# TABLE OF CONTENTS

Graduate ........................................................................................................................................ 9

About DU ........................................................................................................................................ 9

Accreditation .................................................................................................................................. 9

University Governance and Organization ....................................................................................... 10

Academic Calendar ........................................................................................................................ 13

- 2019-2020 Academic Calendar: Quarter System ........................................................................ 14
- 2019-2020 Academic Calendar: Semester System ........................................................................ 14

Equal Opportunity .......................................................................................................................... 15

Dual Degrees ................................................................................................................................... 15

Dual Undergraduate-Graduate Degree Programs ........................................................................... 15

- Daniel Felix Ritchie School of Engineering and Computer Science ........................................ 17
- Daniels College of Business .......................................................................................................... 21
- College of Arts, Humanities and Social Sciences ......................................................................... 22
- Division of Natural Sciences and Mathematics ............................................................................ 22
- Graduate School of Social Work .................................................................................................... 23
- Josef Korbel School of International Studies .................................................................................. 26
- Morgridge College of Education ..................................................................................................... 27
- Sturm College of Law ..................................................................................................................... 29
- University College .......................................................................................................................... 30

Flexible Dual Degree Programs ...................................................................................................... 33

Formal Dual Graduate Degrees ....................................................................................................... 34

- Daniel Felix Ritchie School of Engineering and Computer Science ........................................ 35
- Daniels College of Business .......................................................................................................... 35
- Division of Natural Sciences and Mathematics ............................................................................ 49
- Graduate School of Social Work .................................................................................................... 50
- Josef Korbel School of International Studies .................................................................................. 54
- Sturm College of Law ..................................................................................................................... 55
- University College .......................................................................................................................... 59

Schools, Colleges, and Divisions ..................................................................................................... 60

College of Arts, Humanities and Social Sciences ............................................................................. 60

- Anthropology ............................................................................................................................... 60
- Communication Studies ................................................................................................................ 78
- Economics .................................................................................................................................... 88
- Emergent Digital Practices .............................................................................................................. 91
- English and Literary Arts ................................................................................................................. 100
- Lamont School of Music ............................................................................................................... 108
- Media, Film & Journalism Studies .................................................................................................. 149
- Philosophy .................................................................................................................................... 165
- Psychology .................................................................................................................................... 170
- Religious Studies ........................................................................................................................... 182
School of Art and Art History ........................................................................................................ 196
Daniel Felix Ritchie School of Engineering and Computer Science .................................................. 203
Computer Science ............................................................................................................................... 203
Electrical and Computer Engineering ................................................................................................. 218
Engineering ......................................................................................................................................... 239
Mechanical and Materials Engineering ............................................................................................... 253
Daniels College of Business ................................................................................................................. 270
Business Ethics and Legal Studies ........................................................................................................... 270
Business Information and Analytics ...................................................................................................... 273
Executive PhD ...................................................................................................................................... 276
Finance ............................................................................................................................................... 278
Management ........................................................................................................................................ 283
Marketing ........................................................................................................................................... 289
Daniels College General ....................................................................................................................... 295
Real Estate and Construction Management ......................................................................................... 348
School of Accountancy ......................................................................................................................... 355
DU-liff Joint Doctoral Program .............................................................................................................. 361
DU Iliff Joint Doctoral Program in the Study of Religion ....................................................................... 361
Graduate School of Professional Psychology ......................................................................................... 374
Professional Psychology ....................................................................................................................... 374
Graduate School of Social Work ............................................................................................................ 409
Graduate School of Social Work ............................................................................................................ 410
Graduate Tax Program .......................................................................................................................... 459
Graduate Tax Program .......................................................................................................................... 459
Josef Korbel School of International Studies ....................................................................................... 464
Conflict Resolution ............................................................................................................................... 464
Public Policy ....................................................................................................................................... 467
International Studies ............................................................................................................................ 472
Morgridge College of Education ............................................................................................................ 531
Counseling Psychology ......................................................................................................................... 532
Educational Leadership and Policy Studies ........................................................................................... 546
Higher Education ................................................................................................................................. 555
Research Methods and Information Science ......................................................................................... 563
Teaching and Learning Sciences ......................................................................................................... 580
Division of Natural Sciences and Mathematics .................................................................................... 621
Biological Sciences .............................................................................................................................. 622
Chemistry and Biochemistry ............................................................................................................... 632
Geography and the Environment .......................................................................................................... 639
Mathematics ........................................................................................................................................ 652
Natural Sciences General ..................................................................................................................... 658
Physics and Astronomy ....................................................................................................................... 664
Sturm College of Law ............................................................................................................................ 670
<table>
<thead>
<tr>
<th>Course</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Ethics &amp; Legal Studies (LGST)</td>
<td>998</td>
</tr>
<tr>
<td>Business Information &amp; Analytics (INFO)</td>
<td>1000</td>
</tr>
<tr>
<td>Chemistry (CHEM)</td>
<td>1002</td>
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<td>Child, Family &amp; School Psych (CFSP)</td>
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<td>Counseling Psychology (CNP)</td>
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<td>Curriculum and Instruction (CUI)</td>
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<td>Emergent Digital Practices (EDPX)</td>
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<tr>
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<td>English Language Center (ELC)</td>
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<td>Entrepreneurship &amp; Venture Mgt (EVM)</td>
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<td>1096</td>
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<td>1110</td>
</tr>
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<td>Healthcare Leadership (HC)</td>
<td>1114</td>
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<td>1119</td>
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<tr>
<td>History (HIST)</td>
<td>1123</td>
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<td>Human Resource Administration (HRA)</td>
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<td>1134</td>
</tr>
<tr>
<td>Intermodal Transportation (TRAN)</td>
<td>1136</td>
</tr>
<tr>
<td>International MBA (IMBA)</td>
<td>1140</td>
</tr>
</tbody>
</table>
International Studies (INTS) ................................................................................................................................. 1140
Judaic Studies (JUST) ....................................................................................................................................................... 1178
K-12 Administration (ADMN) ........................................................................................................................................ 1179
Leadership (LDRS) .......................................................................................................................................................... 1182
Liberal Studies (MALS) .................................................................................................................................................... 1182
Library & Information Science (LIS) .............................................................................................................................. 1186
Management (MGMT) ....................................................................................................................................................... 1190
Marketing (MKTG) ........................................................................................................................................................... 1196
Materials Science (MTSC) .............................................................................................................................................. 1200
Mathematics (MATH) ....................................................................................................................................................... 1201
MBA - General (MBA) ..................................................................................................................................................... 1204
Media Film Journalism Studies (MFJS) .......................................................................................................................... 1209
Music-Academic Classes (MUAC) .................................................................................................................................. 1213
Music-Ensembles (MUEN) ........................................................................................................................................... 1226
Music-Studio Lessons (MUPR) ....................................................................................................................................... 1229
Organizational Leadership (ORL) .................................................................................................................................. 1231
Philosophy (PHIL) ............................................................................................................................................................ 1236
Physics & Astronomy (PHYS) ......................................................................................................................................... 1239
Professional Writing (PWRI) ........................................................................................................................................... 1242
Psychology (PSYC) .......................................................................................................................................................... 1246
Public Policy (PPOL) ........................................................................................................................................................ 1251
Real Estate (REAL) .......................................................................................................................................................... 1254
Religion (RLGN) .............................................................................................................................................................. 1255
Religious Studies (RLGS) .................................................................................................................................................. 1264
Research Methods and Stats (RMS) ............................................................................................................................... 1270
Security Management (SMGT) ........................................................................................................................................ 1273
Social Sciences (SS) .......................................................................................................................................................... 1275
Social Work (SOWK) ......................................................................................................................................................... 1276
Statistics (STAT) .............................................................................................................................................................. 1292
Taxation (TAX) ................................................................................................................................................................. 1294
Teacher Ed Prep (TEP) ...................................................................................................................................................... 1296
Theatre (THEA) .............................................................................................................................................................. 1298
GRADUATE

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

About the University of Denver

The University of Denver

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

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

Students

University of Denver students come from all 50 states, in addition to the District of Columbia and from several U.S. territories, and from 98 different countries. Enrollment is approximately 11,700: 5,800 undergraduates and 5,900 graduate students.

Accreditation

Institutional Accreditation

The University of Denver is accredited by the Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools, one of six regional accrediting bodies recognized by the U.S. Department of Education. DU is authorized to offer post-secondary education in the state of Colorado by the Colorado Department of Higher Education.

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

Colorado Department of Higher Education
1560 Broadway, Suite 1600
Denver, CO 80208
303-866-2723
http://highered.colorado.gov

Specialized Accreditation

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

- Accrediting Board for Engineering and Technology
- American Bar Association
- American Chemical Society
- American Library Association
- American Psychological Association
- Association to Advance Collegiate Schools of Business International
• Colorado Department of Education
• Council for Accreditation of Educator Preparation
• Council on Social Work Education
• National Association for the Education of Young Children
• National Association of Schools of Arts and Design
• National Association of School Psychologists
• National Association of Schools of Music

University Governance and Organization

Administration
Jeremy Haefner, PhD
Interim Chancellor

Jeremy Haefner, PhD
Provost

E. LaBrent Chrite, PhD
Dean, Daniels College of Business

Frederick "Fritz" Mayer, PhD
Dean, Josef Korbel School of International Studies

J.B. Holston, MBA
Dean, Daniel Felix Ritchie School of Engineering and Computer Science

Andrei Kutateladze, PhD
Dean, Division of Natural Sciences and Mathematics

Michael Levine-Clark, MS
Dean, University Libraries

Amanda Moore McBride, PhD
Dean, Graduate School of Social Work

Michael McGuire, MLS
Dean, University College

Daniel McIntosh, PhD
Dean, College of Arts, Humanities and Social Sciences

Ann Ayers, JD
Dean, Colorado Women’s College

Karen S. Riley, PhD
Dean, Morgridge College of Education

Shelly Smith-Acuña, PhD
Dean, Graduate School of Professional Psychology

Bruce P. Smith, JD
Dean, Sturm College of Law

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Assistant Secretary

Angela Duggan
Assistant Secretary

Rosalynn Feagins
Assistant Secretary

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

The Vice Provost and the Graduate Council are charged with the responsibility of reviewing, formulating, and implementing policy concerning graduate education.
Composition
Council membership includes the Vice Provost for Research and Graduate Education, all of the academic deans from units with graduate programs, an elected faculty representative from each division, two elected representatives from the Faculty Senate and two representatives of the Graduate Student Government.

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

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

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

• College of Arts, Humanities and Social Sciences (p. 60)
• Daniel Felix Ritchie School of Engineering and Computer Science (p. 203)
• Daniels College of Business (p. 270)
• DU-Iliff Joint Doctoral Program in the Study of Religion (p. 361)
• Graduate School of Professional Psychology (p. 374)
• Graduate School of Social Work (p. 409)
• Graduate Tax Program (p. 459)
• Josef Korbel School of International Studies (p. 464)
• Morgridge College of Education (p. 531)
• Division of Natural Sciences and Mathematics (p. 621)
• Sturm College of Law (p. 670)
• University College (p. 723)

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

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

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

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

Summer Session
Summer session (http://www.du.edu/summer) is an avenue for continuing undergraduate and graduate students to accelerate their programs or complete necessary coursework. Elective, Common Curriculum and required courses for majors and minors are offered in a variety of time frames. Travel and other unique courses including short, intensive workshops are part of the summer program. Visiting students, professionals and individuals from the community interested in attending for the summer only are encouraged to attend and are admitted under an open-enrollment policy.
### 2019-2020 Academic Calendar: Quarter System

#### Autumn Quarter 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>September 9</td>
<td>Monday</td>
<td>Classes begin</td>
</tr>
<tr>
<td>November 16</td>
<td>Saturday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>November 18-21</td>
<td>Monday-Thursday</td>
<td>Final examination period</td>
</tr>
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</table>

#### Winter Interterm 2019

<table>
<thead>
<tr>
<th>Date</th>
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<th>Event</th>
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</thead>
<tbody>
<tr>
<td>November 22</td>
<td>Friday</td>
<td>Classes begin</td>
</tr>
<tr>
<td>December 24</td>
<td>Tuesday</td>
<td>Last day of classes</td>
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#### Winter Quarter 2020

<table>
<thead>
<tr>
<th>Date</th>
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<th>Event</th>
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<tbody>
<tr>
<td>January 3</td>
<td>Friday</td>
<td>Classes begin</td>
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<tr>
<td>March 16</td>
<td>Monday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>March 17-20</td>
<td>Tuesday-Friday</td>
<td>Final examination period</td>
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#### Spring Interterm 2020

<table>
<thead>
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<th>Day</th>
<th>Event</th>
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<tbody>
<tr>
<td>March 21</td>
<td>Saturday</td>
<td>Classes begin</td>
</tr>
<tr>
<td>March 29</td>
<td>Sunday</td>
<td>Last day of classes</td>
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#### Spring Quarter 2020

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
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<tbody>
<tr>
<td>March 30</td>
<td>Monday</td>
<td>Classes begin</td>
</tr>
<tr>
<td>June 6</td>
<td>Saturday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>June 8-11</td>
<td>Monday-Thursday</td>
<td>Final examination period</td>
</tr>
<tr>
<td>June 12</td>
<td>Friday</td>
<td>Graduate Commencement</td>
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<tr>
<td>June 13</td>
<td>Saturday</td>
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#### Summer Session 2020

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<tbody>
<tr>
<td>June 15</td>
<td>Monday</td>
<td>Classes begin</td>
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<tr>
<td>August 21</td>
<td>Friday</td>
<td>Last day of classes</td>
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<tr>
<td>August 22</td>
<td>Saturday</td>
<td>Commencement</td>
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#### University Holidays

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<tr>
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<th>Event</th>
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<tr>
<td>September 2, 2019</td>
<td>Monday</td>
<td>Labor Day</td>
</tr>
<tr>
<td>November 28-29, 2019</td>
<td>Thursday-Friday</td>
<td>Thanksgiving</td>
</tr>
<tr>
<td>December 25-31, 2019</td>
<td>Wednesday-Tuesday</td>
<td>Winter Holiday</td>
</tr>
<tr>
<td>January 1, 2020</td>
<td>Wednesday</td>
<td>New Year’s Day</td>
</tr>
<tr>
<td>January 20, 2020</td>
<td>Monday</td>
<td>Martin Luther King Jr. Day</td>
</tr>
<tr>
<td>May 25, 2020</td>
<td>Monday</td>
<td>Memorial Day</td>
</tr>
<tr>
<td>July 3, 2020</td>
<td>Friday</td>
<td>Independence Day (observed)</td>
</tr>
<tr>
<td>July 4, 2020</td>
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<td>Independence Day</td>
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### 2019-2020 Academic Calendar: Semester System

#### Autumn Semester 2019

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<tr>
<td>August 19</td>
<td>Monday</td>
<td>Classes begin</td>
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<tr>
<td>November 25</td>
<td>Monday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>December 4-19</td>
<td>Wednesday-Thursday</td>
<td>Final examination period</td>
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</tbody>
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### Spring Semester 2020

<table>
<thead>
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<tbody>
<tr>
<td>January 13</td>
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<td>April 27</td>
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<td>Last day of classes</td>
</tr>
<tr>
<td>May 4-14</td>
<td>Monday-Thursday</td>
<td>Final examination period</td>
</tr>
<tr>
<td>May 16</td>
<td>Saturday</td>
<td>Sturm College of Law Commencement</td>
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### Summer Semester 2020

<table>
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<td>May 26</td>
<td>Tuesday</td>
<td>Classes begin</td>
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<tr>
<td>July 14</td>
<td>Tuesday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>July 20-24</td>
<td>Monday-Friday</td>
<td>Final examination period</td>
</tr>
<tr>
<td>August 22</td>
<td>Saturday</td>
<td>Commencement</td>
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### University Holidays

<table>
<thead>
<tr>
<th>Date</th>
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<tr>
<td>January 1, 2020</td>
<td>Wednesday</td>
<td>New Year’s Day</td>
</tr>
<tr>
<td>January 20, 2020</td>
<td>Monday</td>
<td>Martin Luther King Jr.Day</td>
</tr>
<tr>
<td>May 25, 2020</td>
<td>Tuesday</td>
<td>Memorial Day</td>
</tr>
<tr>
<td>July 3, 2020</td>
<td>Friday</td>
<td>Independence Day (observed)</td>
</tr>
<tr>
<td>July 4, 2020</td>
<td>Saturday</td>
<td>Independence Day</td>
</tr>
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</table>

### Equal Opportunity and Non-Discrimination Policy

The University of Denver is an Equal Opportunity Institution. It is the policy of the University not to discriminate in the admission of students, in the provision of services, or in employment on the basis of race, color, national origin, age, religion, disability, sex, sexual orientation, gender identity, gender expression, marital status, pregnancy, genetic information, military enlistment or veteran status. The University prohibits all discrimination, harassment, violence, and retaliation, and complies with all applicable federal, state and local laws, regulations and Executive Orders.

Inquiries concerning allegations of discrimination based on any of the above factors may be referred to the Office of Equal Opportunity & Title IX:

University of Denver  
Office of Equal Opportunity & Title IX  
Mary Reed Building, 4th Floor  
2199 S. University Blvd  
Denver, CO 80208  
Phone: 303-871-7016  
Fax: 303-871-7982

For more information, please call the above number or see the website at https://www.du.edu/equalopportunity. You also may contact the Office of Equal Opportunity & Title IX with concerns regarding determinations of religious or disability accommodations and/or issues about access.

### Dual Degree Programs

Dual Undergraduate-Graduate Degree Programs (p. 15)  
Flexible Dual Degree Programs (p. 33)  
Formal Dual Graduate Degrees (p. 34)

### Dual Undergraduate-Graduate Degree Programs

#### Dual Undergraduate-Graduate Degree Programs

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

The programs may reduce a limited number of both undergraduate and graduate credit hours toward both degrees.
The amount of the credit hour reduction is variable across programs. To be admitted, a student’s academic progress must demonstrate that the requirements of the program can be completed within the set time-frame.

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

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

**Dual Undergraduate-Graduate Financial Aid**

Eligibility for financial aid differs for undergraduate and graduate students and it differs for institutional aid and federal aid. Students enrolled in dual degree programs are considered graduate students for federal financial aid purposes after attaining 198 credit hours even if the student has not met the undergraduate degree requirements. Federal regulations do not allow students in dual degree programs who have completed four academic years (defined as 198 credit hours) to continue to receive undergraduate aid. Students in the law school dual degree program are aided as graduate students after three undergraduate academic years (149 hours for federal aid purposes). While undergraduate merit or need-based institutional grant aid are not available for fifth-year dual-degree students, each graduate department may offer graduate students grant or scholarship funds at their discretion. Students should contact their graduate program for details on available funding for the fifth year.

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

**Institutional Aid**

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

**Federal Aid**

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

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

The following must be followed consistently and accurately:

- Students are admitted to dual undergraduate-graduate degree programs by the graduate admission unit. The graduate unit follows all normal admission procedures and the student must meet all admission criteria for the graduate program other than receipt of the baccalaureate degree. Students should be admitted to the dual undergraduate-graduate program as early as practical for financial aid and other reasons. They must be admitted to the dual undergraduate-graduate program by the start of the first term that the student reaches senior standing (135 earned credits).
- The effective term for admission should be the term in which the student is permitted to take graduate courses. For example, if the student’s senior year begins in the fall and the student meets admission criteria and may begin taking graduate courses in the subsequent spring term, the admission term should be that spring.
- Graduate units are responsible for assuring that the student information is accurate.
Note: A student who receives a bachelor’s degree and was not previously enrolled in a dual undergraduate-graduate program is not eligible to return and enroll in a graduate program and reduce the number of credit hours for the graduate degree.

Daniel Felix Ritchie School of Engineering and Computer Science

Master of Science in Bioengineering, Computer Engineering, Computer Science Systems Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering and Bachelor of Arts in Applied Computing or Bachelor of Arts or Science in Game Development

- Undergraduate-level credits required with dual degree: 174
- Undergraduate credit reduction with dual degree: 9 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 219

All students pursuing the dual Bachelor of Arts in Applied Computing or Bachelor of Arts or Science in Game Development/Master of Science in Bioengineering, Computer Engineering, Computer Science Systems Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering are required to complete all degree requirements for both the BA or BS and Master’s.

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

Admission Requirements - Engineering (p. 241)
Admission Requirements - Mechanical and Materials Engineering (p. 255)
Admission Requirements - Electrical and Computer Engineering (p. 220)
Degree Requirements - Engineering (p. 242)
Degree Requirements - Mechanical and Materials Engineering (p. 258)
Degree Requirements - Electrical and Computer Engineering (p. 223)

Bachelor of Arts in Applied Computing
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts)

Bachelor of Arts or Science in Game Development
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext)

Master of Science in Computer Science and Bachelor of Arts in Applied Computing or Bachelor of Arts or Science in Game Development

- Undergraduate-level credits required with dual degree: 174
- Undergraduate credit reduction with dual degree: 9 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 222

All students pursuing the dual Bachelor of Arts in Applied Computing or Bachelor of Arts or Science in Game Development/Master of Science in Computer Science are required to complete all degree requirements for both the BA or BS and Master’s.

Master of Science in Computer Science
Admission Requirements - Computer Science (p. 204)
Degree Requirements - Computer Science (p. 207)

Bachelor of Arts in Applied Computing
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts)
Bachelor of Arts or Science in Game Development
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext)

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

- Undergraduate-level credits required with dual degree: 183
- Undergraduate credit reduction with dual degree: 0
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 228

All students pursuing the dual Bachelor of Science in Computer Science/Master of Science in in Bioengineering, Computer Engineering, Computer Science Systems Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering are required to complete all degree requirements for both the BS and Master's.

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

Admission Requirements - Engineering (p. 241)

Admission Requirements - Mechanical and Materials Engineering (p. 255)

Admission Requirements - Electrical and Computer Engineering (p. 220)

Degree Requirements - Engineering (p. 242)

Degree Requirements - Mechanical and Materials Engineering (p. 258)

Degree Requirements - Electrical and Computer Engineering (p. 223)

Bachelor of Science in Computer Science
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext)

Master of Science in Computer Science and Bachelor of Science in Computer Science

- Undergraduate-level credits required with dual degree: 183
- Undergraduate credit reduction with dual degree: 0
- Graduate-level credits required with dual degree: 36
- Graduate credit reduction: 12 credits from the original 48 required for the graduate degree
- Minimum number of credits required with dual degree: 219

All students pursuing the dual Bachelor of Science in Computer Science/Master of Science in Computer Science are required to complete all degree requirements for both the BS and Master's.

Master of Science in Computer Science

Admission Requirements - Computer Science (p. 204)

Degree Requirements - Computer Science (p. 207)

Bachelor of Science in Computer Science

Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext)
Master of Science in Bioengineering, Computer Engineering, Computer Science Systems Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering and Bachelor of Science in Mechanical Engineering

- Undergraduate-level credits required with dual degree: 183
- Undergraduate credit reduction with dual degree: 9 credits from the original 192 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 228

All students pursuing the dual Bachelor of Science in Mechanical Engineering/Master of Science in Bioengineering, Computer Engineering, Computer Science Systems Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering are required to complete all degree requirements for both the BS and Master’s.

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

Admission Requirements - Engineering (p. 241)
Admission Requirements - Mechanical and Materials Engineering (p. 255)
Admission Requirements - Electrical and Computer Engineering (p. 220)
Degree Requirements - Engineering (p. 242)
Degree Requirements - Mechanical and Materials Engineering (p. 258)
Degree Requirements - Electrical and Computer Engineering (p. 223)

Bachelor of Science in Mechanical Engineering

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

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

- Undergraduate-level credits required with dual degree: 183
- Undergraduate credit reduction with dual degree: 9 credits from the original 192 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 231

All students pursuing the dual Bachelor of Science in Mechanical Engineering/Master of Science in Computer Science are required to complete all degree requirements for both the BS and Master’s.

Master of Science in Computer Science

Admission Requirements - Computer Science (p. 204)
Degree Requirements - Computer Science (p. 207)

Bachelor of Science in Mechanical Engineering

Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinmechanicalengineering)
Master of Science in Bioengineering, Computer Engineering, Computer Science Systems Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering and Bachelor of Science in Computer Engineering or Electrical Engineering

- Undergraduate-level credits required with dual degree: 189
- Undergraduate credit reduction with dual degree: 9 credits from the original 198 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 234

All students pursuing the dual Bachelor of Science in Computer Engineering or Electrical Engineering/Master of Science in Bioengineering, Computer Engineering, Computer Science Systems Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering are required to complete all degree requirements for both the BS and Master’s.

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

Admission Requirements - Engineering (p. 241)
Admission Requirements - Mechanical and Materials Engineering (p. 255)
Admission Requirements - Electrical and Computer Engineering (p. 220)
Degree Requirements - Engineering (p. 242)
Degree Requirements - Mechanical and Materials Engineering (p. 258)
Degree Requirements - Electrical and Computer Engineering (p. 223)

Bachelor of Science in Computer Engineering
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceincomputerengineering)

Bachelor of Science in Electrical Engineering
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinelectricalengineering)

Master of Science in Computer Science and Bachelor of Science in Computer Engineering or Electrical Engineering

- Undergraduate-level credits required with dual degree: 189
- Undergraduate credit reduction with dual degree: 9 credits from the original 198 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 237

All students pursuing the dual Bachelor of Science in Computer Engineering or Electrical Engineering/Master of Science in any Engineering Program are required to complete all degree requirements for both the BS and Master’s.

Master of Science in Computer Science
Admission Requirements - Computer Science (p. 204)
Degree Requirements - Computer Science (p. 207)

Bachelor of Science in Computer Engineering
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceincomputerengineering)
Bachelor of Science in Electrical Engineering
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinelectricalengineering)

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

- Undergraduate-level credits required with dual degree: 183
- Undergraduate credit reduction with dual degree: 0
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 228

All students pursuing the dual Bachelor of Science in Bioengineering, Computer Engineering, Electrical Engineering, Mechanical Engineering or Mechatronic Systems Engineering/Master of Science in any Engineering Program are required to complete all degree requirements for both the BS and Master's.

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

Admission Requirements - Mechanical and Materials Engineering (p. 255)

Admission Requirements - Electrical and Computer Engineering (p. 220)

Degree Requirements - Mechanical and Materials Engineering (p. 258)

Degree Requirements - Electrical and Computer Engineering (p. 223)

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

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

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

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

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

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

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

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

Daniels College of Business

Master of Accountancy and Bachelor of Science in Accounting

- Undergraduate-level credits required with dual degree: 186
- Undergraduate credit reduction with dual degree: 0 credits from the original 186 required for the undergraduate degree
- Graduate-level credits required with dual degree: 40
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 226
All students pursuing the dual Bachelor of Science in Accounting/Master’s in Accountancy are required to complete all degree requirements for both the BS and Master’s. Eight credits from the graduate program are cross-counted to meet the undergraduate degree requirements. Please contact the department for details.

**Master of Accountancy**
Admission Requirements (p. 356)

Degree Requirements (p. 357)

**Bachelor of Science in Accounting**
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/accounting/#programofstudytext)

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

**Master of Arts in Art History or Concentration in Museum Studies and Bachelor of Arts in Art History**
- Undergraduate-level credits required with the dual degree: 171
- Undergraduate credit reduction with dual degree: 12 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 56
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 227

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

**Master of Arts in Art History, Master of Arts in Art History with a Concentration in Museum Studies**
Admission Requirements (p. 197)

Degree Requirements (p. 198)

**Bachelor of Arts in Art History**
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/schoolofartandarthistory/#programstext)

**Division of Natural Sciences and Mathematics**

**Master of Science in Geographic Information Science and Bachelor of Arts in Environmental Science**
- Undergraduate-level credits required with dual degree: 180
- Undergraduate credit reduction with dual degree: 3 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 228

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

**Master of Science in Geographic Information Science**
Admission Requirements (p. 639)

Degree Requirements (p. 641)

**Bachelor of Arts in Environmental Science**
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/geographyandtheenvironment/#programofstudytext)
Master of Science in Geographic Information Science and Bachelor of Science in Environmental Science

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

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

Master of Science in Geographic Information Science
Admission Requirements (p. 639)
Degree Requirements (p. 641)

Bachelor of Science in Environmental Science
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/geographyandtheenvironment/#programofstudytext)

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

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

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

Master of Science in Geographic Information Science
Admission Requirements (p. 639)
Degree Requirements (p. 641)

Bachelor of Arts in Geography
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/geographyandtheenvironment/#programofstudytext)

Graduate School of Social Work

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

- Undergraduate-level credits required with dual degree: 153
- Undergraduate credit reduction with dual degree: 30 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 90
  - Graduate credit reduction: 0
  - Minimum number of credits required with dual degree: 243

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

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

**Bachelor of Arts (Traditional Bachelor’s Program)**
Degree Requirements [http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts](http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts)

**Bachelor of Science**
Degree Requirements [http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscience](http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscience)

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

**Master of Social Work and Bachelor of Fine Arts**
- Undergraduate-level credits required with dual degree: 159
- Undergraduate credit reduction with dual degree: 30 credits from the original 189 required for the undergraduate degree
- Graduate-level credits required with dual degree: 90
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 249

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

**Master of Social Work**
Admission Requirements (p. 414)

Degree Requirements (p. 417)

**Bachelor of Fine Arts**
Degree Requirements [http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bacheloroffinearts](http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bacheloroffinearts)

**Master of Social Work and Bachelor of Music**
- Undergraduate-level credits required with dual degree: 164
- Undergraduate credit reduction with dual degree: 30 credits from the original 194 required for the undergraduate degree
- Graduate-level credits required with dual degree: 90
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 254

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

**Master of Social Work**
Admission Requirements (p. 414)

Degree Requirements (p. 417)

**Bachelor of Music**
Degree Requirements [http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofmusic](http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofmusic)

**Master of Social Work and Bachelor of Science in Accounting**
- Undergraduate-level credits required with dual degree: 156
- Undergraduate credit reduction with dual degree: 30 credits from the original 186 required for the undergraduate degree
- Graduate-level credits required with dual degree: 90
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 246

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

**Master of Social Work**
Admission Requirements (p. 414)

Degree Requirements (p. 417)
Bachelor of Science in Accounting
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinaccounting)

Master of Social Work and Bachelor of Science in Business Administration
- Undergraduate-level credits required with dual degree: 155
- Undergraduate credit reduction with dual degree: 30 credits from the original 185 required for the undergraduate degree
- Graduate-level credits required with dual degree: 90
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 245

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

Master of Social Work
Admission Requirements (p. 414)

Degree Requirements (p. 417)

Bachelor of Science in Business Administration
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration)

Master of Social Work and Bachelor of Science in Computer Engineering or Electrical Engineering
- Undergraduate-level credits required with dual degree: 168
- Undergraduate credit reduction with dual degree: 30 credits from the original 198 required for the undergraduate degree
- Graduate-level credits required with dual degree: 90
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 258

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

Master of Social Work
Admission Requirements (p. 414)

Degree Requirements (p. 417)

Bachelor of Science in Computer Engineering
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceincomputerengineering)

Bachelor of Science in Electrical Engineering
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinelectricalengineering)

Master of Social Work and Bachelor of Science in Mechanical Engineering
- Undergraduate-level credits required with dual degree: 162
- Undergraduate credit reduction with dual degree: 30 credits from the original 192 required for the undergraduate degree
- Graduate-level credits required with dual degree: 90
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 252

All students pursuing the dual BS in Mechanical Engineering and the MSW are required to complete all degree requirements for both the BS and the MSW degrees.
Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Bachelor of Science in Mechanical Engineering
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinmechanicalengineering)

Josef Korbel School of International Studies

- Undergraduate-level credits required with dual degree: 159
- Undergraduate credit reduction with dual degree: 24 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 72
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 231

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

Public Policy majors are required to complete INTS 1500, INTS 1700 and INTS 2975 prior to matriculation into the MA program.

Master of Arts in International Studies
Admission Requirements (p. 474)
Degree Requirements (p. 477)

Bachelor of Arts
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts)

Master of Public Policy and Bachelor of Arts in Public Policy, International Studies, Economics, Political Science, Sociology or Criminology
- Undergraduate-level credits required with dual degree: 169
- Undergraduate credit reduction with dual degree: 14 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 60
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 229

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

All dual BA/MPP students still need to fulfill the requirements of their respective majors. For Public Policy majors, the 14 credit reduction at the BA level would apply to Public Policy major elective requirements. For International Studies, Political Science, Economics, Sociology and Criminology majors, the 14 credit reduction would apply to general undergraduate elective requirements. As compared to the traditional MPP curriculum, dual BA/MPP degree students are exempt from taking the graduate version of Analytical and Critical Skills (PPOL 4400), as they will have already taken a similar class as an undergraduate. An additional elective is required instead.

Three prerequisite courses would be required for all non-Public Policy majors before matriculating into the MPP program:
- PPOL 3230 Analytical & Critical Skills
- Two additional PPOL courses

Master of Public Policy
Admission Requirements (p. 468)
Degree Requirements (p. 469)
Bachelor of Arts
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts)

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

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

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

Bachelor of Fine Arts
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bacheloroffinearts)

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

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

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

Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program
Admission Requirements (p. 584)

Degree Requirements (p. 589)

Bachelor of Music
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofmusic)

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

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

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

Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program
Admission Requirements (p. 584)

Degree Requirements (p. 589)

Bachelor of Science in Accounting
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinaccounting)

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

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

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

Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program
Admission Requirements (p. 584)

Degree Requirements (p. 589)

Bachelor of Science Business Administration
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration)
Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program and Bachelor of Science in Computer Engineering or Electrical Engineering

- Undergraduate-level credits required with dual degree: 189
- Undergraduate credit reduction with dual degree: 9 credits from the original 198 required for the undergraduate degree
- Graduate-level credits required with dual degree: 52
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 241

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

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

Admission Requirements (p. 584)

Degree Requirements (p. 589)

Bachelor of Science in Computer Engineering

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

Bachelor of Science in Electrical Engineering

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

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

- Undergraduate-level credits required with dual degree: 183
- Undergraduate credit reduction with dual degree: 9 credits from the original 192 required for the undergraduate degree
- Graduate-level credits required with dual degree: 52
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 235

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

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

Admission Requirements (p. 584)

Degree Requirements (p. 589)

Bachelor of Science in Mechanical Engineering

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

Sturm College of Law

Juris Doctor and Bachelor of Arts (traditional bachelor’s program), Bachelor of Science

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

All students pursuing the dual BA or BS degree/Juris Doctor are required to complete all degree requirements for both the BA or BS and JD degrees.
Juris Doctor
Admission Requirements (p. 671)
Degree Requirements (p. 677)

Bachelor of Arts
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts)

Bachelor of Science
Degree Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscience)

University College

Master of Arts in Communication Management and Bachelor of Arts in Communication Arts, Bachelor of Arts in Global Studies or Bachelor of Arts in Leadership and Organization Studies

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

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

Master of Arts in Communication Management
Admission Requirements (p. 738)
Degree Requirements (p. 739)

Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext)

Bachelor of Arts in Global Studies (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/globalstudies/#programofstudytext)

Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/leadershipandorganizationstudies/#programofstudytext)

Master of Arts in Professional Creative Writing and Bachelor of Arts in Communication Arts

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

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

Master of Arts in Professional Creative Writing
Admission Requirements (p. 726)
Degree Requirements (p. 727)
Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext)

Master of Arts in Global Community Engagement and Bachelor of Arts in Global Studies
- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

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

Master of Arts in Global Community Engagement
Admission Requirements (p. 777)
Degree Requirements (p. 778)

Bachelor of Arts in Global Studies (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/globalstudies/#programofstudytext)

Master of Arts in Arts and Culture and Bachelor of Arts in Communication Arts
- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

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

Master of Arts in Arts and Culture
Admission Requirements (p. 726)
Degree Requirements (p. 727)

Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext)

Master of Science in Healthcare Management and Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)
- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

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

Master of Science in Healthcare Management
Admission Requirements (p. 791)
Degree Requirements (p. 792)
Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/leadershipandorganizationstudies/#programofstudytext)

Master of Science in Information and Communications Technology and Bachelor of Arts in Information Technology (Bachelor of Arts Completion Program)
- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

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

Master of Science in Information and Communications Technology
Admission Requirements (p. 814)
Degree Requirements (p. 815)

Bachelor of Arts in Information Technology (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/informationtechnology/#programofstudytext)

Master of Science in Leadership and Organizations and Bachelor of Arts in Communication Arts, Bachelor of Arts in Global Studies or Bachelor of Arts in Leadership and Organization Studies
- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

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

Master of Science in Leadership and Organizations
Admission Requirements (p. 859)
Degree Requirements (p. 860)

Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext)

Bachelor of Arts in Global Studies (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/globalstudies/#programofstudytext)

Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/leadershipandorganizationstudies/#programofstudytext)

Master of Science in Security Management and Bachelor of Arts in Global Commerce and Transportation (Bachelor of Arts Completion Program)
- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
All students pursuing the dual BA in Global Commerce and Transportation (BA Completion Program)/MS in Security Management are required to complete all degree requirements for both the BA and MS degrees.

**Master of Science in Security Management**  
Admission Requirements (p. 884)  
Degree Requirements (p. 885)

**Bachelor of Arts in Global Commerce and Transportation (Bachelor of Arts Completion Program)**  
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/globalcommerceandtransportation/#programofstudytext)

**Master of Science in Strategic Human Resources and Bachelor of Arts in Communication Arts OR Bachelor of Arts in Leadership and Organization Studies**

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

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

**Master of Science in Strategic Human Resources**  
Admission Requirements (p. 895)  
Degree Requirements (p. 896)

**Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)**  
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext)

**Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)**  
Degree Requirements (http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/leadershipandorganizationstudies/#programofstudytext)

**Flexible Dual Degree Programs**

**Flexible Dual Degree Programs**  
Students may propose a flexible dual degree program that links two master’s degrees or a master’s degree and a JD degree.

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

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

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

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

**Proposing a Flexible Dual Degree**  
To propose a flexible dual degree, the student must first apply to and be admitted by both programs, pay application fees and admissions deposits for both programs, and seek the counsel of an advisor in each program. Admission into each program does not take the place of filing a Flexible

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

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

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

**Curriculum Structure**

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

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

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

- **45-60 quarter hour degree program**: Reduce a maximum of 10 quarter hours for the one degree without outside transfer credit. The traditional maximum outside transfer credit allowed in this case would be 11-15 quarter hours. A reduction of 15 quarter hours from the original degree will be the maximum allowed when combining outside transfer hours and the reduction of degree hours.

- **61-75 quarter hour degree program**: Reduce a maximum of 12 quarter hours for the one degree without outside transfer credit. The traditional maximum outside transfer credit allowed in this case would be 15-19 quarter hours. A reduction of 25 quarter hours from the original degree will be the maximum allowed when combining outside transfer hours and the reduction of degree hours.

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

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

**Non-Course Requirements**

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

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

**Formal Dual Degree Programs**

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

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

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.
Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (https://www.du.edu/sites/g/files/Imucqq251/files/2018-11/formal_dual_degree_verification_2018-2019.pdf) during the program’s first term. For program details, please contact the school, college or department.

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

**Formal Dual Degree Programs**

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

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

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

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

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (https://www.du.edu/sites/g/files/Imucqq251/files/2018-11/formal_dual_degree_verification_2018-2019.pdf) during the program’s first term. For program details, please contact the school, college or department.

**Master of Science in Computer Science and Juris Doctor**

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

**Juris Doctor**

Admission Requirements (p. 671)

Degree Requirements (p. 677)

**Master of Science in Computer Science**

Admission Requirements (p. 204)

Degree Requirements (p. 207)

**Daniels College of Business**

**Formal Dual Degree Programs**

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

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

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.
Students are required to complete both degree programs within five years of matriculation into the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (https://www.du.edu/sites/g/files/lmucqz251/files/2018-11/formal_dual_degree_verification_2018-2019.pdf) during the program’s first term. For program details, please contact the school, college or department.

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

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

**Juris Doctor**

Admission Requirements (p. 671)

Degree Requirements (p. 677)

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

Admission Requirements (p. 297)

Degree Requirements (p. 299)

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

- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MBA credits required with dual degree: 48
- MBA credit reduction: 12 credits from the original 60 required for the MBA
- Minimum number of credits required with dual degree: 123

**Master of Social Work**

Admission Requirements (p. 414)

Degree Requirements (p. 417)

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

Admission Requirements (p. 297)

Degree Requirements (p. 299)

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

- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MBA credits required with dual degree: 52
- MBA credit reduction: 8 credits from the original 60 required for the MBA
- Minimum number of credits required with dual degree: 127

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

Admission Requirements (p. 414)

Degree Requirements (p. 417)

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

Admission Requirements (p. 297)
Degree Requirements (p. 299)

**Master of Social Work and Master of Business Administration: The Denver MBA**
- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MBA credits required with dual degree: 64
- MBA credit reduction: 16 credits from the original 80 required for the MBA
- Minimum number of credits required with dual degree: 139

**Master of Social Work**
Admission Requirements (http://bulletin.du.edu/graduate/schoolscollegesanddivisions/socialwork/socialwork/#admissionrequirementstext)

Degree Requirements (http://bulletin.du.edu/graduate/schoolscollegesanddivisions/socialwork/socialwork/#programofstudytext)

**Master of Business Administration: Denver MBA**
Admission Requirements (http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/generalbusiness/#admissionrequirementstext)

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

**Master of Science in Real Estate and the Built Environment and Juris Doctorate**
- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MS credits required with dual degree: 35 quarter credits
- MS credit reduction: 13 quarter credits from the original 48 required for the MS
- Minimum number of credits required with dual degree: 115 (80 semester credits and 35 quarter credits)

**Juris Doctor**
Admission Requirements (p. 671)

Degree Requirements (p. 677)

**Master of Science in Real Estate and the Built Environment**
Admission Requirements (p. 297)

Degree Requirements (p. 299)

**Master of Business Administration: The Denver MBA and Master of Accountancy in Accounting**
- MBA credits required with dual degree: 76
- MBA credit reduction with dual degree: 4 credits from the original 80 required for the MBA
- MAcc credits required with dual degree: 40
- MAcc credit reduction: 0 credits from the original 40 required for the MAcc
- Minimum number of credits required with dual degree: 116

**Master of Business Administration: The Denver MBA**
Admission Requirements (p. 297)

Degree Requirements (p. 299)

**Master of Accountancy**
Admission Requirements (p. 356)

Degree Requirements (p. 357)
Master of Business Administration: The Denver MBA and Master of Science in Business Analytics

- MBA credits required with dual degree: 70
- MBA credit reduction with dual degree: 10 credits from the original 80 required for the MBA
- MS in Business Analytics credits required with dual degree: 46
- MS in Business Analytics credit reduction: 12 credits from the original 58 required for the MS in Business Analytics
- Minimum number of credits required with dual degree: 116

Master of Business Administration: The Denver MBA
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Science in Business Analytics
Admission Requirements (p. 273)
Degree Requirements (p. 273)

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

- MBA credits required with dual degree: 72
- MBA credit reduction with dual degree: 8 credits from the original 80 required for the MBA
- MS in Applied Quantitative Finance credits required with dual degree: 45
- MS in Applied Quantitative Finance credit reduction: 12 credits from the original 57 required for the MS in Applied Quantitative Finance
- Minimum number of credits required with dual degree: 117

Master of Business Administration: The Denver MBA
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Science in Applied Quantitative Finance
Admission Requirements (p. 278)
Degree Requirements (p. 279)

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

- MBA credits required with dual degree: 72
- MBA credit reduction with dual degree: 8 credits from the original 80 required for the MBA
- MS in Marketing credits required with dual degree: 44
- MS in Marketing credit reduction: 3 credits from the original 47 required for the MS in Marketing
- Minimum number of credits required with dual degree: 116

Master of Business Administration: The Denver MBA
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Science in Marketing
Admission Requirements (p. 289)
Degree Requirements (p. 290)
Master of Business Administration: The Denver MBA and Master of Science in Real Estate and the Built Environment

- MBA credits required with dual degree: 72
- MBA credit reduction with dual degree: 8 credits from the original 80 required for the MBA
- MS in Real Estate and the Built Environment credits required with dual degree: 44
- MS in Real Estate and the Built Environment credit reduction: 4 credits from the original 48 required for the MS in Real Estate and the Built Environment
- Minimum number of credits required with dual degree: 116

Master of Business Administration: The Denver MBA
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Science in Real Estate and the Built Environment
Admission Requirements (p. 348)
Degree Requirements (p. 350)

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

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

Master of Accountancy
Admission Requirements (p. 356)
Degree Requirements (p. 357)

Master of Science in Business Analytics
Admission Requirements (p. 273)
Degree Requirements (p. 273)

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

- MAcc credits required with dual degree: 40
- MAcc credit reduction with dual degree: 0 credits from the original 40 required for the MAcc
- MS in Applied Quantitative Finance credits required with dual degree: 45
- MS in Applied Quantitative Finance credit reduction: 12 credits from the original 57 required for the MS in Applied Quantitative Finance
- Minimum number of credits required with dual degree: 85

Master of Accountancy
Admission Requirements (p. 356)
Degree Requirements (p. 357)

Master of Science in Applied Quantitative Finance
Admission Requirements (p. 278)
Degree Requirements (p. 279)

Master of Accountancy in Accounting and Master of Science in Management

- MAcc credits required with dual degree: 40
- MAcc credit reduction with dual degree: 0 credits from the original 40 required for the MAcc
• MS in Management credits required with dual degree: 45
• MS in Management credit reduction: 0 credits from the original 45 required for the MS in Management
• Minimum number of credits required with dual degree: 85

**Master of Accountancy**
Admission Requirements (p. 356)
Degree Requirements (p. 357)

**Master of Science in Management**
Admission Requirements (p. 283)
Degree Requirements (p. 283)

**Master of Accountancy in Accounting and Master of Science in Marketing**
• MAcc credits required with dual degree: 40
• MAcc credit reduction with dual degree: 0 credits from the original 40 required for the MAcc
• MS in Marketing credits required with dual degree: 47
• MS in Marketing credit reduction: 0 credits from the original 47 required for the MS in Marketing
• Minimum number of credits required with dual degree: 87

**Master of Accountancy**
Admission Requirements (p. 356)
Degree Requirements (p. 357)

**Master of Science in Marketing**
Admission Requirements (p. 289)
Degree Requirements (p. 290)

**Master of Accountancy in Accounting and Master of Science in Real Estate and the Built Environment**
• MAcc credits required with dual degree: 40
• MAcc credit reduction with dual degree: 0 credits from the original 40 required for the MAcc
• MS in Real Estate and the Built Environment credits required with dual degree: 48
• MS in Real Estate and the Built Environment credit reduction: 0 credits from the original 48 required for the MS in Real Estate and the Built Environment
• Minimum number of credits required with dual degree: 88

**Master of Accountancy**
Admission Requirements (p. 356)
Degree Requirements (p. 357)

**Master of Science in Real Estate and the Built Environment**
Admission Requirements (p. 348)
Degree Requirements (p. 350)

**Master of Science in Applied Quantitative Finance and Master of Science in Business Analytics**
• MS in Applied Quantitative Finance credits required with dual degree: 45
• MS in Applied Quantitative Finance credit reduction with dual degree: 12 credits from the original 57 required for the MS in Applied Quantitative Finance
• MS in Business Analytics credits required with dual degree: 50
• MS in Business Analytics credit reduction: 8 credits from the original 58 required for the MS in Business Analytics
  • Minimum number of credits required with dual degree: 95

**Master of Science in Applied Quantitative Finance**
Admission Requirements (p. 278)
Degree Requirements (p. 279)

**Master of Science in Business Analytics**
Admission Requirements (p. 273)
Degree Requirements (p. 273)

**Master of Science in Applied Quantitative Finance and Master of Science in Management**
  • MS in Applied Quantitative Finance credits required with dual degree: 41
  • MS in Applied Quantitative Finance credit reduction with dual degree: 16 credits from the original 57 required for the MS in Applied Quantitative Finance
  • MS in Management credits required with dual degree: 45
  • MS in Management credit reduction: 0 credits from the original 45 required for the MS in Management
  • Minimum number of credits required with dual degree: 86

**Master of Science in Applied Quantitative Finance**
Admission Requirements (p. 278)
Degree Requirements (p. 279)

**Master of Science in Management**
Admission Requirements (p. 283)
Degree Requirements (p. 283)

**Master of Science in Applied Quantitative Finance and Master of Science in Marketing**
  • MS in Applied Quantitative Finance credits required with dual degree: 45
  • MS in Applied Quantitative Finance credit reduction with dual degree: 12 credits from the original 57 required for the MS in Applied Quantitative Finance
  • MS in Marketing credits required with dual degree: 39
  • MS in Marketing credit reduction: 8 credits from the original 47 required for the MS in Marketing
  • Minimum number of credits required with dual degree: 84

**Master of Science in Applied Quantitative Finance**
Admission Requirements (p. 278)
Degree Requirements (p. 279)

**Master of Science in Marketing**
Admission Requirements (p. 289)
Degree Requirements (p. 290)

**Master of Science in Applied Quantitative Finance and Master of Science in Real Estate and the Built Environment**
  • MS in Applied Quantitative Finance credits required with dual degree: 45
  • MS in Applied Quantitative Finance credit reduction with dual degree: 12 credits from the original 57 required for the MS in Applied Quantitative Finance
  • MS in Real Estate and the Built Environment credits required with dual degree: 40
Master of Science in Applied Quantitative Finance
Admission Requirements (p. 278)
Degree Requirements (p. 279)

Master of Science in Real Estate and the Built Environment
Admission Requirements (p. 348)
Degree Requirements (p. 350)

Master of Science in Business Analytics and Master of Science in Management
• MS in Business Analytics credits required with dual degree: 50
• MS in Business Analytics credit reduction with dual degree: 8 credits from the original 58 required for the MS in Business Analytics
• MS in Management credits required with dual degree: 45
• MS in Management credit reduction: 0 credits from the original 45 required for the MS in Management
• Minimum number of credits required with dual degree: 95

Master of Science in Business Analytics
Admission Requirements (p. 273)
Degree Requirements (p. 273)

Master of Science in Management
Admission Requirements (p. 283)
Degree Requirements (p. 283)

Master of Science in Business Analytics and Master of Science in Marketing
• MS in Business Analytics credits required with dual degree: 50
• MS in Business Analytics credit reduction with dual degree: 8 credits from the original 58 required for the MS in Business Analytics
• MS in Marketing credits required with dual degree: 39
• MS in Marketing credit reduction: 8 credits from the original 47 required for the MS in Marketing
• Minimum number of credits required with dual degree: 89

Master of Science in Business Analytics
Admission Requirements (p. 273)
Degree Requirements (p. 273)

Master of Science in Marketing
Admission Requirements (p. 289)
Degree Requirements (p. 290)

Master of Science in Business Analytics and Master of Science in Real Estate and the Built Environment
• MS in Business Analytics credits required with dual degree: 50
• MS in Business Analytics credit reduction with dual degree: 8 credits from the original 58 required for the MS in Business Analytics
• MS in Real Estate and the Built Environment credits required with dual degree: 40
• MS in Real Estate and the Built Environment credit reduction: 8 credits from the original 48 required for the MS in Real Estate and the Built Environment
• Minimum number of credits required with dual degree: 90
Master of Science in Business Analytics
Admission Requirements (p. 273)
Degree Requirements (p. 273)

Master of Science in Real Estate and the Built Environment
Admission Requirements (p. 348)
Degree Requirements (p. 350)

Master of Science in Marketing and Master of Science in Management
• MS in Marketing credits required with dual degree: 43
• MS in Marketing credit reduction with dual degree: 4 credits from the original 47 required for the MS in Marketing
• MS in Management credits required with dual degree: 45
• MS in Management credit reduction: 0 credits from the original 45 required for the MS in Management
• Minimum number of credits required with dual degree: 88

Master of Science in Marketing
Admission Requirements (p. 289)
Degree Requirements (p. 290)

Master of Science in Management
Admission Requirements (p. 283)
Degree Requirements (p. 283)

Master of Science in Marketing And Master of Science in Real Estate and the Built Environment
• MS in Marketing credits required with dual degree: 43
• MS in Marketing credit reduction with dual degree: 4 credits from the original 47 required for the MS in Marketing
• MS in Real Estate and the Built Environment credits required with dual degree: 40
• MS in Real Estate and the Built Environment credit reduction: 8 credits from the original 48 required for the MS in Real Estate and the Built Environment
• Minimum number of credits required with dual degree: 83

Master of Science in Marketing
Admission Requirements (p. 289)
Degree Requirements (p. 290)

Master of Science in Real Estate and the Built Environment
Admission Requirements (p. 348)
Degree Requirements (p. 350)

Master of Science in Management And Master of Science in Real Estate and the Built Environment
• MS in Management credits required with dual degree: 45
• MS in Management credit reduction: 0 credits from the original 45 required for the MS in Management
• MS in Real Estate and the Built Environment credits required with dual degree: 40
• MS in Real Estate and the Built Environment credit reduction: 8 credits from the original 48 required for the MS in Real Estate and theBuilt Environment
• Minimum number of credits required with dual degree: 85

Master of Science in Management
Admission Requirements (p. 283)
Degree Requirements (p. 283)

Master of Science in Real Estate and the Built Environment

Admission Requirements (p. 348)

Degree Requirements (p. 350)

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

- MBA credits required with dual degree: 56
- MBA credit reduction with dual degree: 4 credits from the original 60 required for the MBA
- MAcc credits required with dual degree: 40
- MAcc credit reduction: 0 credits from the original 40 required for the MAcc
- Minimum number of credits required with dual degree: 96

Master of Business Administration: The Professional MBA Program

Admission Requirements (p. 297)

Degree Requirements (p. 299)

Master of Accountancy

Admission Requirements (p. 356)

Degree Requirements (p. 357)

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

- MBA credits required with dual degree: 52
- MBA credit reduction with dual degree: 8 credits from the original 60 required for the MBA
- MS in Business Analytics credits required with dual degree: 46
- MS in Business Analytics credit reduction: 12 credits from the original 58 required for the MS in Business Analytics
- Minimum number of credits required with dual degree: 98

Master of Business Administration: The Professional MBA Program

Admission Requirements (p. 297)

Degree Requirements (p. 299)

Master of Science in Business Analytics

Admission Requirements (p. 273)

Degree Requirements (p. 273)

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

- MBA credits required with dual degree: 52
- MBA credit reduction with dual degree: 8 credits from the original 60 required for the MBA
- MS in Applied Quantitative Finance credits required with dual degree: 45
- MS in Applied Quantitative Finance credit reduction: 12 credits from the original 57 required for the MS in Applied Quantitative Finance
- Minimum number of credits required with dual degree: 97

Master of Business Administration: The Professional MBA Program

Admission Requirements (p. 297)

Degree Requirements (p. 299)
Master of Science in Applied Quantitative Finance
Admission Requirements (p. 278)
Degree Requirements (p. 279)

Master of Business Administration: The Professional MBA Program and Master of Science in Marketing
- MBA credits required with dual degree: 52
- MBA credit reduction with dual degree: 8 credits from the original 60 required for the MBA
- MS in Marketing credits required with dual degree: 45
- MS in Marketing credit reduction: 2 credits from the original 47 required for the MS in Marketing
- Minimum number of credits required with dual degree: 97

Master of Business Administration: The Professional MBA Program
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Science in Marketing
Admission Requirements (p. 289)
Degree Requirements (p. 290)

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

Master of Business Administration: The Professional MBA Program
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Science in Real Estate and the Built Environment
Admission Requirements (p. 348)
Degree Requirements (p. 350)

Master of Business Administration: The Executive MBA Program and Master of Accountancy in Accounting
- MBA credits required with dual degree: 60
- MBA credit reduction with dual degree: 0 credits from the original 60 required for the MBA
- MAcc credits required with dual degree: 40
- MAcc credit reduction: 0 credits from the original 40 required for the MAcc
- Minimum number of credits required with dual degree: 100

Master of Business Administration: The Executive MBA Program
Admission Requirements (p. 297)
Degree Requirements (p. 299)
Master of Accountancy
Admission Requirements (p. 356)
Degree Requirements (p. 357)

Master of Business Administration: The Executive MBA Program and Master of Science in Business Analytics
- MBA credits required with dual degree: 60
- MBA credit reduction with dual degree: 0 credits from the original 60 required for the MBA
- MS in Business Analytics credits required with dual degree: 46
- MS in Business Analytics credit reduction: 12 credits from the original 58 required for the MS in Business Analytics
- Minimum number of credits required with dual degree: 106

Master of Business Administration: The Executive MBA Program
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Science in Business Analytics
Admission Requirements (p. 273)
Degree Requirements (p. 273)

Master of Business Administration: The Executive MBA Program and Master of Science in Applied Quantitative Finance
- MBA credits required with dual degree: 60
- MBA credit reduction with dual degree: 0 credits from the original 60 required for the MBA
- MS in Applied Quantitative Finance credits required with dual degree: 41
- MS in Applied Quantitative Finance credit reduction: 16 credits from the original 57 required for the MS in Applied Quantitative Finance
- Minimum number of credits required with dual degree: 101

Master of Business Administration: The Executive MBA Program
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Science in Applied Quantitative Finance
Admission Requirements (p. 278)
Degree Requirements (p. 279)

Master of Business Administration: The Executive MBA Program and Master of Science in Marketing
- MBA credits required with dual degree: 60
- MBA credit reduction with dual degree: 0 credits from the original 60 required for the MBA
- MS in Marketing credits required with dual degree: 41
- MS in Marketing credit reduction: 8 credits from the original 47 required for the MS in Marketing
- Minimum number of credits required with dual degree: 101

Master of Business Administration: The Executive MBA Program
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Science in Marketing
Admission Requirements (p. 289)
Master of Business Administration: The Executive MBA Program and Executive Master of Science in Real Estate and the Built Environment

- MBA credits required with dual degree: 60
- MBA credit reduction with dual degree: 0 credits from the original 60 required for the MBA
- Executive MS in Real Estate and the Built Environment credits required with dual degree: 40
- Executive MS in Real Estate and the Built Environment credit reduction with dual degree: 8 credits from the original 48 required for the Executive MS in Real Estate and the Built Environment
- Minimum number of credits required with dual degree: 100

Master of Business Administration: The Executive MBA Program

Admission Requirements (p. 297)

Degree Requirements (p. 299)

Executive Master of Science in Real Estate and the Built Environment

Admission Requirements (p. 348)

Degree Requirements (p. 350)

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

- Executive MS in Real Estate and the Built Environment credits required with dual degree: 48
- Executive MS in Real Estate and the Built Environment credit reduction with dual degree: 0 credits from the original 48 required for the Executive MS in Real Estate and the Built Environment
- MAcc credits required with dual degree: 40
- MAcc credit reduction: 0 credits from the original 40 required for the MAcc
- Minimum number of credits required with dual degree: 88

Executive Master of Science in Real Estate and the Built Environment

Admission Requirements (p. 348)

Degree Requirements (p. 350)

Master of Accountancy

Admission Requirements (p. 356)

Degree Requirements (p. 357)

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

- Executive MS in Real Estate and the Built Environment credits required with dual degree: 40
- Executive MS in Real Estate and the Built Environment credit reduction with dual degree: 8 credits from the original 48 required for the Executive MS in Real Estate and the Built Environment
- MS in Business Analytics credits required with dual degree: 50
- MS in Business Analytics credit reduction: 8 credits from the original 58 required for the MS in Business Analytics
- Minimum number of credits required with dual degree: 90

Executive Master of Science in Real Estate and the Built Environment

Admission Requirements (p. 348)

Degree Requirements (p. 350)

Master of Science in Business Analytics

Admission Requirements (p. 273)
Executive Master of Science in Real Estate and the Built Environment and Master of Science in Applied Quantitative Finance

- Executive MS in Real Estate and the Built Environment credits required with dual degree: 40
- Executive MS in Real Estate and the Built Environment credit reduction with dual degree: 8 credits from the original 48 required for the Executive MS in Real Estate and the Built Environment
- MS in Applied Quantitative Finance credits required with dual degree: 49
- MS in Applied Quantitative Finance credit reduction: 18 credits from the original 57 required for the MS in Applied Quantitative Finance
- Minimum number of credits required with dual degree: 89

Executive Master of Science in Real Estate and the Built Environment

Admission Requirements (p. 348)

Degree Requirements (p. 350)

Master of Science in Applied Quantitative Finance

Admission Requirements (p. 278)

Degree Requirements (p. 279)

Executive Master of Science in Real Estate and the Built Environment and Master of Science in Marketing

- Executive MS in Real Estate and the Built Environment credits required with dual degree: 40
- Executive MS in Real Estate and the Built Environment credit reduction with dual degree: 8 credits from the original 48 required for the Executive MS in Real Estate and the Built Environment
- MS in Marketing credits required with dual degree: 43
- MS in Marketing credit reduction: 4 credits from the original 47 required for the MS in Marketing
- Minimum number of credits required with dual degree: 83

Executive Master of Science in Real Estate and the Built Environment

Admission Requirements (p. 348)

Degree Requirements (p. 350)

Master of Science in Marketing

Admission Requirements (p. 289)

Degree Requirements (p. 290)

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

- Executive MS in Real Estate and the Built Environment credits required with dual degree: 44
- Executive MS in Real Estate and the Built Environment credit reduction with dual degree: 4 credits from the original 48 required for the Executive MS in Real Estate and the Built Environment
- MBA credits required with dual degree: 72
- MBA credit reduction with dual degree: 8 credits from the original 80 required for the MBA
- Minimum number of credits required with dual degree: 116

Executive Master of Science in Real Estate and the Built Environment

Admission Requirements (p. 348)

Degree Requirements (p. 350)

Master of Business Administration: The Denver MBA

Admission Requirements (p. 297)
Executive Master of Science in Real Estate and the Built Environment and Master of Business Administration: The Professional MBA Program

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

Executive Master of Science in Real Estate and the Built Environment
Admission Requirements (p. 348)

Degree Requirements (p. 350)

Master of Business Administration: The Professional MBA Program
Admission Requirements (p. 297)

Degree Requirements (p. 299)

Division of Natural Sciences and Mathematics

Formal Dual Degree Programs

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

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

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

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

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (https://www.du.edu/sites/g/files/Imocq251/files/2018-11/formal_dual_degree_verification_2018-2019.pdf) during the program’s first term. For program details, please contact the school, college or department.

Master of Arts in Geography and Juris Doctor

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

Juris Doctor
Admission Requirements (p. 671)

Degree Requirements (p. 677)

Master of Arts in Geography
Admission Requirements (p. 639)

Degree Requirements (p. 641)
Master of Social Work and Juris Doctor

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MSW credits required with dual degree: 75 quarter credits
- MSW credit reduction: 15 quarter credits from the original 90 required for the MSW
- Minimum number of credits required with dual degree: 155 (80 semester credits and 75 quarter credits)

Juris Doctor

Admission Requirements (p. 671)

Degree Requirements (p. 677)

Master of Social Work

Admission Requirements (p. 414)

Degree Requirements (p. 417)

Master of Social Work and Master of Arts in International Development

- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MA credits required with dual degree: 48
- MA credit reduction: 24 credits from the original 72 required for the MA
- Minimum number of credits required with dual degree: 123

Master of Social Work

Admission Requirements (p. 414)

Degree Requirements (p. 417)

Master of Arts in International Development

Admission Requirements (p. 474)

Degree Requirements (p. 477)

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

- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MA credits required with dual degree: 48
- MA credit reduction: 24 credits from the original 72 required for the MA
- Minimum number of credits required with dual degree: 123

Master of Social Work

Admission Requirements (p. 414)

Degree Requirements (p. 417)

Master of Arts in International Human Rights

Admission Requirements (p. 474)

Degree Requirements (p. 477)

Master of Social Work and Master of Arts in International studies

- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MA credits required with dual degree: 48
- MA credit reduction: 24 credits from the original 72 required for the MA
- Minimum number of credits required with dual degree: 123

**Master of Social Work**
Admission Requirements (p. 414)
Degree Requirements (p. 417)

**Master of Arts in International Studies**
Admission Requirements (p. 474)
Degree Requirements (p. 477)

**Master of Social Work and Master of Legal Studies**
- MSW credits required with dual degree: 75 quarter credits
- MSW credit reduction with dual degree: 15 quarter credits from the original 90 required for the MSW
- MLS credits required with dual degree: 24 semester credits
- MLS credit reduction: 6 semester credits from the original 30 required for the MLS
- Minimum number of credits required with dual degree: 99 (75 quarter credits and 24 semester credits)

**Master of Social Work**
Admission Requirements (p. 414)
Degree Requirements (p. 417)

**Master of Legal Studies**
Admission Requirements (p. 671)
Degree Requirements (p. 677)

**Master of Social Work and Master of Public Health**
- MSW credits required with dual degree: 75 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 90 required for the MSW
- MPH (completed at University of Colorado Anschutz) credits required with dual degree: 33 semester credits
- MPH (completed at University of Colorado Anschutz) credit reduction: 9 credits from the original 42 required for the MPH
- Minimum number of credits required with dual degree: 75 quarter credits completed at the University of Denver, 33 semester credits completed at Colorado School of Public Health at the University of Colorado Anschutz

A student must apply for the MSW and MPH separately and be accepted into each program in order to qualify for the dual degree.

**Master of Social Work**
Admission Requirements (p. 414)
Degree Requirements (p. 417)

**Master of Social Work and Master of Divinity**
- MSW credits required with dual degree: 75 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 90 required for the MSW
- MDiv (completed at Iliff School of Theology) credits required with dual degree: 100 quarter credits
- MDiv (completed at Iliff School of Theology) credit reduction: 20 credits from the original 120 required for the MDiv
- Minimum number of credits required with dual degree: 75 quarter credits completed at the University of Denver, 100 quarter credits completed at Iliff School of Theology

A student must apply for the MSW and MDiv separately and be accepted into each program in order to qualify for the dual degree.

**Master of Social Work**
Admission Requirements (p. 414)
Degree Requirements (p. 417)
Master of Social Work and Master of Arts in Pastoral and Spiritual Care

- MSW credits required with dual degree: 75 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 90 required for the MSW
- MAPSC (completed at Iliff School of Theology) credits required with dual degree: 68 quarter credits
- MAPSC (completed at Iliff School of Theology) credit reduction: 12 credits from the original 80 required for the MAPSC
- Minimum number of credits required with dual degree: 75 quarter credits completed at the University of Denver, 68 quarter credits completed at Iliff School of Theology

A student must apply for the MSW and MAPSC separately and be accepted into each program in order to qualify for the dual degree.

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Master of Social Work and Master in Social Justice and Ethics

- MSW credits required with dual degree: 75 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 90 required for the MSW
- MSJE (completed at Iliff School of Theology) credits required with dual degree: 68 quarter credits
- MSJE (completed at Iliff School of Theology) credit reduction: 12 credits from the original 80 required for the MSJE
- Minimum number of credits required with dual degree: 75 quarter credits completed at the University of Denver, 68 quarter credits completed at Iliff School of Theology

A student must apply for the MSW and MSJE separately and be accepted into each program in order to qualify for the dual degree.

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Master of Social Work and Master of Theological Studies

- MSW credits required with dual degree: 75 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 90 required for the MSW
- MTS (completed at Iliff School of Theology) credits required with dual degree: 60 quarter credits
- MTS (completed at Iliff School of Theology) credit reduction: 12 credits from the original 72 required for the MTS
- Minimum number of credits required with dual degree: 75 quarter credits completed at the University of Denver, 60 quarter credits completed at Iliff School of Theology

A student must apply for the MSW and MTS separately and be accepted into each program in order to qualify for the dual degree.

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Master of Social Work and Master of Public Policy

- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MPP credits required with dual degree: 50
- MPP credit reduction: 10 credits from the original 60 required for the MPP
- Minimum number of credits required with dual degree: 125

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)
Master of Public Policy
Admission Requirements (p. 468)
Degree Requirements (p. 469)

Master of Social Work and Master of Business Administration: The Professional MBA Program
- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MBA credits required with dual degree: 48
- MBA credit reduction: 12 credits from the original 60 required for the MBA
- Minimum number of credits required with dual degree: 123

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Master of Business Administration: The Professional MBA Program
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Social Work: MSW@DENVER and Master of Business Administration: MBA@Denver
- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MBA credits required with dual degree: 52
- MBA credit reduction: 8 credits from the original 60 required for the MBA
- Minimum number of credits required with dual degree: 127

Master of Social Work: MSW@Denver
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Master of Business Administration: MBA@Denver
Admission Requirements (p. 297)
Degree Requirements (p. 299)

Master of Social Work and Master of Business Administration: The Denver MBA
- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MBA credits required with dual degree: 64
- MBA credit reduction: 16 credits from the original 80 required for the MBA
- Minimum number of credits required with dual degree: 139

Master of Social Work
Admission Requirements (http://bulletin.du.edu/graduate/schoolscollegesanddivisions/socialwork/socialwork/#admissionrequirementstext)
Degree Requirements (http://bulletin.du.edu/graduate/schoolscollegesanddivisions/socialwork/socialwork/#programofstudystext)

Master of Business Administration: Denver MBA
Admission Requirements (http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/generalbusiness/#admissionrequirementstext)
Josef Korbel School of International Studies

Formal Dual Degree Programs

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

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

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

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

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (https://www.du.edu/sites/g/files/lmucqz251/files/2018-11/formal_dual_degree_verification_2018-2019.pdf) during the program's first term. For program details, please contact the school, college or department.

Master of Arts in International Development and Master of Social Work

- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MA credits required with dual degree: 48
- MA credit reduction: 24 credits from the original 72 required for the MA
- Minimum number of credits required with dual degree: 123

Master of Social Work

Admission Requirements (p. 414)

Degree Requirements (p. 417)

Master of Arts in International Development

Admission Requirements (p. 474)

Degree Requirements (p. 477)

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

- MSW credits required with dual degree: 75
- MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
- MA credits required with dual degree: 48
- MA credit reduction: 24 credits from the original 72 required for the MA
- Minimum number of credits required with dual degree: 123

Master of Social Work

Admission Requirements (p. 414)

Degree Requirements (p. 417)

Master of Arts in International Human Rights

Admission Requirements (p. 474)

Degree Requirements (p. 477)
Master of Arts in International Studies and Master of Social Work

• MSW credits required with dual degree: 75
• MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
• MA credits required with dual degree: 48
• MA credit reduction: 24 credits from the original 72 required for the MA
• Minimum number of credits required with dual degree: 123

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Master of Arts in International Studies
Admission Requirements (p. 474)
Degree Requirements (p. 477)

Master of Public Policy and Juris Doctor

• JD credits required with dual degree: 80 semester credits
• JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
• MPP credits required with dual degree: 50 quarter credits
• MPP credit reduction: 10 quarter credits from the original 60 required for the MPP
• Minimum number of credits required with dual degree: 130 (80 semester credits and 50 quarter credits)

Juris Doctor
Admission Requirements (p. 671)
Degree Requirements (p. 677)

Master of Public Policy
Admission Requirements (p. 468)
Degree Requirements (p. 469)

Master of Public Policy and Master of Social Work

• MSW credits required with dual degree: 75
• MSW credit reduction with dual degree: 15 credits from the original 90 required for the MSW
• MPP credits required with dual degree: 50
• MPP credit reduction: 10 credits from the original 60 required for the MPP
• Minimum number of credits required with dual degree: 125

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Master of Public Policy
Admission Requirements (p. 468)
Degree Requirements (p. 469)

Sturm College of Law
Formal Dual Degree Programs

A formal dual degree program links two master's degrees or a master's program with a JD program and leads to two degrees. The Graduate Council and the Senior Vice Provost for Research and Graduate Education must approve all proposals for formal dual degree programs.
There are two types of formal dual degree programs. Type one incorporates two distinct disciplines where students complete two separate sets of core courses and reduce electives. Type two incorporates two areas of study within one discipline where students can cross-count a common set of core courses and take separate sets of electives.

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

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

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (https://www.du.edu/sites/g/files/lmucqz251/files/2018-11/formal_dual_degree_verification_2018-2019.pdf) during the program’s first term. For program details, please contact the school, college or department.

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

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

**Juris Doctor**

Admission Requirements (p. 671)

Degree Requirements (p. 677)

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

Admission Requirements (p. 671)

Degree Requirements (p. 677)

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

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

**Juris Doctor**

Admission Requirements (p. 671)

Degree Requirements (p. 677)

**Master of Laws in International Business Transactions**

Admission Requirements (p. 671)

Degree Requirements (p. 677)

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

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

**Juris Doctor**

Admission Requirements (p. 671)

Degree Requirements (p. 677)

**Master of Laws in Science in Legal Administration**

Admission Requirements (p. 671)

Degree Requirements (p. 677)
Juris Doctor
Admission Requirements (p. 671)
Degree Requirements (p. 677)

Master of Science in Legal Administration
Admission Requirements (p. 671)
Degree Requirements (p. 677)

Juris Doctor and Master of Laws in Taxation
- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- LLM credits required with dual degree: 45 quarter credits
- LLM credit reduction: 0 quarter credits from the original 45 required for the LLM
- Minimum number of credits required with dual degree: 125 (80 semester credits and 45 quarter credits)

Juris Doctor
Admission Requirements (p. 671)
Degree Requirements (p. 677)

Master of Laws in Taxation
Admission Requirements (p. 459)
Degree Requirements (p. 460)

Juris Doctor and Master of Public Policy
- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MPP credits required with dual degree: 50 quarter credits
- MPP credit reduction: 10 quarter credits from the original 60 required for the MPP
- Minimum number of credits required with dual degree: 130 (80 semester credits and 50 quarter credits)

Juris Doctor
Admission Requirements (p. 671)
Degree Requirements (p. 677)

Master of Public Policy
Admission Requirements (p. 468)
Degree Requirements (p. 469)

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

Juris Doctor
Admission Requirements (p. 671)
Degree Requirements (p. 677)

Master of Business Administration: The Denver MBA
Admission Requirements (p. 297)
Juris Doctor and Master of Science in Computer Science

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

Juris Doctor
Admission Requirements (p. 671)

Degree Requirements (p. 677)

Master of Science in Computer Science
Admission Requirements (p. 204)

Degree Requirements (p. 207)

Juris Doctor and Master of Science in Healthcare leadership

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MS credits required with dual degree: 36 quarter credits
- MS credit reduction: 12 quarter credits from the original 48 required for the MS
- Minimum number of credits required with dual degree: 116 (80 semester credits and 36 quarter credits)

Juris Doctor
Admission Requirements (p. 671)

Degree Requirements (p. 677)

Master of Science in Healthcare Management
Admission Requirements (p. 791)

Degree Requirements (p. 792)

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

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

Juris Doctor
Admission Requirements (p. 671)

Degree Requirements (p. 677)

Master of Science in Real Estate and the Built Environment
Admission Requirements (p. 297)

Degree Requirements (p. 299)

Juris Doctor and Master of Arts in Geography

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

Juris Doctor
Admission Requirements (p. 671)
Degree Requirements (p. 677)

Master of Arts in Geography
Admission Requirements (p. 639)
Degree Requirements (p. 641)

Juris Doctor and Master of Social Work
• JD credits required with dual degree: 80 semester credits
• JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
• MSW credits required with dual degree: 75 quarter credits
• MSW credit reduction: 15 quarter credits from the original 90 required for the MSW
• Minimum number of credits required with dual degree: 155 (80 semester credits and 75 quarter credits)

Juris Doctor
Admission Requirements (p. 671)
Degree Requirements (p. 677)

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Master of Legal Studies and Master of Social Work
• MSW credits required with dual degree: 75 quarter credits
• MSW credit reduction with dual degree: 15 quarter credits from the original 90 required for the MSW
• MLS credits required with dual degree: 24 semester credits
• MLS credit reduction: 6 semester credits from the original 30 required for the MLS
• Minimum number of credits required with dual degree: 99 (75 quarter credits and 24 semester credits)

Master of Social Work
Admission Requirements (p. 414)
Degree Requirements (p. 417)

Master of Legal Studies
Admission Requirements (p. 671)
Degree Requirements (p. 677)

University College

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

There are two types of formal dual degree programs. Type one incorporates two distinct disciplines where students complete two separate sets of core courses and reduce electives. Type two incorporates two areas of study within one discipline where students can cross-count a common set of core courses and take separate sets of electives.
Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

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

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (https://www.du.edu/sites/g/files/gmucqz251/files/2018-11/formal_dual_degree_verification_2018-2019.pdf) during the program’s first term. For program details, please contact the school, college or department.

**Master of Science in Healthcare Leadership and Juris Doctor**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MS credits required with dual degree: 36 quarter credits
- MS credit reduction: 12 quarter credits from the original 48 required for the MS
- Minimum number of credits required with dual degree: 116 (80 semester credits and 36 quarter credits)

**Juris Doctor**

Admission Requirements (p. 671)

Degree Requirements (p. 677)

**Master of Science in Healthcare Management**

Admission Requirements (p. 791)

Degree Requirements (p. 792)

### Schools, Colleges, and Divisions

**Academic Units**

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

- College of Arts, Humanities and Social Sciences (p. 60)
- Daniel Felix Ritchie School of Engineering and Computer Science (p. 203)
- Daniels College of Business (p. 270)
- DU-Iliff Joint Doctoral Program in the Study of Religion (p. 361)
- Graduate School of Professional Psychology (p. 374)
- Graduate School of Social Work (p. 409)
- Graduate Tax Program (p. 459)
- Josef Korbel School of International Studies (p. 464)
- Morgridge College of Education (p. 531)
- Division of Natural Sciences and Mathematics (p. 621)
- Sturm College of Law (p. 670)
- University College (p. 723)

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

The College of Arts, Humanities, and Social Sciences (CAHSS) is the liberal arts hub of the University of Denver and represents a variety of schools, departments and programs ranging from a PhD in English and Literary Arts to a Master of Arts in Economics to a Master of Arts in Music with concentrations in Music Theory and Musicology. All of these graduate programs are well regarded for academic rigor and post-graduation job placement. With about 340 CAHSS graduate students enrolled, our intimate graduate programs feature small class sizes taught by enthusiastic faculty, many of whom are internationally recognized for their research and creative endeavors. In our interdisciplinary, highly collaborative environment, we strive to foster meaningful partnerships amongst students and faculty, support student research opportunities and provide both theoretical and applied learning opportunities for our graduate community.

**Anthropology**

Office: Sturm Hall, Room 146
The department of anthropology has a research-active faculty who work closely with students on a one-on-one basis. Classes are small, so graduate
students have their own work-spaces. The department has a wealth of archaeological and ethnographic collections in its museum.

Anthropology explains the relationships among biology, culture and the environments in which people live. Anthropology addresses problems such as
the integration of cultural and ethnic diversity, the conduct of international relations, human rights and the management of environmental and cultural
resources. There are three basic options for construction of a master's degree in anthropology: archaeology, cultural anthropology or museum and
heritage studies. Each concentration has its own formal course work, independent study and requirements for graduation.

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

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

**Standardized Test Scores**
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The
institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the
Anthropology program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

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

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

**Standardized Test Scores**
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The
institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Anthropology program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

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

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Anthropology program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Arts in Anthropology with a Concentration in Archaeology

TRACK: Thesis

Degree Requirements

Course Requirements

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<td>ANTH 3630</td>
<td>Archaeological Method and Theory</td>
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<td>ANTH 3660</td>
<td>Anthropological Theory and Context</td>
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<td>ANTH 3875</td>
<td>Research Methods in Anthropology</td>
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<td>ANTH 4000</td>
<td>Advanced Anthropology</td>
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Select at least one of the following Archaeology Courses:

- ANTH 3170 Applied Heritage Management
- ANTH 3390 Geoarchaeology
- ANTH 4040 Historical Archaeology, Theory and Method

Select one Cultural Anthropology Course:

- ANTH 3000 Anthropology of Tourism
- ANTH 3020 Native Religions
- ANTH 3030 Digital Anthropology
- ANTH 3040 Anthropologies of Place
- ANTH 3060 Cultural Narratives
- ANTH 3070 Folklore and Cultural Heritage
- ANTH 3080 Memory and Memorialization
- ANTH 3135 Feasting, Fasting and Food: The Anthropology of Food
- ANTH 3225 Human Rights in Latin America
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<td>ANTH 3310</td>
<td>Indigenous Environment</td>
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<td>Human Rights of Indg Peoples</td>
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<td>ANTH 3360</td>
<td>Cross-Cultural Perspective: Women</td>
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<td>Sex, Class and Race in Latin America</td>
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<td>ANTH 3380</td>
<td>Women and Development</td>
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<td>ANTH 3550</td>
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<td>ANTH 3701</td>
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<td>Ethnographic Methods</td>
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<td>Culture, Ecology, Adaptation</td>
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**Select one Museum Course:**

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<tr>
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<td>ANTH 3040</td>
<td>Anthropologies of Place</td>
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<td>ANTH 3170</td>
<td>Applied Heritage Management</td>
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<td>ANTH 3290</td>
<td>Art and Anthropology</td>
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<td>ANTH 3500</td>
<td>Culture and The City</td>
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<td>ANTH 3661</td>
<td>Museums and their Visitors</td>
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<td>Topics in Anthropology</td>
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<td>Introduction to Conservation</td>
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<td>ANTH 3743</td>
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<td>Critical Perspectives in Museum Studies</td>
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<td>Folklore and Cultural Heritage</td>
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<td>Museum Anthropology</td>
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**Select Electives**  

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<th>Course Code</th>
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**Total Credits**  

48
Minimum number of credits required for the degree: 48

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

Additional Degree Requirements
- Maximum of 10 hours of transfer work
- Minimum GPA: 3.0
- Minimum grade for individual courses counted toward degree: B

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

**TRACK: Master’s Paper**

Degree Requirements

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Select Electives 32

Total Credits 60

Minimum number of credits required for the degree: 60

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

Additional Degree Requirements
- Maximum of 10 hours of transfer work
- Minimum GPA: 3.0
- Minimum grade for individual courses counted toward degree: B

Non-Course Requirements
- Advancement to candidacy
- Master’s paper
- Qualifying examination
- Three-quarters residency as a graduate student at DU
# Master of Arts in Anthropology with a Concentration in Cultural Anthropology

**TRACK: Thesis**

## Degree requirements

### Course requirements

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Select Electives  

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Total Credits 48

**Minimum number of credits required for the degree: 48**

**Additional Degree Requirements**

- Maximum of 10 hours of transfer work
- Minimum GPA of 3.0
- Minimum grade of B for individual courses counted toward degree

**Additional Course Requirements**

- Maximum of 12 quarter hours outside of ANTH prefix
- Maximum 8 quarter hours of ANTH 4991 Independent Study AND/OR ANTH 4995 Independent Research
- Students must take at least half of their courses in cultural anthropology
Non-course requirements
• Advancement to candidacy
• Thesis
• Oral examination
• Qualifying examination
• Three quarters of residency as a graduate student at the University of Denver

**TRACK: Master’s Paper**

**Degree requirements**

**Course requirements**

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Select Electives:  

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Total Credits: 60

Minimum number of credits required for the degree: 60

Additional Degree Requirements:

- Maximum of 10 hours of transfer work
- Minimum GPA of 3.0
- Minimum grade of B for individual courses counted toward degree
### Additional Course Requirements

- Maximum 12 quarter hours outside of ANTH prefix
- Maximum 8 quarter hours of ANTH 4991 Independent Study AND/OR ANTH 4995 Independent Research
- Students must take at least half of their courses in cultural anthropology course work.

### Non-course requirements

- Advancement to candidacy
- Master’s paper
- Qualifying examination
- Three quarters of residency as a graduate student at the University of Denver

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

**TRACK: Thesis**

**Degree requirements**

**Course requirements**

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1 Class is applied/practice oriented course. Students are limited to taking no more than three of these classes (12 credits) to count toward their requirements.
Electives to be taken inside the department, outside the department, or as internship

**Minimum number of credits required for the degree: 48**

**Additional Degree Requirements**

- Maximum of 10 hours of transfer work
- Minimum GPA of 3.0
- Minimum grade of B for individual courses counted toward degree

**Additional Course Requirements**

- Maximum 12 quarter hours outside of ANTH prefix
- Maximum 8 quarter hours of ANTH 4991 Independent Study AND/OR ANTH 4995 Independent Research

**Non-course requirements**

- Advancement to candidacy
- Thesis
- Oral examination
- Qualifying examination
- Internship (can be taken for credit as ANTH 4981 Museum Internship)

**TRACK: Master’s Paper**

**Degree requirements**

**Course requirements**

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**Minimum number of credits required for the degree: 60**

**Additional Degree Requirements**

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**Non-course requirements**

- Advancement to candidacy
- Master’s paper
- Qualifying examination
- Internship (can be taken for credit as ANTH 4981 Museum Internship)

**Courses**

**ANTH 3000 Anthropology of Tourism (4 Credits)**
Considers the interaction of host and visitor cultures in foreign tourism. Explores the effects of tourism on the host culture and the expectations of the visitors. Discusses tourism's relationship to development and the various levels of needs of the tourists.

**ANTH 3001 Race, Sex and Evolution (4 Credits)**
The course examines the paleoanthropology of race and sex. Our focus is on the nature and evolution of human racial differences, sexual anatomy, reproductive strategies, and gender roles. We will consider the history of thinking about race and sex in anthropology and related disciplines, and the uses to which particular conceptions have been put in our culture. We will discuss and evaluate alternative models for explaining the evolution of alleged biological and behavioral differences between racial groups and between men and women. Evaluation will proceed in light of evolutionary theory, comparative primate anatomy and behavior, the human fossil record, and general anthropological knowledge. Our aim is to examine myth and reality in popular and scientific understandings of these aspects of the human condition and, in the end, the social and political (i.e., policy) consequences of this knowledge. Enforced Prerequisites and Restrictions: ANTH 2105.

**ANTH 3020 Native Religions (4 Credits)**
A cross-cultural survey of concepts used to understand and talk about "religion," "the supernatural," and associated behavior among Native peoples of Turtle Island. Topics include healing and techniques of controlling and channeling supernatural power; sacred places and their significance; myths and symbols in their cultural contexts; initiation rites; conceptualizations of male and female deities; and responses of indigenous people to attempted missionization.

**ANTH 3030 Digital Anthropology (4 Credits)**
Digital Anthropology introduces students to computer technology used in anthropological research. Students study and then produce a number of digital products useful in the analysis and interpretation of museum collections, for archaeological mapping and research, and for the dissemination of anthropological knowledge online. This process covers the use of Geographic Information Systems (GIS) for spatial analysis, three-dimensional imaging programs ranging in scale from broad landscape mapping to detailed digital artifact analysis. In addition, the use of geophysical methods for imaging what is below the surface allows students to produce images of what lies below the ground in archaeological contexts.

**ANTH 3040 Anthropologies of Place (4 Credits)**
This class is an exploration of the relationship between people and places from an anthropological viewpoint. We concern ourselves with a variety of ideas about place, emphasizing not just how places are used, but how they infuse themselves into the lives, histories and ethics of those who interact with them. The course readings include book-length anthropological case studies interspersed with interdisciplinary readings about place and landscape. The course includes seminar-style discussions of readings, workshops and observations in the field. On several occasions, we take our class on the road, working together to think about how people and place interact. By the end of the class, each student creates his or her own anthropology of a place. Must be junior standing or above.
ANTH 3060 Cultural Narratives (4 Credits)
Human beings are natural storytellers. Whether reciting oral traditions or recounting personal experience, people everywhere use narratives as a way to express and to understand themselves. This course approaches cultural narratives from two angles. First, it explores the ways that anthropologists, usually trained in the social sciences, make use of and study narratives, whether through ethnographic observation, conducting an interview, gathering folklore or archaeological interpretation. Second, the class investigates narratives that, although produced by non-anthropologists, engage with anthropological issues such as kinship, gender, work, tradition and identity. The narratives range broadly from fiction, to poetry, to film. These two approaches are framed by theoretically informed readings about narrativity, both from the social sciences and the humanities. The class involves intensive reading and writing, as it makes use of both discussion and workshop formats. Each student in the course completes a research and writing project culminating in his or her own cultural narrative. Must be junior standing or above.

ANTH 3070 Folklore and Cultural Heritage (4 Credits)
Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the "folklore process." Prerequisite: Introductory social science course. Cross-listed with ANTH 4070.

ANTH 3080 Memory and Memorialization (4 Credits)
The course focuses on how social groups represent, experience and commemorate the remembered past; it explores issues of construction of memory, particularly how representations of the past and its materialization through monuments, ruins, and landscapes are connected with issues of institutionalized perceptions of national, ethnic, racial and religious identity. Furthermore, it discusses concepts such as "authenticity," "tradition," and "modernity" in the interpretation of cultural heritage and how the interpretation of the past and of culture depend on context (political and historical), experience and point of view. The course aims to develop an interdisciplinary approach to memory and to methodologies and empirical research.

ANTH 3090 God and Giving? Religion and Philanthropy in America (4 Credits)
This course is cross-listed with JUST 3090 and RLGS 3090. The United States is notable for its high levels of religious participation and for its well-established and rapidly expanding nonprofit sector. In this course, we will explore these phenomena from a variety of disciplinary perspectives including anthropology, history, and religious studies in order to understand the intersections of religion and philanthropy. By looking at religious ideologies, social theory, and legal and economic contexts, we will consider how religion, government, and philanthropy shape and are shaped by one another. We will examine a number of case studies including faith responses to Hurricane Katrina, the history of philanthropy in Denver, and U.S.-based religious global giving. We will explore key questions regarding community and social responsibility and ask which actors get to define key societal problems and who is ultimately responsible for responding to these problems.

ANTH 3130 The Archaeology of Gender (4 Credits)
This course examines the ways archaeology can contribute to the study of gender through investigations of the deep through recent past. The class will include readings on gender theory, the uses of archaeological data and specific case studies of engendered lives in the past. Cross listed with GWST 3130.

ANTH 3135 Feasting, Fasting and Food: The Anthropology of Food (4 Credits)
Feasting, Fasting and Food focuses on foodways and food culture. Food and its acquisition and preparation are tied to the historical, social and cultural lives of all peoples. By drawing on historical sources, ethnography and a number of anthropological perspectives, we look at foodways as symbols of identity, culinary tourism, food work as trade or profession, the study of food as art and theater, and food and memory. Prerequisite: ANTH 2010.

ANTH 3155 Native American Resistance in the Digital Age (4 Credits)
Since Europeans first made contact with the Americas five centuries ago, depictions of indigenous peoples have largely been created by and for the colonizers. Only recently have native activists begun to take back control of their image. The course begins with the premise that indigenous peoples have been active producers of their own cultural heritage both before and after European expansion into the Americas. A postcolonial approach will be used to evaluate resistance from a historical standpoint, starting with the colonial period and into the twenty-first century. Primary attention will be placed on the late twentieth century and twenty-first century to better understand how indigenous filmmakers, curators, scientists, healers, artists, and scholars use indigenous knowledge systems to contest Western conceptions of authority. Specific topics include indigenous film and media; indigenous feminisms; the use of indigenous perspectives in natural resource management; indigenous voices in the decolonization of museums; and the role indigenous communities play in educating the public of long-lived environmental contamination of water and other natural resources. The course will be designed to explore the voice and agency of indigenous peoples in each of the aforementioned fields, and to teach the validity of indigenous perspectives. While students will be introduced to indigenous case studies from around the world, primary attention will be given to Native American tribal groups in the United States. Prerequisite: Any ANTH 1000-level course.

ANTH 3170 Applied Heritage Management (4 Credits)
Considers the role of archaeology in preservation and the management of cultural resources in terms of legislation, ethics and practical application, with emphasis of the utility, necessity and reality of doing archaeology today in the public sector. Site report writing, governmental regulations and the business side of archaeology are stressed. Archaeological information from site reports and artifact analysis are compiled and presented in a digital format. Prerequisite: ANTH 2310.

ANTH 3200 Human Origins and Evolution (4 Credits)
Examines the fossil record for human evolution from 6 million years ago to the origin of modern Homo sapiens, including current theories, evidence and controversies. Considers the historical and sociological contexts of human evolutionary studies, popular myths and misconceptions, and alternative scenarios for the future evolution of the human species.
ANTH 3225 Human Rights in Latin America (4 Credits)
This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region's democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today's human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we will explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.

ANTH 3255 Ancient North America (4 Credits)
This course examines the history of American Indian cultures from their earliest archaeological traces on this continent up to and including contact with European explorers and colonists.

ANTH 3290 Art and Anthropology (4 Credits)
Study of the concept of art and its multiple roles in society from a cross-cultural and historical perspective. Commodification of culture through tourism and the global art market; arts of resistance and survival; and cultural expression and community development.

ANTH 3310 Indigenous Environment (4 Credits)
The purpose of this course is to introduce students to particular environmental issues that affect indigenous peoples, including subsistence and economic issues; sacred lands; cultural property dilemmas; and the impact that use of traditional cultural properties by others--including nation-state governments, corporations and tourists--have on indigenous peoples' cultural and social integrity. Particular focus is on one of these issues--travel and particularly "ecotravel" and "ecotourism."

ANTH 3320 Medical Anthropology (4 Credits)
This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

ANTH 3330 Human Rights of Indg Peoples (4 Credits)
This course introduces students to the concept and definition of "indigenous peoples." It covers the history of resistance, revitalization, and assertion of sovereignty by Indigenous peoples, and why the United Nations felt it necessary to adopt a "Declaration on the Rights of Indigenous Peoples" in 2007. It covers how indigenous identities and indigenous rights issues do or do not "fit" with internationally accepted definitions of human rights. The course will concentrate on the intersection of indigenous autonomy with globalization, neo-liberal ideologies, and nation-state policies. Case studies focus on Iroquois, Cree, Mayans, Mapuche, Zapatistas, Maoris, and Sami.

ANTH 3350 Latin American Archaeology (4 Credits)
Covers the prehistory of the Western Hemisphere south of the Mexico-U.S. border, from initial colonization of the hemisphere by Paleo-Indian people, to the origins of agriculture and the rise of civilization. Olmec, Mayan, Aztec, Chavin, Moche and Inca cultures are covered in detail.

ANTH 3360 Cross-Cultural Perspective: Women (4 Credits)
Confronts question about women's lives and women's status in a global perspective. It addresses issues such as why women have been subordinate to men in so many cultures, how one actually measures dominance and subordination, and whether there is some biological basis for gender inequality. Broad theoretical questions on the status of women are discussed and form the basis for the analytical inquiry which follows. Cross-listed with ANTH 4360.

ANTH 3370 Sex, Class and Race in Latin America (4 Credits)
This course uses an intersectional approach to the study of sex, class and race in Latin America. Intersectionality aims at understanding the interlocking relation between sex, class, race and other aspects, and how these are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. In this course we will aim at understanding such history, culture and peoples with a special emphasis on examining their heterogeneity, and aiming at understanding how such heterogeneity is also related with social inequality. We will also examine some contemporary issues such as women's rights, indigenous movements, human rights, migrations, and economy with an emphasis on their manifestations at the intersections of sex, class, and race.

ANTH 3380 Women and Development (4 Credits)
A case study approach to understanding women's status and the problems of combining productive and reproductive responsibilities in developing countries. Cross-listed with ANTH 4380, INTS 3390.

ANTH 3390 Geoarchaeology (4 Credits)
Use of geological methods to interpret archaeological sites, ancient landscape reconstruction, study of environmental change and habitation.

ANTH 3430 Visions, Utopias and Messiahs (4 Credits)
Ghost dance, peyote religion, cargo cults, peasant revolution, charismatic leaders, messianic movements in cross-cultural perspectives; roles played by cultural systems, historical circumstances and social conditions in generating social movements.

ANTH 3460 Peasant Culture and Society (4 Credits)
The problems, evolution, and variable organization of peasant society cross-culturally. Emphasis on causes of persistence and change in economic, social and ideological aspects of peasantry.
ANTH 3470 Applied Anthropology (4 Credits)
The practical application of cross-cultural knowledge and awareness to the solution of social and cultural problems. Ethnographic methodologies, a review of the history of applied anthropology and a consideration of the ideological and ethical components of applied anthropology are covered.

ANTH 3485 Anthropology and Underdevelopment (4 Credits)
Anthropological approach to some of the developing world's most pressing social problems and how anthropologists can make a relevant contribution in confronting, studying and changing the nature of underdevelopment.

ANTH 3500 Culture and The City (4 Credits)
Examines the past and future of the city as a human built environment that reflects and reproduces social, political, economic, and cultural forces and ideals. Begins with the origin of cities in antiquity and ends with contemporary urban landscapes. Analysis is sensitive to both the technologies and aesthetics of urban form. Emphasis is on the possibilities for urban redesign to meet the problems of 21st century city life.

ANTH 3510 The Ancient City (4 Credits)
The archaeological study of ancient cities around the world is a booming and controversial area of research. This course investigates what we know about the nature of the earliest cities in the great original cradles of civilization: Mesopotamia, Asia, Africa, and the Americas. Our focus is on how the first cities were planned, built, and experienced by citizens.

ANTH 3540 The Nature of Language (4 Credits)
Language as social, psychological, cultural phenomenon; relationship between cultures, semantics; language as medium of cultural unification; relationship between dialects, social structure.

ANTH 3550 Africa: Peoples and Cultures (4 Credits)
Survey course in the anthropology of Africa designed to explore the diversity of African people and cultures. The course examines issues of contemporary life in the continent as well as the way it has been portrayed by the media, anthropologists, historians, and writers. Topics such as geography, history, society, politics, religion, ethnicities, and material culture of different regions are central to the discussion.

ANTH 3560 Ethnarchaeology (4 Credits)
Ethnographic data has often been used as an illustrative device to animate archaeological remains, or to develop models of human behavior, regardless of the geographic and chronological distance between the ethnographic and the archaeological data. This course addresses different perspectives and theories concerning the use of ethnarchaeology to complement archaeological information. It aims to define the role of ethnarchaeology in the study of human past; to establish an agenda of issues to which their use is relevant; and to provide a critical overview of major approaches to the use of ethnographic analogies and historical information in archaeology.

ANTH 3600 Anthropological Theory and Context (4 Credits)
History and development of particular schools of thought, paradigms, methods and methodologies that characterize contemporary anthropology. Intellectual, artistic developments, world-wide sociopolitical and economic processes that shaped much of anthropological thinking of the times. Research methods in reconstruction of human history and qualitative ethnolographical research.

ANTH 3610 Museums and their Visitors (4 Credits)
This course is designed to be a comprehensive introduction to museums and their approaches to serving visitors, primarily through exhibitions and education. It examines current research and museum practice as it relates to the museum as an environment for meaningful visitor experiences and learning. The course is organized around the following core issues: (1) What do visitor experiences look like in a museum context? (2) How do museums design for different audience types? (3) What do we learn from assessing visitors' experiences? (4) How do objects, ideas and spaces affect visitor learning and experiences? Cross listed with ARTH 3661.

ANTH 3640 Race and Human Evolution (4 Credits)
Examines the history of thought about the nature and evolution of human racial differences and sexual characteristics, from the mid-19th century to the present day. Considers scientific and popular models for explaining the evolution of racial differences, male-female reproductive behavior and gender roles. These models are examined in light of comparative primate data, ethnographic data and the material record of human evolution. Prerequisite: ANTH 2010.

ANTH 3650 Dynamics of Culture Change (4 Credits)
Considers culture change and the agents of change. Focuses on changes in indigenous cultures around the world resulting from colonialism 1850-1950, forced acculturation, the tension between worldwide economic development and human rights, and the changing nature of the post-colonial world.

ANTH 3660 Anthropological Theory and Context (4 Credits)
History and development of particular schools of thought, paradigms, methods and methodologies that characterize contemporary anthropology. Intellectual, artistic developments, world-wide sociopolitical and economic processes that shaped much of anthropological thinking of the times. Research methods in reconstruction of human history and qualitative ethnolographical research.

ANTH 3670 Quantitative Methods-Anthropology (4 Credits)
The use of statistics in all branches of anthropology; data screening; parametric and nonparametric statistics. Prerequisite: any course in basic statistics.
ANTH 3701 Topics in Anthropology (4 Credits)
Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit.

ANTH 3702 Topics in Anthropology (4 Credits)
Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit.

ANTH 3703 Topics in Anthropology (4 Credits)
Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit. Prerequisite: ANTH 1010.

ANTH 3704 Introduction to Conservation (4 Credits)
Introduction to physical properties of materials found in museum artifacts and specimens. Discusses preventative conservation principles and methods.

ANTH 3742 Museum Exhibit Development (4 Credits)
Introduces general principles of planning, development, production and evaluation of museum exhibits. Explores design elements and methods of evaluation. Students have the opportunity to do exhibit mockups and exhibit evaluation.

ANTH 3743 Managing Collections (4 Credits)
Principles and methods regarding acquisition, documentation, conservation and accessibility of collections. Law, registration methods, computerization, policy, development, ethics and preventive conservation are also discussed.

ANTH 3745 Ethnographic Methods (4 Credits)
In this course, students study the art and science of ethnographic research methods, conduct quarter-long field research projects, and write practice ethnographies. The course requires students to apply the American Anthropological Association’s Code of Ethics in their research and to write Institutional Review Board applications for their projects. Course readings include texts on ethnographic methods as well as controversial and exemplary ethnographic publications for student dissection and debate.

ANTH 3790 Field Methods in Archaeology (4 Credits)
The purpose of this class is to introduce students to archaeological field methods through a combination of readings, lecture, discussion, and hands-on experience. Training begins with issues of archaeological ethics, legal mandates, and research designs. Students then transition to learning skills and methods both in the classroom and in the field. Methods you will learn will include the basics of site survey and mapping, testing, excavation, artifact recovery and field processing, and data recording in the field. Cross-listed with ANTH 2310. Prerequisite: ANTH 2310.

ANTH 3791 Critical Perspectives in Museum Studies (4 Credits)
This course critically explores museums and heritage complexes as sites of cultural production and consumption at different historical moments and in diverse cultural and national settings. Special attention is given to contemporary issues, debates, and approaches in the context of museum anthropology and heritage studies. The term museum is used to include a wide range of heritage projects that do not rely only on the traditional institution established to collect, conserve and exhibit material culture, but includes intangible heritage, historic built environment and event natural environment that was used and marked by human action.

ANTH 3792 Conservation and Computerization (4 Credits)
Principles and methods regarding acquisition, documentation, conservation and accessibility of collections. Law, registration methods, computerization, policy, development, ethics and preventive conservation are also discussed.

ANTH 3795 Research Methods in Anthropology (4 Credits)
This course offers an in-depth introduction to anthropological research methods with the aim of providing students with the tools necessary to design a coherent research proposal. Starting with the notion that anthropological research is a scientific endeavor, the course offers knowledge and skills that allow for a systematic application of qualitative and quantitative methods to respond to research questions. Students will learn when and how to use one method, as well as the implications of doing it. Students will also learn how to critically read research reports that use qualitative, quantitative, or mixed methods. The course is organized in two portions. The qualitative portion will focus on a detailed exploration of the continuum that goes from posing a research question, choosing a methodology, carrying it on, and reporting the results. The quantitative portion is concentrated on collecting numerical data, methods of which are often based on a qualitative understanding of people. Quantitative analysis will present tools used to take readings, acquire data, observations, and other information necessary to test hypotheses about people, cultures and how we can understand them from their material remains. The purpose of the quantitative part of the class is to determine what is statistically significant and what ideas about people are supportable using the scientific method. This course is required for all anthropology graduate students, and suggested for advanced undergraduates who are working on senior theses, and have an interest in anthropological research. The course is also open to non-anthropology students interested in anthropological research.

ANTH 3796 Culture, Ecology, Adaptation (4 Credits)
This course is organized around these concepts: “ecology,” “adaptation,” “landscape,” “technology,” “artifact,” and “architecture.” The course focuses on defining and examining adaptation and the role of culture and technology in achieving adaptations, or in not achieving them. This focus will be especially pursued with respect to the concept of landscape—that is, culturally defined physical space—and the cultural artifacts that interpret and modify it in the course of human adaptation to its ecological components.

ANTH 3797 Context of Material Culture (4 Credits)
Examines how material culture both reflects and actively structures political, economic and cultural life. Considers the relationship between people and their material culture (portable objects, non-portable objects, buildings, socially-created landscapes) in Western, non-Western, ancient, and contemporary cultural contexts. Reading materials draw from the fields of ethnology, archaeology, folklore, geography, history, art and architecture.
ANTH 3981 Museum Internship (1-6 Credits)

ANTH 3990 Summer Field School-Archaeology (4-6 Credits)
Archaeological excavation, survey and recordings; analysis and conservation of artifacts in the field.

ANTH 3991 Independent Study (1-15 Credits)

ANTH 3992 Directed Study (1-10 Credits)

ANTH 3995 Independent Research (1-10 Credits)

ANTH 4000 Advanced Anthropology (4 Credits)

ANTH 4040 Historical Archaeology: Theory and Method (4 Credits)
Because it is the archaeology of periods for which there is also written history, historical archaeology is a dynamic and interdisciplinary field. It also has a distinct set of concerns and methods that builds upon, but does not replicate, those of prehistoric archaeology. This course is designed to engage students in the practice of historical archaeology through readings, discussions, and the hands-on analysis of archaeological materials. The first class of each week is a discussion of readings in historical archaeology. The readings introduce students to theoretical and methodological issues in the discipline, as well as important case studies. Many of the readings have a North American focus, but address international practice. The second class of each week has a hands-on focus. Backed by readings on historic materials analysis, we discuss and practice the types of research historical archaeologists perform on actual materials, focusing on different material types each week. Students in the course each process and analyze a set of materials excavated from a historic site. Cross-listed with ANTH 2040.

ANTH 4070 Folklore and Cultural Heritage (4 Credits)
Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the “folklore process.” Cross-listed with ANTH 3070.

ANTH 4200 Native North America (4 Credits)
Native American cultures north of Mexico. Cross-listed with ANTH 2200.

ANTH 4220 Human Rights in Latin America (4 Credits)
This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region’s democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today’s human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.

ANTH 4290 Art and Anthropology (4 Credits)
This course introduces students to anthropological approaches to the study of art and visual culture. The first part of the course covers foundational work in the field, introducing key concepts as well as methods for viewing and understanding art from a cross-cultural/comparative and interdisciplinary perspective. We examine the relationships among art, technology and the environment, as well as the importance of form, function, style, meaning, and aesthetics in the study of art. The second part addresses issues of contemporary concern in art and anthropology, such as the influence of market forces and tourism on artistic traditions and cultural expressions; the intersection of art and identity; the politics of cultural representation. The course also explores the ethnographic turn in some forms of contemporary art as well as doing ethnography as art.

ANTH 4320 Medical Anthropology (4 Credits)
This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

ANTH 4360 Cross-Cultural Perspectives of Women (4 Credits)
Cross-listed with ANTH 3360.

ANTH 4370 Sex, Class and Race in Latin America (4 Credits)
This course uses an intersectional approach to the study of sex, class and race in Latin America. Intersectionality aims at understanding the interlocking relation between sex, class, race and other aspects, and how these are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. In this course we will aim at understanding such history, culture and peoples with a special emphasis on examining their heterogeneity, and aiming at understanding how such heterogeneity is also related with social inequality. We will also examine some contemporary issues such as women's rights, indigenous movements, human rights, migrations, and economy with an emphasis on their manifestations at the intersections of sex, class, and race.

ANTH 4380 Women and Development (4 Credits)
Case study approach to understanding women’s status; problems of combining productive/reproductive responsibilities in developing countries. Cross-listed with ANTH 3380, INTS 3390.

ANTH 4700 Readings in Anthropology (1-5 Credits)
Directed readings in anthropology under faculty supervision. May be repeated for credit.
ANTH 4701 Special Topics in Anthropology (1-5 Credits)
ANTH 4702 Special Topics in Anthropology (1-5 Credits)
ANTH 4703 Special Topics in Anthropology (1-5 Credits)
ANTH 4704 Special Topics in Anthropology (1-5 Credits)
ANTH 4740 Perspectives-Museum Studies (4 Credits)
ANTH 4744 Museum Anthropology (4 Credits)

This course introduces students to museum anthropology and the ethnography of museums as well as the theoretical and practical sides of museum studies. The course is based on the following premises: Museum anthropology is a form of applied anthropology in which museums are a venue for making anthropological insights and knowledge accessible and relevant to the public; Museums, as institutions of public culture, are a forum for exploring contemporary social issues and concerns; The role of museums in society and civic engagement is at the core of contemporary museum anthropology and Museology.

ANTH 4745 Museum Practicum (2 Credits)
Individually designed practicum in student's area of interest.

ANTH 4981 Museum Internship (1-6 Credits)
ANTH 4991 Independent Study (1-17 Credits)
ANTH 4992 Directed Study (1-10 Credits)
ANTH 4995 Independent Research (1-17 Credits)

Communication Studies

Office: Sturm Hall, Room 200
Mail Code: 2000 E. Asbury Ave., Denver, CO 80208
Phone: 303-871-2385
Email: gradcomn@du.edu
Web Site: http://www.du.edu/comn

The Department of Communication Studies has been a pioneer in speech and communication studies since 1912, offering MA and PhD programs.

Our program takes full advantage of being situated in the state's capital and business center, offering students excellent opportunities to study culture and communication, interpersonal and family communication, and rhetoric and communication ethics.

The graduate program in Communication Studies seeks to identify the ways in which we can better understand who we are as members of cultures, groups and families; examine and critique ideologies and structures that constrain our contact with each other; identify ways to deliberate and reach just decisions in public, organizational and personal contexts; and create the means for dialogue and collaboration in instances of conflict and struggle. Our faculty members work within and across three main areas of expertise, and we encourage our students to combine these areas in novel ways.

Culture and Communication
The area of Culture and Communication investigates the communicative constitution and intersection of difference in its various codifications as culture, race, class, religion, ethnicity, nationality, gender and sexual orientation. Its vision is to promote an ethic of inclusivity, racial and social justice, reciprocity and mutual transformation in the encounter of difference. Courses reflect this emphasis, focusing on the social and performative construction of identity, the politics of representation, performances of affect, identity and community and vernacular and embodied rhetorics, all informed by critical, feminist and queer perspectives on cultural communication.

This area investigates the communicative constitution and negotiation of difference in its various codifications as culture, race, religion, ethnicity, nationality, gender and sexual orientation. Its vision of the goal of intercultural communication is to promote an ethic of inclusivity, racial and social justice, reciprocity and mutual transformation in the encounter of difference. As such, it endeavors to equip students with perspectives, knowledge and skills needed to function in an ethical manner within a global cultural context. Besides introducing students to the history of theorizing and practice in the field, the program seeks to update disciplinary competence to include more fluid and dynamic conceptions of cultural negotiation of difference within the context of trans-border crossings, intensified global interactions and the displacement and movements of populations.

Interpersonal and Family Communication
The area of interpersonal communication explores how human communication works in our everyday lives, specifically, how people interact, and the impact their actions have on relationships between members of dyads, families, groups, social networks and communities. A basic premise of work in this area is that human interaction is fundamental to the construction, development and maintenance of personal and social relationships, and to the organization of social life as we know it today. The curriculum in this area draws from and is grounded in several significant traditions in social science and communication research, namely social-psychological, dialectical and interpretive approaches. Courses focus on current trends and significant contributions to research in interpersonal communication, family communication and research on close relationships.
The objective of study in this area is to facilitate an increased understanding of the communication processes and practices that occur within various contexts of interpersonal and social relationships, such as close, intimate relationships, including friendships, marriages and family relationships. Our primary value commitment is to high-quality relationships. That is, our research and teaching is directed toward discovering and disseminating information about the ways that relationships can be mutually satisfying and constructive—or dissatisfying and destructive.

We emphasize the construction of relationships through communication and recognize that quality relationships can take many forms.

**Rhetoric and Communication Ethics**

The Rhetoric and Communication Ethics area of emphasis is dedicated to the investigation of public communication and is particularly concerned with questions of how ethics and justice are constituted throughout the spectrum of public communication activity. The study of rhetoric and communication ethics at DU is best defined through three intellectual commitments. First, we are committed to developing philosophical accounts of the nature of communicative activity. Second, we are committed to understanding how communicative action works to form and transform our public and civic identities. And third, we are committed to producing reflective criticism of communicative activity in all of its textual and performative modalities.

It is our mission to foster intellectual relationships between faculty and students that will result in research programs capable of describing the normative presuppositions of communication activity, using that knowledge to expose and critique illegitimate and unjust communication behavior and constructing normative models of ethical communicative practice. It is our mission to cultivate teachers dedicated to addressing important public issues in a reasoned, passionate and ethical manner. It is our mission to model a deep commitment to using knowledge of rhetoric and communication ethics to further the public good.

**Doctor of Philosophy in Communication Studies**

**Degree and GPA Requirements**

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

**Prerequisites:**

- Bachelor’s or master’s degree in communication or a related field is required.

**Standardized Test Scores**

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
- This program has minimum GRE score requirements. Minimum overall score for the GRE is 286.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 88
- Minimum TOEFL Score (Paper-based test): 570
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

**Master of Arts in Communication Studies**

**Degree and GPA Requirements**

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

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 3.0 on a 4.0 scale.

**Prerequisites:**
- Bachelor's degree in communication or a related field.

**Standardized Test Scores**
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
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- Minimum TOEFL Score (Internet-based test): 88
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- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

**Doctor of Philosophy in Communication Studies**

**Degree Requirements**

**Coursework Requirements**

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td></td>
<td>Core course requirements (135 graduate-level credits required)</td>
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<td></td>
<td>Research Methods/Tools</td>
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<tr>
<td></td>
<td>Minimum of 8 credit hours of research methods from courses listed below or other courses with permission of advisor</td>
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<tr>
<td>COMN</td>
<td>Performance Ethnography</td>
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<td>Qualitative Methods II</td>
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<td>COMN</td>
<td>Critical Methods for Studying Culture</td>
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<td></td>
<td>Content Seminars</td>
<td>40</td>
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<td></td>
<td>Minimum of 40 credit hours of any 4000-level COMN graduate coursework (or courses outside the department, with advisor approval)</td>
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<td>Tutorials</td>
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<td>12-18 hours of close engagement in scholarly work with a faculty mentor</td>
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<tr>
<td>COMN</td>
<td>Graduate Tutorial in Communication Studies</td>
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<td>Electives</td>
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<td></td>
<td>MA Transfer Credit</td>
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<td>Assumes a 45 hr. credit transfer for the MA degree. If the student does not have an MA, the total hours required for the degree is 135 hours, or if the student has less than 45 hrs. of transfer credit the student will need to take courses to equal 135 hours.</td>
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<td>Total Credits</td>
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1 Registration for COMN 5995 is optional

**Minimum number of credits required for the degree: 135**

**Non-coursework Requirements**

- Tool Requirement: The tool is a methodological rather than a content requirement. This requirement should be met through course work in a methodology that results in advanced knowledge about a method that is related to the dissertation. In addition to recognizing tool requirement options in the traditional sense, (i.e., statistics) the student, in consultation with the dissertation advisor, may petition the faculty for an option
deemed appropriate to the research/investigative requirements of the dissertation. The tool consists of 8–10 credits of course work taken during the PhD program at the University of Denver; transfer hours from the student’s prior MA program cannot be counted toward the tool.

- Periodic Review: After the completion of 10 quarter credits, the PhD student may be advanced to preliminary candidacy. Basis for advancement is the periodic faculty review of the progress of each student.

- Comprehensive Examination: At the end of required graduate course work and preliminary to advancement to final candidacy, the PhD student is required to pass a comprehensive examination. The examination is designed to test the student’s competencies as a scholar. The examination assesses both depth and breadth of knowledge within the discipline by focusing upon both the student’s curriculum emphasis and supporting work in other fields of study. The comprehensive examination offers the doctoral student an opportunity to demonstrate that the student has become an independent, original and mature thinker in the discipline, as a consequence of the research and study engaged in during formal graduate course work.

  - Examination Procedures: Exam preparation and administration will be under the supervision of an examination committee chosen by the student in conjunction with the student’s advisor. The committee will consist of a minimum of three tenure-track faculty members in the department of communication studies. The examining committee chair will, in consultation with the student, convene the committee to prepare the examination and will offer the student guidance in preparation for meeting. (See the department for a more detailed description of comprehensive examination policies and procedures.)

- Dissertation: The PhD student is expected to submit a formal dissertation proposal, write a dissertation and defend the dissertation in an oral defense. No oral defense can be taken in the summer quarters.

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**Master of Arts in Communication Studies**

**Degree Requirements**

**Thesis Track**

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<th>Title</th>
<th>Credits</th>
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<td>Minimum of 8 credit hours of research methods from courses listed below or other courses with permission of advisor</td>
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<td>COMN 4930  Speech and Communication Research - Qualitative Methods</td>
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<td>COMN 4931  Qualitative Methods II</td>
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<td>COMN 4932  Critical Methods for Studying Culture</td>
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<td>28 credit hours of any 4000-level COMN graduate coursework (or courses outside the department, with advisor approval)</td>
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<td></td>
<td><strong>Total Credits</strong></td>
<td>45</td>
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</tbody>
</table>

1. Registration for elective credits is optional
2. Registration for COMN 4995 is optional

**Minimum number of credits required for the degree: 45**

**Non-coursework Requirements**

- Thesis
- Thesis oral defense

**Comprehensive Examination Track**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td><strong>Coursework Requirements</strong></td>
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<td></td>
<td><strong>Research Methods</strong></td>
<td>8</td>
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<tr>
<td></td>
<td>Minimum of 8 credit hours of research methods from courses listed below or other courses with permission of advisor</td>
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<tr>
<td></td>
<td>COMN 4160  Performance Ethnography</td>
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<td></td>
<td>COMN 4900  Quantitative Methods I</td>
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</tbody>
</table>
Courses

**COMN 3130 Organizational Communication (4 Credits)**
This is an applied course, service learning course, based on a consulting model. While the course will extend and enrich the topical and theoretical knowledge developed in COMN 1550 and COMN 2130, the primary purpose of this course will be to help students explore how they can put such knowledge into practice by collectively working with a local non-profit organization to first diagnose and then propose (and, in some cases implement) solutions to an organizational communication problem faced by that organization.

**COMN 3230 Principles of Leadership (4 Credits)**
Roles, functions, behaviors that influence and direct; emphasis on interpersonal effectiveness; theories and methods.

**COMN 3245 Building Group/Team Effectiveness (4 Credits)**
The objectives of this course are to help students acquire a deeper understanding of groups and teams, how they function, and what contributes to their success or failure. It also aims to help students develop the skills and capacities that will allow them to contribute in concrete and significant ways to successful outcomes and satisfying experiences for themselves and others in groups and teams. Cross listed with LDRS 2540.

**COMN 3270 Health Communication (4 Credits)**
This course examines the role of health communication in our everyday lives. We will focus on communication strategies that inform and influence individuals, families and communities in decisions that enhance health. We will also explore the dynamics and impact of health communication between individuals and the health care system such as doctor-patient communication, dissemination of health related information, and the role of mediated communication in examining health communication.

**COMN 3280 Family Communication (4 Credits)**
The purpose of this course is to enhance understanding about communication patterns within families. In this course, we will examine theory/research on the role of communication in creating and maintaining healthy marriages and families. Specifically, we will study communication and the family life cycle, different family forms, family race/ethnicity, power in families, conflict in families, communication and stress in families, and communication in the aging family. The course format includes lectures, discussions, analysis of case studies, and in class applications.

**COMN 3285 Advanced Relational Communication (4 Credits)**
Advanced Relational Communication is intended to increase understanding of relationships from diverse perspectives. The three main perspectives we will investigate show how relationships affect and are affected by their context, the individuals involved, and the relational system. The goals of this course are for students to increase their skill in (1) explaining how knowledge about context, individuals, and relational systems increases understanding of communication processes in a variety of relationships; (2) evaluating critically the information about relationships that we encounter in our everyday lives; (3) asking and investigating questions about real-life relationships.

**COMN 3290 Communication and Aging (4 Credits)**
In this course, we will focus on the communication processes associated with aging. We will explore the implications of aging and how aging affects the process and outcomes social and relational interactions. We will examine communication and aging through interactional processes (intrapersonal, interpersonal and relational) and through context (organization, family, health, and culture). Emphasis will be placed on the theoretical and applied research in communication and aging.

**COMN 3300 Principles of Persuasion (4 Credits)**
This course involves a social scientific approach to persuasion and social influence. Some of the topics included in this approach are the relationship between attitude and behavior; characteristics of the source, message, and receiver of a persuasive appeal; and models and theories that explain the effects of persuasive communication. By the end of the course, students should be able to think more critically about the persuasive messages they encounter in everyday life, to apply theoretical models of persuasion, and to construct persuasive messages.
COMN 3315 Public Deliberation (4 Credits)
During the last two decades public deliberation has emerged as the centerpiece of theoretical and practical accounts of liberal democracy. This course begins by setting out the nature and functions of public deliberation. We will then track how deliberative democrats respect the traditional accounts of inclusion, equality and reason in an attempt to meet the demands of the deep cultural diversity that marks social life in advanced industrial societies. Specifically we will ask if public deliberation as portrayed in these accounts is sufficient to meet these demands or do we need to expand our understanding of political argument to include a diversity of rhetorical practices? And, once we do expand our account of deliberation how does this transform the traditional problematics of both democratic and rhetorical theory?

COMN 3425 Rhetoric and Governance (4 Credits)
An introduction to the works of Michel Foucault and his influence on contemporary rhetorical theory. Permission of instructor is required.

COMN 3435 Rhetoric and Public Life (4 Credits)
An introduction to the conceptual and political history of the public sphere. The course pays particular attention to how the normative assumptions of public communication are affected by the demands of cultural pluralism. Permission from instructor is required.

COMN 3470 Seminar in Free Speech (4 Credits)
This course will survey some of the major conceptual innovations in the justifications of freedom of speech. We will begin with an exploration of the traditional defenses of free speech and then move to a reexamination of those defenses in light of modern communication theory and the challenges of pluralism. In particular we will ask if the justifications of free speech need to be rethought given our understanding of speech as a social force that constitutes identities and values rather than merely expressing private opinions. Moreover, given our understanding of the social force of speech, should we regulate speech that is racist, sexist and seems to erode the foundations of a public culture based on mutual respect and public deliberation over social goods? Can we devise a robust defense of free speech based on its social force that both protects those that may be harmed by antidemocratic discourses and still provides the resources for democratic dissent?

COMN 3500 Advanced Public Speaking (4 Credits)
Theory, preparation, delivery and evaluation of public speeches.

COMN 3680 Gender and Communication (4 Credits)
This course focuses on the interactive relationships between gender and communication in contemporary U.S. society. This implies three priorities for the class. First, the course explores the multiple ways communication creates and perpetuates gender roles in families, media, and society in general. Second, the course considers how we enact socially created gender differences in public and private settings and how this affects success, satisfaction, and self-esteem. Third, the course connects theory and research to our personal lives. Throughout the quarter, the course considers not only what IS in terms of gender roles, but also what might be and how we, as change agents, may act to improve our individual and collective lives. Cross listed with GWST 3680, HCOM 3680.

COMN 3700 Topics in Communication (1-4 Credits)
COMN 3701 Topics in Communication (1-4 Credits)
COMN 3702 Topics in Communication (1-4 Credits)
COMN 3703 Topics in Communication (1-4 Credits)
COMN 3704 Topics in Communication (1-4 Credits)
COMN 3705 Topics in Communication (1-4 Credits)
COMN 3770 Mediated Communication and Relationships (4 Credits)
This course examines how people develop, define, maintain, and manage interpersonal relationships through their use of mediated communication. We will examine communication in relationships that occur through the internet, text-messaging, cell phones, chat rooms, gaming, and virtual communities. This is a seminar type course where students guide and are guided through their own study of mediated relationships.

COMN 3800 Philosophies of Dialogue (4 Credits)
This course explores the philosophies of dialogue of Martin Buber, Mikhail Bakhtin and others in the context of contemporary communication scholarship on ethics, culture, and relationship. Prerequisite: permission of instructor.

COMN 3850 Communication Ethics (4 Credits)
This class is not just about how to be ethical communicators but it is also about how to discover ethics—the good life and care for others, answerability and responsibility—deep within the structures of human communication itself. The course is committed to a mixture of theory and practice but practice is at the heart of the matter. Half of our sessions will be devoted to dialogue or conversation about ethics in life. There we will try to work as close as we can with ethics in our own lived experience. In the other half, we will explore theory: the ethical/philosophical/communicative ground of ethics.

COMN 3991 Independent Study (1-5 Credits)
COMN 3992 Directed Study (1-10 Credits)
COMN 3995 Independent Research (1-10 Credits)
Topics and quarter hours vary. Prerequisite: instructor’s permission.

COMN 4010 Introduction to Graduate Studies (4 Credits)
History of the discipline; noteworthy scholars and publications, current issues in the discipline.
This course will integrate content from the other three area foundations courses and specifically address implications for the study and practice of identity, knowledge, value, social organizations are constructed in and through communicative practices.

### COMN 4020 Communication Studies: Relational (4 Credits)
Recent social science literature in interpersonal communication; emphasis on pragmatics, meta-level perspectives, relational concerns affecting intimacies, friendships, families.

### COMN 4030 Communication Studies: Organizational (3-4 Credits)
Ways in which communicative actions create, maintain, transform terms that define and regulate our practical and passionate attachments to each other; specifically how identity, knowledge, value, social organizations are constructed in and through communicative practices.

### COMN 4100 Seminar: Speech Communication Theory (4 Credits)
Theoretical foundations of communication and language behavior; syntactics, semantics, pragmatics.

### COMN 4110 Theories in Interpersonal Communication (4 Credits)
Selected themes in interpersonal communication, based primarily on theoretical sources, including interaction, relationships, goal achievement, hierarchies, interpersonal change.

### COMN 4120 Comparative Theories in Human Communication (4 Credits)
Selected efforts to construct theories of human communication; lectures, discussions, student presentations of analysis of readings.

### COMN 4130 Seminar in Communication in Human Organizations (4 Credits)
Current problems and issues in organizational communication.

### COMN 4140 Graduate Colloquium (4 Credits)

### COMN 4150 Culture, Ethnicity and Communication (4 Credits)
A cross-cultural approach to investigate communication codes, norms, value dimensions, power, privilege, and relationship issues within national, ethnic, and gender groups.

### COMN 4160 Performance Ethnography (4 Credits)
This seminar provides a theoretical and methodological framework for understanding performance ethnography. This is not a “how to” class; rather, this is a course that examines the theories and perspectives behind performance ethnography as a method and orientation. Among the subtopics that fall within the purview of performance ethnography we will examine will be performative writing, personal narrative, poetic transcription, autoethnography, narrative ethnography, and ethics. This course provides an introduction and broad overview to performance ethnography.

### COMN 4200 Physical Basis of Spoken Language (4 Credits)
The purpose of this course is to provide the student with a comprehensive understanding of the past, current, and evolving legal, policy, and regulatory issues effecting telecommunications, telecommunications-related industries, and the Internet. Laws and policies effecting multichannel television, wireline and wireless telephone companies, and the Internet will be examined in depth. Focus is placed on the role public policy plays in light of a rapidly changing information environment, critical evaluation and understanding of the rationale behind policy and regulatory activity, and the exploration of the various complex problems arising from the evolving information environment and its products.

### COMN 4210 Seminar Interpersonal Communication (4 Credits)
Selected theories applicable to interpersonal communication and their implications.

### COMN 4220 Critical Intercultural Communication (4 Credits)
This seminar explores the key figures and foundational essays in the development of Critical Intercultural Communication. This seminar offers a critical perspective on current theory and research in intercultural communication. We emphasize questions and practices of “diversity” (especially involving race, class, gender, and sexuality) as they manifest in local and global contexts in the United States. The principle objective is to develop a politically informed and self-reflexive praxis in the service of reframing the study of intercultural communication.

### COMN 4221 Culture, Power and Representation (4 Credits)
Central to the production of cultural knowledge about the ‘other’ is the labor of power implicated in all practices of discursive representation. In this course, we will examine the various theories of representation, the racial and gendered production of difference, the relation between discourse and subjectivity, and more generally, the poetics and politics of representation. These topics will be explored within a rich variety of contexts and institutional sites, e.g., in colonial and anthropological discourse, in popular media narratives and consumer culture, in the global deployment of Western theoretical/knowledge productions, among others.

### COMN 4222 Theories of Identity and Subjectivity (4 Credits)
The seminar explores the communicative constitution of cultural, political, and institutional identities. Discussion will range from the historical development of the theoretical discourse on identity and subjectivity to more contemporary theories covering the emergence and transformation of identities in public discursive spaces. Particular attention will be given to theoretical frameworks and methods of inquiry animating research having to do with what is known as the “new cultural politics of difference.” The course ends with a look at the contexts and arenas in which “identity” and “subjectivity” have emerged as critical sites of contestation in the 21st century.

### COMN 4223 Culture and Communication: Contexts and Issues (4 Credits)
This is a capstone course in the foundations sequence for the Culture and Communication Area of Concentration in Human Communication Studies. This course will integrate content from the other three area foundations courses and specifically address implications for the study and practice of intercultural communication in such contexts of study as globalization, transnationalism, diaspora, colonization, immigration, adaptation, localization, corporate, institutional, and situated discourse. In addition current theoretical, research, and application issues and problematics such as multivocality, voice and representation, intersections and contradictions of contradictory identifications, representations, micro and macro forces, and paradigmatic separation and integration will be discussed. Prerequisites: COMN 4220, COMN 4221 and COMN 4222.
COMN 4224 Critical Interpersonal & Family Communication (4 Credits)
This course introduces critical interpersonal and family communication studies, an emergent movement within the larger subfields of interpersonal and family communication. At its heart, critical interpersonal and family communication studies centers issues of power in studies of individuals, relationships, and families. Within the context of this course, students explore critically-oriented interpersonal and family communication theories and methods. Students receive the opportunity to work on a research, teaching, or service-learning project that reflect a critical interpersonal/family approach. Students are challenged to consider critical pedagogies in interpersonal and family communication curriculum and instruction.

COMN 4230 Intercultural Training (4 Credits)
Research and theoretical approaches that examine international/intercultural training and instructional practices about topics such as adaptation, adjustment, competence, conflict and cultural diversity.

COMN 4231 Discourse and Race (4 Credits)
This course looks at race as a discursive formation using the literature in Critical Race Theory that has emerged over the past decade. In analyzing this body of work covering a wide range of themes and diverse theoretical perspectives, we hope to uncover the historic, material, as well as symbolic determinations of the discourse on race that have conspired to sustain a highly racialized system in place.

COMN 4232 Critical Sexuality Studies (4 Credits)
This course takes a critical approach to the study of sexualities by challenging our assumptions and everyday knowledges about identities, gender, sexuality, race, and ethnicity. This course is organized around important and recent publications in the fields of Communication Studies and Sexuality Studies. Rather than simply reiterating the canonical voices such as Foucault and Butler, the course focuses on the voices of queer people of color.

COMN 4240 Seminar: Group Communication (4 Credits)
Small group literature; interpersonal and group communication.

COMN 4250 Seminar: Family Communication (4 Credits)
This course is designed to investigate and explore the communication processes associated with families. Areas of exploration include definitions of family communication and interactional patterns, the impact of life stage on family communication processes, marriage and divorce, parent-child communication, sibling interactions, the child-free family, and the later-life family.

COMN 4251 Advanced Seminar in Family Communication (4 Credits)
This advanced seminar is designed to build on the first seminar in family communication. The course will examine how historic research in the study of families have influenced the field of family communication. Emphasis will be placed on how understanding these classics can influence theory and research in the human communication area of family communication.

COMN 4280 Theories-Group Communication (4 Credits)
Examination, from different theoretical perspectives, of group communication as an area of study; research and application in speech communication discipline.

COMN 4300 Seminar in Persuasion (4 Credits)
Theory, research, special problems in persuasion and attitude change.

COMN 4310 Communication and Collaboration (4 Credits)
A survey of contemporary theories and applications.

COMN 4315 Public Deliberation (4 Credits)
An introduction to the theories and problematics of public deliberation. The course pays particular attention to the demands of inclusion, equality, and public reason as requirements of public deliberation.

COMN 4400 Seminar: Rhetoric Conversation Analysis (4 Credits)
Contemporary contributions to development of rhetorical theory ranging from perspectives on rhetoric offered by various rhetorical theorists to methods of rhetorical criticism.

COMN 4420 Rhetorical Theory (4 Credits)
Contemporary rhetorical theories.

COMN 4425 Rhetoric and Governance (4 Credits)
An introduction to the works of Michel Foucault and his influence on contemporary rhetorical theory.

COMN 4435 Rhetoric and Public Life (4 Credits)
An introduction to the conceptual and political history of the public sphere. The course pays particular attention to how the normative assumptions of public communication are affected by the demands of cultural pluralism.

COMN 4510 Seminar: Speech Communication Theory (4 Credits)
Integration of conceptual theory with behavioral practice in formal public speaking situations through lectures, discussions, performances.
COMN 4520 Rhetoric and Social Movement (4 Credits)
This course is designed to survey the range of humanistic/critical scholarship on social movement in Communication Studies. Whether it has approached “social movements” from a rhetorical perspective, or analyzed the rhetoric within and surrounding social change, social movement rhetoric scholarship is characterized by major theoretical debates. These debates will help focus the seminar’s inquiry, and are summarized by the following questions: Are the received tools of rhetorical theory capable of making sense of the (often) non-normative, un-institutionalized expressions of dissent associated with social change? How are scholars to evaluate the ethics and impacts of social movement rhetoric, given its “inherent” nature as challenging to the status quo? What is a social movement, and what is rhetoric’s proper relationship to it? Is the figure of the “social movement” the most insightful means of understanding social change? What is at stake in retaining or abandoning the “social movement” in rhetorical criticism that seeks to understand and evaluate social change?.

COMN 4530 Critical Theories of Communication II: Nietzsche’s Influence on Contemporary Rhetoric (4 Credits)
In conversation with Classical Rhetorical Theory and Critical Theories I, this course is designed to explore a major philosopher’s influence on rhetoric and communication studies. Friedrich Nietzsche offers and inspires a second trajectory of thinking that allies with, but ultimately diverges from, the Marxist critical project. Broadly, Nietzschean thought echoes the Marxist concern for structural oppression, alienation, and limited consciousness; but it attempts to undermine structural power as much as possible without the tools of structural power (namely, language, values/truth/knowledge, and the subject). We explore this line of critique much more closely, considering how it has materialized in communication scholarship. This course offers a point of departure for explorations of particular theorists.

COMN 4700 Topics in Communication (1-4 Credits)
COMN 4701 Topics in Communication (1-4 Credits)
COMN 4702 Topics in Communication (1-4 Credits)
COMN 4703 Topics in Communication (1-4 Credits)
COMN 4704 Topics in Communication (1-4 Credits)
COMN 4705 Topics in Communication (1-4 Credits)
COMN 4710 Seminar: Nonverbal Communication (4 Credits)
Theoretical and practical exploration of interpersonal role relationships; emphasis on time, space, kinetic, vocal, tactile cues; methodological concerns.

COMN 4760 Linguistic Aspects of Communication Theory (4 Credits)

COMN 4800 Philosophies of Dialogue (4 Credits)
This course explores the philosophies of dialogue of Martin Buber, Mikhail Bakhtin and others in the context of contemporary communication scholarship on ethics, culture, and relationship.

COMN 4850 Communication Ethics (4 Credits)
This course explores the work of Todorov, Bakhtin, Levinas, and Hyde as foundational to communication ethics.

COMN 4890 Philosophy of Communication (4 Credits)
How speech communication is presupposed and/or demonstrated to be related to social reality, language, intersubjectivity by various methodologies used in conducting communication research; special emphasis on exploring presuppositions of recent methodological developments in contrast to more traditional approaches.

COMN 4900 Quantitative Methods I (4 Credits)
Lectures, readings, written assignments that facilitate growth and development of the research scholar.

COMN 4901 Quantitative Methods II (4 Credits)
This course is a continuation of the HCOM 4900 which explored the process of human inquiry, social science paradigms, the development of sound research questions, and strategies and techniques surrounding sampling, measurement and design. This course will expand on the exploration of research design and statistical methods that can be utilized in answering research questions and hypotheses. In addition, we will be collecting data that will be used to help us understand and analyze various statistical strategies.

COMN 4910 Theory Building in Communication (4 Credits)
Steps involved in constructing theory; application of theory building process to communication phenomena.
COMN 4913 Rhetorical Criticism (4 Credits)
Like other research methods in communication studies, rhetorical criticism is a means: It is a pathway through which you may reach a desired end, as well as a set of tools with which you may shape your final work. However, following Nothstine, Blair, and Copeland (1994), "criticism is a process"—a pathway which "rarely travels a straight line to its end" (p. 343), and a toolkit which arrives with ambiguous instructions (at best) for how to make use of its contents to assemble a research project. In the humanistic tradition, rhetorical criticism is an art motivated by the critic's vision and guided by her or his deftness, ingenuity, and perseverance. Moreover, rhetorical criticism is a practical endeavor inspired by important public events of the day and the critic's desire to persuade. The significance of rhetorical criticism is born in public dialogue or debate. In the wake of the "critical turn," rhetorical criticism not only inspires academic colloquia. Through it, critics pursue democracy and social justice. In conversation with performance studies and ethnography, rhetorical critics have started to embrace self-reflexivity, and writing as a method of inquiry (not simply the "reporting on" inquiry once it is "done"). Given its rich scholarly history, and its fluidity as a research method, one could imagine several different ways to approach a seminar in rhetorical criticism. Such a course might use hermeneutics (or the art of interpretation) as its guide, encouraging participants to engage a text and arrive at its deeper meanings. It might take a skills-based approach, cultivating the necessary techniques of the critic, including the abilities to: locate interesting and important rhetorical acts; closely analyze a rhetorical act's symbolic action and richly describe it to readers; contextualize a rhetorical act to invite a deeper understanding of its significance; and place a rhetorical act in conversation with relevant theory to generate productive insights into the human condition. A seminar in rhetorical criticism might also take a historical approach, attending to the ways rhetorical theory has shaped criticism as a method—such an approach would introduce the range of theoretical "tools" available to critics as they approach different rhetorical acts. At the risk (and with the benefits) of complexity, we will draw upon each of these possibilities, enacting an "inventional" approach to rhetorical criticism.

COMN 4915 Discourse Analysis (4 Credits)
An introduction to common theoretical assumptions and methods shared by scholars who study discourse as social interaction, with emphasis on analyzing key features of discourse that are central to their work.

COMN 4920 Communication Research Practicum (4 Credits)
COMN 4930 Speech and Communication Research - Qualitative Methods (4 Credits)
Grounded theory, phenomenology and other non-numerical approaches to research in human interaction.

COMN 4931 Qualitative Methods II (4 Credits)
This course teaches students qualitative data management skills, introduces them to an array of qualitative methods for analyzing naturalistic data, and guides them through the application of these skills to qualitative research projects. Prerequisite: COMN 4930.

COMN 4932 Critical Methods for Studying Culture (4 Credits)
This seminar provides an overview of a variety of critical methodologies (inclusive of the theory of method) for the study of culture. Potential course foci include textual analysis, critical ethnography, personal narrative, oral history, performance writing, and autoethnography.

COMN 4933 Writing Culture (4 Credits)
This seminar serves as a capstone course in the Culture and Communication seminar sequence. Students explore diverse genres used to write about culture. The course aims to help every student find a writing voice by reading excellent writing in diverse genres. By writing and rewriting all term, this course guides students through the process of writing an article centered around culture and communication, following the practices of the field.

COMN 4990 Graduate Tutorial in Communication Studies (2 Credits)
In this course, students will closely engage in scholarly work with a faculty member, with the intention to foster collaboration on mutually beneficial topics. This close collaboration can take many forms, and much like an independent study, it will be designed by faculty and students together. Such collaboration may include: deeper reading of the literature in a particular communicative context; advancing a research project toward presentation and publication (through data collection, data analysis, or/and manuscript revision); pedagogical development (through the development of syllabi, assignments, teaching materials, and educational philosophy). Students will deepen their knowledge base on a topic of significance in the field, advancing scholarly, pedagogical, and/or creative work.

COMN 4991 Independent Study (1-10 Credits)
COMN 4992 Directed Study (1-10 Credits)
COMN 5921 Seminar: Communication Research I (4 Credits)
Design, method, procedure strategies in research. Prerequisite: approved proposal.

COMN 5922 Seminar: Communication Research II (4 Credits)
Design, method, procedure strategies in research. Prerequisite: approved proposal.

COMN 5923 Seminar: Communication Research III (4 Credits)
Design, method, procedure strategies in research. Prerequisite: approved proposal.

COMN 5991 Independent Study (1-10 Credits)
COMN 5992 Directed Study (1-10 Credits)
COMN 5995 Independent Research (1-22 Credits)
Master of Arts in Economics

If you’re looking for a career as a business or government economist, the University of Denver’s master of arts in economics program offers excellent preparation.

Our MA program helps you build the solid skills and respected credentials that employers want. The degree also prepares students for doctoral studies, particularly if they want to explore alternative approaches and develop further insights about economics before entering doctoral programs.

Our department’s strengths include

- Macroeconomics
- Economics of money, banking and finance
- Environmental economics
- Health economics
- International and development economics
- Alternative approaches to economics
- History of economic thought
- Econometrics
- Gender economics
- Economics of technology
- Urban economics

Master of Arts in Economics

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Economics program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.
Master of Arts in Economics

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ECON 3670</td>
<td>Econometrics: Multivariate Regression Analysis for Economists</td>
<td>4</td>
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<tr>
<td>ECON 4020</td>
<td>Adv Macroeconomic Theory</td>
<td>4</td>
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<tr>
<td>ECON 4030</td>
<td>Adv Microeconomic Theory</td>
<td>4</td>
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<tr>
<td>ECON 4050</td>
<td>Origins of Modern Economics</td>
<td>4</td>
</tr>
<tr>
<td>ECON 4993</td>
<td>Thesis Topic Development and Defense</td>
<td>4</td>
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<tr>
<td>ECON 4995</td>
<td>Thesis Research</td>
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Electives

Students choose 5 courses (ECON 3XXX).

Total Credits: 20

Total Credits: 45

1. A grade will be assigned to the completed thesis ECON 4995 Thesis Research and that grade enters into the calculation of the minimum GPA as well.

Minimum number of credits required for the degree: 45

Non-coursework Requirements

- Topic development and defense
- Thesis research
- Oral defense - The student must defend a thesis in an oral exam and pass it, and then must complete whatever revisions the thesis committee suggests.

Grade Requirements

A student must earn a grade of B- or better in each of the required courses (where ECON 4993 only allows for pass/fail). The minimum grade for an individual elective course is C- but the minimum GPA is 3.0.

Courses

ECON 3040 Marxian Political Economy (4 Credits)

An exposition of Marx's theory of value through a detailed reading of Capital, vol. I. Excerpts from other readings by Marx, and some of the relevant secondary literature used. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

ECON 3075 Marxism (4 Credits)

This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx's work, but it is highly recommended. Requires junior standing or above. Cross listed with PHIL 3075.

ECON 3110 European Economic History (4 Credits)

The emergence of capitalism from feudal society; the Industrial Revolution, English capitalism; European industrialization; state and economy in capitalism; 20th-century Europe and the global economy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

ECON 3120 Economic History of the U.S. (4 Credits)

Industrial progress from colonial period to the present time; influence of economic forces in social and political development. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

ECON 3460 Monetary Theory and Policy (4 Credits)

Studies the interaction between money and the economy. Examines the workings of the financial institutions and how they affect the economy. Looks at the questions of what serves as money, what determines interest rates, and how the central bank conducts monetary policy and its effect on the performance of the economy. Restriction: junior standing. Prerequisite: ECON 2030.

ECON 3480 Money & Financial Markets (4 Credits)

Examines workings of the money and financial markets and their relation to the monetary system and to the macroeconomy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

ECON 3500 Economic Development (4 Credits)

Careful re-examination of the works of the prominent development economists of the immediate postwar decades to critically shed light on the treatment of topical development problems by modern economists. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.
ECON 3590 Urban Economics (4 Credits)
Covers topics and issues of economic growth and decline in metropolitan areas, emphasizing urban economic issues. A broad range of policy areas is discussed, including labor market policy, welfare reform, housing policy, racial segregation, transportation, and environmental policy, among others. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

ECON 3600 International Monetary Relations (4 Credits)
Theory, policy, and history of international organization of money and finance; open-economy macroeconomics: balance of payments, exchange rate dynamics, monetary policy effectiveness. Cross-listed with INTS 3600. Restriction: junior standing. Prerequisite: ECON 2030.

ECON 3610 International Trade Theory & Policy (4 Credits)
Examines topical trade issues confronting the United States, policies proposed to tackle them, and the theoretical underpinnings of these policies. Studies how those policies could affect the less developed countries as determined by the environment established under the World Trade Organization. Prerequisite: ECON 2020 or 2030. Recommended: ECON 2610.

ECON 3620 Philosphical Perspectives on Economics and Social Sciences (4 Credits)
This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

ECON 3670 Econometrics: Multivariate Regression Analysis for Economists (4 Credits)
This course develops the foundations of ordinary least squares (OLS) regression analysis and teaches students how to specify, estimate, and interpret multivariate regression models. Students have to apply what they have learned using a popular software package used for econometrics and real data. Special topics also covered include regression models that include dummy variables, log-linear models, fixed effects models, a brief discussion of instrumental variables, and an introduction to time-series analysis and forecasting. Prerequisites: ECON 2670 and either ECON 2020 or ECON 2030. Restriction: Junior standing.

ECON 3740 Health Economics (4 Credits)
This course is designed to study the nature of the organization of health care production, delivery and utilization according to economic theory. It introduces the up-to-date problems and issues in the U.S. health care system by studying demand for and supply of health care services, health care production and costs, and market analysis of health care industry. Important parties playing roles in health care industry such as private health insurance firms, physicians, pharmaceutical industry, and hospital services will be studied in detail. In addition, the course deals with the role of government in health care industry and various health care reforms proposed in the U.S. Restriction: Junior standing. Prerequisite: ECON 2020 or 2030.

ECON 3830 Topics in Macroeconomics (4 Credits)
Coverage varies but may include advanced topics in monetary theory, the study of business cycles, or the works of important monetary and macroeconomic theorists. Restriction: Junior standing. Prerequisite: ECON 2030.

ECON 3850 Mathematics for Economists (4 Credits)
Restriction: junior standing. Prerequisite: ECON 2020 and 2670.

ECON 3900 Growth, Technology and Economic Policy (4 Credits)
This course will introduce students to the important issues related to technological change and how it relates to economic growth. The lectures seek to explain how technology and innovation determine growth and development with special emphasis on learning-by-doing, organizational capability, appropriation and spillover effects. The core topics that will be covered include: (1) origins of new technology and its market introduction, (2) the process of technological adoption and advancement, (3) the dissemination of technology and innovations within and cross firms, industries and countries, (4) the impacts of technological change, including benefits and costs, on individual and society at large and (5) policy implications to promote innovation and to reduce its negative effects. The rest of the course will focus on the relationship of technological change to human development, social welfare, as well as prior experiences of industrialized economies and emerging economies. Prerequisites: ECON 2020 and junior standing.

ECON 3970 Environmental Economics (4 Credits)
This course examines economic perspectives of environmental and resource problems, ranging from peak oil, food crisis, and climate change. Topics include the property-rights basis of polluting problems, environmental ethics, benefit-cost analysis, regulatory policy, incentive-based regulation, clean technology, population growth and consumption, and sustainable development. Restriction: junior standing. Prerequisite: ECON 2020.

ECON 3991 Independent Study (1-8 Credits)
Prerequisites: ECON 1030.
ECON 3992 Directed Study (1-10 Credits)
ECON 3995 Independent Research (1-4 Credits)
This research project is based on a topic that the student picks in consultation with the chair of the economics department. During the consultation process a faculty supervisor is assigned to work with the student throughout the research process. The topic is preferably one that requires the student to demonstrate her/his ability to apply what she/he has learned in the intermediate-level required courses for the economics major. Restriction: senior standing.

ECON 3996 Senior Paper Research (2-4 Credits)
This research project is based on a topic that the student picks in consultation with the chair of the economics department. During the consultation process a faculty supervisor will be assigned to work with the student throughout the research process. The topic is preferably one that requires the student to demonstrate her/his ability to apply what she/he has learned in the intermediate-level required courses for the economics major. Restriction: senior standing.

ECON 4020 Adv Macroeconomic Theory (4 Credits)
Determinants of national income and its components and of the level of employment and the general price level; also examines business cycles and alternative macroeconomic theories.

ECON 4030 Adv Microeconomic Theory (4 Credits)
The orthodox microeconomic approach to determining prices and income distribution in competitive general equilibrium based on utility and profit maximization of consumers and firms; alternative theories of value and distribution.

ECON 4050 Origins of Modern Economics (4 Credits)
This course covers the development of economic theory from the decline of the classical school through the emergence of the Keynesian theory and investigates in detail the structure of the neoclassical theory and the degree to which Keynesian economics provides an alternative. We examine why economists thought that certain theoretical frameworks were better than others and what problems skill remain.

ECON 4991 Independent Study (1-10 Credits)
ECON 4992 Directed Study (1-10 Credits)
ECON 4993 Thesis Topic Development and Defense (4 Credits)
This resembles an independent-study where a student will work under the supervision of a professor. The aim is to encourage the student, as s/he completes a certain number of hours of course work, to actively formulate and develop her/his thesis topic, and to formally present and defend it in a thesis workshop scheduled by the Department. A minimum of 20 credit hours of graduate-level course work must be completed. Instructor's permission required.

ECON 4995 Thesis Research (1-10 Credits)

Emergent Digital Practices

Office: Sturm Hall, Room 216
Mail Code: 2000 E. Asbury Ave., Denver, CO 80208
Phone: 303-871-7716
Email: edp@du.edu
Web Site: www.du.edu/ahss/edp

The MA in Emergent Digital Practices combines the pursuit of advanced, investigatory technical media skill-sets with focused research agendas contextualized within a broad liberal arts and digital humanities framework. The MFA in Emergent Digital Practices emphasizes methods and production of creative scholarly research and works shaped by broader art historical and cultural contexts. Students in both of the graduate degree threads of the EDP program will share key critical, theoretical, and historical resources, will be expected to excel in areas of creative expression and hands-on media production, and will be asked to acquire specialized investigatory skills. Students will learn to work together by utilizing advanced technical platforms and facilities combined with opportunities for heightened critical reflection and dialog.

EDP graduate students should strive to develop critical awareness, to articulate deep media literacies, to sustain new creative practices, and to foster outlooks engaged with the world around us. While invested in participatory forms of creation, performance, and interactivity, EDP graduate students are expected to engage in technical experimentation outside the realm of industry standards and creative, as well as critical, undertakings that surpass the limits of single disciplines. Students are also expected to be able to articulate the critical underpinnings of the things they devise and create through writing and speaking.

Advanced study in EDP will add scholarly and professional depth to the multiple artistic and cultural practices—both mainstream and alternative—that have developed alongside the powerful, networked, and mobile computing technologies of the 21st century. Advanced research in EDP will provide students with an awareness of broad contexts as well as definitive, professional-level focus and in-depth knowledge of the strategies and collaborative processes for complex, interdisciplinary cultural engagement.
Master of Arts in Emergent Digital Practices

The EDP MA degree at the University of Denver is unique in that it asks the student to balance the technical and the critical, the practical and the aesthetic. The MA degree is structured to build upon the body of knowledge each student already possesses from his/her undergraduate studies and expand and explore the consequence and possibilities that arise from the inclusion of technology into that field.

The MA student should be able to articulate and demonstrate advanced perspectives on emergent digital practices within interdisciplinary contexts. The MA student should also be able to synthesize knowledge of ideas and practices from across the spectrum of historical and contemporary contexts, focusing not just on making the new, but making the needed. And the MA student’s work should demonstrate accomplished means and mechanisms for critically evaluating the cultural dynamics of emergent digital practices.

The MA degree is designed around a two-year coursework structure with two courses being taken during each of the three regular quarters per year and then students have up to three years to complete the non-coursework requirements. It is not unusual for students to be able to have a part-time job (up to 20 hours/week) and still be successful on the program.

Master of Fine Arts in Emergent Digital Practices

Envisioning and actualizing artworks created with the latest technology — fueled by critical content — that’s the EDP MFA program.

While also demonstrating an understanding of Emergent Digital Practices within interdisciplinary contexts, the MFA student should be able to articulate a deep understanding of the art historical and contemporary contexts of art making, especially as they are being shaped by technology and the sciences. The MFA student should be prepared for public engagement through knowledge of the significance of established cultural institutions and frameworks such as galleries, museums, festivals, and other public spaces.

The MFA degree is structured as three years of coursework with students taking an average of three courses during each of the three normal quarters per year and then having up to two years to complete the non-coursework requirements. It is recommended that students pursuing the MFA degree are able to focus full time on their studies without simultaneous employment. The MFA degree is considered a “terminal degree” providing the necessary credentials to teach at an institute of higher education.

Master of Arts in Emergent Digital Practices

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Fine Arts in Emergent Digital Practices

Degree and GPA Requirements

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

**Prerequisites:**
- The recommended undergraduate degree is a bachelor of fine arts degree (BFA) in design or studio arts practices with a strong foundation in both traditional and electronic practices. Students with a BA in art or design should have at least 24 credit hours of studio courses such as photography, electronic art, ceramics, painting, drawing, printmaking, sculpture, textiles, etc. as documented in their transcripts. Students with undergraduate degrees other than a BFA may be required to take prerequisite courses at the undergraduate level as a condition of admission.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

**Master of Arts in Emergent Digital Practices**

**Degree Requirements**

**Coursework Requirements**

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
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<td>Graduate Foundations</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>EDPX 4000</td>
<td>Digital Design Concepts</td>
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<td>Emergent Digital Cultures</td>
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<td>EDP Electives</td>
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<tr>
<td>Select at least 1 EDP Studio and at least 1 EDP Cultures</td>
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<tr>
<td>Courses meeting Studio/Making requirement:</td>
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<td>EDPX 4100</td>
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<tr>
<td>EDPX 4200</td>
<td>Data Visualization</td>
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<td>EDPX 4210</td>
<td>Typographic Landscapes</td>
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<td>EDPX 4250</td>
<td>Making Networks</td>
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<td>EDPX 4270</td>
<td>Making Networked Art</td>
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<td>Tangible Interactivity</td>
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<tr>
<td>EDPX 4460</td>
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<tr>
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<td>Expanded Cinema</td>
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<td>EDPX 4500</td>
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<td>Sonic Arts II</td>
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</table>
EDPX 4520  Voice and Sonic Environments
EDPX 4600  3D Modeling
EDPX 4610  3D Animation
EDPX 4620  3D Spaces
EDPX 4800  Topics in Digital Making
EDPX 4991  Independent Study ¹
EDPX 4992  Directed Study ¹

Courses meeting the Cultures requirement:
EDPX 4700  Topics in Digital Cultures
EDPX 4725  Activist Media
EDPX 4740  Performance Cultures
EDPX 4750  Sound Cultures
EDPX 4770  Cybercultures
EDPX 4780  Speculative Cultures
EDPX 4991  Independent Study ¹
EDPX 4992  Directed Study ¹

Research and Methods credits
EDPX 5700  Research & Theoretical Methods  4

Other credits
EDPX 5800  M.A. Thesis  4-8
or EDPX 5850  M.A. Project

Total Credits Required  48

¹ Depending on topic or focus

Minimum number of credits required for degree: 48

Non-coursework Requirements
• Thesis Requirement: The final form of the published thesis is a combination of a project and a thesis that are conceptually interconnected. Successful completion of the oral defense

OR

• Major Research Paper Requirement: The final form of the major research paper is a combination of a project and a major paper that are conceptually interconnected.

Master of Fine Arts in Emergent Digital Practices

Degree Requirements

Coursework Requirements

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<tr>
<td></td>
<td><strong>Art History/Grad Seminar/Grad EDP Cultures</strong></td>
<td>24</td>
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<td>12 hours of ARTH maximum</td>
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<td>EDPX 5000</td>
<td>Graduate Seminar</td>
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<td>ARTH 3834</td>
<td>Contemporary Art</td>
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<td><strong>EDP Cultures courses:</strong></td>
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**EDPX 4992**  
Directed Study

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| **EDPX 5700**  
Research & Theoretical Methods |

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<th>Grad Critique credits</th>
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| **EDPX 5100**  
Graduate Critique |
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Graduate Critique |
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Graduate Critique |

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| **EDPX 4110**  
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| **EDPX 4115**  
Game Design: Paper to Digital |
| **EDPX 4120**  
Making Critical Games |
| **EDPX 4130**  
Making Educational Games |
| **EDPX 4200**  
Data Visualization |
| **EDPX 4210**  
Typographic Landscapes |
| **EDPX 4250**  
Making Networks |
| **EDPX 4270**  
Making Networked Art |
| **EDPX 4310**  
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| **EDPX 4510**  
Sonic Arts II |
| **EDPX 4520**  
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| **EDPX 4600**  
3D Modeling |
| **EDPX 4610**  
3D Animation |
| **EDPX 4620**  
3D Spaces |
| **EDPX 4800**  
Topics in Digital Making |
| **EDPX 4991**  
Independent Study

<table>
<thead>
<tr>
<th>Exhibition credits</th>
<th>12</th>
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</table>
| **EDPX 5900**  
MFA Exhibition |

Total Credits  
92

Depending on topic or focus

**Minimum number of credits required for the degree: 92**

**Non-coursework Requirement**

*Exhibition:* Additionally the MFA graduate student should be prepared for the development and organization of emerging venues for the exhibition of, and public engagement through, digital art works and new media. The final form of the MFA exhibition is the creation and public off-campus showcase of a significant body of work coupled with a written analysis of the past present and future of connected ideas, inspirations and critical theories.
Courses

EDPX 4000 Digital Design Concepts (4 Credits)
An introductory course requiring conceptual, perceptual and manual skills to meet rigorous studio research into the history of mark-making, letter forms and layout designs as reflective of cultural, social, political and psychological contexts of interpretation. This class also emphasizes 2-D principles of design, including form, structure, conceptual understanding, visual aesthetics, semiotics, organizational systems, relationships of typography and imagery. Lab fee.

EDPX 4010 Emergent Digital Tools (4 Credits)
This course serves as a primer on the tools essential to expression, sharing, and creation in digital mediums. This includes knowledge of web technologies, creative coding, video, audio, and the basic historical and theoretical contexts of each. Lab fee.

EDPX 4020 Emergent Digital Cultures (4 Credits)
This course familiarizes students with current crucial approaches to understanding digital media and the impacts these media have in personal, community, cultural, social, institutional and international life. The course pays particular attention to cultural constructions of emergent digital media and practices. This course introduces graduate students to a variety of disciplinary lenses and conceptual practices, with readings and research ranging from media theory and studies, philosophy of technology, media archaeology and history, to science fiction studies as approaches to digital media and cultures.

EDPX 4100 Programming for Play (4 Credits)
This course offers an introduction to the creation of games and playful interactive objects. Students explore the space of socially conscious and humane games as well as investigate the creation of compelling interfaces and interactive opportunities. Cross listed with EDPX 3100. Prerequisites: EDPX 4000 and EDPX 4010, or permission of the instructor.

EDPX 4110 Rapid Game Design and Prototypes (4 Credits)
This course is a rigorous investigation into games, rules, systems, interaction, and the iterative design methodology through the rapid creation of paper-based and physical game prototypes. The ambition is for each student to create one new game per week in response to varying material and conceptual constraints. Participants create and constructively critique games created by classmates. Participants are expected to become reflective in their play. Class time is devoted to play-testing and discussion. Lab fee. Cross listed with EDPX 3110.

EDPX 4112 Rapid Physical Game Design & Prototyping (4 Credits)
This course is a rigorous investigation into games, rules, systems, interaction, collaboration, and the iterative design methodology through the rapid creation of large, human scale, “Big Games.” The ambition is for students, working in changing collaborative groupings, to rapidly create games in response to varying material and conceptual constraints. Participants will both create and constructively critique games created by classmates. Participants are expected to become reflective in their play. Class time will be devoted to play-testing and discussion. Prerequisite: EDPX 4000. Lab fee.

EDPX 4115 Game Design: Paper to Digital (4 Credits)
This rigorous game design and development course analytically considers formal game design elements through game design and simple 2D game creation exercises, game design text readings, the creation of paper-based game prototypes, digital game-mechanic prototypes, and the followed by the creation of a complete 2D digital game. Class time is devoted to reading discussions, design exercises, play-testing, and some workshopping time. Lab fee. Prerequisite: EDPX 4100 or permission of the instructor.

EDPX 4120 Making Critical Games (4 Credits)
This course is a time intensive practicum offered once a year and may be available in Summer terms. Students are challenged to create games (board, physical, video-, and hybrid games) that respond to social conditions in a critical manner while still maintaining an essential ludic quality. Public Good and Civic Engagement projects are welcomed. The course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisites: EDPX 4100 and EDPX 4110 or permission of the instructor. Cross listed with EDPX 3120.

EDPX 4130 Making Educational Games (4 Credits)
This course is a time intensive practicum offered once a year and may be available in summer terms. Students are challenged to create games (board, physical, video-, and hybrid games) that deliver K-12 educational content while still maintaining an essential ludic quality. Course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisites: EDPX 4100 and EDPX 4110 or EDPX 4115, or permission of the instructor.

EDPX 4200 Data Visualization (4 Credits)
This course explores the creation of informational graphics for visual unpacking of relationships within and among data sets. Students learn to visualize large data sets as a means of revealing and exploring patterns of information. Creating interactive visualizations is also covered, allowing for deep and participatory engagement with information. The resulting mediums include print and web. Lab fee. Cross listed with EDPX 3200. Prerequisites: EDPX 4000 and EDPX 4010 or permission of the instructor.

EDPX 4210 Typographic Landscapes (4 Credits)
This class is a rigorous investigation of the expressive potential of typography as a crucial element of visual expression and electronic media. This class presumes no background in typography. Students are guided through project-based explorations that range from hand-rendered inter-letter spatial relationships to the typesetting of modest sets of pages for paper and e-books. Lab fee. Prerequisite: EDPX 4000 or permission of the instructor.
EDPX 4250 Making Networks (4 Credits)
This course provides students with the skills necessary to establish network presence across a range of platforms and technologies. Current web technologies and standards are covered but an emphasis is placed on identifying emerging platforms and developing innovative methodologies for critical engagement with emergent digital practices. Technologies studied may include content management and delivery systems, web APIs, big data, digital mapping platforms, data visualization, augmented reality and locative media. Prerequisite: EDPX 4010 or instructor permission. Lab fee. Cross listed with EDPX 3250.

EDPX 4270 Making Networked Art (4 Credits)
In this course networked art is understood in the broadest sense from art that natively exists on digital networks to art that critiques and engages with the concept of the network in contemporary society. This course aims to develop a critical understanding of and response to the social, cultural, aesthetic and technical contexts of network culture, building on a deep understanding of contemporary and historical networked art practices. Students will engage with network architectures and platforms developing experimental approaches to user interface and interaction, deploying a range of digital materials from data to rich multimedia content to create work that produces new understandings of the role of the network in a post digital age. Prerequisite: EDPX 4250, or permission of the instructor. Lab fee. Cross listed with EDPX 3270.

EDPX 4310 Tangible Interactivity (4 Credits)
Explores methods and devices for human-computer interaction beyond the mouse and keyboard. Students learn to create and hack electronic input and output devices and explore multi-touch augmented reality, and other forms of sensor-based technologies. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor.

EDPX 4320 Interactive Art (4 Credits)
This course expands the concepts, aesthetics, and techniques critical to the exploration and authoring of interactive art. It explores human computer interactions; user/audience interface design/development; interactive logic, author-audience dialogue; meta-data/multimedia asset acquisition and authoring environments. While utilizing students' skills in numerous media forms, the class focuses on sensing, interactive scripting techniques, and emerging forms of digital narrative. Emphasis is on the development of interactive media deployment and distributions ranging from screen media to physical environments. Lab fee. Cross listed with EDPX 3320. Prerequisites EDPX 4310 or EDPX 4450.

EDPX 4340 Designing Social Good (4 Credits)
This course focuses on interdisciplinary approaches to artistic, scholarly and cultural methods for creating change in contemporary societal mindsets for a more sustainable and equitable future. Our objectives are to understand how current practices are reinforced and to then make experiences that encourage new ideas in the personal and global sphere. Lab fee. Cross listed with EDPX 3340. Prerequisites: EDPX 4000 and EDPX 4010.

EDPX 4350 Sustainable Design (4 Credits)
This course reviews and implements advanced sustainable design strategies as a praxis intersecting the domains of digital media design, dissemination, community organization and networking. The course builds upon the basic paradigms that have coalesced in the organizational and critical platforms of the sustainable design movement including ecology/environment, economy/employment, equity/equality and education/ pedagogy/dissemination. The class reviews a wide spectrum of sustainable design strategies including: mapping of consumptive origin-thru-fate, green materials usage, creative commons, open source software/hardware movements, collaborative design, predictive complexity modeling, biomimicry, evolutionary design methods, and greening infrastructure, among others. Lab fee. Prerequisite: EDPX 4000 and EDPX 4010 or permission of the instructor.

EDPX 4400 Video Art (4 Credits)
This course continues the investigation of theories and practice of electronic media and expands into an exploration of video art, providing the basic principles of video technology and independent video production through a cooperative, hands-on approach utilizing various video formats. The course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor. Cross listed with EDPX 3400.

EDPX 4410 Advanced Video Art (4 Credits)
This course continues the investigation of theories and practices of electronic media and expands into an individual exploration of video art focusing on "off-screen" time-based media through conceptual and technological experimentation. Projects explore creating digital video for projection into spaces, onto buildings, and in the form of installations, to name a few formats. Projects are used as a platform for creative expression focusing on the critical skills necessary for the conception and completion of ideas. Lab fee. Prerequisite: EDPX 4400 or permission of instructor.

EDPX 4430 2.5D Motion (4 Credits)
This course provides students an opportunity to create multi-dimensionally active poetic orchestrations of text, video and audio using the post-production processing and animation tool, After Effects. Lab fee. Prerequisite: EDPX 4010. Cross listed with EDPX 3430.

EDPX 4440 Site-Specific Installation (4 Credits)
This class produces projects investigating physical space, virtual space and site-specific public installations. Lab fee. Cross listed with EDPX 3440. Prerequisites: EDPX 4000 and EDPX 4010.

EDPX 4450 Visual Programming (4 Credits)
This course introduces intuitive visual "programming" that allows rapid building of personalized tools for data, video, image, and sound manipulation. These tools can be used in real-time editing or performance, complex effects processing, or to bridge between multiple pieces of software. Lab fee. Cross listed with EDPX 3450. Prerequisite: EDPX 4010 or permission of the instructor.
EDPX 4460 Visual Programming II (4 Credits)
This class uses advanced visual programming concepts (as provided by Max/MSP and Jitter) to explore visualization and sonification techniques in an artistic context. Areas of exploration include OpenGL modeling and animation, virtual physics emulation, audio synthesis techniques, and external data manipulation. Students use these concepts to create art installation and performance projects. Lab fee. Cross listed with EDPX 3460. Prerequisite: EDPX 4450.

EDPX 4490 Expanded Cinema (4 Credits)
This course introduces several forms of expanded cinema, such as video remixes and mashups; live cinema and audiovisual performance; VJing; sonic visualization; visual music; and ambient video. The class extends the student's multitrack video and audio mixing skills to an emphasis on both performance and generative approaches to audiovisual media. It introduces software and hardware sets including VJ tools and visual programming for generating as well as manipulating video files and real-time source streams. Lab fee. Cross listed with EDPX 3490. Prerequisite: EDPX 4010 or permission of the instructor.

EDPX 4500 Sonic Arts (4 Credits)
This class introduces the tools and techniques of the sonic arts, including field recording; sampling and synthesis; sound editing and effects processing; and mixing. Students survey a variety of sonic arts, historical and contemporary, to understand techniques and strategies for developing and distributing sonic artifacts. Lab fee. Cross listed with EDPX 3500. Prerequisite: EDPX 4010 or permission of the instructor.

EDPX 4510 Sonic Arts II (4 Credits)
This class extends and applies the techniques and theories of the sonic arts to include loop-based composition, generative creation and modular processing. Students learn to add richness and complexity to audio work based on a combination of modern and classic techniques for audio production and the sonic arts. Class assignments include creation of audio for video and games, live performance and installations. Lab fee. Prerequisite: EDPX 4500 or permission of the instructor.

EDPX 4520 Voice and Sonic Environments (4 Credits)
This course covers environmental sound design with an emphasis on the human voice and acoustic ecologies. Studying and exploring a range of documentary, narrative and experimental approaches to sound design and the spoken word, students write and produce several short audio pieces. The final consists of a podcast, voice-oriented performance and/or sonic installation. Lab fee. Prerequisite: EDPX 4500 or permission of the instructor. Cross listed with EDPX 3520.

EDPX 4600 3D Modeling (4 Credits)
This course serves as an introduction to 3D modeling, texturing, and lighting on the computer. Students complete a series of projects in which the processes of preparing and producing a 3D piece are explored. Various strategies and techniques for creating detailed models to be used in animation and games are examined. Additional attention is spent on virtual camera techniques as well as the use of composting in creating final pieces. Current trends in the field are addressed through the analysis and discussion of current and historical examples. Lab fee. Cross listed with EDPX 3600, MFJS 3600. Prerequisite: EDPX 4000 or permission of the instructor.

EDPX 4610 3D Animation (4 Credits)
This course examines animation within virtual 3D environments. Starting with basic concepts, the course develops timing and spacing principles in animation to support good mechanics. They also serve as the basis for the more advanced principles in character animation as the class progresses. Lab fee. Cross listed with EDPX 3610. Prerequisite: EDPX 4600.

EDPX 4620 3D Spaces (4 Credits)
An exploration of 3D digital space and the possibilities found in games, narratives and visualizations in these spaces. A real-time engine is used by students to examine the opportunities of virtual 3D worlds. Lab fee. Prerequisites: EDPX 4010 and EDPX 4600, or permission of the instructor.

EDPX 4700 Legacy and Trends of Nonprofit Organizations and Civil Society (4 Credits)
This course provides an in-depth exploration of the emergent digital practices of a particular culture and unique area of advanced study (for example, art and science studies; activism; youth culture; critical game studies; the philosophy of technology; or social networking). Students learn the social/historical context of the particular culture and observe and document the interplay between cultural practices and particular technologies. Prerequisite: varies with topic.

EDPX 4701 Topics in Emergent Digital Practices (1-4 Credits)
Topics in Emergent Digital Practices.

EDPX 4710 Critical Game Studies (4 Credits)
This course is a critical investigation of contemporary ludic cultures. Ludic cultures are environments and practice of play. This course is taught with a hybrid teaching model where games are treated as texts, and outcomes are in the form of discussion and synthetic media responses. We construct and play a hyper-local canon of games, both in and outside of class. We read from the growing body of literature in game studies. We reflect and respond to these texts through shareable media. This course partially satisfies a cultures requirement for emergent digital practices majors and minors. Lab fee.
EDPX 4725 Activist Media (4 Credits)
Today's alternative cultures use Internet and mobile technologies to access and circulate mainstream information, but also to rapidly exchange information that exists outside mainstream media channels. Activist movements today with access to digital tools and networks are no longer dependent on newspapers and broadcast networks to represent them and to disseminate their messages. We are, however, just beginning to see how the proliferation of alternative networks of communication, and the content, practices, and identities they facilitate, interact with traditional political and business organizations, as well as with traditional media products and practices. This course focuses on media activism over the past half-century tied to various social movements with an emphasis on contemporary protest movements and their use of new and old media tools and strategies. Cross listed with EDPX 3725, MFJS 3150.

EDPX 4730 21st Century Digital Art (4 Credits)
An exploration of Digital Art and surrounding culture from the last 15 years. Topics will include machinima, demoscenes, MMO performances, interactive installations, VR, animation, video shorts, and much more. Students will actively search for, share and critically review much of the creative work for the class.

EDPX 4740 Performance Cultures (4 Credits)
This course explores the history and current state of technology and performance. Topics covered include expanded cinema, live cinema, V.Jing, performance art, and the intersections of audiovisual media and technologies with dance, theater, and more. This course incorporates reading and discussion of critical texts and documentation of theory, process and practices, and the class includes screening and discussion of examples of both historical and emerging forms of media-enriched performance. Students produce written media on a variety of performance-related issues, artifacts, and practitioners, culminating in a written document or interactive publication. Lab Fee. Prerequisites: EDPX 4010 and EDPX 4020, or permission of the instructor.

EDPX 4750 Sound Cultures (4 Credits)
This course explores the sonic turn of emergence in contemporary digital culture. New sound technologies and practices, along with the development of interdisciplinary sound studies, have made avant-garde composition, sound art, film soundtracks, electronic music, turntablism, jazz, and alternative as well as popular musical forms equally essential zones in which we attune to changing technocultural conditions. To situate the course’s emphasis on contemporary sonic experience and auditory ways of being in the world, an historical portion of the class establishes the ways in which new sound cultures have appeared since WWII to transform how musicians, artists, scholars, and listeners experience and understand sound. The class facilitates experiences ranging from the pole of auditory realism to that of sonic speculation and futurism. Students will develop a sonic literacy that includes: listening as a creative act; understanding how to work with diverse sonic materials; and appreciating the critical voice as a creative and cultural imperative. Prerequisites: EDPX 4010 and 4020.

EDPX 4770 Cybercultures (4 Credits)
This course encompasses a variety of lenses through which to view, evaluate and critique ideas of ‘community’ and communities in cyberspace (cyber culture). The course covers such issues as: identity and race in cyberspace (including ‘identity and racial tourism’); communication technologies and social control; digital censorship; and utopian and dystopian representations of digital technology. The course also engages with social theories involving issues of technological determinism and the popular representation of technology. It explores the views of a diverse set of critics to ask whether digital things are ‘good’ for you and your communities. Cross listed with EDPX 3770. Prerequisite: EDPX 4020.

EDPX 4780 Speculative Cultures (4 Credits)
This course explores the intersections of emergent digital practices and cultures with the extrapolative thought experiments, technical speculations, and social criticisms of science fiction. Students read, discuss, write and otherwise respond to primary texts by the likes of William Gibson, Bruce Sterling, Cory Doctorow, Philip K. Dick, and Hiroshi Yamamoto. Science fiction studies may also include sub-genres (steampunk, hard science fiction, ecological) and regional categories (Japanese sci-fi), as well as consider science fiction in other media formats (sound recordings, film, games). Students produce written materials in a variety of formats, culminating in a formal essay or interactive publication. Cross listed with EDPX 4780. Prerequisite: EDPX 4020 or permission of the instructor.

EDPX 4800 Topics in Digital Making (4 Credits)
This course provides an in-depth explorations of the emergent digital practices of a technology or method for making (for example, wearables; interactive projections; augmented reality; immersive multi-channel soundscapes). Students learn the social/historical context of the particular method and consider the role and function their creations serve when it becomes public. Lab Fee. Prerequisite: varies with topic.

EDPX 4980 Internship (0-8 Credits)
Instructor approval required.

EDPX 4991 Independent Study (1-8 Credits)
Independent Study form required.

EDPX 4992 Directed Study (1-4 Credits)
Independent study form required.

EDPX 4995 Independent Research (1-10 Credits)

EDPX 5000 Graduate Seminar (4 Credits)
Topics vary. Reading and discussion of critical theory. May include project(s) related to the topic. Course may be repeated up to six times.
EDPX 5100 Graduate Critique (4 Credits)
The course focuses on student's creative production. Critiques are moderated by a different faculty member each quarter. Conceptual, methodological and theoretical concerns are stressed. Critiques are designed to assist in the experimentation, preparation and construction of individual art projects. Time is also spent on preparing students for a professional practice in the Arts. Course may be repeated up to six times.

EDPX 5700 Research & Theoretical Methods (4 Credits)
This course provides graduate students with the strategies and techniques of research in the area of digital media studies.

EDPX 5800 M.A. Thesis (4-8 Credits)
Independent work toward completion of the MA Thesis. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

EDPX 5850 M.A. Project (1-4 Credits)
Independent work toward completion of the MA Project. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

EDPX 5900 MFA Exhibition (1-6 Credits)
Independent work toward completion of the MFA Thesis Exhibition. May only be taken with the permission of the Graduate Director. May be taken for up to 12 credit hours.

English and Literary Arts

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Phone: 303-871-2266
Email: joel.lewis@du.edu
Web Site: http://www.du.edu/english

The Department of English and Literary Arts offers a PhD in English and Literary Arts with concentrations in creative writing and literary studies, as well as an MA with a concentration in literary studies.

Our major areas for dissertation research include creative writing; modern and contemporary British literature; American literature; American multicultural literature and Anglophone literatures; genre studies; and literary theory and rhetoric. We also offer course work in traditional literary fields, cultural studies, ethnic literatures and gender studies.

The University of Denver's Department of English and Literary Arts is small and intimate, with 21 faculty members, all of whom publish widely and seek to translate their learning into shared experiences by working closely with students in and out of the classroom.

Because of our relatively small faculty, the department has the flexibility to allow students to tailor their degrees to their specific talents and interests. We do so with a distinctive curriculum that offers not only typical graduate seminars but also writing workshops, individually designed tutorials and colloquia devoted to teaching and professional development. Such a curriculum encourages students to cross genre boundaries in their writing, to relate theory to practice and to work creatively with scholarly projects.

Doctor of Philosophy in English and Literary Arts with a Concentration in Creative Writing

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

Standardized Test Scores
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

Doctor of Philosophy in English and Literary Arts with a Concentration in Literary Studies

Degree and GPA Requirements
• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
• Masters degree: This program requires a masters degree as well
• Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master’s degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master’s degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
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Master of Arts in English and Literary Arts with a Concentration in Literary Studies

Degree and GPA Requirements
• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
• Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master’s degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master’s degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
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• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169
English Conditional Admission: No, this program does not offer English Conditional Admission.

**Doctor of Philosophy in English and Literary arts with a Concentration in Creative Writing**

**Degree Requirements**

**Course Requirements**

48 hours of course work must be in formal classes, excluding ENGL 5995 and ENGL 5991 and tutorials (ENGL 4100)

Five courses distributed over three literary periods. Students must take at least one course in one period and at least two courses in the other two periods. Students may only take two approved 3000 level courses (ENGL 3800 and 3982) in the Department of English. Registration for any other ENGL 3000 level class must be made by special petition to be approved by the full Graduate Committee.

### Coursework Requirements

Courses listed below are representative examples. Students may consult the department for additional course options.

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td><strong>Before 1700</strong></td>
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<tr>
<td>ENGL 4125</td>
<td>Old English</td>
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<td>ENGL 4150</td>
<td>Special Topics in Medieval Lit</td>
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<td>Special Topics- Early Mod Lit</td>
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<td>ENGL 4213</td>
<td>Advanced Studies in Early Modern Literature</td>
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<td>Seminar-Studies in Shakespeare</td>
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<td></td>
<td><strong>1700-1900</strong></td>
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<td>ENGL 4300</td>
<td>Advanced Studies in 18th Century Literature</td>
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<td>ENGL 4321</td>
<td>Spc Tpcs: 18th Cent Literature</td>
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<td>Topics in English: 19th Century Literature</td>
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<td>ENGL 4700</td>
<td>Antebellum American Literature</td>
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<td>ENGL 4730</td>
<td>American Romanticism</td>
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<td>Spc Tpc: Antebellum Amer Lit</td>
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<td><strong>After 1900</strong></td>
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<td>Adv Studies -20th Cent Lit</td>
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<td>ENGL 4621</td>
<td>Adv Studies-20th C. Literature</td>
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<td>ENGL 4650</td>
<td>Special Topics: 20th Cent Lit</td>
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<td><strong>Graduate Tutorials (Students may take up to 5 tutorials, 10 credits total)</strong></td>
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<tr>
<td>ENGL 4100</td>
<td>Graduate Tutorial</td>
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<td><strong>Three Graduate Professional Seminars (count towards the 48 hours of course work)</strong></td>
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<td>ENGL 4830</td>
<td>Seminar: Teaching and Writing Literature</td>
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<td>ENGL 4702</td>
<td>Topics in English (Crit Imag)</td>
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<td>ENGL 4000</td>
<td>Colloquium</td>
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<td><strong>Three writing workshops</strong></td>
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<td>ENGL 4001</td>
<td>Sem Creative Writing-Poetry</td>
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<td>ENGL 4011</td>
<td>Sem Creative Writing-Fiction</td>
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<td>ENGL 4017</td>
<td>Travel Writing</td>
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<td>ENGL 4650</td>
<td>Special Topics: 20th Cent Lit (Translation)</td>
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<td><strong>Total Credits</strong></td>
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Minimum number of credits required for the degree: 90 graduate-level quarter hours beyond the master’s degree

**Non-Course Requirements:**

- Preliminary advancement to candidacy
- Advancement to candidacy
- A dissertation of publishable quality that makes a significant contribution to its field. This will take the form of an extended scholarly and critical work (usually between 150 and 250 pages) OR a creative work (fiction or poetry). The creative dissertation must include a critical preface that situates the dissertation in its literary context.
- Oral defense. When the dissertation is completed, it must be defended by the candidate. For spring quarter graduates, the defense should take place by April 30. No dissertation defenses will be held during the summer quarter. The candidate is therefore advised to set the defense date as
far in advance as possible. The defense takes the form of a discussion with the committee concerning the content, context and implications of the work.

- Tool (reading knowledge of one language) proficiency may be established by completing any one of the following:
  - Passing a standard reading examination accredited by the Department
  - Passing, with a grade of B or better, a 3000-level literature course in the language.
  - Successful completion of the Bibliography and Research Methods class in the Department of English.
  - Selection and successful completion of a cognate course in another department that will augment specific skills. This course must be approved by the Graduate Committee.
  - Successful completion of Old English (4 credits), followed by a "Beowulf" tutorial (2 credits), followed by an intermediate Old English tutorial (2 credits).
  - Successful completion of a graduate translation class (students must secure approval of instructor)
  - Successful completion of ENGL 3982 (Writers in the Schools)

The Tool requirement must be completed one quarter before graduation.

- Proposal & Prospectus review. By the end of the Fall quarter of the third year, students must submit a Dissertation Area Proposal to the director of graduate studies. This proposal is a brief description (250-300 words) of the proposed area of the dissertation; it must be signed by at least two dissertation committee members. Before the end of the Winter quarter of the third year of study, all students should complete the prospectus review. This is an oral discussion based on the written dissertation prospectus and conducted by a committee consisting of the first two readers of the dissertation. The prospectus should be approximately 2,500–3,000 words and should be presented to the exam committee well in advance of the exam. For creative writing students, the prospectus should discuss the theoretical and generic origins of the project, its methodology and artistic goals.

- Written comprehensive exam. At the beginning of the third year of study, and after 48 hours of completed course work, all students will take a written comprehensive exam covering three (out of four) areas of study: (1) an author or major figure; (2) a genre; (3) a period; and (4) a second period or special topic. All choices must be approved by examiners and the graduate director. Students will prepare a reading list for each area in consultation with examiners. All lists must be signed by both examiners and on file with the graduate director by May 1 or the student will not be allowed to take the exam the following fall.

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**Doctor of Philosophy in English and literary arts with a Concentration in Literary Studies**

**Degree Requirements**

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Five courses distributed over three literary periods. Students must take at least one course in one period and at least two courses in the other two periods. Students may only take two approved 3000 level courses (ENGL 3800 and 3982) in the Department of English. Registration for any other ENGL 3000 level class must be made by special petition to be approved by the full Graduate Committee.

**Coursework Requirements**

Courses listed below are representative examples. Students may consult the department for additional course options.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 4125</td>
<td>Old English</td>
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<tr>
<td>ENGL 4150</td>
<td>Special Topics in Medieval Lit</td>
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<tr>
<td>ENGL 4200</td>
<td>Special Topics-Early Mod Lit</td>
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<tr>
<td>ENGL 4213</td>
<td>Advanced Studies in Early Modern Literature</td>
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<tr>
<td>ENGL 4220</td>
<td>Seminar-Studies in Shakespeare</td>
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<tr>
<td>ENGL 4300</td>
<td>Advanced Studies in 18th Century Literature</td>
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<tr>
<td>ENGL 4321</td>
<td>Spc Tpcs: 18th Cent Literature</td>
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<tr>
<td>ENGL 4424</td>
<td>Topics in English: 19th Century Literature</td>
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<tr>
<td>ENGL 4700</td>
<td>Antebellum American Literature</td>
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<td>ENGL 4730</td>
<td>American Romanticism</td>
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<tr>
<td>ENGL 4732</td>
<td>Spc Tpc: Antebellum Amer Lit</td>
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<tr>
<td>ENGL 4600</td>
<td>Adv Studies -20th Cent Lit</td>
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</tbody>
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ENGL 4621  Adv Studies-20th C. Literature
ENGL 4650  Special Topics: 20th Cent Lit

Graduate Tutorials (Students may take up to 5 tutorials, 10 credits total)

ENGL 4100  Graduate Tutorial

Three Graduate Professional Seminars (count towards the 48 hours of course work)  6
ENGL 4000  Colloquium
ENGL 4702  Topics in English (Crit Imag)
ENGL 4830  Seminar: Teaching and Writing Literature

Total Credits 90

Minimum number of credits required for the degree: 90 graduate-level quarter hours beyond the master’s degree

Non-Course Requirements:
- Preliminary advancement to candidacy
- Advancement to candidacy
- A dissertation of publishable quality that makes a significant contribution to its field. This will take the form of an extended scholarly and critical work (usually between 150 and 250 pages).
- Oral defense. When the dissertation is completed, it must be defended by the candidate. For spring quarter graduates, the defense should take place no later than April 30. No dissertation defenses will be held during the summer quarter. The candidate is therefore advised to set the defense date as far in advance as possible. The defense takes the form of a discussion with the committee concerning the content, context and implications of the work.
- Tool (reading knowledge of one language) proficiency may be established by completing one of the following:
  - Passing a standard reading examination accredited by the Department
  - Passing, with a grade of B or better, a 3000-level literature course in the language
  - Successful completion of the Bibliography and Research Methods class in the Department of English
  - Selection and successful completion of a cognate course in another department that will augment specific skills. This course must be approved by the Graduate Committee.
  - Successful completion of Old English (4 credits), followed by a “Beowulf” tutorial (2 credits), followed by an intermediate Old English tutorial (2 credits).
  - Successful completion of a graduate translation class (students must secure approval of instructor)
  - Successful completion of ENGL 3982 (Writers in the Schools)

The Tool requirement must be completed one quarter before graduation.
- Proposal & Prospectus review. By the end of the Fall quarter of the third year, students must submit a Dissertation Area Proposal to the director of graduate studies. This proposal is a brief description (250-300 words) of the proposed area of the dissertation; it must be signed by at least two dissertation committee members. Before the end of the Winter quarter of the third year of study, all students should complete the prospectus review. This is an oral discussion based on the written dissertation prospectus and conducted by a committee consisting of the first two readers of the dissertation. The prospectus should be approximately 2,500–3,000 words and should be presented to the exam committee well in advance of the exam.
- Written comprehensive exam. At the beginning of the third year of study, and after 48 hours of completed course work, all students will take a written comprehensive exam covering three (out of four) areas of study: (1) an author or major figure; (2) a genre; (3) a period; and (4) a second period or special topic. All choices must be approved by examiners and the graduate director. Students will prepare a reading list for each area in consultation with examiners. All lists must be signed by both examiners and on file with the graduate director by May 1 or the student will not be allowed to take the exam the following fall.

Master of Arts in English and Literary arts with a Concentration in Literary Studies

Degree Requirements

Course Requirements
- 45 hours of course credit, up to 13 hours of which may be taken in graduate tutorials (ENGL 4100), independent research (ENGL 4995) and/or cognate courses outside the department.
- All course work for the MA should be taken at the University of Denver, but, in rare exceptions, a maximum of 10 credit hours may be transferred to count for the requirements if approved by the director of graduate studies and meet the University’s transfer of credit policy.
- While students have no specific course requirements beyond the 32-hour minimum within the Department of English and the 13 hours of tutorials or cognate courses, they are advised to work closely with an adviser to determine a balance between coverage and focus. Students may only take two approved 3000 level courses (ENGL 3800 and 3982) in the Department of English. Registration for any other ENGL 3000 level class must be made by special petition to be approved by the full Graduate Committee. Courses must be completed within three years of enrollment (excluding ENGL 4995).
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>Coursework Requirements</td>
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<tr>
<td></td>
<td>Minimum of 32 classroom hours (eight courses) is required.</td>
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<tr>
<td></td>
<td>Up to 13 credits may be taken in graduate tutorials (ENGL 4100), independent research (ENGL 4995) and/or cognate courses outside the department.</td>
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<td>Total Credits</td>
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<td></td>
<td>Minimum number of credits required for the degree: 45</td>
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<td>Non-Course Requirements</td>
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<td></td>
<td>• Advancement to candidacy</td>
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<td></td>
<td>• A thesis of at least 18,000 words. The thesis for an MA in literary studies is either a single scholarly/critical essay or two 30-page scholarly/critical essays. The thesis adviser must approve a prospectus for the thesis.</td>
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<td>• Oral Defense. The defense takes the form of a discussion on the content, context and implications of the work.</td>
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<td>Courses</td>
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<tr>
<td>ENGL 3000</td>
<td>Advanced Creative Writing-Poetry (4 Credits)</td>
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<td>ENGL 3001</td>
<td>Advanced Creative Writing-Poetry (4 Credits)</td>
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<td>ENGL 3002</td>
<td>Advanced Creative Writing-Poetry (4 Credits)</td>
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<td>ENGL 3003</td>
<td>Advanced Creative Writing-Poetry (4 Credits)</td>
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<td>ENGL 3010</td>
<td>Advanced Creative Writing-Fiction (4 Credits)</td>
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<td>ENGL 3011</td>
<td>Advanced Creative Writing-Fiction (4 Credits)</td>
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<td>ENGL 3012</td>
<td>Advanced Creative Writing-Fiction (4 Credits)</td>
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<td>ENGL 3013</td>
<td>Advanced Creative Writing-Fiction (4 Credits)</td>
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<tr>
<td>ENGL 3015</td>
<td>Advanced Creative Writing: Non-Fiction (4 Credits)</td>
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<td>ENGL 3017</td>
<td>Travel Writing-Fiction &amp; Fact (4 Credits)</td>
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<td>ENGL 3040</td>
<td>Introduction to Publishing (4 Credits)</td>
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<tr>
<td>ENGL 3101</td>
<td>Non-Chaucerian Middle English Literature (4 Credits)</td>
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<tr>
<td>ENGL 3121</td>
<td>Chaucer: Canterbury Tales (4 Credits)</td>
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<td>ENGL 3320</td>
<td>Oral Literature and Orality in Literature (4 Credits)</td>
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<td>ENGL 3402</td>
<td>Early Romantics (4 Credits)</td>
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<tr>
<td>ENGL 3404</td>
<td>England and Empire: Ambivalent Imperialism in Victorian and Edwardian Literature (4 Credits)</td>
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</tbody>
</table>
ENGL 3405 Postmodern Visions of Israel (4 Credits)
This course investigates how representation of Israel as a modernist utopia have been replaced in contemporary literature with images of Israel as a dystopia. The class discusses the historical context that gave rise to visions of an idealized Israel, and the role the Hebrew language played in consolidating and connecting narration to nation. Next the class considers how belles-lettres from recent decades have reimagined Israel as a series of multilingual “multiverses.” A selection of fiction translated from Hebrew forms the core of class reading. Theoretical exploration of postmodernism help us conceptualize the poetics of postmodern literature. No knowledge of Israeli history or Jewish culture is necessary to succeed in this course. Cross listed with JUST 3405.

ENGL 3706 Writing the American West (4 Credits)
Explores historical and contemporary writing produced in and about the American West.

ENGL 3711 20th-Century American Fiction (4 Credits)
Fiction, poetry, drama, and non-fiction on selected themes by 20th and 21st century American writers. Topics for study may include issues related to regionalism, ethnicity and gender, as well as specific social and historical concerns.

ENGL 3731 Topics in English (1-4 Credits)
ENGL 3732 Topics in English (1-4 Credits)
ENGL 3733 Topics in English (1-4 Credits)
Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

ENGL 3742 Jesus in Jewish Literature (4 Credits)
This course surveys literary depictions of Jesus in Jewish literature. Readers are often surprised to learn that throughout the twentieth century and into the twenty-first century, major Jewish writers have incorporated the figure of Jesus of Nazareth into their work. This class explores the historical, aesthetic, and spiritual reasons for the many Jewish literary representations of Jesus and of his literary foil, Judas. A selection of materials including short stories, poems, novels, scholarly essays and polemics in English and in translation from Hebrew and Yiddish demonstrate the depth of Jewish literary culture’s engagement with Jesus’ life and teachings. Among the many writers we will read are: S.Y. Agnon, Sholem Asch, Uri Zvi Greenberg, Haim Hazaz, Emma Lazarus, Amos Oz, Philip Roth, and L. Shapiro. Ultimately, this class will consider how literary representations of Jesus can destabilize perceived distinctions between Jews and Christians. While helpful, no knowledge of Jewish languages, religious tradition, or cultural practice is necessary to succeed in this course. This course is cross-listed as JUST 3742.

ENGL 3743 Modern Jewish Literature (4 Credits)
Stories, novels and memoirs by 20th-century Jewish writers; consideration of issues of generation, gender and idea of Jewish literature as a genre. Cross listed with JUST 3743.

ENGL 3744 African American Literature (4 Credits)
This course examines fiction, poetry, autobiography, and drama by African American writers, with strong consideration on the socio-historical conditions that gave rise to and continue to inform this literary tradition.

ENGL 3800 Bibliography/Research Method (4 Credits)
ENGL 3803 Modernism/Postmodernism (4 Credits)
ENGL 3813 History and Structure of the English Language (4 Credits)
A composite course studying both the structure of modern English and the history of the English language.

ENGL 3815 Studies in Rhetoric (4 Credits)
This course will examine the history and principles of rhetoric and how they pertain to theory and practice in the field of composition and rhetoric.

ENGL 3817 History of Rhetoric (4 Credits)
ENGL 3818 Composition Theory (4 Credits)
ENGL 3819 Old English (4 Credits)
This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 3200.

ENGL 3821 Literary Criticism: 19th Century-Present (4 Credits)
ENGL 3822 Literary Criticism: 20th Century (4 Credits)
Critical methods and philosophies of 20th-century critics; their relationship to traditions.

ENGL 3823 Interpretation Theory (4 Credits)
ENGL 3825 Cultural Criticism (4 Credits)
Cross listed with ENGL 2835.
ENGL 3852 Topics in Poetics (4 Credits)

ENGL 3982 Writers in the Schools (2,4 Credits)
This course operates mostly "in the field." Following the models of California Poets in the Schools and Teachers & Writers Collaborative, students are in training with a poet-in-residence, observing him as he conducts a residency in a public school. In addition, we have our own meetings to discuss pedagogy, classroom practices and management, teacher-writer relations, and all other necessary logistical planning. Placement in public schools is facilitated by Denver SCORES, an education program dedicated to increasing literacy in Denver's at-risk school population. For those wishing to work with middle or high school students, or in other community settings (e.g., homeless or women's shelters), special arrangements can be made. This course is a collaborative effort between CO Humanities, Denver SCORES, and the University of Denver.

ENGL 3991 Independent Study (1-17 Credits)
ENGL 3992 Directed Study (1-10 Credits)
ENGL 3995 Independent Research (1-10 Credits)
ENGL 4000 Colloquium (2 Credits)
ENGL 4001 Sem Creative Writing-Poetry (4 Credits)
ENGL 4011 Sem Creative Writing-Fiction (4 Credits)
ENGL 4012 History/Theory of Genre-Poetry (4 Credits)
ENGL 4017 Travel Writing (4 Credits)
ENGL 4050 The Critical Imagination (2 Credits)
This graduate level course explores poetry, fiction, and criticism as different facets of the imagination. This is a large and a necessarily vaguely defined topic. But in the world of literary studies, creativity and criticism are clearly symbiotic. Reading and writing are connected activities. The poet or fiction writer is often a critic, and there are numerous treatments of interpretation in the critical canon suggesting that the act of reading and interpreting is itself an imaginative and creative act. The course explores genre signatures and possibilities, as well as provides an introduction to some of the analytics through which texts, literary and otherwise, are interpreted.

ENGL 4100 Graduate Tutorial (2-4 Credits)
ENGL 4120 Beowulf (2 Credits)
Reading and translation of the Old English Beowulf. Prerequisite: ENGL 4125.
ENGL 4125 Old English (4 Credits)
This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 4120.
ENGL 4150 Special Topics in Medieval Lit (4 Credits)
ENGL 4200 Special Topics-Early Modern Literature (4 Credits)
ENGL 4210 Holocaust Literature (4 Credits)
This seminar presents a multidisciplinary and transnational approach to literature of the Holocaust. Students consider memoir, fiction, and poetry drawn from a variety of national literatures and linguistic traditions. Works written by victims, survivors and 'witnesses through the imagination' are all considered. These readings are supplemented by secondary texts, including historical and philosophical materials, as well as relevant works from the social sciences.

ENGL 4510 ISL Dharamsala: Tibet, Global Citizenship, & Community Literacies (4 Credits)
ISL Dharamsala presents DU students with the unique opportunity to study international community literacies as a practical component of global citizenship through service-learning placements and study in Dharamsala, India. Home of the Dalai Lama and the Tibetan government-in-exile, Dharamsala is a multi-generational community located in the northern Indian foothills of the Himalayas. During fall quarter, students will study community literacies in the practice of global citizenship and service while immersed in the geo-political, religious, and other contexts experienced by Tibetans in exile. During their time in Dharamsala, cultural immersion and a service-learning placement will give students insight into the complexities of social justice issues and cultural nuances they have been studying and provide opportunities to contribute to local and global society through informed and reflective practice.

ENGL 4600 Adv Studies -20th Century Literature (4 Credits)
ENGL 4621 Adv Studies-20th Century Literature (2-4 Credits)
This course will offer (and be required of) graduate students an advanced foundation in 20th century literature; the primary texts and their cultural/historical/theoretical contexts.
ENGL 4650 Special Topics: 20th Cent Lit (4 Credits)

ENGL 4660 The Black Imagination (4 Credits)
Focusing mainly on Africa, Asia, Europe, and the Americas (especially the USA and the Caribbean/Latin America), this course explores and connects aspects of the black imagination. These aspects include oral performances, thought systems, literature, art, cinema, and critical discourses in different eras and in various places. Studied together, these existential and intellectual signposts provide an expanded insight into black (African and African diasporic) aesthetics from an intercontinental and an interdisciplinary perspective.

ENGL 4675 Theories of Narrative: Formalism, Narratology, Cybertext (4 Credits)
This class traces developments in narrative theory from Russian Formalism through "classical" narratology and on to examine the border between traditional narrative texts and texts that require a higher degree of interactivity, sometimes called "cyber texts." The goal is to identify significant contributions to narrative theory and to suggest the possibilities for the future of the field. Seminal articles, key works, and critical introductions survey key advances in narrative theory to present an overview of the field from its inception to contemporary trends.

ENGL 4700 Antebellum American Literature (4 Credits)

ENGL 4701 Topics in English (2-5 Credits)
A topics class; topics may change.

ENGL 4702 Topics in English (2-5 Credits)
A topics class; topics may change.

ENGL 4730 American Romanticism (4 Credits)

ENGL 4732 Spc Tpc: Antebellum Amer Lit (4 Credits)

ENGL 4735 Sem: H. James & E. Wharton (4 Credits)

ENGL 4830 Seminar: Teaching and Writing Literature (2-4 Credits)

ENGL 4832 Sem: Teaching Writing & Lit (2 Credits)

ENGL 4840 Topics in Composition Studies (2-4 Credits)
Each offering of this course focuses on specific issues in theory, research, or pedagogy within the broad field of composition studies. Examples of topics include the development of writing abilities; genre theory and composing; multimodal texts and their intersections and disjunctions of rhetoric and composition; the history of composing theories and practices; realms of composing, including the academic, civic, vocational, aesthetic, and interpersonal; institutional formations and settings of composing; discourse theories; stylistics; race, gender, class and composing; and so on.

ENGL 4851 Publishing Institute (6 Credits)

ENGL 4852 Dissertation Colloquium (2 Credits)
This two-credit dissertation colloquium is offered in the winter and spring for third-year PhD students in English who are in the process of researching and writing their dissertations. In addition to having weekly presentations and discussions of work in progress, the group will peruse prefaces and introductions to former English Department dissertations, write and abstract for their own dissertation, and possibly revise and send out a piece from their dissertation. The class is open to both literary studies and creative writing students. Restricted to doctoral students in English.

ENGL 4991 Independent Study (1-17 Credits)

ENGL 4992 Directed Study (1-10 Credits)

ENGL 4995 Independent Research (1-17 Credits)

ENGL 5991 Independent Study (1-17 Credits)

ENGL 5995 Independent Research (1-17 Credits)

Lamont School of Music

With its wide array of degrees and certificates, outstanding faculty and superior new facilities, the Lamont School of Music is one of the most distinguished music programs in the United States.

If the words dedication, discipline, enthusiasm and desire define your musical aspirations, then you'll find exciting opportunities at the University of Denver. The Lamont School of Music will lend resonance to your musical career, as well as surrounding you with other talented students and a rich cultural environment in Denver.
The Lamont School of Music offers MM programs with concentrations in composition, conducting, pedagogy and performance, as well as MA programs in music theory and musicology. We also offer certificates with concentrations in jazz and commercial music, conducting, orchestral studies and Suzuki pedagogy; and artist diploma programs with a concentration in conducting and emphasis in performance.

The faculty is composed of professors and instructors who actively perform, compose, publish, and lecture worldwide. The Lamont School of Music is located in the Robert and Judi Newman Center for the Performing Arts, a 186,000-square-foot state-of-the-art facility opened in 2002 and officially inaugurated in 2003. The Newman Center includes an academic building, a 225-seat recital hall, a 1,000-seat concert/opera hall and a 250-seat flexible theater. The academic building is replete with teaching studios, practice rooms (some of which are digitally enhanced as “virtual” acoustic practice rooms), large rehearsal spaces, a music library, a digital keyboard laboratory, two recording studios, an electronic music lab, classrooms with smart-to-the-seat technology and an 80-seat recital salon.

Master of Arts in Music with a Concentration in Music Theory

Degree and GPA Requirements

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

Prerequisites:

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: musicadmission@du.edu, phone: 303.871.6973).

Other Requirements

- Please submit a 5-10 minute video of your teaching—either a single student or a group. Videos should be uploaded through the online application system.

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Lamont School of Music may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Arts in Music with a Concentration in Musicology

Degree and GPA Requirements

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master’s degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master’s degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.
Prerequisites:
• Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: musicadmission@du.edu, phone: 303.871.6973).

Other Requirements
• Please submit a 5-10 minute video of your teaching. In the ideal video, you will teach some musical/musicological concept to a group of two (2) or more people (three (3) or more preferred) in an interactive manner, i.e., not solely in a lecture format. The video should be submitted via upload through the online application process.

Standardized Test Scores
• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Lamont School of Music may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Music in Music with a Concentration in Composition

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

Prerequisites:
• Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: musicadmission@du.edu, phone: 303.871.6973).

Other Requirements
• Classical Emphasis: All applicants must submit a portfolio of at least two scores through the online application. Recordings are optional but encouraged.
• Jazz Emphasis: All applicants must submit a recording following the audition requirements for their principal instrument (http://www.du.edu/ahss/lamont/apply-audition/requirements/jazz.html). In addition, submit a score and recording of two original compositions in contrasting styles.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Lamont School of Music may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.
Master of Music with a Concentration in Conducting

Degree and GPA Requirements

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

Prerequisites:

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: musicadmission@du.edu, phone: 303.871.6973).

Other Requirements

- Orchestral conducting applicants must submit a pre-screening audition through the online application by December 17, 2018. All applicants must schedule and complete a music audition. Audition information and requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/index.html).

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Lamont School of Music may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Music with a Concentration in Pedagogy

Degree and GPA Requirements

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

Prerequisites:

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: musicadmission@du.edu, phone: 303.871.6973).

Other Requirements

- All applicants must schedule and complete a music audition. Audition information and requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/index.html). Master of Music in Piano Pedagogy applicants must submit a 20-minute video of teaching.
- Master of Music in Piano Pedagogy applicants are strongly encouraged to take the GRE. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Lamont School of Music may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Music with a Concentration in Performance

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

Prerequisites:
• Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: musicadmission@du.edu, phone: 303.871.6973).

Other Requirements
• All applicants must schedule and complete a music audition. Audition information and requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/index.html). Additionally, applicants auditioning for voice performance must submit a pre-screening audition via the online application process.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

Certificate in Music (Artist Diploma Program) with a Concentration in Conducting

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

Other Requirements
• Conducting applicants must submit a pre-screening audition and additional preliminary materials by December 17, 2018. Upon passing the preliminary round, all applicants must schedule and complete a music audition. Audition information and additional requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/requirements/artist-diploma.html).

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Certificate in Music (Artist Diploma Program)

Degree and GPA Requirements

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

Other Requirements

• All applicants must submit a prescreening audition through the online application by December 17, 2018. The video should be 25 minutes, unedited. Upon passing the prescreening portion, all applicants must schedule and complete a music audition. Audition information and requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/requirements/artist-diploma.html).

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Lamont School of Music may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Certificate in Music with a Concentration in Conducting

Degree and GPA Requirements

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

Other Requirements

• Orchestral conducting applicants must submit a pre-screening audition through the online application by December 17, 2018. All applicants must schedule and complete a music audition. Audition information and requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/requirements/artist-diploma.html).

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169
Certificate in Jazz & Commercial Music

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

Other Requirements
- All applicants must schedule and complete a music audition. Audition information and requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/index.html).

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

Certificate in Music with a Concentration in Orchestral Studies

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

Other Requirements
- All applicants must schedule and complete a music audition. Audition information and requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/index.html).

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Lamont School of Music may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.
Certificate in Music with a Concentration in Performance

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

Other Requirements
- All applicants must schedule and complete a music audition. Audition information and requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/index.html). Additionally, applicants auditioning for voice performance must submit a pre-screening audition via the online application process.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Lamont School of Music may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Certificate in Suzuki Pedagogy Certificate

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

Other Requirements
- All applicants must schedule and complete a music audition. Audition information and additional requirements can be found on the Lamont School of Music website (http://www.du.edu/ahss/lamont/apply-audition/index.html). Applicants applying for the University of Denver Suzuki Cello or Violin Certificate program, are required to receive acceptance for teaching training through the Suzuki Association of the Americas guidelines. (The Suzuki Association is responsible for all Suzuki teacher training that takes place in the Americas and approves and supports the University of Denver Lamont School of Music as a university long-term training center for Suzuki Method Violin and Cello.) A video of your performance must be sent into the Suzuki Association. For audition guidelines, please visit http://suzukiassociation.org/teachers/guides/audition.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Lamont School of Music may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.
# Master of Arts in Music with a Concentration in Music Theory

## Degree requirements

### Coursework requirements

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<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<td>Music Theory courses (One course in Music Theory or Musicology/Ethnomusicology must be at the 4XXX level.)</td>
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<td>MUAC 3023</td>
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<td>MUAC 4002</td>
<td>Form and Analysis</td>
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<td>MUAC 4006</td>
<td>Post-Tonal Theory: Mode/Rhythm</td>
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<td>MUAC 4007</td>
<td>Post-Tonal Theory and Analysis: Set-Theory and Serialism</td>
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<td>MUAC 4008</td>
<td>Modal Counterpoint, Renaissance Vocal Style</td>
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<td>MUAC 4009</td>
<td>Tonal Counterpoint</td>
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<td>MUAC 4995</td>
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<td>Gender &amp; Genre in World Music</td>
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<td>Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music</td>
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<td>MUAC 3550</td>
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<td>Major Composers: Beethoven</td>
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<td>MUAC 3600</td>
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<tr>
<td>MUAC 3683</td>
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<td>MUAC 3847</td>
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<tr>
<td>MUAC 4161</td>
<td>Topics in Modern Opera</td>
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<td>MUAC 4350</td>
<td>Talam: Rhythmic Form and Process in South Indian Music</td>
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<td>MUAC 4492</td>
<td>History of Opera: From Monteverdi to Minimalism and Beyond</td>
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<td>MUAC 4493</td>
<td>Approaches to American Popular Music</td>
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<td>Music and Belief in World Cultures</td>
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<td>MUAC 4520</td>
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<td>MUAC 4535</td>
<td>Baroque Opera on Stage</td>
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<td>MUAC 4536</td>
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<tr>
<td>MUAC 4537</td>
<td>Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship</td>
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<td>MUAC 4545</td>
<td>The Making of Romantic Music: Paris and Leipzig in the 1830s</td>
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### Electives

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Note: Students may complete a maximum of 8 credits in graduate departments outside of the Lamont School of Music.

| Total Credits | 45 |

**Minimum number of credits required for degree: 45 credits**

**Non-coursework requirements (see below and the Lamont Student Handbook for more details)**

- Final Oral Comprehensive Examination, including defense of the thesis.
- Proficiency Examinations:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of superior graduate-level proficiencies in Music Theory and Aural Skills by examination.
- Convocation: Attendance requirements as specified in the Lamont Student Handbook.

## Master of Arts in Music with a Concentration in Musicology

### Degree requirements

#### Coursework requirements

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<td>Other courses as approved by the department</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUAC 4995</td>
<td>Thesis Research</td>
<td>5</td>
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<tr>
<td><strong>Other Studies in Music</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUAC 4000</td>
<td>Introduction to Graduate Study</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 4000</td>
<td>Introduction to Graduate Study</td>
<td>2</td>
</tr>
<tr>
<td>Music Theory courses (One course in Music Theory or Musicology/Ethnomusicology must be at the 4XXX level.)</td>
<td>8</td>
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</tr>
<tr>
<td>MUAC 3005</td>
<td>Post-Tonal Theory and Analysis: Set-Theory and Serialism</td>
<td></td>
</tr>
<tr>
<td>MUAC 3023</td>
<td>Rhythm &amp; Meter in Tonal Music</td>
<td></td>
</tr>
<tr>
<td>MUAC 4002</td>
<td>Form and Analysis</td>
<td></td>
</tr>
<tr>
<td>MUAC 4006</td>
<td>Post-Tonal Theory: Mode/Rhythm</td>
<td></td>
</tr>
</tbody>
</table>
Master of Music in Music with a Concentration in Composition

A Master of Music in Music with a concentration in Composition has two emphases: Classical or Jazz.

Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration Area Complete the following course:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUPR 4920 &amp; 4920 &amp; 4920 &amp; 4920 &amp; 4920 &amp; 4920 &amp; 4920</td>
<td>Composition and Composition and Composition and Composition and Composition and Composition and Composition</td>
<td>12</td>
</tr>
</tbody>
</table>

Emphases

Students must select one of two emphases (Classical or Jazz):

A. Classical Emphasis

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUAC 3124 &amp; 3124 &amp; 3124 &amp; 3124 &amp; 3124 &amp; 3124</td>
<td>Composition Seminar and Composition Seminar and Composition Seminar and Composition Seminar and Composition Seminar and Composition Seminar and Composition Seminar</td>
<td>6</td>
</tr>
</tbody>
</table>

Music Theory or Composition courses (At least four credits must be at the 4XXX level.)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUAC 3005</td>
<td>Post-Tonal Theory and Analysis: Set-Theory and Serialism</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>MUAC 4006</td>
<td>Post-Tonal Theory: Mode/Rhythm</td>
<td></td>
</tr>
<tr>
<td>MUAC 4007</td>
<td>Post-Tonal Theory and Analysis: Set-Theory and Serialism</td>
<td></td>
</tr>
<tr>
<td>MUAC 4008</td>
<td>Modal Counterpoint, Renaissance Vocal Style</td>
<td></td>
</tr>
<tr>
<td>MUAC 4009</td>
<td>Tonal Counterpoint</td>
<td></td>
</tr>
<tr>
<td>MUAC 4010</td>
<td>Pedagogy of Music Theory</td>
<td></td>
</tr>
<tr>
<td>MUAC 4090</td>
<td>Model Composition</td>
<td></td>
</tr>
<tr>
<td>MUAC 4121</td>
<td>Seminar in Music Theory</td>
<td></td>
</tr>
<tr>
<td>MUAC 4801</td>
<td>Introduction to Schenkerian Analysis</td>
<td></td>
</tr>
</tbody>
</table>

Other courses as approved by the department

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUEN 3XXX</td>
<td>Ensembles (Must register/participate in one per quarter as assigned. See Lamont Student Handbook for details.)</td>
</tr>
<tr>
<td>MUEN 3XXX</td>
<td>Ensembles (Must register/participate in two per quarter as assigned. See Lamont Student Handbook for details.)</td>
</tr>
<tr>
<td>MUAC, MUEN, MUPR 3XXX or 4XXX</td>
<td>Courses from the Jazz Studies curriculum, selected in consultation with the student's faculty advisor.</td>
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</table>

Other Studies in Music

Both emphases complete all of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MUAC 4000</td>
<td>Introduction to Graduate Study</td>
</tr>
<tr>
<td>MUAC 4000</td>
<td>Introduction to Graduate Study</td>
</tr>
</tbody>
</table>

Musicology/Ethnomusicology course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUAC 3497</td>
<td>Studying Music in the Field: Theory and Method in Ethnomusicology</td>
</tr>
<tr>
<td>MUAC 3502</td>
<td>Gender &amp; Genre in World Music</td>
</tr>
<tr>
<td>MUAC 3537</td>
<td>Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music</td>
</tr>
<tr>
<td>MUAC 3550</td>
<td>Major Composers-J. S. Bach</td>
</tr>
<tr>
<td>MUAC 3570</td>
<td>Major Composers: Beethoven</td>
</tr>
<tr>
<td>MUAC 3600</td>
<td>The Evolution of Rock</td>
</tr>
<tr>
<td>MUAC 3683</td>
<td>History of Chamber Music</td>
</tr>
<tr>
<td>MUAC 3847</td>
<td>Hip-Hop: Theory and Practice</td>
</tr>
<tr>
<td>MUAC 4161</td>
<td>Topics in Modern Opera</td>
</tr>
<tr>
<td>MUAC 4350</td>
<td>Talam: Rhythmic Form and Process in South Indian Music</td>
</tr>
<tr>
<td>MUAC 4492</td>
<td>History of Opera: From Monteverdi to Minimalism and Beyond</td>
</tr>
<tr>
<td>MUAC 4493</td>
<td>Approaches to American Popular Music</td>
</tr>
<tr>
<td>MUAC 4494</td>
<td>Music and Belief in World Cultures</td>
</tr>
<tr>
<td>MUAC 4498</td>
<td>Music, Dance, and Everyday Life in South Asia</td>
</tr>
<tr>
<td>MUAC 4499</td>
<td>Topics in Musicology</td>
</tr>
<tr>
<td>MUAC 4511</td>
<td>Mahler and Musical Culture</td>
</tr>
<tr>
<td>MUAC 4512</td>
<td>Stories of Music History</td>
</tr>
<tr>
<td>MUAC 4513</td>
<td>Wagner and the Ideology of the Artwork</td>
</tr>
<tr>
<td>MUAC 4520</td>
<td>Topics in Hindustani Music</td>
</tr>
<tr>
<td>MUAC 4521</td>
<td>Topics in Baroque Music</td>
</tr>
<tr>
<td>MUAC 4535</td>
<td>Baroque Opera on Stage</td>
</tr>
<tr>
<td>MUAC 4536</td>
<td>Musics of the African Diaspora</td>
</tr>
<tr>
<td>MUAC 4537</td>
<td>Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship</td>
</tr>
<tr>
<td>MUAC 4538</td>
<td>Cultural and Psychological History of the African American Spiritual</td>
</tr>
<tr>
<td>MUAC 4545</td>
<td>The Making of Romantic Music: Paris and Leipzig in the 1830s</td>
</tr>
</tbody>
</table>

Other courses as approved by the department

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUAC 3XXX or 4XXX</td>
<td>Music Theory course</td>
</tr>
</tbody>
</table>

 Electives

Select either a Classical or Jazz emphasis.

Classical Emphasis

<table>
<thead>
<tr>
<th>3XXX or 4XXX courses</th>
<th></th>
</tr>
</thead>
</table>

Note: Students may complete a maximum of 8 credits in graduate departments outside of the Lamont School of Music.
Jazz Emphasis

MUAC 3XXX or 4XXX Musicology/ Ethnomusicology/ Music Theory/ Composition courses 4
3XXX or 4XXX course 4

Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.

Total Credits 50

Minimum number of credits required for degree: 50 credits

Non-coursework requirements

- Final Examination:
  - Classical Emphasis: Final Written Examination and Final Oral Comprehensive Examination.
  - Jazz Emphasis: Final Written Project and Final Oral Comprehensive Examination.

- Proficiency Exams:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of graduate-level proficiencies in Music Theory and Aural Skills by examination.

- Composer's Series Concerts: Submission of at least one composition for every end-of-quarter Composer's Series concert.

- Convocation: Attendance requirements as specified in the Lamont Student Handbook.

Master of Music in Music with a Concentration in Conducting

The Master of Music with a concentration in Conducting degree has three emphases: Choral, Orchestral, or Wind.

Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUPR 4930</td>
<td>Conducting</td>
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<tr>
<td>&amp; 4930</td>
<td>and Conducting</td>
<td></td>
</tr>
<tr>
<td>&amp; 4930</td>
<td>and Conducting</td>
<td></td>
</tr>
<tr>
<td>&amp; 4930</td>
<td>and Conducting</td>
<td></td>
</tr>
<tr>
<td>&amp; 4930</td>
<td>and Conducting</td>
<td></td>
</tr>
<tr>
<td>&amp; 4930</td>
<td>and Conducting</td>
<td></td>
</tr>
</tbody>
</table>

Emphasis

Students must select one of the three emphases (Choral, Orchestral or Wind):

A. Choral Emphasis

Complete all of the following courses:

MUAC 3960 Advanced Orchestral Conducting 2
MUAC 3962 Advanced Wind Conducting 2
MUAC 3684 Choral Literature I 2
MUAC 3689 Choral Literature II 2
MUEN 3712 Lamont Chorale 6
& 3712 and Lamont Chorale
& 3712 and Lamont Chorale
& 3712 and Lamont Chorale
& 3712 and Lamont Chorale
& 3712 and Lamont Chorale

Select either the Choral Pedagogy sequence or the Vocal Pedagogy sequence: 4

MUAC 3686 Choral Pedagogy I
& MUAC 3688 and Choral Pedagogy II

MUAC 3240 Vocal Pedagogy I
& MUAC 3241 and Vocal Pedagogy II (& 2 credits of upper-division area electives approved by faculty advisor)

B. Orchestral Emphasis

Complete all of the following courses:

MUAC 3961 Advanced Choral Conducting 2
MUAC 3962 Advanced Wind Conducting 2
MUAC 3959 Movement and Expression for Conductors 4
MUAC 3XXX or 4XXX Course in orchestral literature 4
MUEN 3760 Lamont Symphony Orchestra 6
& 3760 and Lamont Symphony Orchestra
& 3760 and Lamont Symphony Orchestra
& 3760 and Lamont Symphony Orchestra
& 3760 and Lamont Symphony Orchestra
& 3760 and Lamont Symphony Orchestra

C. Wind Emphasis
Complete all of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUAC 3960</td>
<td>Advanced Orchestral Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 3961</td>
<td>Advanced Choral Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 3959</td>
<td>Movement and Expression for Conductors</td>
<td>4</td>
</tr>
<tr>
<td>MUAC 3973</td>
<td>Advanced Wind Literature I</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 3974</td>
<td>Advanced Wind Literature II</td>
<td>2</td>
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</tbody>
</table>

MUEN 3752 Lamont Wind Ensemble 6
& 3752 and Lamont Wind Ensemble
& 3752 and Lamont Wind Ensemble
& 3752 and Lamont Wind Ensemble
& 3752 and Lamont Wind Ensemble
& 3752 and Lamont Wind Ensemble

Other Studies in Music
All emphases complete all of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUAC 4000</td>
<td>Introduction to Graduate Study</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 4000</td>
<td>Introduction to Graduate Study</td>
<td>2</td>
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</table>

Musicology/Ethnomusicology course 4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUAC 3497</td>
<td>Studying Music in the Field: Theory and Method in Ethnomusicology</td>
<td></td>
</tr>
<tr>
<td>MUAC 3502</td>
<td>Gender &amp; Genre in World Music</td>
<td></td>
</tr>
<tr>
<td>MUAC 3537</td>
<td>Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music</td>
<td></td>
</tr>
<tr>
<td>MUAC 3550</td>
<td>Major Composers-J.S. Bach</td>
<td></td>
</tr>
<tr>
<td>MUAC 3570</td>
<td>Major Composers: Beethoven</td>
<td></td>
</tr>
<tr>
<td>MUAC 3600</td>
<td>The Evolution of Rock</td>
<td></td>
</tr>
<tr>
<td>MUAC 3683</td>
<td>History of Chamber Music</td>
<td></td>
</tr>
<tr>
<td>MUAC 3847</td>
<td>Hip-Hop: Theory and Practice</td>
<td></td>
</tr>
<tr>
<td>MUAC 4161</td>
<td>Topics in Modern Opera</td>
<td></td>
</tr>
<tr>
<td>MUAC 4350</td>
<td>Talam: Rhythmic Form and Process in South Indian Music</td>
<td></td>
</tr>
<tr>
<td>MUAC 4492</td>
<td>History of Opera: From Monteverdi to Minimalism and Beyond</td>
<td></td>
</tr>
<tr>
<td>MUAC 4493</td>
<td>Approaches to American Popular Music</td>
<td></td>
</tr>
<tr>
<td>MUAC 4494</td>
<td>Music and Belief in World Cultures</td>
<td></td>
</tr>
<tr>
<td>MUAC 4498</td>
<td>Music, Dance, and Everyday Life in South Asia</td>
<td></td>
</tr>
<tr>
<td>MUAC 4499</td>
<td>Topics in Musicology</td>
<td></td>
</tr>
<tr>
<td>MUAC 4511</td>
<td>Mahler and Musical Culture</td>
<td></td>
</tr>
<tr>
<td>MUAC 4512</td>
<td>Stories of Music History</td>
<td></td>
</tr>
<tr>
<td>MUAC 4513</td>
<td>Wagner and the Ideology of the Artwork</td>
<td></td>
</tr>
<tr>
<td>MUAC 4520</td>
<td>Topics in Hindustani Music</td>
<td></td>
</tr>
<tr>
<td>MUAC 4521</td>
<td>Topics in Baroque Music</td>
<td></td>
</tr>
<tr>
<td>MUAC 4535</td>
<td>Baroque Opera on Stage</td>
<td></td>
</tr>
<tr>
<td>MUAC 4536</td>
<td>Musics of the African Diaspora</td>
<td></td>
</tr>
<tr>
<td>MUAC 4537</td>
<td>Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship</td>
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</tr>
<tr>
<td>MUAC 4538</td>
<td>Cultural and Psychological History of the African American Spiritual</td>
<td></td>
</tr>
<tr>
<td>MUAC 4545</td>
<td>The Making of Romantic Music: Paris and Leipzig in the 1830s</td>
<td></td>
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<td></td>
<td>Other courses as approved by the department</td>
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Music Theory course 4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MUAC 3005</td>
<td>Post-Tonal Theory and Analysis: Set-Theory and Serialism</td>
<td></td>
</tr>
<tr>
<td>MUAC 3023</td>
<td>Rhythm &amp; Meter in Tonal Music</td>
<td></td>
</tr>
<tr>
<td>MUAC 4002</td>
<td>Form and Analysis</td>
<td></td>
</tr>
</tbody>
</table>
MUAC 4006  Post-Tonal Theory: Mode/Rhythm
MUAC 4007  Post-Tonal Theory and Analysis: Set-Theory and Serialism
MUAC 4008  Modal Counterpoint, Renaissance Vocal Style
MUAC 4009  Tonal Counterpoint
MUAC 4010  Pedagogy of Music Theory
MUAC 4121  Seminar in Music Theory
MUAC 4801  Introduction to Schenkerian Analysis

Other courses as approved by department

Electives
All emphases complete all of the following courses:

MUAC 3XXX or 4XXX  Musicology/Ethnomusicology/Music Theory/Composition course

Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.

Total Credits 50

Minimum number of credits required for degree: 50 credits
Non-coursework requirements (see below and the Lamont Student Handbook for more details)

- Final Written Examination.
- Final Oral Comprehensive Examination.
- Proficiency Exams:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of graduate-level proficiencies in Music Theory and Aural Skills by examination.
- Recital: One full-length conducting recital.
- Convocation: Attendance requirements as specified in the Lamont Student Handbook.

Master of Music in Music with a Concentration in Pedagogy
The Master of Music in Music with a concentration in Pedagogy has two emphases: Piano and Suzuki Cello/Violin.

Degree requirements
Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emphasis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select one of the two emphases (Piano or Suzuki Cello/Violin):</td>
<td></td>
</tr>
<tr>
<td>A. Piano Emphasis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUPR 4210 &amp; 4210 &amp; 4210 &amp; 4210 &amp; 4210 &amp; 4210</td>
<td>Piano and Piano and Piano and Piano and Piano and Piano</td>
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</tr>
<tr>
<td>MUAC 4020</td>
<td>Introduction to Research in Piano Pedagogy</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 4831</td>
<td>Current Trends in Piano Pedagogy</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 4840 &amp; 4840 &amp; 4840 &amp; 4840 &amp; 4840 &amp; 4840</td>
<td>Piano Teaching Practicum and Piano Teaching Practicum and Piano Teaching Practicum and Piano Teaching Practicum (Students will enroll in MUAC 4840 each quarter and will complete 3 credits total over the course of their studies: three quarters for 0 credits and three quarters for 1 credit.)</td>
<td>3</td>
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<tr>
<td>MUAC 4850</td>
<td>Elementary Piano Pedagogy I</td>
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<tr>
<td>MUAC 4851</td>
<td>Elementary Piano Pedagogy II</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 4852</td>
<td>Group Piano Teaching Techniques</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 4853</td>
<td>Intermediate Piano Pedagogy I</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 4854</td>
<td>Intermediate Piano Pedagogy II</td>
<td>2</td>
</tr>
</tbody>
</table>

B. Suzuki Cello/Violin Emphases
   Select either the Suzuki Cello or Suzuki Violin emphasis.

1. Suzuki Cello Pedagogy Emphasis
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUPR 4270</td>
<td>Violoncello and Violoncello</td>
<td>12</td>
</tr>
<tr>
<td>MUAC 3463</td>
<td>Suzuki Cello Seminar I and Suzuki Cello Seminar I</td>
<td>6</td>
</tr>
<tr>
<td>MUAC 3466</td>
<td>Suzuki Cello Seminar II and Suzuki Cello Seminar II</td>
<td>6</td>
</tr>
<tr>
<td>MUAC 3439</td>
<td>Teaching Note Reading</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 3460</td>
<td>Suzuki Cello Practicum</td>
<td>3</td>
</tr>
<tr>
<td>MUEN 3XXX</td>
<td>Ensembles (Must register/participate in two ensembles per quarter as assigned. See Lamont Student Handbook for details.)</td>
<td>6</td>
</tr>
</tbody>
</table>

### 2. Suzuki Violin Pedagogy Emphasis

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUPR 4250</td>
<td>Violin and Violin</td>
<td>12</td>
</tr>
<tr>
<td>MUAC 3470</td>
<td>Suzuki Violin Seminar I and Suzuki Violin Seminar I</td>
<td>6</td>
</tr>
<tr>
<td>MUAC 3471</td>
<td>and Suzuki Violin Seminar I</td>
<td></td>
</tr>
<tr>
<td>MUAC 3477</td>
<td>Suzuki Violin Practicum and Suzuki Violin Practicum</td>
<td>3</td>
</tr>
<tr>
<td>&amp; 3477</td>
<td>and Suzuki Violin Practicum</td>
<td></td>
</tr>
<tr>
<td>MUEN 3XXX</td>
<td>Ensembles (Must register/participate in two ensembles per quarter as assigned. See Lamont Student Handbook for details.)</td>
<td>6</td>
</tr>
</tbody>
</table>

## Other Studies in Music

All emphases complete all of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUAC 4000</td>
<td>Introduction to Graduate Study</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 4000</td>
<td>Introduction to Graduate Study</td>
<td>2</td>
</tr>
<tr>
<td>MUAC 3497</td>
<td>Studying Music in the Field: Theory and Method in Ethnomusicology</td>
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<td>MUAC 3502</td>
<td>Gender &amp; Genre in World Music</td>
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<td>MUAC 3537</td>
<td>Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music</td>
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<td>MUAC 3550</td>
<td>Major Composers-J.S. Bach</td>
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<td>MUAC 3600</td>
<td>The Evolution of Rock</td>
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<td>MUAC 3683</td>
<td>History of Chamber Music</td>
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<td>MUAC 3847</td>
<td>Hip-Hop: Theory and Practice</td>
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<td>MUAC 4161</td>
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<td>MUAC 4493</td>
<td>Approaches to American Popular Music</td>
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<td>Music and Belief in World Cultures</td>
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<td>MUAC 4498</td>
<td>Music, Dance, and Everyday Life in South Asia</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>MUAC 4499</td>
<td>Topics in Musicology</td>
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<tr>
<td>MUAC 4511</td>
<td>Mahler and Musical Culture</td>
<td></td>
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<tr>
<td>MUAC 4512</td>
<td>Stories of Music History</td>
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<tr>
<td>MUAC 4513</td>
<td>Wagner and the Ideology of the Artwork</td>
<td></td>
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<td>Topics in Hindustani Music</td>
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<td>MUAC 4537</td>
<td>Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship</td>
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<tr>
<td>MUAC 4538</td>
<td>Cultural and Psychological History of the African American Spiritual</td>
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<tr>
<td>MUAC 4545</td>
<td>The Making of Romantic Music: Paris and Leipzig in the 1830s</td>
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Other courses as approved by the department

Music Theory course

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<tbody>
<tr>
<td>MUAC 3005</td>
<td>Post-Tonal Theory and Analysis: Set-Theory and Serialism</td>
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<tr>
<td>MUAC 3023</td>
<td>Rhythm &amp; Meter in Tonal Music</td>
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<tr>
<td>MUAC 4002</td>
<td>Form and Analysis</td>
</tr>
<tr>
<td>MUAC 4006</td>
<td>Post-Tonal Theory: Mode/Rhythm</td>
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<td>MUAC 4007</td>
<td>Post-Tonal Theory and Analysis: Set-Theory and Serialism</td>
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<td>MUAC 4008</td>
<td>Modal Counterpoint, Renaissance Vocal Style</td>
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<td>MUAC 4009</td>
<td>Tonal Counterpoint</td>
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<td>MUAC 4010</td>
<td>Pedagogy of Music Theory</td>
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<tr>
<td>MUAC 4121</td>
<td>Seminar in Music Theory</td>
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<tr>
<td>MUAC 4801</td>
<td>Introduction to Schenkerian Analysis</td>
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Other courses as approved by the department

Piano emphasis students also complete the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MUEN 3XXX</td>
<td>Ensembles (Must register/participate in ensembles per quarter as assigned. See Lamont Student Handbook for details.)</td>
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</tbody>
</table>

Electives

All emphases complete all of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MUAC 3XXX or MUAC 4XXX</td>
<td>Musicology/Ethnomusicology/Music Theory/Composition course</td>
</tr>
<tr>
<td>3XXX or 4XXX</td>
<td>Course</td>
</tr>
</tbody>
</table>

Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.

Note: If Piano emphasis candidates did not complete one year of piano literature prior to graduate study in this program, MUAC 3822/MUAC 3823/MUAC 3824 Piano Repertoire or its equivalent must be successfully completed before graduation.

Total Credits for Suzuki Cello/Violin Pedagogy Emphases 55

Total Credits for Piano Pedagogy Emphasis 55

Minimum number of credits required for the degree: 55 credits

Non-coursework requirements (see below and the Lamont Student Handbook for more details)

- Recital: One full-length performance recital.
- Final Teaching Demonstration.
- Final Oral Comprehensive Exam.
- Proficiency Exams:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of graduate-level proficiencies in Music Theory and Aural Skills by examination.
- Convocation: Attendance requirements as specified in the Lamont Student Handbook.

**Master of Music in Music with a Concentration in Performance**

The Master of Music in Music with a concentration in Performance has several emphases: Bassoon, Carillon, Cello, Clarinet, Double Bass, Flute, Guitar, Harp, Horn, Jazz (Double Bass, Drums, Guitar, Piano, Trombone, Trumpet, Voice, or Woodwinds), Oboe, Organ, Percussion, Piano, Saxophone, Trombone, Trumpet, Tuba, Viola, Violin, or Voice.
## Degree requirements

### Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MUPR 4XXX</td>
<td>Applied Lessons</td>
<td>12</td>
</tr>
<tr>
<td>MUEN 3XXX</td>
<td>Ensembles (Must register/participate in ensembles per quarter as assigned. See Lamont Student Handbook for details.)</td>
<td>6</td>
</tr>
</tbody>
</table>

Select one of the instrument emphases. 12

**A. Bassoon**
- MUAC 3761
- MUAC 3762
- Pedagogy & Repertoire Bassoon
  and Pedagogy & Repertoire Bassoon

3XXX or 4XXX: Area elective

**B. Carillon**
- MUAC 3698
- Carillon History and Mechanics
- MUAC 3700
- Carillon Repertoire
- MUAC 3700
- Carillon Repertoire

**C. Cello**
- MUAC 3730
- MUAC 3463
- Pedagogy & Repertoire Cello
  or Suzuki Cello Seminar I
  and Suzuki Cello Seminar I
  & MUAC 3464

3XXX or 4XXX: Area elective

**D. Clarinet**
- MUAC 3751
- MUAC 3752
- Pedagogy & Repertoire Clarinet
  and Pedagogy & Repertoire Clarinet

3XXX or 4XXX: Area elective

**E. Double Bass**
- MUAC 3655
- Orchestral Excerpts-Bass
- MUAC 3733
- Pedagogy & Rep Double Bass

3XXX or 4XXX: Area elective

**F. Flute**
- MUAC 3748
- MUAC 3749
- Pedagogy & Repertoire Flute
  and Pedagogy & Repertoire Flute

3XXX or 4XXX: Area elective

**G. Guitar**
Select one of the following options:
- MUAC 3724
- MUAC 3724
- Pedagogy & Repertoire Guitar
  and Pedagogy & Repertoire Guitar

3XXX or 4XXX: Area elective

**OR**
- MUAC 4050
- MUAC 4051
- MUAC 4052
- Major Adv Repertoire Guitar
  and Major Adv Repertoire Guitar
  and Major Adv Repertoire Guitar
3XXX or 4XXX: Area elective

**H. Harp**
- MUAC 3736
- MUAC 3737
- Pedagogy & Repertoire Harp
  and Pedagogy & Repertoire Harp

3XXX or 4XXX: Area elective

**I. Horn**
- MUAC 3662
- Orchestral Studies for Brass
- MUAC 3708
- Pedagogy & Repertoire Horn
**J. Jazz**

Jazz emphasis in Double Bass, Drums, Guitar, Piano, Trombone, Trumpet, Voice, or Woodwinds

Courses from the Jazz Studies curriculum selected in consultation with student’s faculty advisor.

**K. Oboe**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MUAC 3757</td>
<td>Pedagogy &amp; Repertoire Oboe</td>
</tr>
<tr>
<td>&amp; MUAC 3758</td>
<td>Pedagogy &amp; Repertoire Oboe</td>
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3XXX or 4XXX: Area elective

**L. Organ**

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<tr>
<td>MUPR 3350</td>
<td>Organ Improvisation</td>
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<tr>
<td>&amp; 3350</td>
<td>and Organ Improvisation</td>
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<td>&amp; 3350</td>
<td>and Organ Improvisation</td>
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<tr>
<td>MUAC 3738</td>
<td>Pedagogy &amp; Repertoire Organ</td>
</tr>
<tr>
<td>&amp; MUAC 3739</td>
<td>Pedagogy &amp; Repertoire Organ</td>
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<tr>
<td>&amp; MUAC 3740</td>
<td>Pedagogy &amp; Repertoire Organ</td>
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**M. Percussion**

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<td>MUAC 3718</td>
<td>Pedagogy &amp; Repertoire Percussion</td>
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<tr>
<td>&amp; MUAC 3719</td>
<td>Pedagogy &amp; Repertoire Percussion</td>
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3XXX or 4XXX: Area elective

**N. Piano**

Select one of the following options:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MUAC 3822</td>
<td>Piano Repertoire I</td>
</tr>
<tr>
<td>&amp; MUAC 3823</td>
<td>Piano Repertoire II</td>
</tr>
<tr>
<td>&amp; MUAC 3824</td>
<td>Piano Repertoire III</td>
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Sequence required if equivalent courses were not completed in the undergraduate degree.

<table>
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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
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<td>Advanced Keyboard Repertoire course</td>
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OR

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MUAC 3XXX or 4XXX</td>
<td>Advanced Keyboard Repertoire courses</td>
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**O. Saxophone**

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<td>MUAC 3754</td>
<td>Pedagogy &amp; Repertoire Saxophone</td>
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<tr>
<td>&amp; MUAC 3755</td>
<td>Pedagogy &amp; Repertoire Saxophone</td>
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3XXX or 4XXX: Area elective

**P. Trombone**

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<th>Course Code</th>
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<tr>
<td>MUAC 3662</td>
<td>Orchestral Studies for Brass</td>
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<tr>
<td>MUAC 3712</td>
<td>Pedagogy &amp; Repertoire Trombone</td>
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<tr>
<td>MUAC 3765</td>
<td>Professional Brass Techniques</td>
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3XXX or 4XXX: Area elective

**Q. Trumpet**

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<td>Orchestral Studies for Brass</td>
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<tr>
<td>MUAC 3742</td>
<td>Pedagogy &amp; Repertoire Trumpet</td>
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<td>MUAC 3765</td>
<td>Professional Brass Techniques</td>
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3XXX or 4XXX: Area elective

**R. Tuba**

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<th>Course Title</th>
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<tr>
<td>MUAC 3662</td>
<td>Orchestral Studies for Brass</td>
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<tr>
<td>MUAC 3706</td>
<td>Pedagogy &amp; Repertoire Tuba</td>
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<td>MUAC 3765</td>
<td>Professional Brass Techniques</td>
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3XXX or 4XXX: Area elective

**S. Viola**

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<tr>
<td>MUAC 3661</td>
<td>Orchestral Excerpts Viola</td>
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<td>&amp; MUAC 3663</td>
<td>and Orchestral Excerpts, Viola II</td>
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3XXX or 4XXX: Area elective

**T. Violin**
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<th>Course Code</th>
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<tr>
<td>MUAC 3470 &amp; MUAC 3471</td>
<td>Suzuki Violin Seminar I and Suzuki Violin Seminar I</td>
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<tr>
<td>MUAC 3660 or MUAC 3472 &amp; MUAC 3282</td>
<td>Orchestral Excerpts-Violin and Suzuki Violin Seminar I and Suzuki Violin Seminar II</td>
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<tr>
<td>U. Voice</td>
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<tr>
<td>MUAC 3810 &amp; MUAC 3811 &amp; MUAC 3812</td>
<td>Voice Repertoire and Voice Repertoire and Voice Repertoire</td>
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<td>MUAC 4200</td>
<td>Diction-Graduate Voice Majors</td>
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<td>Other Studies in Music</td>
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<td>Complete all of the following courses:</td>
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<td>Introduction to Graduate Study 2</td>
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<td>Topics in Hindustani Music</td>
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<td>Topics in Baroque Music</td>
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<td>MUAC 4535</td>
<td>Baroque Opera on Stage</td>
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<td>MUAC 4536</td>
<td>Musics of the African Diaspora</td>
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<td>MUAC 4537</td>
<td>Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship</td>
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<td>Music Theory course</td>
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<td>MUAC 3005</td>
<td>Post-Tonal Theory and Analysis: Set-Theory and Serialism</td>
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<td>Form and Analysis</td>
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<td>Post-Tonal Theory: Mode/Rhythm</td>
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<td>Post-Tonal Theory and Analysis: Set-Theory and Serialism</td>
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<td>MUAC 4009</td>
<td>Tonal Counterpoint</td>
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<td>MUAC 4010</td>
<td>Pedagogy of Music Theory</td>
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<td>MUAC 4121</td>
<td>Seminar in Music Theory</td>
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</table>
MUAC 4801  Introduction to Schenkerian Analysis

Other courses as approved by the department

**Electives**

Complete all of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MUAC 3XXX or 4XXX</td>
<td>Musicology/Ethnomusicology/Music Theory/Composition course</td>
<td>4</td>
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<tr>
<td>3XXX or 4XXX</td>
<td>Course</td>
<td>4</td>
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</table>

Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.

Voice emphasis candidates must take MUAC 3240 & 3241 Vocal Pedagogy I-II if equivalent coursework was not completed in the undergraduate degree.

**Total credits** 50

**Minimum number of credits required for the degree: 50 credits**

**Non-coursework requirements (see below and the Lamont Student Handbook)**

- Recital: One full-length performance recital.
- Final Written Project.
- Final Oral Comprehensive Examination.
- Proficiency Exam:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of graduate-level proficiencies in Music Theory and Aural Skills by examination.
- Convocation: Attendance requirements as specified in the Lamont Student Handbook.

**MASTER OF MUSIC DUAL CONCENTRATION**

**Degree requirements**

**Coursework requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>MUAC 4XXX or 4XXX</td>
<td>Musicology/Ethnomusicology/Music Theory/Composition course</td>
<td>4</td>
</tr>
<tr>
<td>3XXX or 4XXX</td>
<td>Course</td>
<td>4</td>
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</tbody>
</table>

Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.

Voice majors must take MUAC 3240 & MUAC 3241 Vocal Pedagogy I-II if equivalent was not completed during undergraduate study.

**MUEN 3XXX**  Ensembles (Consult Lamont Student Handbook for specific requirements. Not necessary if credits are required in the Concentration Area.) 6

**Minimum Number of Credits Required** 75

**Minimum number of credits required for degree: At least 75 credits**

**Non-coursework requirements:** Students must complete all non-coursework requirements for both concentrations. See Lamont Student Handbook for details.

**CERTIFICATE IN JAZZ AND COMMERCIAL MUSIC**

**Certificate requirements**

**Coursework requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MUPR 4XXX</td>
<td>Applied Lessons on major instruments</td>
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</tr>
<tr>
<td>MUEN 3XXX</td>
<td>Ensembles (as assigned by department chair)</td>
<td>6</td>
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</table>

Select from the following:

- MUAC 3860  Basic Jazz Improvisation
- MUAC 3870  Jazz Improvisation & Composition

**Minimum number of credits:** 12
MUAC 3980  Advanced Jazz Improvisation and Composition
MUAC 3830  Advanced Jazz Arranging I
MUAC 3831  Advanced Jazz Arranging II
MUAC 3832  Arranging for Computer-Based Media
Other courses as approved by the department

Total Credits 24

Minimum number of credits required for the certificate: 24

Certificate in Music (Artist Diploma Program) with a Concentration in Conducting
The Artist Diploma with a concentration in Conducting has three emphases: Choral, Orchestral, or Wind.

Certificate requirements
Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MUAC, MUPR, MUEN 3XXX or 4XXX</td>
<td>Upper-division Music electives</td>
<td>9</td>
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<tr>
<td>MUPR 4930 &amp; 4930</td>
<td>Conducting and Conducting</td>
<td>12</td>
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<tr>
<td>MUPR 4930 &amp; 4930</td>
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<tr>
<td>MUAC 3060 &amp; 3060</td>
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<td>MUAC 3060 &amp; 3060</td>
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<td>Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director</td>
<td>6</td>
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</tbody>
</table>

Total Credits 27

Minimum number of credits required for the certificate: 27 credits

Non-coursework requirements:
- Candidates will be enrolled in the Artist Diploma program for two years.
- Candidates will make four concert appearances with an appropriate major ensemble, which will be evaluated.
- Candidates will successfully perform one full-length conducting recital while enrolled in the program.

Certificate in Music (Artist Diploma Program) WITH A CONCENTRATION IN PERFORMANCE

Certificate requirements
Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MUAC, MUPR, MUEN 3XXX or 4XXX</td>
<td>Upper-division Music electives</td>
<td>9</td>
</tr>
<tr>
<td>MUPR 4XXX</td>
<td>Applied Lessons (2 credits per quarter)</td>
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<tr>
<td>MUEN 3XXX</td>
<td>Ensembles/Chamber Music (Must audition for and participate in two ensembles per quarter, at least one of which must be an appropriate major ensemble, if so assigned. See Lamont Student Handbook for details.)</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: These are minimum hours required. Candidates must enroll for at least one credit hour per quarter for each quarter of study and participate in at least two ensembles per quarter of study.

Total Credits 27
Minimum number of credits required for the certificate: 27 credits

Non-coursework requirements:
- Candidates will perform three juried, full-length solo recitals.
- Candidates will participate in the Lamont Honors Competition and the Lamont Chamber Music Competition at least once during enrollment in the program.

Certificate in Music with a Concentration in Conducting

The Certificate in Music with a concentration in Conducting has three emphases: Choral, Orchestral, or Wind.

Certificate requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>Core coursework requirements</td>
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<tr>
<td>MUPR 4930</td>
<td>Conducting and Conducting</td>
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<tr>
<td>MUAC 3060</td>
<td>Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director</td>
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<tr>
<td>MUEN 3XXX</td>
<td>Ensembles</td>
<td>6</td>
</tr>
</tbody>
</table>

Candidates will enroll in the appropriate major ensemble for 1 credit hour per quarter for each quarter of study. They must audition for, and if so assigned, play/sing in said ensemble each quarter. Candidates who do not play an appropriate instrument or who are not accepted into the ensemble for any given quarter will fulfill the credit and requirement by attending all rehearsals and concerts, following along in their scores during rehearsals.

Select the two courses outside your emphasis from the following:
- MUAC 3960 Advanced Orchestral Conducting: 2 credits
- MUAC 3961 Advanced Choral Conducting: 2 credits
- MUAC 3962 Advanced Wind Conducting: 2 credits

Total Credits: 28 credits

Minimum number of credits required for the certificate: 28 credits

Non-coursework requirements:
- Candidates will be enrolled in the Certificate program for two years.
- Candidates will successfully perform one full-length conducting recital while enrolled in the program.

Certificate in MUSIC WITH A CONCENTRATION IN Orchestral Studies

Certificate requirements

Coursework requirements

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<th>Code</th>
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<tr>
<td></td>
<td>Core coursework requirements</td>
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<tr>
<td>MUPR 4XXX</td>
<td>Applied Lessons on major instrument</td>
<td>6</td>
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<tr>
<td>MUPR 4XXX</td>
<td>Applied Lessons on orchestral repertoire</td>
<td>6</td>
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<tr>
<td>MUEN 3XXX</td>
<td>Chamber Ensembles</td>
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<tr>
<td>Lamont Symphony Orchestra</td>
<td>Lamont Symphony Orchestra</td>
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<tr>
<td>MUEN 3760</td>
<td>Lamont Symphony Orchestra</td>
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</tbody>
</table>

Total Credits: 18 credits

Minimum number of credits required for the certificate: 18

Non-coursework requirements:
- One solo recital consisting of orchestral audition solo repertoire.
- Two orchestral audition juries in audition format (winter and spring quarters).
Candidates will normally be enrolled for one year. However, one may request to remain in school longer with the stipulation that the candidate must enroll in orchestra every quarter during which he/she is on campus.

Certificate in Suzuki Pedagogy

The Certificate in Suzuki Pedagogy has two emphases: Violin and Cello

Certificate Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Cello</td>
<td>Suzuki Seminars: 2 credits each quarter</td>
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</tr>
<tr>
<td>MUAC 3463</td>
<td>Suzuki Cello Seminar I</td>
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<tr>
<td>MUAC 3464</td>
<td>Suzuki Cello Seminar I</td>
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<td>MUAC 3466</td>
<td>Suzuki Cello Seminar II</td>
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<td>Suzuki Cello Seminar II</td>
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<td>MUAC 3439</td>
<td>Teaching Note Reading</td>
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<td>MUAC 3460</td>
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<td>MUAC 3461</td>
<td>Suzuki Cello Practicum</td>
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<td>MUAC 3462</td>
<td>Suzuki Cello Practicum</td>
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<tr>
<td>MUAC 4450</td>
<td>Suzuki Group Lesson Practicum</td>
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</table>

Total Credits: 18

Minimum number of credits required for the certificate: 18

Music-Academic Classes Courses

MUAC 3002 Form and Analysis (4 Credits)
Analysis of structural elements and stylistic features in solo, chamber and orchestral literature from 1600 to present. Prerequisite: MUAC 2006.

MUAC 3005 Post-Tonal Theory and Analysis: Set-Theory and Serialism (4 Credits)
This course has two components: (1) A study of selected analytical techniques for post-tonal music, primarily pitch-class set theory and twelve-tone (serial) theory; (2) Analysis of representative works from the twentieth century, focusing on the music from the first half of the century (Schoenberg, Berg, Webern, Stravinsky, and Bartok). Six credits of Theory 2 or permission of instructor required.

MUAC 3023 Rhythm & Meter in Tonal Music (4 Credits)
This course gives a general background, including the history of rhythm and meter, different rhythmic analyses, and various topics (dissonance, ambiguity, Schenker, motives, biography, and perception).

MUAC 3024 Introduction to Tonal Analysis (4 Credits)
This course introduces students to various types of musical analysis for tonal music that are more advanced than what is introduced in first- and second-year music theory. Prerequisites: MUAC 2006 and MUAC 2022.

MUAC 3025 Topics in Analysis: Brahms (4 Credits)
This course explores a variety of analytical techniques used to understand the compositions of Brahms. We examine works by musicologists and theorists such as Allen Forte, Walter, Frisch, Arnold Schoenberg, Carl Schachter, and David Lewin. Issues discussed include developing variations, rhythm, form, and ambiguity in Brahms. We cover a wide range of repertoire, ranging from piano works to choral works to symphonies.
MUAC 3030 Seminar-Performance Psychology (2 Credits)

MUAC 3036 Internship (1-5 Credits)

MUAC 3045 Introduction to Studio Recording (3 Credits)
A hands-on introduction to recording popular music in the state of the art Lamont Recording Studio. Students will participate in pre-production and recording of a professional four piece rock band. Students will also learn basic audio theory as it applies to the use of microphones, signal processing, and other studio equipment. Topics to be covered include drum sounds, guitar and bass sounds, basic audio theory and acoustics, basic electricity, digital recording, microphones and DI’s, signal routing in the studio, tracking with ProTools HD and Logic Pro7, equalization, dynamics, reverberation and delay, special effects, mixing to stereo.

MUAC 3059 Audio Production II (4 Credits)
This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as on-site training at Lamont School of Music performances. This is the first sequence in the audio production concentration.

MUAC 3060 Extra-Musical Roles of the Music Director (1 Credit)
Under the supervision and guidance of the director of orchestral studies, students will gain hands-on, actual experience with many of the non-musical tasks that conductors face. These experiences will include managing orchestra personnel, librarian activities, running auditions, and recruiting. Open only to Artist Diploma in orchestral conducting students.

MUAC 3061 Audio Production I (4 Credits)
An introduction to analog and digital synthesis, MIDI sequencing, and DAW software.

MUAC 3064 Audio Production IV (4 Credits)
This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as on-site training at Lamont School of Music performances. This is the third sequence in the audio production concentration.

MUAC 3065 Audio Production V (4 Credits)
This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as onsite training at Lamont School of Music performances. This is the fourth sequence in the audio production concentration.

MUAC 3068 Audio Production for Working Musicians (4 Credits)
In this course, students are taught a solid foundation of basic audio production skills that will enable them to record any style of music. Students are also taught the basics of digital music synthesis and how to create music with digital synthesizers and MIDI. The primary digital audio workstation software used in this course will be ProTools, and each student is required to purchase ProTools (about $250 academic price) and an iLok license dongle (about $40). However, the course has been designed so that skills acquired can be easily applied to any regular DAW platform, such as Logic, Cubase, Ardour, etc. Production techniques for various musical genres will be presented, including Rock, Jazz, Classical, Techno, experimental electro-acoustic, etc. This course will be of great value to performing musicians, singer/songwriters, ensemble directors and conductors, composers, or anyone who wants to record and/or produce music. Students are encouraged but not required to purchase an audio interface and microphone or other input device depending on their area of interest, and are advised in class as to what purchases make sense.

MUAC 3069 Jazz Rhythm Section (4 Credits)
Jazz Rhythm Section provides students with detailed performance practice skills and knowledge. This class may be used to fulfill four hours of Jazz Studies and Commercial Music Area Requirements and may only be taken once for credit. Jazz Studies and Commercial Music Major or the performance ability sufficient to perform on a rhythm section instrument in one of the JSCM ensembles.

MUAC 3092 The Business Side of Music (4 Credits)
A personal and clinical approach to developing music business skills and strategies.

MUAC 3105 Studies in Style: Movement, Mannerisms, Gesture and Physical Comedy (3 Credits)
The exploration of period styles in theatrical and historical genres will be introduced to broaden the singer/actor’s repertoire of physical gesture and comedic forms of stage movement. The focus of the course will include studies in rhythm, timing, pacing, musicality and lyricism as these elements apply to heightened expressivity within scene work, character development and ensemble performance. Considerable time will be devoted to the physical practice of related skills as preparation and facilitation of performance projects that will serve as an opportunity for peer observation, group discussion and commentary, and student assessment.

MUAC 3106 The Dynamic Body: Foundations in Movement Methods and Body Awareness Principles (2 Credits)
An introduction to fundamental body awareness principles in relationship to physical performance skills for vocal performance majors. Methods for heightening kinesthetic awareness will be learned in the form of movement explorations, improvisations, structures, and learned phrases to gain somatic insight into the performer’s sense of verticality in all places and dimensions of space. The concepts of the body in motion will be a primary context and focus for the progression of studies or ‘etudes,’ and for the reflective and analytical processes that include observation, journaling, discussion and peer commentary. Studio activities in solo, partnering, and group work will further the student’s knowledge of how to become more responsive, expressive, and communicative when interacting with the surrounding environment and with others. Integrated with the body-mind practice and theoretical study, students will be encouraged to inquire, examine and articulate possible philosophies regarding why the mastery of the performer’s physical body requires an essential sense of discipline that is cultivated in the performing arts, and how the somatic practices being investigated can serve his/her performance presence and support one’s vocal training and health for the long-term.
MUAC 3124 Composition Seminar (1 Credit)
Composition Seminar focuses on the reading and performance of modern scores by Lamont and recognized composers. Any student composing music or wishing to perform new compositions at Lamont may register and participate. Requirements for composers include the completion, rehearsal and performance of a piece of music at the New Music Ensemble concert each quarter. Non-composers are required to rehearse and perform at the New Music Ensemble concert. Composers enrolled in the ensemble may be required to play compositions submitted as well.

MUAC 3165 Music Theater Survey (2 Credits)
A historical overview of the American Broadway musical, performance technique, audition preparation and repertoire. Must be prepared to sing and perform.

MUAC 3166 Music Theater Survey II (2 Credits)
Fundamentals of music theater performance will be addressed through readings of the text, "Acting in Music Theater" by Joe Dee and Rocco dal Vera. Application of these techniques through performance of musical theater literature will be incorporated during the last number of weeks. Additionally, we will highlight prominent composers and their works throughout the quarter.

MUAC 3196 Advanced Composition Tutorial (4 Credits)

MUAC 3200 Recitative in Opera & Oratorio (2 Credits)
The fluid singing of recitative in German, English, Italian and French will be explored and practiced in this class. Students will harmonically analyze examples, add ornamentation, and perform recitative with a knowledge of the translation and emotional content.

MUAC 3212 Digital Music Creation (4 Credits)
In this course, students will create, produce, and present their own digital music. Using one of the industry’s leading digital music creation platforms (such as Ableton Live), students will learn the history of electronic music creation, create their own digital music portfolios, become familiar with relevant copyright issues, and oversee public performances of their music.

MUAC 3234 Cycle of Seasons-Resources (1 Credit)

MUAC 3235 Preschool Music Workshop (3 Credits)

MUAC 3236 Family Music Workshop (1 Credit)

MUAC 3237 Music Makers at the Keyboard (3 Credits)
This 30-hour workshop presents the keyboard method for groups of young beginners ages 5-9.

MUAC 3238 Music Makers at Home & World (3 Credits)
This 30-hour workshop presents the method for a sequential two-year program that guides the musical development of children ages 4-7. Different world cultures are celebrated through music, songs, dances, stories, and rituals.

MUAC 3240 Vocal Pedagogy I (1 Credit)
Psychological and physical aspects of teaching of singing.

MUAC 3241 Vocal Pedagogy II (1 Credit)
Psychological and physical aspects of teaching of singing.

MUAC 3243 Recitative in Opera (2 Credits)
Working as a professional singer your proficiency with recitative should be high. Though a major part of many operas recitative is still often overlooked as a skill set. Through this course we will explore several different approaches to recitative from various compositional styles and time periods.

MUAC 3282 Suzuki Violin Seminar II (2 Credits)

MUAC 3283 Suzuki Violin Seminar II (2 Credits)

MUAC 3284 Suzuki Violin Seminar II (2 Credits)

MUAC 3333 Advanced Vocal Pedagogy (2 Credits)
An advanced study of the science behind the singing voice, including the biomechanics of phonation, identifying systems and changes in the voice, posture and breathing that impact phonation, and a physiologic approach to vocal exercises in preparation for teaching voice. Prerequisite: MUAC 3242.

MUAC 3350 Social History-Modern Britain (4 Credits)
This course investigates the intersections of class, gender, and race in nineteenth-century British society. During this period, Britain became the preeminent world power thanks to its spectacular industrialization and its even more impressive empire. Such success often fostered smugness and complacency, yet British society was also riddled with dissension as people struggled to cope with the enormous changes they were witnessing. Discussions focus on the ways in which Victorian people themselves understood their society and its problems, and how they attempted to construct solutions to those problems. Who was implicitly or explicitly excluded from British society? As we consider these topics, we use a variety of secondary and primary sources, including fiction; one goal of the course is for us to think about how to integrate different kinds of sources as we analyze historical problems and create our own interpretations. Cross listed with HIST 3350.
MUAC 3439 Teaching Note Reading (2 Credits)
MUAC 3460 Suzuki Cello Practicum (1 Credit)
MUAC 3461 Suzuki Cello Practicum (1 Credit)
MUAC 3462 Suzuki Cello Practicum (1 Credit)
MUAC 3463 Suzuki Cello Seminar I (2 Credits)
MUAC 3464 Suzuki Cello Seminar I (2 Credits)
MUAC 3465 Suzuki Cello Seminar I (2 Credits)
MUAC 3466 Suzuki Cello Seminar II (2 Credits)
MUAC 3467 Suzuki Cello Seminar II (2 Credits)
MUAC 3468 Suzuki Cello Seminar II (2 Credits)
MUAC 3470 Suzuki Violin Seminar I (2 Credits)
Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.
MUAC 3471 Suzuki Violin Seminar I (2 Credits)
Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.
MUAC 3472 Suzuki Violin Seminar I (2 Credits)
Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.
MUAC 3477 Suzuki Violin Practicum (1 Credit)
The Suzuki Violin Practicum is designed to give the students enrolled in the Suzuki Seminar classes a forum to practice teaching using the pedagogical points and teaching philosophy covered in the seminar classes. The course will include some lecture focusing on teaching strategies for effective technical development and effective communication in the lessons. Prerequisite: MUAC 3470.
MUAC 3497 Studying Music in the Field: Theory and Method in Ethnomusicology (4 Credits)
This course introduces issues that motivate ethnomusicological research and techniques for carrying out fieldwork, the ethnographic method which has largely come to define the discipline. Our primary texts include Bruno Nettl's classic text, The Study of Ethnomusicology, and Shadows in the Field, a seminal volume of essays discussing ethnomusicological fieldwork. This course also involves hands-on experience in some of the major fieldwork techniques, including field observation and writing fieldnotes, musical transcription and interviewing. This course culminates in a field research project in a Denver musical community determined in consultation with the professor. Note: this course is not open to freshman; sophomores with permission of instructor.
MUAC 3502 Gender & Genre in World Music (4 Credits)
How are concepts of "maleness," "femaleness" and other gendered categories constructed, maintained, and contested through musical performance? This course examines the issues explored and debated in recent studies of gender relation to music of various cultures including Western art music, popular music, and other world genres. We focus on reading and discussion of ethno-musicological and anthropological ethnographies, musicological studies focusing on gender and theoretical writings from gender and women's studies. Lectures and discussions are supplemented by guest lecture-demonstrations, film/video screenings and hands-on workshops. This course is not open to freshman. Sophomores can register with instructor approval.
MUAC 3537 Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music (4 Credits)
André Crouch, Walter Hawkins, and Richard Smallwood have each influenced the course of black gospel music for the last 50 years. Through listening to recordings, watching video performances, score analysis, readings, performance, and improvisation, this course will examine the music of these unique composer/performers and how their contributions have impacted black gospel music. Rather than simply read about and analyze the music, students will play the music of these composers and literally have hands-on experience with the colors and textures of the music that has shaped church music and the gospel music industry for the last five decades.
MUAC 3550 Major Composers: J.S. Bach (4 Credits)
Music of Bach, including chronological development, form and style, studied against background of baroque musical practice and circumstances of Bach's life and temperament. Prerequisites: MUAC 1621, 1622 and 1623.
MUAC 3570 Major Composers: Beethoven (4 Credits)
MUAC 3578 Advanced Composition (4 Credits)
Advanced composition with students composing works of large scope and using a variety of advanced techniques consistent with interests and abilities; emphasis on imagination and originality of personal expression.
MUAC 3579 Advanced Composition (3 Credits)
Advanced composition with students composing works of large scope and using a variety of advanced techniques consistent with interests and abilities; emphasis on imagination and originality of personal expression. May be taken more than once for credit. Prerequisite: MUAC 3020.
MUAC 3590 Guitar History (4 Credits)

MUAC 3600 The Evolution of Rock (4 Credits)
This course traces the history of rock from the Beatles in the early 60’s to the most recent developments of the 90’s. The course provides a concise overview of this most influential musical phenomenon. Designed for the non-music major, it requires no prerequisites. Classes consist of lectures and listening. All listening examples are available via computer to each student.

MUAC 3630 Basic Jazz Arranging (2 Credits)
A study and practical analysis of the foundational techniques involved with composing and orchestrating for small group jazz ensembles. This course will cover the basics of form, notation, and orchestration in the small group jazz idiom, consisting of one to four horns and/or vocals, guitar, piano, bass, and drums.

MUAC 3650 Orchestral Excerpts-Cello (4 Credits)
This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock auditions and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

MUAC 3655 Orchestral Excerpts-Bass (4 Credits)
This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock auditions and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

MUAC 3660 Orchestral Excerpts-Violin (4 Credits)
This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock auditions and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

MUAC 3661 Orchestral Excerpts Viola (4 Credits)
This course explores excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students are given a list of excerpts and coached on how to prepare them. They participate in mock auditions and receive feedback. This course also addresses the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

MUAC 3662 Orchestral Studies for Brass (2 Credits)
Study of orchestral literature brass players are likely to be asked to play at auditions for professional orchestras. Undergraduate participants should have passed their Sophomore Proficiency jury with distinction.

MUAC 3663 Orchestral Excerpts, Viola II (4 Credits)
Companion course to Orchestral Excerpts Viola I, this section expands the repertoire list beyond the standard works used for auditions today. In addition to further honing basic requisite material from section I, students study and prepare less frequently required works and principle viola solo repertoire. There is more extensive discussion of the audition process and mock auditions as a part of the course. While it is advised and preferable that students complete the first section of this course it is possible to take the course with the approval of the instructor.

MUAC 3677 Bow Art Ensemble (0-1 Credits)
The Bow Art Ensemble explores the study and rehearsal of traditional and contemporary chamber orchestra repertoire, history, and culture, to be led in conjunction with Lamont performance faculty and guest artists. Students will receive instruction on proper techniques, musical styles, study of traditional and contemporary collaborative leadership and democratic approaches to performing in a conductor-less ensemble.

MUAC 3682 Topics-Orchestral Repertoire (4 Credits)
We explore the history of the orchestra and orchestral literature from the baroque through modern eras, and examine a number of test cases in which conventional understanding has been challenged in recent years. The course concludes with individual research projects and presentations on topics students choose and develop.

MUAC 3683 History of Chamber Music (4 Credits)
Chamber music from baroque trio sonata to contemporary electronic works. Prerequisites: MUAC 1621, MUAC 1622 and MUAC 1623. Winter quarter only.

MUAC 3684 Choral Literature I (2 Credits)
This course is an analysis of the development of choral repertoire from the Middle Ages through the Baroque era.

MUAC 3686 Choral Pedagogy I (2 Credits)
The Choral Pedagogy course focuses on effective choral methods and techniques indigenous to primary schools of thought that have risen to prominence or have proven successful in practice and performance throughout the last 50 years in the academic and professional choral idiom. Through study and analysis of selected works by various composers, effective teaching techniques are explored in performance practice and style interpretation.
MUAC 3688 Choral Pedagogy II (2 Credits)
The Choral Pedagogy course focuses on effective choral methods and techniques indigenous to primary schools of thought that have risen to prominence or have proven successful in practice and performance throughout the last 50 years in the academic and professional choral idiom. Through study and analysis of selected works by various composers, effective teaching techniques are explored in performance practice and style interpretation.

MUAC 3689 Choral Literature II (2 Credits)
This course is an analysis of the development of choral repertoire from the Classical period until the present day. This course is meant to be taken in sequence after Choral Literature I.

MUAC 3698 Carillon History and Mechanics (4 Credits)
A survey of the evolution of signal bells into the musical instrument known as the carillon. This subject is often called "campanology." The history will be traced from the 16th century in the Low Countries through modern times in Europe, North America, Australia/New Zealand and Japan. Topics will include bell foundries, bell casting and tuning, bell chambers, playing actions, carillonneurs, carillon schools, carillon organizations, the use of the carillon in its various regions and basic carillon maintenance.

MUAC 3699 Carillon Repertoire (4 Credits)
A survey of the music expressly produced for carillon from the earliest times through the present. Categories include automatic music (e.g., De Sany, Wyckaert, Eggert), the earliest compositions for manual play (Van den Gheyn and the Louvain manuscripts of the 18th century), and the 20th-century categories: Flemish, Dutch, French and North American. Mainstream publishers as well as incidental publications will be covered. The labs will focus on analysis through recordings and live performances by participants.

MUAC 3686 Pedagogy & Repertoire Tuba (4 Credits)
Teaching techniques and survey of literature and teaching materials for the tuba.

MUAC 3687 Pedagogy & Repertoire Tuba (4 Credits)
Teaching techniques and survey of literature and teaching materials for the tuba.

MUAC 3688 Pedagogy & Repertoire Tuba (4 Credits)
Teaching techniques and survey of literature and teaching materials for the tuba.

MUAC 3689 Pedagogy & Repertoire Horn (4 Credits)
Teaching techniques and survey of literature and teaching materials for the horn.

MUAC 3690 Pedagogy & Repertoire Horn (4 Credits)
Teaching techniques and survey of literature and teaching materials for the horn.

MUAC 3691 Pedagogy & Repertoire Horn (4 Credits)
Teaching techniques and survey of literature and teaching materials for the horn.

MUAC 3692 Pedagogy & Repertoire Percussion (4 Credits)
Teaching techniques and survey of literature and teaching materials for percussion.

MUAC 3693 Pedagogy & Repertoire Percussion (4 Credits)
Teaching techniques and survey of literature and teaching materials for percussion.

MUAC 3694 Pedagogy & Repertoire Percussion (4 Credits)
Teaching techniques and survey of literature and teaching materials for percussion.

MUAC 3695 Pedagogy & Repertoire Percussion (4 Credits)
Teaching techniques and survey of literature and teaching materials for percussion.

MUAC 3696 Pedagogy & Repertoire Guitar (4 Credits)
Teaching techniques and survey of literature and teaching materials for the guitar.

MUAC 3697 Pedagogy & Repertoire Viola (4 Credits)
Teaching techniques and survey of literature and teaching materials for the viola.

MUAC 3698 Pedagogy & Repertoire Viola (4 Credits)
Teaching techniques and survey of literature and teaching materials for the viola.

MUAC 3699 Pedagogy & Repertoire Cello (4 Credits)
Teaching techniques and survey of literature and teaching materials for the cello.
MUAC 3733 Pedagogy & Rep Double Bass (4 Credits)
Teaching techniques and survey of literature and teaching materials for the double bass.

MUAC 3735 Pedagogy & Repertoire Harp (4 Credits)
Teaching techniques and survey of literature and teaching materials for the harp.

MUAC 3736 Pedagogy & Repertoire Harp (4 Credits)
Teaching techniques and survey of literature and teaching materials for the harp.

MUAC 3737 Pedagogy & Repertoire Harp (4 Credits)
Teaching techniques and survey of literature and teaching materials for the harp.

MUAC 3738 Pedagogy & Repertoire Organ (2 Credits)
Teaching techniques and survey of literature and teaching materials for the organ.

MUAC 3739 Pedagogy & Repertoire Organ (2 Credits)
Teaching techniques and survey of literature and teaching materials for the organ.

MUAC 3740 Pedagogy & Repertoire Organ (2 Credits)
Teaching techniques and survey of literature and teaching materials for the organ.

MUAC 3741 Pedagogy & Repertoire Trumpet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the trumpet.

MUAC 3742 Pedagogy & Repertoire Trumpet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the trumpet.

MUAC 3743 Pedagogy & Repertoire Trumpet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the trumpet.

MUAC 3747 Pedagogy & Repertoire Flute (4 Credits)
Teaching techniques and survey of literature and teaching materials for the flute.

MUAC 3748 Pedagogy & Repertoire Flute (4 Credits)
Teaching techniques and survey of literature and teaching materials for the flute.

MUAC 3749 Pedagogy & Repertoire Flute (4 Credits)
Teaching techniques and survey of literature and teaching materials for the flute.

MUAC 3750 Pedagogy & Repertoire Clarinet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the clarinet.

MUAC 3751 Pedagogy & Repertoire Clarinet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the clarinet.

MUAC 3752 Pedagogy & Repertoire Clarinet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the clarinet.

MUAC 3753 Pedagogy & Repertoire Saxophone (4 Credits)
Teaching techniques and survey of literature and teaching materials for the saxophone.

MUAC 3754 Pedagogy & Repertoire Saxophone (4 Credits)
Teaching techniques and survey of literature and teaching materials for the saxophone.

MUAC 3755 Pedagogy & Repertoire Saxophone (4 Credits)
Teaching techniques and survey of literature and teaching materials for the saxophone.

MUAC 3756 Pedagogy & Repertoire Oboe (4 Credits)
Teaching techniques and survey of literature and teaching materials for the oboe.

MUAC 3757 Pedagogy & Repertoire Oboe (4 Credits)
Teaching techniques and survey of literature and teaching materials for the oboe.

MUAC 3758 Pedagogy & Repertoire Oboe (4 Credits)
Teaching techniques and survey of literature and teaching materials for the oboe.

MUAC 3759 Pedagogy & Repertoire Bassoon (4 Credits)
Teaching techniques and survey of literature and teaching materials for the bassoon.

MUAC 3761 Pedagogy & Repertoire Bassoon (4 Credits)
Teaching techniques and survey of literature and teaching materials for the bassoon.

MUAC 3762 Pedagogy & Repertoire Bassoon (4 Credits)
Teaching techniques and survey of literature and teaching materials for the bassoon.
MUAC 3765 Professional Brass Techniques (4 Credits)
This 4-hour per week course will be divided into a lecture/seminar for two hours and performance practicum for two hours. Topics discussed and performed include orchestral playing, sight reading, practice, solo performance, jazz survival, ornamentation, transposition, and warm-up/maintenance routine.

MUAC 3804 Topics in Music (1-5 Credits)
MUAC 3810 Voice Repertoire (2 Credits)
Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.
MUAC 3811 Voice Repertoire (2 Credits)
Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.
MUAC 3812 Voice Repertoire (2 Credits)
Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.
MUAC 3822 Piano Repertoire I (2 Credits)
Performance and analysis.
MUAC 3823 Piano Repertoire II (3 Credits)
Performance and analysis.
MUAC 3824 Piano Repertoire III (3 Credits)
Performance and analysis.
MUAC 3830 Advanced Jazz Arranging I (2 Credits)
A study and practical analysis of small to medium jazz ensemble writing with extended instrumentation. Consisting of nonette-style orchestration including orchestral instruments such as horn, tuba, woodwinds, and voice along with extended electronic textures, this course will cover the basics of from, notation and orchestration in the 21st Century hybrid small to medium size jazz ensemble idiom.
MUAC 3831 Advanced Jazz Arranging II (2 Credits)
A study and practical analysis of large “studio orchestra” type jazz writing with extended instrumentation. Consisting of medium to full orchestral string section, woodwinds, harp, percussion, brass plus jazz rhythm section, voices, and soloists. Exemplified by such modern ensembles as Snarky Puppy with the Metropole Orchestra, this will be a full studio orchestra with modern 21st Century jazz, rock, and pop sensibilities. String bowings and aspects of dynamic ensemble balances in the studio orchestra will be studied, as well as writing for the harp.
MUAC 3832 Arranging for Computer-Based Media (2 Credits)
This course will be an introduction to techniques of composition and arranging music for media, with an emphasis on practical assignments that the student will encounter in the professional world of media composition. Students will learn how to work in collaboration with filmmakers, master techniques of timing and synchronization, use traditional techniques of composition/arranging/orchestration to serve dramatic needs, and work efficiently in the recording studio under time and budget restraints.
MUAC 3841 Jazz & Commercial Music History/Repertoire (4 Credits)
MUAC 3842 Jazz & Commercial Music History/Repertoire (4 Credits)
Writing for small and large jazz groups; accompaniment skills; writing for live performance versus writing for recorded performance. Prerequisite: MUAC 3830.
MUAC 3843 Jazz & Commercial Music History/Repertoire (4 Credits)
Writing for small and large jazz groups; accompaniment skills; writing for live performance versus writing for recorded performance. Prerequisite: MUAC 3830.
MUAC 3844 21st Century Artistry I (2 Credits)
21st Century Artistry I is a course of study that examines the full spectrum of attributes and skills necessary for a student to “survive and thrive” in the every-changing landscape of the 21st Century. With a two-fold approach of examining effective strategies for a “modern artistry mindset” along with extensive case studies of successful 21st Century professionals, this course will offer the student a wide array of important recourses to guide their career. The case study aspect of 21st Century Artistry I will be based on multiple evaluations of successful artists in the 21st Century in partnership with local presenters.
MUAC 3845 Writing for The Modern Large Jazz Ensemble I (2 Credits)
A study and practical analysis of the major methods for writing for the modern large jazz ensemble (big band) as exemplified by Frank Foster, Sammy Nestico, Slide Hampton, Bob Brookmeyer and other modern practitioners. Application of analysis will be in the form of a complete arrangement or original composition for modern big band.
MUAC 3846 Writing for the Modern Large Jazz Ensemble II (2 Credits)
A study and practical analysis of the major methods for writing for the modern large jazz ensemble (big band) as exemplified by Bob Brookmeyer, Maria Schneider, Gil Evans, Darcy James Argue, and others. A special emphasis will be placed on creating full works for the large jazz ensemble that uses textures and modern extended form approaches indicative of these artists. Application of analysis will be in the form of a complete arrangement or original composition for modern big band.
MUAC 3847 Hip-Hop: Theory and Practice (4 Credits)
Students in this class will examine the socio-cultural, economic, and political significance of hip-hop as a medium of expression for youth around the world. Through analysis of popular writing and media, as well as academic texts, we critically explore issues of race, social justice, masculinity, misogyny, censorship, technology, and intellectual property, as they relate to mainstream and underground hip-hop in America. Having discussed hip-hop's roots in the U.S., the remainder of the quarter will be devoted to tracing hip-hop's global routes.

MUAC 3860 Basic Jazz Improvisation (4 Credits)
The study of jazz improvisation techniques and forms. Open to music majors or by instructor permission.

MUAC 3870 Jazz Improvisation & Composition (4 Credits)
Improvisational styles of major jazz soloists studied through transcription and analysis of selected recorded jazz solos; scales and modes; rhythmic styles and devices; practice and development of individual student's improvisational technique. Prerequisites: MUAC 1011, MUAC 1012, MUAC 3830.

MUAC 3872 Jazz Improvisation & Composition (4 Credits)
Improvisational styles of major jazz soloists studied through transcription and analysis of selected recorded jazz solos; scales and modes; rhythmic styles and devices; practice and development of individual student's improvisational technique. Prerequisites: MUAC 1011, MUAC 1012, MUAC 3830.

MUAC 3910 Orchestration (4 Credits)
Techniques of instrumental scoring.

MUAC 3933 Graduate Music History Review (0 Credits)

MUAC 3935 Graduate Music Theory Review (0 Credits)
This course provides an accelerated review of materials from the undergraduate theory core, including analysis and written exercises in diatonic and chromatic harmony, counterpoint, tonal forms, and an introduction to 20th-Century theory.

MUAC 3959 Movement and Expression for Conductors (4 Credits)
Conductors use their whole body to communicate and elicit successful performances from their ensemble. If you have unnecessary tension or lack of ease in your body, this is communicated unconsciously to your ensemble, hindering quality of performance. Additionally, physical tension can prevent your ability to communicate and think clearly under pressure. This course is an exploration of freedom of movement and the physicality of musical expression. Classes will include group activities in free-movement, dance, acting, keeping your cool, poise, balance, tension release, as well as hands-on instruction applying Alexander technique to your conducting.

MUAC 3960 Advanced Orchestral Conducting (2 Credits)
Discussions of and exercises in score study, interpretation, and techniques associated with orchestral conducting. Includes practical experience conducting orchestral repertoire. Required of MM Conducting students with Choral or wind concentrations. Open to other students with permission of instructor. Prerequisite: Permission of instructor (not needed for MM Conducting students with Choral or Wind concentration). Fall quarter only.

MUAC 3961 Advanced Choral Conducting (2 Credits)
Conducting complex choral works, including those with instrumental accompaniment; phrasing, interpretation and score reading. Prerequisite: MUAC 2940. Fall quarter only.

MUAC 3962 Advanced Wind Conducting (2 Credits)
Conducting complex wind compositions; phrasing interpretation and score reading. Prerequisite: MUAC 2970. Spring quarter only.

MUAC 3973 Advanced Wind Literature I (2 Credits)
This course is an overview of wind literature appropriate for junior high school, high school, college and professional programs including strategies in effective programming and creation of appropriate program notes.

MUAC 3974 Advanced Wind Literature II (2 Credits)
An in-depth study of successful compositional techniques by prominent composers of wind literature. Prerequisite: MUAC 3973.

MUAC 3980 Advanced Jazz Improvisation and Composition (4 Credits)
A three term sequence continuing the in-depth study of the theory, performance practices, style, and history of jazz improvisation and composition. Prerequisite: satisfactory completion of the three terms of Jazz Improvisation and Composition or consent of the instructor.

MUAC 3990 Internship in Music (0-8 Credits)
Internship in Music will offer opportunities for music majors to experience actual music related careers within a sponsoring music organization chosen by the student and accepted by the supervising faculty of the School of Music.

MUAC 3991 Independent Study (1-10 Credits)

MUAC 3992 Directed Study (1-10 Credits)

MUAC 4000 Introduction to Graduate Study (2 Credits)
Problems of research in various chronological epochs of Western musical culture; research techniques and sources used in research; formal writing style.

MUAC 4002 Form and Analysis (4 Credits)
Analysis of structural elements and stylistic features in solo, chamber and orchestral literature from 1600 to present. Prerequisite: MUAC 2006.
MUAC 4006 Post-Tonal Theory: Mode/Rhythm (4 Credits)
Works of Stravinsky, Bartok, Satie, Debussy, and others are studied, employing various transformational theories, diatonic set theory, and 20th-century metric theories. Prerequisite: completion of Music Theory I and Music Theory II sequences.

MUAC 4007 Post-Tonal Theory and Analysis: Set-Theory and Serialism (4 Credits)
This course has two components: (1) A study of selected analytical techniques for post-tonal music, primarily pitch-class set theory and twelve-tone (serial) theory; (2) Analysis of representative works from the twentieth century, focusing on the music from the first half of the century (Schoenberg, Berg, Webern, Stravinsky, and Bartok). Six credits of Theory 2 or permission of instructor required.

MUAC 4008 Modal Counterpoint, Renaissance Vocal Style (4 Credits)
This course teaches students to compose vocal music in the Renaissance style. After surveying species counterpoint, students learn imitative techniques en route to composing three- and four-voice texted pieces.

MUAC 4009 Tonal Counterpoint (4 Credits)
Eighteenth-century counterpoint using J.S. Bach as a model, with two- and three-part fugue writing.

MUAC 4010 Pedagogy of Music Theory (4 Credits)
Materials, devices, techniques of teaching theory. Students must have successfully completed undergraduate music theory or passed graduate review theory.

MUAC 4020 Introduction to Research in Piano Pedagogy (2 Credits)
This course is designed to support the research requirements for the lecture-recital and/or the independent graduate-level pedagogical project which meet the standard competencies of the piano pedagogy program.

MUAC 4030 Convocation Attendance (0 Credits)

MUAC 4050 Major Adv Repertoire Guitar (2 Credits)
Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

MUAC 4051 Major Adv Repertoire Guitar (2 Credits)
Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

MUAC 4052 Major Adv Repertoire Guitar (2 Credits)
Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

MUAC 4090 Model Composition (4 Credits)
Students in this course deepen their understanding of musical styles and techniques by composing works that imitate major composers before 1900. Music by each student is performed in a final recital. Prerequisite: Tonal Counterpoint, equivalent coursework from another institution, or permission of instructor.

MUAC 4121 Seminar in Music Theory (4 Credits)
Seminar in Music Theory focuses on special topics chosen by faculty members. Students should expect rigorous course work and a final project or paper.

MUAC 4161 Topics in Modern Opera (4 Credits)
This course involves the close study of selected twentieth- and twenty-first-century operas, their respective musical styles and their videotaped performances. This study will include such issues as opera and film, opera libretto criticism, and the personal and public politics of the opera.

MUAC 4189 Jazz Performance Techniques (2 Credits)
Individual study of jazz performance techniques in a directed study environment.

MUAC 4196 Graduate Composition Tutorial (2 Credits)

MUAC 4200 Diction-Graduate Voice Majors (2 Credits)
This course is designed to help refine the diction skills of graduate students in voice, with an emphasis on Italian, French and German. Native speakers will be presented, and the student will learn some basic vocabulary and syntactical aspects of the language.

MUAC 4300 Topics in Jazz History (4 Credits)
A seminar focusing on a major figure of jazz history. Detailed examination of a single artist, their life, music and influences.

MUAC 4301 The Michael Brecker Era - Jazz Fusion 1970 to the Present (4 Credits)
An examination of the music of jazz and pop saxophonist Michael Brecker. From the Saturday Night Live Band through performances on over 700 pop, R&B, and jazz recordings, this course will look at the evolution of jazz fusion through this active musical period.

MUAC 4305 Advanced Bebop Concepts (2 Credits)
An in-depth study of the language of bebop jazz improvisation. The course will combine listening, composing and performing skills with theoretical knowledge of the great improvisers of the 1940s and 50s.
MUAC 4350 Talam: Rhythmic Form and Process in South Indian Music (4 Credits)
This course explores the rhythmic system (talam) of Carnatic music, the classical music of Southern India. We begin the quarter with a general introduction to Carnatic music performance, examining its relationship to religious identity, histories of colonialism and nationalism, and social practices of class, caste, and gender. Having contextualized South Indian classical music socio-historically, the remainder of the quarter will focus on theoretical and practical issues in Carnatic talam. Readings and discussions will examine Indian conceptions of time (musical, cosmological, and cultural), the setting of song-texts, the art of improvisation and accompaniment, as well as the relationship between music, dance, and the body. We will also discuss and analyze cross-cultural applications of Carnatic rhythm in the compositions and pedagogies of several rock, jazz, and classical musicians. Weekly modules in solkattu, a system of spoken syllables and patterned hand gestures, will help students build and sharpen rhythmic skills and develop an analytical understanding for the intricacies of Carnatic meter and rhythmic design. Over the quarter, students will learn increasingly challenging exercises and rhythmic compositions in a variety of tala cycles (3, 5, 7, 8, and 9 beats in length). Some class time will be devoted to hands-on instruction in Carnatic percussion, including the mrdangam, the principle drum of South Indian classical music, as well as other hand drums including the kanjira frame drum.

MUAC 4450 Suzuki Group Lesson Practicum (1 Credit)
The Suzuki Group Lesson Teaching Practicum provides an opportunity for Suzuki Pedagogy master's students and Suzuki Teaching Certificate students to receive feedback on their own group lesson teaching skills from the professor. Prerequisites: MUAC 3478 or MUAC 3461.

MUAC 4492 History of Opera: From Monteverdi to Minimalism and Beyond (4 Credits)
This seminar course surveys the history of opera from the invention of the genre c. 1600 to the present day. In addition to assigned excerpts, students view three complete operas during the quarter. Primary and secondary source readings supplement the required text and class lectures. Students write a research paper that may examine some aspect of a particular opera or that may compare a particular aspect found in several operas. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

MUAC 4493 Approaches to American Popular Music (4 Credits)
We explore a number of topics involved in the study of popular music, including tensions between analytical and cultural approaches; issues of race, class, and gender; and constructions of authenticity and personae. Listening and reading are wide-ranging, encompassing diverse styles. The course concludes with individual research projects and presentations on topics students choose and develop.

MUAC 4494 Music and Belief in World Cultures (4 Credits)
How does music affect religious experience and how does religion shape musical practice? Why is music vital in some religious rituals and expressly banned in others? If humans use music to create, reflect, and comment upon the worlds they experience and imagine, then the use of music in religious practice is among its most powerful and ephemeral. Students are introduced to a wide range of musical traditions and their relationship to many of the world’s religions, including Islam, Judaism, Christianity, Buddhism, Hinduism, Native American belief and the religious practices of Africa and its diaspora. Readings, lectures and discussions are supplemented by guest lecture demonstrations, film/video screenings and hands-on workshops.

MUAC 4498 Music, Dance, and Everyday Life in South Asia (4 Credits)
This course serves as an introduction to a diverse array of performance traditions from the South Asian subcontinent. We examine the significance of music and dance in everyday life, the influence of media technology, and the relationship of performance to issues such as caste, gender, nationalism and globalization. Class discussions are supplemented by guest lectures, hands-on workshops and film screenings. Our study of music outweighs that of dance, and a music background is strongly encouraged.

MUAC 4499 Topics in Musicology (4 Credits)
This course focuses on particular musicology topics determined by the instructor. Course materials may include primary and secondary source readings, theoretical writings from other disciplines, a variety of listening assignments, film/video screenings, guest lecture demonstrations, and hands-on workshops. Students are expected to participate in class discussions and may be asked to write short response papers and/or to give short oral presentations. The course concludes with individual research projects, presented orally and in written form, on topics chosen and developed in consultation with the instructor. Expectations for graduate students enrolled in the course are commensurate with their training and background as compared to undergraduates enrolled in the course. In some cases, with the prior consent of the instructor, students may choose to combine performance with the final research project.

MUAC 4511 Mahler and Musical Culture (4 Credits)
We explore Gustav Mahler's life, historical context, and music, all in relation to one another. The focus is on recent and important scholarly approaches to this conductor and composer. The course concludes with individual research projects and presentations on topics students choose and develop.

MUAC 4512 Stories of Music History (4 Credits)
We explore a number of case studies in which "conventional wisdom" about a composer, repertory, or a period of time turns out to be not universally "true," but instead contingent on cultural context and changing ideologies about music. The course concludes with individual research projects and presentations on topics students choose and develop.

MUAC 4513 Wagner and the Ideology of the Artwork (4 Credits)
We explore Richard Wagner's music dramas, particularly the Ring operas, as well as theories and ideologies surrounding them. The focus is on recent and important scholarly approaches. The course concludes with individual research projects and presentations on topics students choose and develop.
MUAC 4520 Topics in Hindustani Music (4 Credits)
This course explores the melodic system (raga) and rhythmic system (tala) of Hindustani music, the classical music of North India. These conceptual frameworks act both as sound structures to be realized in improvised performance and as aesthetic entities manifested in the related traditions of dance, iconography, and film. A major emphasis of this course will be developing an understanding of raga and tala as musical structures through intensive listening as well as practical instruction. Accordingly, one class each week is designed to incorporate hands-on music-making through singing, rhythmic exercises, and dance. By the end of the quarter, students will become familiar with several ragas and talas and the stages by which they are developed in performance. A second, equally important objective is to learn to appreciate ragas as aesthetic entities. We will analyze their musical characteristics as well as the "extra-musical" characteristics of sentiment (rasa), performance time and/or season and iconographic associations (ragamala painting).

MUAC 4521 Topics in Baroque Music (4 Credits)
Through the study of selected Baroque instrumental, vocal and operatic works, this seminar course considers various approaches to performance practice issues such as "authenticity," the "historically informed" performance, period instruments, ornamentation, continuo realization, and editing. Facsimile editions and primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of Baroque music with an emphasis on performance practice. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

MUAC 4535 Baroque Opera on Stage (4 Credits)
This course will explore aspects of Baroque opera not immediately conveyed by a score - including staging, gesture, scenic design, machinery, theater space, performers response - as they inform our understanding of specific Baroque operas and the cultural context within which they were performed. We will focus on operas by Monteverdi, Cavalli, Purcell, Handel, Lully, Campra and Rameau, among others. Students should expect to participate in class discussions, to write short response papers, to give short oral presentations, and to write a 12 to 15 page paper that examines a Baroque opera or operas in the light of one or more performance considerations. With the prior consent of the instructor, students may submit an alternative final project, one which combines performance with some form of written work.

MUAC 4536 Musics of the African Diaspora (4 Credits)
How have African music-cultures changed in their transitions to new lands? What performative Africanisms have been retained, reconstructed and/or highlighted in the aftermath of legal slavery? And within newer Afro-diasporic communities? What role does musical transmission play in cultural retention and survival? This course will explore the connections and differences in musical practice and worldview throughout the African diaspora. We focus primarily on music-cultures of North, South, and Central America, and the Caribbean, examining traditional forms of music and dance associated with religion and ritual such as Afro-Cuban bata drumming, practices which fuse music and movement such as Afro-Brazilian capoeira, jazz, and popular music such as rap. Lectures and class discussions are supplemented by guest lecture-demonstrations, film/video screenings and hands-on workshops.

MUAC 4537 Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship (4 Credits)
This course is an experiential exploration of the spirituality of African-American sacred song. Participants will sing, consider the history of the music and explore their own connection to the songs, as well as the inspiration and challenge these songs may offer to present and future communities.

MUAC 4538 Cultural and Psychological History of the African American Spiritual (4 Credits)
In this graduate academic music course, we trace the cultural and psychological history of African American spirituals, which are the sacred folk songs that were created and first sung in the 18th and 19th centuries by African women and men enslaved in North America. We explore the cultural and psychological functions of the music during slavery and the different functions of choral and art song spirituals that evolved after slavery, peaking in their cultural impact during the Harlem Renaissance of the 1920s and 30s. We also examine the cultural relationship of the spirituals to gospel music, and the influence of the spirituals tradition on the emergence of the freedom songs of the Civil Rights Movement of the 1950s and 60s. Throughout the course, we reflect on the relationship of the spirituals to larger issues of racial identity and social justice. Finally, we examine the cultural and psychological meanings of the spirituals tradition in contemporary twenty-first century America.

MUAC 4541 Mozart’s Piano Concertos (4 Credits)
Cultural context, stylistic sources, stylistic development, meaning, and performance issues with regard to Mozart's 30 works in the piano concerto genre. Principles for the creation of stylistic cadenzas, lean-ins, embellishments, "white-spot" fill-ins, and basso continuo realizations. Considerations of means for integration aspects of the concertos’ original cultural context into performance for twenty-first-century pianists, orchestral players, and their listeners. Course is designed for both pianists and non-pianists.

MUAC 4542 Beethoven's Piano Concertos (4 Credits)
Cultural context, stylistic sources, stylistic development, meaning, and performance issues with regard to Beethoven's works in the piano concerto genre, including the triple concerto and the choral fantasia with piano. Consideration of means of integrating aspects of the concertos' original cultural context into performance for twenty-first-century pianists, orchestral players, and their listeners. Course is designated for both pianists and non-pianists.

MUAC 4543 Schubert and the Piano: Sonatas and Chamber Music (4 Credits)
Cultural context, stylistic sources, stylistic development, meaning, and performance issues with regard to Franz Peter Schubert's works in the piano sonata genre - whether for two or four hands - and other closely related genres. Consideration of means for integrating aspects of the works' original cultural context into performance for 21st-Century pianists and their listeners. Course is designed for both pianists and non-pianists.
MUAC 4544 Advanced Keyboard Repertoire: 2-Piano & 4-Hand (4 Credits)
In this course, pianists will explore 2-piano/4-hand repertoire, and discuss its historical development and use as a pedagogic tool. Students are required to perform in a collaborative recital, in which the repertoire may extend beyond two pianists. This course is designed for piano students and have no prerequisites. Permission of instructor required for non-piano students.

MUAC 4545 The Making of Romantic Music: Paris and Leipzig in the 1830s (4 Credits)
With a view to identifying the various interdisciplinary factors that led to the making of romantic music, this seminar course focuses on musical life in Paris and Leipzig in the 1830s. Specific attention is paid to the music of Chopin, Berlioz, Mendelssohn, and Robert and Clara Schumann and the personal and musical connections between these composers. Primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of music and/or musical life in the 1830s. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

MUAC 4546 Advanced Keyboard Repertoire: John Cage’s Sonatas and Interludes for Prepared Piano (4 Credits)
In this course, pianists will study Sonatas and Interludes for Prepared Piano by John Cage, and discuss the historical development of prepared piano (a piano that has had its sound altered by placing objects between or on the strings) and the major composers and compositions for such instrumentation. Students are required to perform selection(s) of the work.

MUAC 4547 Topics in Advanced Keyboard Repertoire (4 Credits)
Topics in Advanced Keyboard Repertoire focuses on special topics chosen by faculty members. Students should expect rigorous course work and a final project or paper.

MUAC 4601 Soundpainting: The Study of the Live Composing Sign Language for the Performing and Visual Arts (2 Credits)
In this course, students will study the soundpainting gestural language, a universal live composing sign language for the performing and visual arts.

MUAC 4602 Free Improvisation Techniques (2 Credits)
Free Improvisation Techniques will explore exercises in Tom Hall’s book Free Improvisation: A Practical Guide. We will also explore how those exercises relate to the broader concepts of improvising as discussed in Stephen Nachmanovich’s landmark book Free Play. This class is best suited for all musicians, especially those who are seeking to expand the way they relate to performing and how performing relates to other aspects of their life.

MUAC 4801 Introduction to Schenkerian Analysis (4 Credits)

MUAC 4831 Current Trends in Piano Pedagogy (2 Credits)
This course will explore current trends including some of the following topics: technology, professionalism, the history of piano pedagogy, employment opportunities and creative projects.

MUAC 4832 Prof Found-Piano Pedagogy (2 Credits)
Literature in musical aesthetics, educational philosophy, psychology; curriculum development; group teaching processes; interpretation and technique; foundations of educational research in music; practice teaching of children and adults.

MUAC 4833 Prof Found-Piano Pedagogy (2 Credits)
Literature in musical aesthetics, educational philosophy, psychology; curriculum development; group teaching processes; interpretation and technique; foundations of educational research in music; practice teaching of children and adults.

MUAC 4837 Pedagogy and Repertoire Organ (2 Credits)
Study of teaching techniques, survey of literature and teaching materials from the 20th and 21st centuries. Prerequisite: MUAC 3740.

MUAC 4840 Piano Teaching Practicum (0-1 Credits)
Guided observations, lesson planning, practice teaching of students of various developmental age groups using foundations and principles developed in Piano Pedagogy.

MUAC 4841 Piano Teaching Practicum (1 Credit)
Guided observations, lesson planning, practice teaching of students of various developmental age groups using foundations and principles developed in Piano Pedagogy.

MUAC 4842 Piano Teaching Practicum (1 Credit)
Guided observations, lesson planning, practice teaching of students of various developmental age groups using foundations and principles developed in Piano Pedagogy.

MUAC 4850 Elementary Piano Pedagogy I (2 Credits)
An in-depth study of methods and curriculum for teaching piano at the beginner and elementary level. Focus on philosophical, psychological, and physiological bases of piano study. Study and evaluation of current educational materials.

MUAC 4851 Elementary Piano Pedagogy II (2 Credits)
This course is designed in a sequence with Elementary Piano Pedagogy I. An in-depth study of methods and curriculum for teaching piano at the late elementary to early intermediate levels. Focus on philosophical, psychological, and physiological bases of piano study. Study and evaluation of current educational materials. Prerequisite: MUAC 4850.

MUAC 4852 Group Piano Teaching Techniques (2 Credits)
An in-depth study of methods and curriculum for group study and the teaching of adults and children. Focus on philosophical, psychological, and physiological bases for teaching the piano in groups of all ages. Study and evaluation of current resources.
MUAC 4853 Intermediate Piano Pedagogy I (2 Credits)
Course content will emphasize teaching methods, materials, and curriculum content at the intermediate level of piano study. Reading and discussions will explore practical issues encountered by the contemporary piano teacher.

MUAC 4854 Intermediate Piano Pedagogy II (2 Credits)
This course is designed in a sequence with Intermediate Piano Pedagogy I. Course content will emphasize teaching methods, materials, and curriculum content at the intermediate to early advanced levels of piano study. Reading and discussions will explore practical issues encountered by the contemporary piano teacher.

MUAC 4929 Tutorials-Theoretical Subject (1-5 Credits)
Individual instruction in all areas of music theory with regularly scheduled meetings allowing students to acquire necessary skills to qualify for upper-division and/or graduate courses. Summer session only.

MUAC 4930 Conducting Tutorial (2 Credits)
Private tutorial in orchestral conducting. Open to Orchestral Conducting majors only.

MUAC 4934 Choral Pedagogy (4 Credits)
A comprehensive investigation of the art and science of choral music instruction. Students us philosophical and theoretical learning to develop a practical approach to choral music instruction. Students identify personal strengths in the area of choral music instruction as well as areas for improvement.

MUAC 4991 Independent Study (1-10 Credits)
MUAC 4992 Directed Study (1-10 Credits)
MUAC 4993 Independent Study (1-10 Credits)
MUAC 4995 Thesis Research (1-10 Credits)
MUAC 4999 Graduate Recital (1-10 Credits)
MUAC 5991 Graduate Thesis (1-10 Credits)

Music-Ensembles Courses

MUEN 3025 Ensemble Block (3 Credits)
Ensemble Block can be taken by students who are assigned to multiple ensembles in one quarter without full participation in each group. Instructor permission is required for registration.

MUEN 3028 Album Combo (0-1 Credits)
The study and performance of the skills and practices of collective improvisation and composition.

MUEN 3029 Steel Drum Ensemble (0-1 Credits)
The steel drum music of Trinidad and Tobago as well as other styles of music from around the world are studied and performed by this ensemble. Participation in this ensemble does not require music notation. Participation in the ensemble is limited; therefore, students are selected by a simple audition process.

MUEN 3030 Hard Bop Combo (0-1 Credits)
The Hard Bop Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with Hard Bop jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3031 Bebop Combo (0-1 Credits)
The Bebop Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with Bebop jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3032 Latin Combo (0-1 Credits)
The Latin Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with Latin jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3033 Standards Combo (0-1 Credits)
The Standards Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with standard jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3034 Traditional Jazz Combo (0-1 Credits)
The Traditional Jazz Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with traditional (Dixieland) jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.
The Flex Jazz Ensemble is a modern jazz group with open-ended instrumentation. The ensemble consists of traditional jazz instruments and vocalists as well as nontraditional jazz instruments (such as double reed, French Horns, strings, etc.). While there is no specific instrumentation for the ensemble, the core of the group will always be the traditional modern jazz rhythm section: piano (keys-synth), bass (acoustic and electric), drums (plus an extra percussionist as needed), and guitar (hollow body and Stratocaster-styles with the full range of pedals and gear. With the addition of non-traditional instrumentation, the ensemble reaches out to the classical side of Lamont to give those students a jazz opportunity. Along with the regular fare of programmed concerts, this ensemble also provides opportunities to other departments (theatre, creative writing, studio art, EDP, etc.) to incorporate their disciplines in performances.
MUEN 3046 Indonesian Music Ensemble (0-1 Credits)
This class provides a practical and theoretical introduction to Indonesian performance traditions from the islands of Bali and Java. Through hands-on instruction and oral transmission, students will learn a variety of gamelan (gong/chime ensemble) traditions. While learning this sophisticated cyclic music, class discussions, assigned readings, films, and guided listening will further familiarize students with the social and cultural meanings of the musics performed in class. Additionally, students will have the opportunity to learn basic hand, foot, and eye movements for Balinese and Javanese dance, as well as to study kecak, a Balinese vocal music that imitates the sound of the gamelan. The course will culminate in an end of the quarter concert.

MUEN 3047 Xperimental Jazz Ensemble (0-1 Credits)
The Xperimental Jazz Ensemble is a pan-genre ensemble with a focus on creativity expressed through improvisation, transcription, arrangement, and composition. XJE will have variable instrumentation that may include vocalists, all "classical" and "jazz" instruments, and emergent electronic instruments and software. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3048 Bluegrass Ensemble (0-1 Credits)
In this class, students will receive instruction on proper bluegrass performance fundamentals with traditional bluegrass instruments, the harmony and rhythm of bluegrass music, the art of simultaneous playing and singing, the proper interpretation of the chosen repertoire per the composers' style, and the social and cultural influences that inspired the music. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3100 Lamont Jazz Small Group (0-1 Credits)
All Lamont jazz small groups will focus on the basic elements of communication and musicality that make up high-level jazz performance practices. Students will transcribe, compose and or arrange their own material and will have numerous opportunities to perform each quarter. Admission to all small groups is by audition only.

MUEN 3677 Bow Art Ensemble (0-1 Credits)
The Bow Art Ensemble explores the study and rehearsal of traditional and contemporary chamber orchestra repertoire, history, and culture, to be led in conjunction with Lamont performance faculty and guest artists. Students will receive instruction on proper techniques, musical styles, study of traditional and contemporary collaborative leadership and democratic approaches to performing in a conductor-less ensemble.

MUEN 3710 Opera (0-1 Credits)
Practical experience in operatic performance. One production each quarter; major production in winter quarter. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3712 Lamont Chorale (0-1 Credits)
The Lamont Chorale is a select mixed voice choir that performs choral literature from the Renaissance to present and strives for a high level of artistry. The choir performs works from the great masters of music, as well as living composers, world music, and spirituals. The Lamont Chorale is open to undergraduate and graduate students, music majors, non-music majors, and community members. Credits from this course can fulfill the AI-Society credit requirement for undergraduate students.

MUEN 3720 Pioneer Pep Band (0-1 Credits)

MUEN 3730 American Heritage Chorale (1 Credit)
This ensemble will explore through choral music the various ways in which music written by American composers has been influenced and has its roots in music from other cultures and regions of the globe. Special attention shall be given to music by African American composers. American Heritage Chorale is open to all students interested in singing. Prior choral experience is not required. A brief vocal interview will determine appropriate placement within the ensemble. The course will conclude with a performance at the end of the quarter. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3731 The Spirituals Project Choir (0-1 Credits)
This ensemble will explore African American spirituals as an art form, tradition, and tool for social change through performance, reading, and listening. Because the core of this ensemble is a multi-ethnic, multi-generational community choir, students will have the unique opportunity to join with and learn from a group of singers immersed in this musical tradition. Students will participate in 2-3 performances over the course of the term, the majority of which will be outside of Lamont. Through performance and study of spirituals and related music, students will gain a musical and cultural understanding of this dynamic music and gift from African Americans to the world. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3740 Lamont Men's Choir (0-1 Credits)

MUEN 3750 Modern Music Ensemble (1 Credit)
The 20th- and 21st-Centuries have produced some of the most expressive, intriguing, and diverse music ever written. In this course, students have the opportunity to prepare and perform chamber music by 20th-Century masters, as well as recent works by living composers and new pieces written for them by students. This repertoire often involved unusual combinations of instruments (potentially including strings, woodwinds, brass, percussion, plucked instruments, keyboards, vocals, and electronics), providing an opportunity for students to work in less familiar ensembles. Students may also participate in the course by conducting or composing. The course is limited to music majors who are graduate students or advanced undergraduate students. Students in their first or second undergraduate year, and music non-majors may enroll with instructor approval.

MUEN 3751 Lamont Jazz Orchestra (0-1 Credits)
This course counts toward the Analytical Inquiry: Society and Culture requirement.
MUEN 3752 Lamont Wind Ensemble (0-1 Credits)
Open to all students by audition and approval of conductor; regularly scheduled concerts. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3753 Lamont Jazz Ensemble (0-1 Credits)
Open to all students by audition and approval of director of jazz studies; regularly scheduled concerts. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3754 University Jazz Ensemble (0-1 Credits)
The study of large ensemble jazz works for non-music majors. Must have high school performance ability.

MUEN 3760 Lamont Symphony Orchestra (0-1 Credits)
The LSO generally performs six symphonic concerts and one opera each year. Students are exposed to orchestral repertoire from all periods and styles of music as well as appropriate performance practices associated with each period and style. The LSO is open to all university students by audition. However, because the course objective is to prepare students for successful professional orchestra careers, all participants are held to a very high standard and level of expectation. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3769 Organ Accompanying (0-1 Credits)
Major choral/vocal and major instrumental repertoire with organ accompaniment are studied and prepared for possible performance with chamber groups or local professional/church choirs.

MUEN 3770 Chamber Ensemble-Piano (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3771 Chamber Ensemble-Accordion (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3772 Chamber Ensemble-Harp (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3774 Chamber Ensemble-Brass (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3775 Piano Accompanying (0-2 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3776 Chamber Ensemble-Percussion (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3777 Chamber Ensemble-Strings (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3778 Chamber Ensemble-Woodwind (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3781 Chamber Ensemble-Guitar (0-2 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3780 Vocal Chamber Ensemble (0-1 Credits)
A small group of outstanding singers interested in singing soloist vocal chamber music.

MUEN 3900 Lamont Women's Chorus (0-1 Credits)
The Lamont Women's Chorus is a treble voice choir that performs a wide variety of choral literature, including masterworks, a cappella works, spirituals, new music, and world music. The choir is open to undergraduate and graduate students, music majors, non-music majors, and community members. Credits from this course can fulfill the Analytical Inquiry: Society and Culture credit requirement for undergraduate students.

Music-Studio Lessons Courses

MUPR 3120 Alexander Technique (2 Credits)
The Alexander technique is a skill that can be incorporated into practice, performance, and everyday life. Using the principles discovered by F. Matthias Alexander, students will learn how to identify and change faulty patterns of thought and movement. Emphasis will be placed on recognizing how these patterns affect music-making in practice and performance. Lessons are individually tailored and topics may include injury recovery and prevention, pain and tension reduction, stress management, performance anxiety, freeing the breath, using the back effectively, balance, and ease of motion.

MUPR 3121 Alexander Technique (4 Credits)
The Alexander technique is a skill that can be incorporated into practice, performance, and everyday life. Using the principles discovered by F. Matthias Alexander, students will learn how to identify and change faulty patterns of thought and movement. Emphasis will be placed on recognizing how these patterns affect music-making in practice and performance. Lessons are individually tailored and topics may include injury recovery and prevention, pain and tension reduction, stress management, performance anxiety, freeing the breath, using the back effectively, balance, and ease of motion. This class is tailored to the needs of students who are experiencing pain or injury and cannot take their regular studio lesson in a given quarter.
MUPR 3190 Jazz Piano (2 Credits)  
MUPR 3210 Piano (2 Credits)  
MUPR 3230 Voice (2 Credits)  
MUPR 3250 Violin (2 Credits)  
MUPR 3290 Viola (2 Credits)  
MUPR 3310 Bass Violine (2 Credits)  
MUPR 3350 Organ Improvisation (2 Credits)  
This course is designed for organ students to introduce them to the art of organ improvisation, hymn and ensemble playing, as well as all possible forms of accompaniment. It is meant for undergraduate students (upper division), graduate students, and artist diploma graduates. Prerequisites: knowledge of music history, figured bass, and counterpoint. Permission of instructor required.

MUPR 4191 Jazz Piano (2 Credits)  
MUPR 4195 Applied Lessons (2,4 Credits)  
MUPR 4210 Piano (2 Credits)  
MUPR 4230 Voice (2 Credits)  
MUPR 4250 Violin (2 Credits)  
MUPR 4251 Violin (2 Credits)  
MUPR 4270 Violoncello (2 Credits)  
MUPR 4290 Viola (2 Credits)  
MUPR 4310 Bass Violin (2 Credits)  
MUPR 4312 Jazz Bass (2 Credits)  
MUPR 4330 Harp (2 Credits)  
MUPR 4350 Organ (2 Credits)  
MUPR 4370 Clarinet (2 Credits)  
MUPR 4390 Flute (2 Credits)  
MUPR 4460 Bassoon (2 Credits)  
MUPR 4480 Trombone (2 Credits)  
MUPR 4481 Jazz Trombone (2 Credits)  
MUPR 4500 Trumpet (2 Credits)  
MUPR 4520 Horn (2 Credits)  
MUPR 4540 Euphonium (2 Credits)  
MUPR 4560 Tuba (2 Credits)  
MUPR 4570 Tuba (4 Credits)  
MUPR 4600 Classical Guitar (0-2 Credits)  
MUPR 4610 Classical Guitar (4 Credits)  
MUPR 4621 Jazz Guitar (2 Credits)  
MUPR 4660 Percussion (2 Credits)  
MUPR 4661 Percussion Set (2 Credits)  
MUPR 4671 Percussion Set (4 Credits)  
MUPR 4680 Oboe (2 Credits)  
MUPR 4780 Saxophone (2 Credits)  
MUPR 4900 Carillon (2 Credits)  
MUPR 4920 Composition (2 Credits)  
One-on-one instruction for composition majors.
MUPR 4930 Conducting (2 Credits)
This course provides individualized instruction in conducting for graduate students majoring in conducting. Repertoire selection, analysis, rehearsal procedures, and gestures will all be studied. Students will prepare assigned repertoire for class each week. Significant time will be spent developing gestures that reflect the artistic and pedagogical intentions of each student. The individual lesson is also a mentoring time to develop strategies for career development and recital preparation. Analysis projects may be assigned to provide an opportunity for in-depth scholarly research and presentation of significant literature relating to the theme of the quarter.

MUPR 4991 Independent Study (2-4 Credits)

Media, Film & Journalism Studies
Office: Media, Film and Journalism Studies Building, Room 127
Mail Code: 2490 S. Gaylord St., Denver, CO 80208
Phone: 303-871-2166
Email: mfjsadm@du.edu
Web Site: http://www.du.edu/ahss/mfjs

Master of Arts in International and Intercultural Communication
The Master of Arts program in International and Intercultural Communication is a joint master’s degree from the Josef Korbel School of International Studies (JKSIS) and the Department of Media, Film & Journalism Studies (MFJS). This highly flexible program allows students to choose from the breadth of coursework available in JKSIS and MFJS, while developing their own specific areas of concentration. Students complete internships to gain professional experience, and may further hone expertise by completing a Graduate Certificate as part of the degree. Certificate Programs include: Global Business & Corporate Social Responsibility; Global Health Affairs; and Public Diplomacy.

International and Intercultural Communication graduates pursue globally-oriented careers in a variety of fields, including: Global health communication; Public diplomacy & Public affairs; International PR and marketing; Nonprofit management; Cross-cultural and diversity training; International education; Human rights and Conflict resolution; International administration, and more.

Effective global communication requires that people understand both international and intercultural dynamics and differences. Success is based on communicating goals and bridging differences. Students pursuing the MA in International and Intercultural Communication establish a strong theoretical and applied foundation, while learning the nuances of the global environment. They then have an opportunity to extend this interdisciplinary base through courses in business, anthropology, education and other areas.

Master of Arts in Media and Public Communication
The Master of Arts in Media and Public Communication is a 48-credit, two-year degree program, which equips students with a combination of essential theoretical and practical skills that prepare them for a variety of professional and research careers in media and communication. The program emphasizes the role of media and communication in bridge building and social justice across diverse audiences. Students can choose one of two areas of concentration: Strategic Communication or Media and Globalization. Depending on students’ goals and interests, they can opt to complete a master’s thesis, a substantial research paper, or a professional internship as their capstone requirement.

Concentration in Strategic Communication: Strategic communication encompasses skills and activities associated with public relations, advertising, brand management, and marketing communication. This concentration focuses on the nonprofit and government sectors, as well as on international and intercultural issues within strategic communication. Classes emphasize ethical communication and incorporate experiential learning projects in which students work with nonprofit organizations to develop creative and strategically sound communication campaigns. Students benefit from faculty expertise in nonprofit, international, intercultural, health, corporate, and political communication. The coursework integrates theoretical concepts in media and communication with applied research, strategic planning, and messaging skills essential for professional success in the nonprofit, government, and for-profit sectors. Students also gain a solid foundation for pursuing advanced degrees and conducting academic research.

Concentration in Media and Globalization: This concentration is designed for students who are interested in pursuing careers as researchers and media educators. Courses focus on the role of media and communication in social and cultural change in both global and local settings. Students gain in-depth theoretical knowledge of media, culture, and communication and acquire methodological skills needed to conduct independent research projects based on their interests. This concentration emphasizes critical and critical and conceptual thinking, cultural awareness, and social responsibility. Students benefit from faculty’s research and community engaged projects in international locations, including Latin America, Africa, Europe, and Asia, as well as from faculty work with immigrant and multicultural communities in the US. Graduates develop a solid foundation for pursuing advanced degrees and careers in higher education and research.

Public Diplomacy Certificate of Specialization
The Public Diplomacy Graduate Certificate is an interdisciplinary, 24-credit certificate, which examines the history, theory, methods and uses of strategic communication for the purposes of informing, influencing, and establishing dialogue with international publics and stakeholders. The certificate is designed to help students acquire a sophisticated understanding of global media and communication processes and the ways in which they are employed by individuals, groups, organizations, and governments to advance their strategic interests. The certificate combines expertise from the Department of Media, Film, and Journalism Studies and the Josef Korbel School of International Studies, providing students...
with an interdisciplinary learning experience. Graduates of the Public Diplomacy Certificate are equipped with conceptual and practical skills that prepare them for careers in the fields of cultural diplomacy, nation branding, public affairs and information, foreign aid, global health and development communication, international strategic communication, and international education. The certificate is open to students enrolled in one of the master’s programs offered by the Department of Media, Film, and Journalism Studies or the Josef Korbel School of International Studies.

Master of Arts in International & Intercultural Communication

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

Standardized Test Scores
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842. Scores must be at or above the 50th percentile to be competitive for admission to the program.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 105 total, 27 writing
- Minimum TOEFL Score (Paper-based test): 620 total, 4.5 TWE
- Minimum IELTS Score: 7.5 total, 8.0 writing
- Minimum CAE Score: 191, 200 writing

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the International and Intercultural Communication program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Arts in Media and Public Communication with a Concentration in Strategic Communication

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

Standardized Test Scores
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842. Scores must be at or above the 50th percentile to be competitive for admission to the program.

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- Minimum IELTS Score: 7.5 total, 8.0 writing
- Minimum CAE Score: 191, 200 writing
Master of Arts in Media and Public Communication with a Concentration in Media and Globalization

Degree and GPA Requirements

• Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842. Scores must be at or above the 50th percentile to be competitive for admission to the program.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 105 total, 27 writing
• Minimum TOEFL Score (Paper-based test): 620 total, 4.5 TWE
• Minimum IELTS Score: 7.5 total, 8.0 writing
• Minimum CAE Score: 191, 200 writing

Master of Arts in International and Intercultural Communication

Degree requirements

Coursework requirements

Students should plan ahead to ensure they are able to complete their required courses as some are offered every other year.

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<tr>
<th>Code</th>
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<tbody>
<tr>
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<td>International Project Design and Monitoring</td>
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INTS 4423  Introduction to Epidemiology
INTS 4500  Social Science Methods
INTS 4575  Systems Thinking for Social Scientists
INTS 4576  Seminar: Community-Based Research Methods
INTS 4632  Qualitative Research Methods
INTS 4633  Int’l Project Evaluation
INTS 5XXX  International Studies Transfer
INTS 4644  Human Rights Research Methods
INTS 4966  Applied Field Methods
RMS 4941  Introduction to Qualitative Research

IV. Thesis or Substantial Research Paper and/or Internship

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFJS 4980</td>
<td>Internship</td>
</tr>
<tr>
<td>or MFJS 4995</td>
<td>Independent Research</td>
</tr>
</tbody>
</table>

V. Electives

Electives may serve as additional coursework needed to reach the minimum number of credits required for the degree. Elective courses must be at the 4000 level. A student is allowed to take one graduate 3000-level course to count towards the 60 hours required. Students should consult the course description in their unit, program, and course schedule prior to enrolling in any 3000-level course to verify it is listed at the graduate level and may count as credit for the graduate degree. 3000-level courses that are not designated as graduate level are not approved to count toward graduate degrees. Consult with the instructor and the IIC director before enrolling in any 3000-level course.

Total Credits 56

Note: The maximum number of credits that will be accepted in transfer toward the degree is 20 credits.

* Check prerequisites for these courses

Minimum number of credits required for degree: 56 credits

Non-coursework Requirements:

- Foreign Language Proficiency
- Thesis or Substantial Research Paper (SRP) and/or internship

FOREIGN LANGUAGE PROFICIENCY

IIC students must demonstrate proficiency equivalent to approximately two years of college-level course work in a language other than English. This requirement is waived for IIC-Peace Corps Fellows, as well as international students whose primary language is not English. Ways to demonstrate proficiency include:

1. Course work beyond the two-year level (earned ‘B’ or better) within the past three years of initial enrollment in the IIC program. Note: **The school must offer the course according to formal levels or years: for example, when the student finishes a course, the student will be at or beyond the two-year level. If the course work was performed at a non-accredited institution (so the courses are not offered by levels), the student must take the proficiency test. Students enrolling in Berlitz Language Learning courses must complete level 4. Most university courses are offered according to year or level, whereas many short-term intensive immersion programs or classes are not.

2. Worked or lived in another culture requiring proficiency at or beyond the two-year level for six months or more within the past three years where the primary language used by the student in the other culture was not English.

3. Taking a foreign language course (see (1) above on type of course) for which completion (and earning a ‘B’ or better) brings the student up to the two-year proficiency level within three years of enrolling in the IIC program or during the program. The classes will not count toward the degree. International students whose primary language is not English meet the language proficiency requirement.

4. Taking a foreign language course beyond the two-year level and earning a ‘B’ or better. Students may take 3000-level courses to bring them beyond the two-year proficiency requirement; however the classes will not count as credits toward their degree.

5. Taking and passing the graduate foreign language proficiency exam through the Center for World Languages and Cultures (CWLC).
   a. Students must take the language proficiency exam AT LEAST two quarters prior to their anticipated graduation date. It should be taken as early in your program as possible! Students should contact the CWLC at cwlc@du.edu or 303.871.4601, to register for the exam, for a fee of $50 (cash or a check only). Early registration is appreciated! Contact the CWLC to determine exact dates the Language Proficiency Test is offered each quarter. Students may take the test only one time per quarter, so if the student does not pass the test, s/he will need to wait until the next quarter before taking it again. The test may be taken a maximum of three times.

   Students should submit a memo with written evidence of proficiency to the IIC Director no later than the beginning of the quarter before graduation.

No University of Denver language courses may be counted toward the course requirements of the joint MA program. Students may take language courses to reach or surpass the two-year proficiency level, but these will not count toward the credits required for the degree.
International students whose native language is not English may use that language to meet the requirement, provided they have done academic or professional work in that original language.

**Internship**

Internships required 40 hours of work per credit (40 x 4 = 160 hours). IIC Peace Corps Fellows are required to complete four credits of internship with a high-needs community in the United States. An internship is registered as a course (MFJS 4980: Internship), and may be taken for 1 to 5 credits during any one term. (Note: For internships at the end of a student’s program, they must be secured or in the process of being secured in the quarter before graduation.) Students may elect to do an internship with media/communications agencies, non-profit organizations, corporations, or government, located in the Denver area, or elsewhere in the U.S. or abroad. Students are encouraged to do the internship after they have completed at least half of the 56 credits required for the MA degree. All internships will be administered and supervised by the Director of Internships for the IIC Program in the Dept. of Media, Film and Journalism Studies. Students must meet with the internship director in order to obtain approval for an internship.

**Thesis**

Students in the general IIC program may opt to do a thesis instead of an internship, for a total of 4 credits. To begin work on the thesis, the student must first choose an area of interest and develop a research question that will guide the thesis project. At that time, the student should also choose a thesis advisor with expertise in the student’s interest area. The advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the thesis project. Students should review the process and policies for the master’s thesis in the Graduate Policy Manual. Students can find “Thesis and Dissertation Formatting Guidelines,” “Thesis Oral Defense Information,” and “Thesis/Dissertation Submission Instructions via ETD” under the “Graduation and Oral Defense Information on this website. The student should meet at least twice with the thesis advisor to finalize a research question and outline the entire project. The student should then begin work on a preliminary proposal which may need to be reviewed by the IIC Graduate Committee (as determined by the thesis advisor and IIC Director), and should include a brief summary of the following:

- research problem or question
- theoretical framework
- preliminary literature review
- methods

The committee will review the proposal and the student’s course record (including grades), consult with the student’s advisor and instructors of courses related to the thesis, and make a recommendation to the student on doing a thesis. If the committee recommends against the student doing a thesis, the student is required to do an internship. A student has the option to revise and resubmit the preliminary thesis proposal one time. Once the preliminary proposal has been approved by the IIC Graduate Committee, the student and advisor will need to select a thesis committee, which includes the advisor and a minimum of two other committee members (at least one Media, Film & Journalism Studies, and one from International Studies; the third may be from either area) who will read the formal research proposal and the final report. These additional members should be contacted and asked if they would be willing to serve on the thesis committee. Having formed the thesis committee, the student should begin work on a formal thesis proposal. The exact form of this proposal will be outlined by the thesis advisor and will vary according to the thesis topic, the specific problem being studied and the methodology proposed to explore that problem. All proposals should include the following (the order may vary):

1. a general introduction to the thesis topic
2. an explication of the problem(s) the research will address (i.e., the purpose of the study)
3. a review of the literature related to the stated problem
4. a clear and succinct statement of the research questions or hypotheses the thesis will address
5. a discussion of the research methods that will be used to explore the questions or hypotheses
6. a description of the material or data that will be examined in order to suggest answers to the research questions or to test the hypotheses
7. if appropriate, a discussion of the contributions the study will make to the existing discourse on the thesis topic.

The student will need to convene the thesis committee for a proposal meeting following completion of the proposal. The committee members should be presented with a draft of the research proposal two weeks prior to this meeting. At the meeting the committee members will question the student on the project’s theory, design, and research methods to ensure that the project is rigorous and of appropriate scope. Revisions to the proposal may be required following this meeting. An approved proposal outlines the specific procedures the student must follow to complete the thesis requirement. Following approval of the research proposal, the student may then proceed to conduct the research described in the proposal, then report and discuss the results in the final written thesis report, which must be approved in an oral defense by the thesis committee. The format of the thesis should follow the guidelines developed by the Office of Graduate Studies exactly.

**Substantial Research Paper (SRP)**

A Substantial Research Paper is a problem-focused paper designed to engage students in an independent research project that is longer and more in-depth than a class research paper, but less than a thesis project. An SRP does not require a review committee or an oral defense; rather, it will be supervised and graded by a single appointed faculty member.

Students should register for MFJS 4995 for a maximum of 4 credits, allocated in the quarters in which they are actually working on the SRP. It is not permissible to register for credit before work has commenced or after the work has been completed.
To begin work on the SRP, the student must first choose an area of research interest and develop a research question that will guide the research. It may be based on a class research paper that will then be expanded for the SRP. The student should choose an SRP advisor with expertise in the student’s interest area. The advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the SRP. It is important that the student and faculty advisor establish a reasonable and mutually agreeable timeline for exchanging drafts and comments on the student’s work. The final copy of the SRP should be formatted according to APA, MLA or other guidelines agreed upon with the faculty advisor.

IIC/Peace Corps’ Paul D. Coverdell Fellows Program

In cooperation with the Peace Corps, the Paul D. Coverdell Fellows Program permits students who have completed their service in the Peace Corps to complete the MA in International & Intercultural Communication degree following their service. They receive 8 credits for their Peace Corps service toward the 56 credits required for the degree, leaving 48 credits for the program. In addition, the foreign language proficiency requirement is waived. Students are required to complete an internship with a high needs community in the U.S.

Coursework requirements

Students should plan ahead to ensure they are able to complete their required courses as some are offered every other year.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Core coursework requirements</strong></td>
<td>24</td>
</tr>
<tr>
<td></td>
<td><strong>I. Department of Media, Film and Journalism Studies requirements (6 courses)</strong></td>
<td></td>
</tr>
<tr>
<td>MFJS 4650</td>
<td>Global Media and Communication</td>
<td></td>
</tr>
<tr>
<td>MFJS 4654</td>
<td>Intercultural Communication</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete an additional 4 courses in MFJS</td>
<td></td>
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<tr>
<td></td>
<td><strong>II. Joseph Korbel School of International Studies requirements (4 courses)</strong></td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Students must complete 4 courses in JKSIS.</td>
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<td></td>
<td><strong>III. Research Methods</strong></td>
<td>4</td>
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<tr>
<td></td>
<td>The research methods course may be from MFJS or INTS and counts as one of the 4 courses required in either unit. Advisors must approve research methods courses. Students who wish to take a methods course from another department must receive approval from the IIC director to fulfill this requirement.</td>
<td></td>
</tr>
<tr>
<td>MFJS 4560</td>
<td>Methods in Communication Research</td>
<td></td>
</tr>
<tr>
<td>INTS 4050</td>
<td>Statistical Methods I</td>
<td></td>
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<tr>
<td>INTS 4057</td>
<td>Statistics for International Affairs</td>
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<tr>
<td>INTS 4332</td>
<td>Data Analysis and Development</td>
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<tr>
<td>INTS 4333</td>
<td>International Project Design and Monitoring</td>
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<tr>
<td>INTS 4423</td>
<td>Introduction to Epidemiology</td>
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<tr>
<td>INTS 4500</td>
<td>Social Science Methods</td>
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<tr>
<td>INTS 4575</td>
<td>Systems Thinking for Social Scientists</td>
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<tr>
<td>INTS 4576</td>
<td>Seminar: Community-Based Research Methods</td>
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<td>INTS 4632</td>
<td>Qualitative Research Methods</td>
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<tr>
<td>INTS 4633</td>
<td>Int’l Project Evaluation</td>
<td></td>
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<tr>
<td>INTS 4644</td>
<td>Human Rights Research Methods</td>
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<tr>
<td>INTS 4966</td>
<td>Applied Field Methods</td>
<td></td>
</tr>
<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
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<tr>
<td></td>
<td><strong>IV. Internship (must be completed with a high needs community in the U.S.)</strong></td>
<td>4</td>
</tr>
<tr>
<td>MFJS 4980</td>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>V. Electives</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electives may serve as additional coursework needed to reach the minimum number of credits required for the degree. Elective courses must be at the 4000 level. A student is allowed to take one graduate 3000-level course to count towards the 50 hours required. Students should consult the course description in their unit, program, and course schedule prior to enrolling in any 3000-level course to verify it is listed at the graduate level and may count as credit for the graduate degree. 3000-level courses that are not designated as graduate level are not approved to count toward graduate degrees. Consult with the instructor and the IIC director before enrolling in any 3000-level course.</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td>48</td>
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<tr>
<td></td>
<td><strong>Note:</strong> The maximum number of credits that will be accepted in transfer toward the degree is 20 credits</td>
<td></td>
</tr>
</tbody>
</table>

* Check prerequisites for these courses
Minimum number of credits required for degree: 48 credits

Non-coursework Requirements:
- Internship

Internship
Internships required 40 hours of work per credit (40 x 4 = 160 hours). IIC Peace Corps Fellows are required to complete five credits of internship with a high-needs community in the United States. An internship is registered as a course (MFJS 4980: Internship), and may be taken for 1 to 5 credits during any one term. (Note: For internships at the end of a student's program, they must be secured or in the process of being secured in the quarter before graduation.) Students in the Paul D. Coverdell Fellows Program must complete their internship in a high-need community within the U.S. Students are encouraged to do the internship after they have completed at least half of the 48 credits required for the MA degree. All internships will be administered and supervised by the Director of Internships for the IIC Program in the Dept. of Media, Film and Journalism Studies. Students must meet with the internship director in order to obtain approval for an internship.

Master of Arts in Media and Public Communication with a Concentration in Strategic Communication

Degree Requirements
The MA in Media and Public Communication with a Concentration in Strategic Communication requires 48 quarter hours of credit, as well as completing a thesis, a substantial research paper (SRP), or an internship.

Coursework Requirements
Students should plan ahead to ensure they are able to complete their required courses as some are offered every other year.

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>MFJS 4160</td>
<td>Media Theories</td>
<td>16</td>
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<tr>
<td>MFJS 4560</td>
<td>Methods in Communication Research</td>
<td></td>
</tr>
<tr>
<td>MFJS 4300</td>
<td>Mass Media Law</td>
<td></td>
</tr>
<tr>
<td>MFJS 4055</td>
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<td></td>
</tr>
<tr>
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<td>Global Media and Communication</td>
<td></td>
</tr>
<tr>
<td>MFJS 4654</td>
<td>Intercultural Communication</td>
<td></td>
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</tbody>
</table>

Choose one of the following courses

- MFJS 4050 Foundations of Strategic Communication
- MFJS 4060 Strategic Messaging
- MFJS 4065 Public Diplomacy and Nation Branding
- MFJS 4080 Global/Multicultural Campaigns
- MFJS 4165 Global Health and Development Communication
- MFJS 4175 Multicultural Health Communication
- MFJS 4320 Brands and Identities
- MFJS 4912 Seminar in Media Film & Journalism Studies

Electives
- MFJS 4980 Internship
- MFJS 4995 Independent Research

Total Credits: 48

Minimum number of credits required for the degree: 48

Non-coursework Requirements:
- Internship, Substantial Research Paper (SRP), or Thesis

Internship
Internships required 40 hours of work per credit (40 x 4 = 160 hours). An internship is registered as a course (MFJS 4980: Internship), and may be taken for a maximum of 4 credits during any one term. (Note: For internships at the end of a student's program, they must be secured or in the process of being secured in the quarter before graduation.) Students may elect to do an internship with media/communications agencies, non-profit organizations, corporations, or government, located in the Denver area, or elsewhere in the U.S. or abroad. Students are encouraged to do the internship after they have completed at least half of the 48 credits required for the MA degree. All internships will be administered and supervised.
by the director of internships in the Dept. of Media, Film and Journalism Studies. Students must meet with the internship director in order to obtain approval for an internship.

**Thesis**

Students in the general MFJS may opt to do a thesis instead of an internship, for a maximum of 4 credits. To begin work on the thesis, the student must first choose an area of interest and develop a research question that will guide the thesis project. At that time, the student should also identify a faculty member with expertise in their area of interest who is available and willing to work with them as a thesis advisor. The advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the thesis project. Students should review the process and policies for the master's thesis in the Graduate Policy Manual. Students can find "Thesis and Dissertation Formatting Guidelines," "Thesis Oral Defense Information," and "Thesis/Dissertation Submission Instructions via ETD" under the "Graduation and Oral Defense Information" on this website. The student should meet with the thesis advisor to finalize a research question and outline the entire project. The student should then begin work on a preliminary proposal which may need to be reviewed by the MFJS Graduate Committee (as determined by the thesis advisor and MA director), and should include the following:

- research problem or question
- theoretical framework
- preliminary literature review
- methods
- The committee will review the proposal and the student's course record (including grades), consult with the student's advisor and instructors of courses related to the thesis, and make a recommendation to the student on doing a thesis. If the committee recommends against the student doing a thesis, the student is required to do an internship. A student has the option to revise and resubmit the preliminary thesis proposal one time. Once the preliminary proposal has been approved by the graduate committee, the student and advisor will need to select a thesis committee, which includes the advisor, a committee chair who is a tenured or tenure-track faculty member outside of MFJS, and a minimum of one other committee member who will read the formal research proposal and the final report. These additional members should be contacted and asked if they would be willing to serve on the thesis committee. Once the thesis committee is formed, the student should begin work on a formal thesis proposal. The exact form of this proposal will be outlined by the thesis advisor and will vary according to the thesis topic, the specific problem being studied and the methodology proposed to explore that problem. All proposals should include the following (the order may vary):

- a general introduction to the thesis topic
- an explication of the problem(s) the research will address (i.e., the purpose of the study)
- a review of the literature related to the stated problem
- a clear and succinct statement of the research questions or hypotheses the thesis will address
- a discussion of the research methods that will be used to explore the questions or hypotheses
- a description of the material or data that will be examined in order to suggest answers to the research questions or to test the hypotheses
- if appropriate, a discussion of the contributions the study will make to the existing discourse on the thesis topic.
- The student will need to convene the thesis committee for a proposal meeting following completion of the proposal. The committee members should be presented with a draft of the research proposal two weeks prior to this meeting. At the meeting the committee members will question the student on the project's theory, design, and research methods to ensure that the project is rigorous and of appropriate scope. Revisions to the proposal may be required following this meeting. An approved proposal outlines the specific procedures the student must follow to complete the thesis requirement. Following approval of the research proposal, the student may then proceed to conduct the research described in the proposal, then report and discuss the results in the final written thesis report, which must be approved in an oral defense by the thesis committee. The format of the thesis should follow the guidelines developed by the Office of Graduate Studies exactly.

**Substantial Research Paper (SRP)**

A Substantial Research Paper (SRP) is a problem-focused paper designed to engage students in an independent research project that is longer and more in-depth than a class research paper, but less than a thesis project. Unlike a thesis, an SRP does not require a review committee or an oral defense; rather, it will be supervised and graded by a single appointed faculty member. Also, unlike a thesis, the SRP does not require the collection of primary data, but may use secondary data only.

To begin work on the SRP, the student must first choose an area of research interest and develop a research question that will guide the research. It may be based on a class research paper that will then be expanded for the SRP. The student should choose an SRP faculty advisor with expertise in the student's area of interest. The faculty advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the SRP. It is important that the student and faculty advisor establish a reasonable and mutually agreeable timeline for exchanging drafts and comments on the student’s work. The final copy of the SRP should be formatted according to an academic style, such as APA or MLA, and follow any other guidelines agreed upon with the faculty advisor.

Students opting to complete an SRP should register for MFJS 4995 for a maximum of 4 credits, allocated in the quarters in which they are actually working on the SRP. It is not permissible to register for credit before work has commenced or after the work has been completed.
MASTER OF ARTS IN MEDIA AND PUBLIC COMMUNICATION WITH A CONCENTRATION IN MEDIA AND GLOBALIZATION

Degree Requirements

The MA in Media and Public Communication with a Concentration in Media and Globalization requires 48 quarter hours of credit, as well as completing a thesis, a substantial research paper (SRP), or an internship.

Course Requirements

Students should plan ahead to ensure they are able to complete their required courses as some are offered every other year.

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<td>MFJS 4065</td>
<td>Public Diplomacy and Nation Branding</td>
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<td>Global/Multicultural Campaigns</td>
<td>4</td>
</tr>
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<td>MFJS 4165</td>
<td>Global Health and Development Communication</td>
<td>4</td>
</tr>
<tr>
<td>MFJS 4255</td>
<td>Space, Place and Globalization</td>
<td>4</td>
</tr>
<tr>
<td>MFJS 4652</td>
<td>Culture, Gender, and Global Communication</td>
<td>4</td>
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<tr>
<td>MFJS 4653</td>
<td>Language, Power, and Globalization</td>
<td>4</td>
</tr>
<tr>
<td>MFJS 4655</td>
<td>Multicultural Journalism</td>
<td>4</td>
</tr>
<tr>
<td>MFJS 4656</td>
<td>Cross-Cultural Travel Seminar: Immigration, Communication, and Border Cultures</td>
<td>4</td>
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Electives

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<td>Independent Research</td>
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Total Credits

<table>
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</tr>
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<tbody>
<tr>
<td>48</td>
</tr>
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</table>

Minimum number of credits required for the degree: 48

Non-coursework Requirements:

- Internship, Substantial Research Paper (SRP), or Thesis

Internship

Internships required 40 hours of work per credit (40 x 4 = 160 hours). An internship is registered as a course (MFJS 4980: Internship), and may be taken for a maximum of 4 credits during any one term. (Note: For internships at the end of a student's program, they must be secured or in the process of being secured in the quarter before graduation.) Students may elect to do an internship with media/communications agencies, non-profit organizations, corporations, or government, located in the Denver area, or elsewhere in the U.S. or abroad. Students are encouraged to do the internship after they have completed at least half of the 48 credits required for the MA degree. All internships will be administered and supervised by the director of internships in the Dept. of Media, Film and Journalism Studies. Students must meet with the internship director in order to obtain approval for an internship.

Thesis

Students in the general MFJS may opt to do a thesis instead of an internship, for a maximum of 4 credits. To begin work on the thesis, the student must first choose an area of interest and develop a research question that will guide the thesis project. At that time, the student should also identify a faculty member with expertise in their area of interest who is available and willing to work with them as a thesis advisor. The advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the thesis project. Students should review the process and policies for the master's thesis in the Graduate Policy Manual. Students can find "Thesis and Dissertation Formatting Guidelines," "Thesis Oral Defense Information," and "Thesis/Dissertation Submission Instructions via ETD" under the "Graduation and Oral Defense Information on this website. The student should meet with the thesis advisor to finalize a research question and outline the entire project.
The student should then begin work on a preliminary proposal which may need to be reviewed by the MFJS Graduate Committee (as determined by the thesis advisor and MA director), and should include the following:

- research problem or question
- theoretical framework
- preliminary literature review
- methods

The committee will review the proposal and the student’s course record (including grades), consult with the student’s advisor and instructors of courses related to the thesis, and make a recommendation to the student on doing a thesis. If the committee recommends against the student doing a thesis, the student is required to do an internship. A student has the option to revise and resubmit the preliminary thesis proposal one time. Once the preliminary proposal has been approved by the graduate committee, the student and advisor will need to select a thesis committee, which includes the advisor and a minimum of two other committee members who will read the formal research proposal and the final report. These additional members should be contacted and asked if they would be willing to serve on the thesis committee. Once the thesis committee is formed, the student should begin work on a formal thesis proposal. The exact form of this proposal will be outlined by the thesis advisor and will vary according to the thesis topic, the specific problem being studied and the methodology proposed to explore that problem. All proposals should include the following (the order may vary):

- a general introduction to the thesis topic
- an explication of the problem(s) the research will address (i.e., the purpose of the study)
- a review of the literature related to the stated problem
- a clear and succinct statement of the research questions or hypotheses the thesis will address
- a discussion of the research methods that will be used to explore the questions or hypotheses
- a description of the material or data that will be examined in order to suggest answers to the research questions or to test the hypotheses
- if appropriate, a discussion of the contributions the study will make to the existing discourse on the thesis topic.

The student will need to convene the thesis committee for a proposal meeting following completion of the proposal. The committee members should be presented with a draft of the research proposal two weeks prior to this meeting. At the meeting the committee members will question the student on the project’s theory, design, and research methods to ensure that the project is rigorous and of appropriate scope. Revisions to the proposal may be required following this meeting. An approved proposal outlines the specific procedures the student must follow to complete the thesis requirement. Following approval of the research proposal, the student may then proceed to conduct the research described in the proposal, then report and discuss the results in the final written thesis report, which must be approved in an oral defense by the thesis committee. The format of the thesis should follow the guidelines developed by the Office of Graduate Studies exactly.

**Substantial Research Paper (SRP)**

A Substantial Research Paper (SRP) is a problem-focused paper designed to engage students in an independent research project that is longer and more in-depth than a class research paper, but less than a thesis project. Unlike a thesis, an SRP does not require a review committee or an oral defense; rather, it will be supervised and graded by a single appointed faculty member. Also, unlike a thesis, the SRP does not require the collection of primary data, but may use secondary data only.

To begin work on the SRP, the student must first choose an area of research interest and develop a research question that will guide the research. It may be based on a class research paper that will then be expanded for the SRP. The student should choose an SRP faculty advisor with expertise in the student’s area of interest. The faculty advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the SRP. It is important that the student and faculty advisor establish a reasonable and mutually agreeable timeline for exchanging drafts and comments on the student’s work. The final copy of the SRP should be formatted according to an academic style, such as APA or MLA, and follow any other guidelines agreed upon with the faculty advisor.

Students opting to complete an SRP should register for MFJS 4995 for a maximum of 4 credits, allocated in the quarters in which they are actually working on the SRP. It is not permissible to register for credit before work has commenced or after the work has been completed.

**Public Diplomacy Certificate of Specialization**

**Program Requirements**

**Course Requirements**

Students will take classes in three categories as follows:

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MFJS 4060  Strategic Messaging
MFJS 4165  Global Health and Development Communication
MFJS 4912  Seminar in Media Film & Journalism Studies

**Context Specialization Courses**

Examples of INTS and MFJS Context Specialization courses are listed below, but others may be approved by the Certificate Director if the student makes a convincing case.

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**Total Credits** 24

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**Non-coursework Requirements:**
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Courses

MFJS 3120 Media Ethics (4 Credits)
Analysis of problems affecting mass communications profession that result from interaction among governmental, legal, institutional and socioeconomic forces in mass communications systems. Senior standing required.

MFJS 3150 Activist Media: A Historical Overview 1960-Present (4 Credits)
Today's alternative cultures use internet and mobile technologies to access and circulate mainstream information, but also to rapidly exchange information that exists outside mainstream media channels. Activist movements today with access to digital tools and networks are no longer dependent on newspapers and broadcast networks to represent them and to disseminate their messages. We are, however, just beginning to see how the proliferation of alternative networks of communication, and the content, practices, and identities they facilitate, interact with traditional political and business organizations, as well as with traditional media products and practices. This course focuses on media activism over the past half-century tied to various social movements with an emphasis on contemporary protest movements and their use of new and old media tools and strategies. Cross listed with EDPX 3725, MFJS 4725. Prerequisite: junior standing or permission of instructor. MFJS, SCOM, MDST, COMN, JOUR, MCOM, IIC, or DMST majors only.
MFJS 3160 Networked Journalism (4 Credits)
This course traces the shift that has taken place over the past 15 years from mass-mediated journalism to networked journalism, with emphasis on experiments in citizen and participatory news and on the changing relationship between journalists and their publics. It explores emergent communication technologies and practices and how they are changing the news media landscape. Prerequisite: junior standing or permission of instructor. MFJS, SCOM, MDST, COMN, JOUR, MCOM, IIC, or DMST majors only.

MFJS 3201 Digital Graphic Design (4 Credits)
Students explore digital publication and graphic design, from printed layouts (newspaper and magazines) to digital packages (eBooks and mobile apps). Courses focus on raster and vector tools to create effective presentations and user interfaces. Laboratory fee required. Prerequisites: MFJS 2140 or instructor approval.

MFJS 3203 Women and Film (4 Credits)
This course explores the major intersections of the terms "women" and "film." It is concerned, for example, with the representation of women in film, both in the dominant Hollywood cinema and in alternative filmmaking practices (independent, experimental, documentary, and other national cinemas), with films by women and with women as cinema viewers or spectators. This course examines a variety of feminist approaches (historical, critical, theoretical) relevant to the subject matter. Lab fee. Cross listed with GWST 3203. Prerequisites: MFJS 200 or GWST 1112 or permission of instructor.

MFJS 3205 International & Development Communication (4 Credits)
The course uses a variety of methods and approaches to inspire critical reflection about the complex relationship between communication, culture, and development.

MFJS 3206 Film History I: Silent Cinema (4 Credits)
This course explores the international history of film, from the origins of cinema through the late silent period. We examine the ways in which important events such as massive immigration, the Progressive movement, colonialism, World War I, modernism, and the Bolshevik Revolution have altered the face of film history, and look at some of the most important cinematic movements of the period. We discuss film historiography and the special challenges posed by film historical research and writing. Lab fee required. Note: This course is writing-intensive. Prerequisite: Permission of the instructor.

MFJS 3208 Narrative and Longform Journalism (4 Credits)
Students spend time learning the nature and functions of in-depth news reporting for online and print, with a focus on magazine-style feature article writing and editing. Laboratory fee required. Prerequisite: MFJS 2140.

MFJS 3212 Film History II: Sound Cinema (4 Credits)
This course explores the international history of film, from the development of sound cinema through the post-World War II period, 1926-1960. We examine the ways in which important events such as the Great Depression, the rise of fascism, the Second World War, and the Cold War have altered the face of film history, and look at some of the most important cinematic movements of the period. We discuss film historiography and the special challenges posed by film historical research and writing. Lab fee required. Prerequisite: Permission of the instructor.

MFJS 3216 Film History III: Contemporary Cinema (4 Credits)
This course explores the history of film from 1960 to the present. We examine the ways in which important events such as the Cold War, struggles against colonialism, the Vietnam War, globalization, and the rise of religious fundamentalisms have altered the face of film history and look at some of the most important cinematic movements of the period. We discuss film historiography and the special challenges posed by film historical research and writing. Note: Lab fee required. This course is writing-intensive. Lab fee required. Prerequisite: Permission of the instructor.

MFJS 3224 Introduction to 16mm Film and HD Digital Cinematography (4 Credits)
This course focuses on the visual aspects of telling a cinematic Story. Students learn the basics of black and white cinematography using 16mm film cameras and/or the basics of color cinematography using high definition digital cameras. The class emphasizes silent storytelling, using lighting, art design and camera movement to develop character and theme. Students read from seminal film theorists about varying approaches to cinematography and write analyses of their own work. Lab fee required.

MFJS 3229 Video Editing is for Everybody (4 Credits)
The goal for this course is for students to have a basic working knowledge of editing using various media elements (video, audio, photos, music, graphics), developing proficiencies using different editing software, and applying a mixture of editing theories and techniques. This is a summer course only.

MFJS 3310 Advanced Newswriting & Reporting (4 Credits)
Application of investigative techniques to interpretive reporting in areas of contemporary social concern. Laboratory fee required. Prerequisite: MFJS 2140.

MFJS 3320 Screenwriting for TV & Film (4 Credits)
This course leads students through advanced scriptwriting formats based on instructor expertise. Lab fee required. Prerequisite: MFJS 2150.

MFJS 3330 Broadcast & Video Journalism (4 Credits)
Students in this course learn and practice the techniques used by broadcast journalists as they write, shoot and edit news packages for television. Laboratory fee required. Prerequisite: MFJS 2140.

MFJS 3501 Web Design & Content Development (4 Credits)
This course covers the building and management of web pages. Students must be comfortable planning, creating and integrating social media and third-party content into web sites, along with analytical tools that measure audience engagement. Laboratory fee required. Prerequisite: MFJS 2140.
MFJS 3504 Advanced Multimedia Storytelling and Publishing (4 Credits)

This course, students tap the reporting, writing, editing and multimedia production and editing skills and knowledge learned and practiced in previous journalism studies classes and apply them to building from scratch, an open content management based multimedia web site. Laboratory fee required. Prerequisites: MFJS 2140 and MFJS 2240.

MFJS 3852 Advanced Design, Layout, and Editing (4 Credits)

This course teaches students advanced layout and design for media publications using contemporary software applications for journalists and public relations professionals.

MFJS 3900 Topics in Media Film & Journalism (1-4 Credits)

MFJS 4000 MFJS Graduate Assessment Requirement (0 Credits)

This zero credit hour course is designed to enable graduate students enrolled in the Department of Media, Film and Journalism Studies’ M.A. in Media and Public Communication and the M.A. in International and Intercultural Communication degrees to complete an assessment file prior to their graduation. The requirement does not take place in conjunction with a single quarter but is rather completed throughout the student’s academic career according to the required coursework within both the M.A. in IIC and M.A. in MEPC (Media and Globalization or Strategic Communication concentration).

MFJS 4020 Emergent Digital Cultures (4 Credits)

This course introduces graduate students to some of the major historical, cultural, sociopolitical, philosophical, and other critical trends in this field of digital media. The rapid growth of participatory culture online has significant social implications and brings up issues of privacy, consumer power, intellectual property, and the nature of community and public engagement. This class will explore these issues as they manifest in various cases including politics, intellectual property, youth culture, activism, journalism and art. Particular emphasis will be placed on the question of how new media differs from mass media across various fields of cultural production (music, news, advertising, for example) and on what influence new digital products and practices might have on these industries and on cultures and societies more generally.

MFJS 4050 Foundations of Strategic Communication (4 Credits)

Focuses on understanding and implementing public communication campaigns. Central to the course is the exploration of the theoretical social science framework underlying communication campaigns and examination of the ways theories are used to define and explain communication problems and to plan and evaluate campaigns.

MFJS 4055 Media and Cultural Studies (4 Credits)

This class surveys key ideas and authors in the interdisciplinary field of cultural studies with a focus on their contributions to the study of media and communication. Some theoretical concepts to be discussed include: representation, identity, cultural production, ideology, hegemony, intersectionality, and power as these relate to the analysis of media institutions, technologies, cultures, audiences/users, texts, and artifacts. Students will develop an understanding of cultural studies as a theoretical, methodological, and political project, devoted to social critique and transformative praxis.

MFJS 4060 Strategic Messaging (4 Credits)

Continues the focus on learning and applying public relations techniques, emphasizing media relations and media writing. Students develop the ability to formulate and evaluate appropriate communication objectives, strategies, and tactics in response to real-world public relations problems, paying attention to ethical considerations. Students produce a portfolio of written public relations materials. Prerequisite MFJS 4050 or instructor permission.

MFJS 4065 Public Diplomacy and Nation Branding (4 Credits)

Drawing on research from strategic communication, cultural studies, international relations, and marketing, this interdisciplinary course examines how nation-states strive to manage their reputations and increase their influence in the context of globalization and mediatedization. Students will learn about the evolution of public diplomacy and nation branding from the Cold War to present day and will discuss current developments and challenges. The course will introduce several theoretical approaches and will use a variety of case studies to help students gain insights into public diplomacy and nation branding as fields of research and of practice.

MFJS 4070 Seminar in Strategic Communication (4 Credits)

Through a combination of course readings, case study analyses and guest speakers, students will observe and learn about the practice of public relations in the health and nonprofit sectors. Students will also learn about the goals, challenges and opportunities specific to these sectors. Prerequisite: MCOM/MFJS 4060 or permission of instructor.

MFJS 4080 Global/Multicultural Campaigns (4 Credits)

Explores aspects of international and intercultural public relations, including intercultural communications issues, international media issues, international corporate PR, cross-cultural and diversity training, international media relations, and international public relations of governments. The class focuses on relevant theories and issues, rather than on techniques. Prerequisite MFJS 4050 or permission of instructor.

MFJS 4160 Media Theories (4 Credits)

Surveys a number of theoretical approaches to the study of media and mass communication, paying attention to the historical context in which they arise. Students explore the relationships among media technologies, institutions, content, and audiences as well as their impacts on culture and society. The class prepares students to formulate theoretically grounded research questions within the field of media and mass communication.
MFJS 4165 Global Health and Development Communication (4 Credits)
This course will begin with an overview of health communication (which includes but is not limited to health promotion and behavior change). We will discuss individual, social, cultural & technological factors, and relevant theories and concepts in relation to international health communication and development. Students will then learn about the role of communication in international health and development and the way it is practiced in the field. We will also discuss and apply the social and cultural factors that influence the design, delivery, reception, and effectiveness of international health communication programs, the role of international health's important players big and small (e.g. WHO, UNAID, PEPFAR, Doctors without Borders, pharmaceutical companies, local village leaders, local ministries of health, husbands, mothers, etc.), and the ways in which the use of both upstream and downstream communication is imperative. We will examine case studies and the latest research for international health communication and its effectiveness while we also apply health communication theories from a variety of perspectives.

MFJS 4175 Multicultural Health Communication (4 Credits)
The course will begin with an overview of Health Communication in the United States and the ways in which health and illness are defined through communication, including media. We will discuss existing health disparities and social determinants of health as we examine health communication in multicultural settings in the U.S. We will further examine multicultural audiences and perspectives about health and illness, including diverse meaning systems and their influences on health attitudes and behaviors. Students will learn about cross-cultural concepts of health and disease and how those are represented in communication about health and illness. As students learn about what it means to develop culturally grounded health communication campaigns, they will examine culture centric messaging in health promotion. We will also discuss the ways in which health care systems are promoting patient-centered, culturally sensitive health care.

MFJS 4200 Topics in Mass Communications (4 Credits)

MFJS 4218 Narrative Film/Video Production I (4 Credits)
This is the first of a two-course capstone sequence focused on the filmmaking process and the completion of a short narrative film. Using an intensive workshop method, the class examines the scriptwriting and pre-production processes, and students finish the quarter with a completed pre-production notebook that includes a shooting script, a producer analysis, a script breakdown, production boards, casting decisions, location scouting reports and a shooting schedule. Likewise, through readings, discussions and screenings, the course is designed to expose students to the larger world of narrative filmmaking. Lab fee required. Cross-listed with MFJS 3218. Prerequisites: MFJS 4450 and MFJS 4470 or permission of the instructor.

MFJS 4219 Documentary Film/Video Production I (4 Credits)
This is the first of a two-course capstone sequence focused on the filmmaking process and the completion of a short documentary film. This course focuses on historical modes and styles of documentary, ethics, and documentary pre-production. Students pitch films, form filmmaking teams and research and write a proposal for their films. Reflective writing about process and outcome anchors student learning. Lab fee required. Cross-list with MFJS 3219. Prerequisites: MFJS 4470 or permission of instructor.

MFJS 4220 Narrative Film/Video Production II (4 Credits)
This is the second of a two-course capstone sequence focused on the filmmaking process and the completion of a short narrative film. The class uses an intensive workshop method to hone work on films pre-produced in Narrative Film/Video I. Specifically, students focus on shooting, directing, editing and sound development for their short narrative film. Lab fee required. Prerequisites: MFJS 4450 and MFJS 4470 or permission of the instructor.

MFJS 4221 Documentary Film/Video Production II (4 Credits)
This is the second of a two-course capstone sequence focused on the filmmaking process and the completion of a short documentary film. The course focuses on documentary structure, production and post-production. Additionally, using an intensive workshop style, students, critique their own and each other’s work. Reflective writing about process and outcome anchors student learning. Lab fee required. Prerequisites: MFJS 4470 and MFJS 4219.

MFJS 4222 Experimental Theory and Production (4 Credits)
This course is an historical, critical overview of experimental film/video movements; training in experimental projection techniques; production of own experimental projects. Lab fee required. Cross listed with MFJS 3222. Prerequisite: MFJS 4470 or permission of instructor.

MFJS 4223 Advanced Editing (4 Credits)
Building on the basic non-linear editing skills gained in Introduction to Field Production and Editing, this course focuses on advanced editing techniques including image and sound manipulation that utilize rhythmic, graphic, metaphoric, temporal and spatial approaches. In addition, the class addresses advanced sound sweetening and image color correction. Students read from seminal film theorists about varying approaches to editing and write analyses of their own work. Lab fee required. Cross listed with MFJS 3223. Prerequisite: MFJS 4470 or permission of instructor.

MFJS 4229 Video Editing is for Everybody (4 Credits)
Video has become ubiquitous. Whether on YouTube, Hulu, television or a friend's Facebook page, people are exposed to thousands of edited videos every year. From business to anthropology, chemistry to journalism, students in every discipline want to create videos to enhance class projects, aide business plans, promote good works, accompany science processes and create lasting memories. This course is designed to provide students with a basic understanding of television and film editing. When completing this course, the goal is for students to have a basic working knowledge of editing using various media elements (video, audio, photos, music, graphics), editing software and applying a mixture of editing theories and techniques (continuity and montage style editing). There are no prerequisites for this course.

MFJS 4255 Space, Place and Globalization (4 Credits)
This class explores how developments in media technologies converge with expanded forms of mobility (migration, tourism, business travel, etc.) to create new practices and experiences with space and place. Responding to a globalizing context where places have become increasingly networked and/or virtual, this course pulls together research at the intersection of communication and geography studies.
MFJS 4300 Mass Media Law (4 Credits)
Introduction to freedom of expression and media law. Students learn how the American legal system works and gain an understanding and appreciation of the philosophical foundations of free expression. In addition, students confront many of the issues facing professional communicators today. Topics include incitement, hate speech, student speech, copyright, defamation, and other issues crucial to mass media professionals. The course examines also explores challenges to free expression brought by new(er) communication technologies. The purpose of this class is to give students the knowledge and critical thinking skills needed to be successful in today's rapidly changing communication environment. Cross-listed with MFJS 3040.

MFJS 4310 New Media Law & Regulation (4 Credits)
Examination of current conflicts in mass communications law. Particular emphasis is given the legal problems of communications technologies. Topics may include libel, privacy, obscenity, news gathering, copyright, media ownership and comparative approaches to media law. The course provides insight into how the legal process works and an understanding of the principles and philosophies that underlie the restraints on new communication technologies.

MFJS 4320 Brands and Identities (4 Credits)
Reviews theories and cases of the role and meaning of brands in a consumer society, with a particular emphasis on understanding how brands are implicated in the construction and presentation of personal and group identities. The course combines insights from marketing, social psychology, and cultural studies to explore the importance of brands for both consumers and practitioners. Students master core branding concepts and use them to critically analyze salient social and cultural issues.

MFJS 4450 Scriptwriting (4 Credits)
Utilizing film and written texts, this course examines the fundamentals of narrative scriptwriting. Students produce a short narrative script (10-15 pages) while learning about the various processes involved in this art form. Cross listed with MFJS 2150. Lab fee required.

MFJS 4470 Introduction to Field Production and Editing (4 Credits)
This course focuses on the complete production process: pre-production (planning), production (lighting, shooting and sound gathering) and post-production (editing). The goal of the course is for students to gain a basic understanding of the process involved in producing a field-based production, the skills necessary to complete it and the critical understanding behind all decision. Lab fee required. Cross listed with MFJS 3215.

MFJS 4501 Web Building & Site Management (4 Credits)
An introduction to the fundamental concepts of Web site development and management, including HTML, DHTML, graphical Web-building tools (Macromedia DreamWeaver and others), multilevel site planning and construction, navigation schemes, basic interactivity (via Javascript and CGI), information organization, Web site management and delivery of basic multimedia content.

MFJS 4550 Media Effects & Consequences (4 Credits)
Examines the psychological effects and sociological consequences of mass communications. The course combines theoretical perspectives from social science inquiry that seek to explain how audiences use the mass media and the effects which media have on audiences. Emphasis is placed upon areas of inquiry which have a bearing on mass communications policy.

MFJS 4560 Methods in Communication Research (4 Credits)
Development and application of specific social scientific research techniques to study mass communication. The class surveys both quantitative and qualitative techniques and addresses methods for evaluation.

MFJS 4565 Global Media and Communication (4 Credits)
Major theories concerning international communication flows, the impact of globalization and global media, issues of new communication technologies, the rhetoric and media framing of global politics and culture; international marketing and public relations; and national and cultural sovereignty issues related to communication.

MFJS 4651 Development Communication (4 Credits)
An overview of major theories in development communication concerning past, present, and future roles of media in economic/cultural development around world.

MFJS 4652 Culture, Gender, and Global Communication (4 Credits)
Explore the ways in which culture, gender, and communication intersect and shape a variety of issues from an international and intercultural perspective, including sexuality and gender identity, indigenous and immigration rights, women's rights, and human rights. Using a global feminist perspective, the class examines paradigm shifts in creating social change through social and political movements. Cross listed with MFJS 3652.

MFJS 4653 Language, Power, and Globalization (4 Credits)
This course focuses on scholarly and political debates surrounding the social nature of language, language and (inter)national and individual identity, language policy, multilingualism and linguistic diversity, language and globalization, language and media and communication technologies, and, finally, the future of the global language landscape.

MFJS 4654 Intercultural Communication (4 Credits)
This course focuses on the intersections between culture & communication, including intercultural communication in interpersonal and mediated contexts at the local, national and global levels as shaped by processes of globalization. It covers major theoretical perspectives and methods, the role of power and privilege in the construction and articulation of culture and cultural identity, and intersections with race, ethnicity, gender, sexuality and class, intercultural training and the role of communication and culture in conflict and conflict resolution.
MFJS 4655 Multicultural Journalism (4 Credits)
This course focuses on multicultural approaches to journalism and media, including representations and news coverage related to gender, race/ ethnicity, class, and sexuality, disabilities, religion, and nationality, etc. The class explores culture and intercultural communication and ways to apply these to journalistic writing as a creative process and craft. Prerequisite: Prior journalistic coursework or its equivalent (including writing experience). Cross-listed with MFJS 3655.

MFJS 4656 Cross-Cultural Travel Seminar: Immigration, Communication, and Border Cultures (4 Credits)
This is a one-week intensive travel course that takes place in Tucson, Arizona and south to the US-Mexican border region. The focus of this experiential learning class is to study immigration issues, border cultures, and the role of communication and media through testimonies of immigrants, and visits to key sites such as the migrant trail, immigration detention center and courts. Also included are talks by activists and officials involved in the immigration debate. Class meets for two pre-class sessions in spring quarter. Cross-listed with MFJS 3656.

MFJS 4912 Seminar in Media Film & Journalism Studies (1-5 Credits)
MFJS 4980 Internship (1-10 Credits)
Arrange with internship director to complete internship with Denver-area media organization. Prerequisite: varies; consult internship director.

MFJS 4991 Independent Study (1-10 Credits)
MFJS 4992 Directed Study (1-10 Credits)
MFJS 4995 Independent Research (1-10 Credits)

Philosophy
Office: Sturm Hall, Room 257
Mail Code: Sturm Hall, Room 257, 2000 E. Asbury, Denver, CO 80208
Phone: 303-871-2063
Email: philosophy@du.edu
Web Site: http://www.du.edu/philosophy

Master of Arts in Philosophy
The department of philosophy at the University of Denver offers an MA in philosophy, but only when done through the university’s flexible dual-degree program in conjunction with an MA in another approved discipline. The philosophy faculty places a strong emphasis on research and personal interaction with students. Our program is designed to meet the needs of two kinds of students — those wishing to prepare for doctoral work in philosophy and those seeking an individualized course of study with a more interdisciplinary focus. Areas of concentration include the history of Western thought, interpretive and critical theory, practical philosophy, meta-philosophy, and studies in creative and critical reasoning about human nature and values.

Proposal Process for Flexible Dual-Degree Program in Philosophy
After formal admission into both programs, the dean, chair, or director of each degree program and both program advisors, must carefully compare the requirements for each program and approve the proposal. The student must then submit a copy of the original requirements for each degree (printout from the unit Web site or copy from the student handbook is acceptable), and the flexible dual-degree proposal to the Office of Graduate Education. The philosophy department will provide a coursework template for the student to include with his or her proposal. The student then submits the documents listed above to the Office of Graduate Education, which reviews and decides on the proposals.

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

Prerequisites:
• An undergraduate degree in philosophy is desirable, but talented students from other areas will be considered for admission. Students must already have been accepted and matriculated into the master’s degree program in another approved DU master’s program.
Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

Other Requirements

• All students should apply after matriculation into their first MA program at DU, but must matriculate into the Philosophy program no later than the first available term following fifty percent (50%) course work completion of the first program. To propose a flexible dual-degree, the student must seek the counsel of an adviser in the philosophy department.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

Master of Arts in Philosophy

Degree Requirements

Coursework Requirements

45 quarter hours in philosophy (students may propose to have this amount reduced by a maximum of 10 quarter hours under appropriate circumstances as specified by the flexible dual-degree guidelines). Because philosophy is part of a flexible dual degree program, these hours are required in addition to the required hours in another approved discipline. Courses graded below a C– cannot be counted for a flexible dual degree.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>PHIL 3XXX, 4XXX, or 5XXX courses</td>
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<td>Total Credits</td>
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Minimum number of credits required for the degree: 45

Non-Coursework Requirements

• A comprehensive exam over the history of Western philosophy
• A portfolio paper approved by a committee of three department faculty
• An oral defense covering both the comprehensive exam on the history of Western philosophy and the portfolio paper

Courses

PHIL 3000 Plato’s Metaphysics (4 Credits)
A systematic study of Plato’s Middle and Late Period Dialogues that focuses on his arguments for the existence of abstract objects and the development of Plato’s theory of Forms. Prerequisite: At least Junior standing or permission of instructor.

PHIL 3003 Plato’s Theory of Knowledge (4 Credits)
A systematic investigation of Plato’s treatments of knowledge throughout the dialogues with a focus on the theory of recollection, Forms as objects of knowledge, the relationship between the Forms and perceptual experience, and the challenges posed by notions of true and false belief. Prerequisites: At least Junior standing or permission of instructor.

PHIL 3005 Cosmopolitics (4 Credits)
This class will be a close reading of Plato’s dialogue Timaeus, with a special focus on the cosmological, theological, and political dimensions of the text.

PHIL 3010 Great Thinkers: Aristotle (4 Credits)
A study of Aristotle’s central theories and doctrines. Prerequisite: junior standing or instructor’s permission.

PHIL 3023 Great Thinkers: Maimonides: Politics, Prophecy and Providence (4 Credits)
Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with RLGS 3023 and JUST 3023. Prerequisite: junior standing or instructor’s permission.
PHIL 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)
Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides’ core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is “metaphysics?”; God’s unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God’s ways as well as “negative theology”—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the “separate intellects”; creation vs. eternity vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for “living in the world with/out God.” In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and RLGS 3024. Prerequisite: Junior standing or instructor’s permission.

PHIL 3026 Levinas and the Political (4 Credits)
Emmanuel Levinas (1906-1995), famous for his arresting insight of “ethics as first philosophy,” is a key figure in the histories of phenomenology, metaphysics, and theology. In this class, we examine the implications of Levinas’ thought for politics and the political through close readings of his insights on peace, proximity, and justice in such works as “Reflections on the Philosophy of Hitlerism” (1934), Totality and Infinity (1961), Otherwise Than Being or Beyond Essence (1974), and “Peace and Proximity” (1995) in dialogue with key companion works in political thought and political theology, including Benjamin on Divine Violence, Butler on postmodern politics, Connolly on agonism, Critchley on anarchism, Marxist intersections, and Derrida and other “Jewish theologies” of messianistic impossibility. Themes addressed include: Justice; Covenant; Law; the grounding and paradox (or betrayal) of politics-with-ethics; phenomenologies of hostilities and strangers, friends and enemies; liberalisms, socialisms, fascisms; revolutions and anarchies; agonisms v. antagonisms; impossibility; messianisms without Messiahs; logics of works v. logics of grace; on the role of love v. justice; anarchic grounds; temporalities of covenant and justice; fraternity; forgiveness and its limits; “the 3rd”; rational peace, peace between the wars, and impossible peace. This course is cross-listed: PHIL and JUST. Pre-reqs: This course is open to juniors and seniors except by special permission of the instructor.

PHIL 3050 Great Thinkers: Hume (4 Credits)
A detailed study of Hume’s "radical" empiricism and its impact on contemporary analytic philosophy. Prerequisite: junior standing or instructor’s permission.

PHIL 3061 Kant’s Ethics/Aesthetics/Politics (4 Credits)
A study of Kant’s "value theory" and its historical significance. Prerequisite: junior standing or instructor’s permission.

PHIL 3062 Kant’s Epistemology and Logic (4 Credits)
A study of Kant’s theory of knowledge, logic and related issues. Prerequisite: junior standing or instructor’s permission.

PHIL 3063 Kant on Religion (4 Credits)
A study of Immanuel Kant’s major writings on religion and their subsequent influence on theology and the philosophy of religion. Prerequisite: junior standing or instructor’s permission.

PHIL 3070 Great Thinkers: Hegel (4 Credits)
Hegel’s "Phenomenology," later system and place in the history of modern philosophy. Prerequisite: junior standing or instructor’s permission.

PHIL 3075 Marxism (4 Credits)
This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx’s work, but it is highly recommended. Cross listed with ECON 3075.

PHIL 3090 Great Thinkers: Heidegger (4 Credits)
Study of "Being and Time" and related essays by a major 20th-century philosopher. Prerequisite: junior standing or instructor’s permission.

PHIL 3092 Great Thinkers: The Later Heidegger (4 Credits)
Study of the works of Heidegger after 1930. Prerequisite: junior standing or instructor’s permission.

PHIL 3101 Great Thinkers: Kierkegaard (4 Credits)
Each year, the philosophy department offers at least two courses in great thinkers. Specific figures may vary from year to year. Cross-listed with RLGS 3102. Prerequisite: 10 hours of Philosophy at the 2000 level or permission of instructor.

PHIL 3111 Contemporary Continental Philosophy: The Figure of the Migrant (4 Credits)
The 21st century has been described as the century of “people on the move” by UNHCR High Commissioner Antonio Guterres. Some 11 million people are refugees worldwide, fleeing political violence and/or persecution at home; whole more than 20 million are internally displaced within the borders of their own countries. Accordingly, the figure of the migrant/refugee has emerged as one of the most important, if not the most important, political figures of contemporary continental philosophy. Despite differences in philosophical orientation, thinkers such as Gilles Deleuze, Judith Butler, Jacques Ranciere, Julia Kristeva, Alain Badiou, and Jacques Derrida have all written at length on the centrality of the figure of the migrant for contemporary political thought. Not only does the figure of the migrant define the people of our time, according to many of these authors, it also defines a positive political way forward. This course thus provides not only a survey of the different traditions in contemporary European philosophy over the last twenty years (post-structuralism, deconstruction, neo-classicism, post-Marxism, third-wave feminism) but also offers a thematic look at the politico-philosophical figure of the migrant and other issues related to migration (human rights, borders, camps, sovereignty, territory, nomadism, and resistance).
PHIL 3120 Metaphysics (4 Credits)
In the course of this study, we will cover a broad range of philosophical topics falling within metaphysics, philosophy of language, philosophy of science, and epistemology. Prerequisite: junior standing or instructor's permission.

PHIL 3130 Knowledge Problems (4 Credits)
Problems in the foundations and justifications of claims to knowledge. Prerequisite: junior standing or instructor's permission.

PHIL 3146 Great Thinkers: Levinas (4 Credits)
Emmanuel Levinas (1906-1995), famous for his arresting and original idea of "ethics as first philosophy," is an important figure in the histories of phenomenology, metaphysics, and theology. In this course, we set out to explore Levinas' insights on ethics, alterity, and infinity, including the connection of his ideas to Plato, Descartes, Kant, and Husserl, as well as his critical responses to Heidegger and his positive contributions to Derrida. In this course, we work through Levinas' two major works, Ethics and Infinity and Otherwise Than Being or Beyond Essence, as well as a number of shorter writings—including material from his Talmudic commentaries. Themes to be covered include: Being, Goodness, Risk, Ethics, Alterity, Transcendence, Law, Judaism, Gift, Forgiveness, Politics, Theology, and Justice. This course is cross-listed with JUST 3146.

PHIL 3150 Metaphysics of Matter: Theory-Building from Science to Philosophy to Theology (4 Credits)
What is matter? How do we make sense of philosophical discussions of an "X I know not what"? Of a "nothing" which is something? Of a "pure potency" that lacks any actual characteristics? In what sense does matter mark the very limits of human theorizing, and how do theories of matter reveal differences (or similarities) between the methods of theorizing that we use in physics, metaphysics, and theology? In this course, we work to understand the metaphysics and metametaphysics of matter, focusing on a number of views of matter as well as on methodological questions of what it means to theorize about matter in (1) scientific, (2) philosophical, and (3) theological contexts. Drawing on theory ranging from ancient physics and cosmology to contemporary metametaphysics, philosophy of science, and philosophy of language, we engage in close readings of ancient, medieval, and modern texts to challenge the ways we theorize about matter (and theory itself) in the history of philosophy. Requires junior standing or higher.

PHIL 3152 Philosophy Meets Mysticism: A Greek, Jewish and Islamic Neoplatonic Journey (4 Credits)
Neoplatonism is a unique genre—somewhere between philosophy and mysticism. In this course, we investigate some of the leading themes of Neoplatonism, tracing the Greek ideas of Plotinus (the third century "father of Neoplatonism") into later Jewish and Islamic textual traditions. As part of our journey, we will investigate a host of philosophical writings, including the Theology of Aristotle and the Liber de Causis, as well as works by Plato, Plotinus, Proclus, Ibn Tufayl, Acecenna, IsaacIsraeli, Solomon Ibn Gabirol, and Abraham Ibn Ezra. Themes to be covered include emanation and creation, apophatic discourse, divine desire, the theological significance of imagination, inward reflection and the call to virtue. Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3152.

PHIL 3175 Morality and the Law (4 Credits)
A systematic study of various elements of the relation between law and morality. Are we obligated to obey every law the government enacts? Why? If we do have an obligation to obey the law, are civil disobedients like Martin Luther King, Jr. justified in disobeying the law? Are immoral laws, laws at all, or must a law connect with some higher moral truth to have any authority? To what extent is it morally permissible for the law to restrict our personal freedoms? To what extent is it morally permissible for the law to enforce morality in general? If it is not permissible for the law to enforce morality, do we incur any obligation to obey the law? Prerequisite: junior standing or instructor's permission.

PHIL 3176 Advanced Topics in Philosophy of Law: Rights, Legal Institutions, and Justice (4 Credits)
A critical examination of rights claims and an exploration of those rights claims ought to affect legal institutions. What are rights? How are they justified? How do various different rights claims conflict with each other? Does a theory or rights help provide a justified theory of criminalization? Are there any rights we have just in virtue of being human? How does the concept of human rights apply to issues such as international law, the right to life and whether human rights require a right to democracy?

PHIL 3178 Metaethics (4 Credits)
This course systematically and critically examines the metaphysical, semantic, and epistemic issues central to the study of metaethics. Do moral properties exist? If so, how are they related to natural properties? Do moral properties exist independent of human agency; or do we construct morality? If moral properties exist, how can we come to have justified belief about them? Is it possible to know that a moral belief is true? Doesn't the phenomenon of widespread, intractable disagreement about moral matters establish that there are no objective moral truths? Is the process of gaining scientific knowledge really that different from the process of gaining moral knowledge? Prerequisite: junior standing or instructor's permission.

PHIL 3179 Virtue Ethics (4 Credits)
Virtue ethics purportedly provides a distinct approach to moral deliberation, moral reasoning, moral decision-making, and moral justification. This course is a systematic study of the nature of virtue ethics, the nature of a virtue, and the alleged superiority of virtue ethics over its more familiar consequentialist and deontological alternatives. We also study various responses to the following questions: Have moral psychologists generated any valuable studies on the nature of virtue? What virtues ought we to endorse? At least Junior standing required or permission of the instructor.

PHIL 3180 Socratic Ethics (4 Credits)
A study of Plato's early dialogues in order to discern the ethical views of the historical Socrates. Prerequisite: junior standing or instructor's permission.
PHIL 3185 Philosophy of Action and Agency (4 Credits)
Wittgenstein once asked, “What is left over if I subtract the fact that my arm goes up from the fact that I raise my arm?” Understanding the difference between mere happening and an intentional action became central to the philosophical investigation of action and agency in the 20th century. In this course we examine this distinction and why it should matter to us. Our topics include intentional action, the causal theory of action, the metaphysics of action, agent causation, basic action, acting and trying to act, intentions, weakness of will, strength of will, and mental action. Requires junior standing or permission of instructor.

PHIL 3201 Wittgenstein, Quine, & Kripke on Necessity and a Priori Knowledge (4 Credits)
A study of Wittgenstein, Quine, and Kripke on the nature of necessity, a priori knowledge and their relation to understanding philosophy. Prerequisite: junior standing or instructor’s permission.

PHIL 3210 Philosophy of Movement (4 Credits)
Everything is in motion. Yet, philosophers have consistently considered motion to be a derivative or secondary form of being. Why? What are the political and metaphysical consequences of marginalizing motion in the history of philosophy? The aim of this class is to read the history of philosophy with a unique focus on the status of movement and motion from the ancient to contemporary period.

PHIL 3211 Contemporary Pol Philosophy (4 Credits)
This class focuses primarily on the philosophical problems generated by thinking about political authority and justice. We discuss the nature of political authority, justice, rights, equality and the role of property in a modern state.

PHIL 3215 Modern Jewish Philosophy (4 Credits)
Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3215.

PHIL 3445 Cultural Theory and Critique (4 Credits)
This course will provide an overview of the major theories of culture and cultural critique, as well as a consideration of some of the major controversies and recent developments in this field. It will proceed roughly chronologically, beginning with liberal humanist critique and continuing with hermeneutics, materialist and Marxist critique, psychoanalysis, the Frankfurt School, structuralism, post-structuralism, and contemporary British cultural studies. It will also consider more recent developments, such as feminist critique, GLBT critique, and postcolonialism. While the approach will be mainly philosophical, implications for other areas such as literature, art, emergent media, religion, and politics will also figure in the discussions, so it is appropriate for students in many fields, not just philosophy. Prerequisite: Junior standing or permission of the instructor. Note that this course will serve as a foundational offering for students interested in participating in the Critical Theory specialization.

PHIL 3450 Phenomenology and Theology (4 Credits)
Cross listed with RLGS 3455. Prerequisite: junior standing or instructor’s permission.

PHIL 3455 Philosophy and 9/11: Sovereignty in Traumatic Times (4 Credits)
Philosopher’s responses to the attacks on 9/11/2001, leading into philosophical study of the connections between trauma and modern assertions of political sovereignty. Prerequisite: junior standing or instructor’s permission.

PHIL 3460 Nietzsche & the Death of God (4 Credits)
This course involves an intensive reading and discussion of Friedrich Nietzsche's 'Thus Spake Zarathustra,' together with relevant associated materials, especially 'The Gay Science.' Prerequisite: junior standing or instructor’s permission. Cross listed with RLGS 3460.

PHIL 3465 Derrida and Postmodernism (4 Credits)
Cross listed with RLGS 3465. Prerequisite: junior standing or instructor’s permission.

PHIL 3466 Contemporary Continental Philosophy (4 Credits)
A critical study of current trends in European philosophy, focusing on such thinkers as Deleuze, Badiou, Zizek, Meillassoux, or Laruelle. Prerequisite: junior standing or instructor’s permission.

PHIL 3610 Advanced Topics in Philosophy, Psychology, and Cognitive Science (4 Credits)
This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, psychology, and cognitive science. More specifically, our main goal is to engage in a critical discussion of how the study of the mind requires an interdisciplinary approach that integrates empirical findings with conceptual and philosophical theorizing. Cross listed with PSYC 3610. Prerequisites: PSYC 1001 and junior standing (or instructor approval).

PHIL 3618 Philosophy of Biology (4 Credits)
A survey of conceptual issues that lie at the intersection of biology and philosophy: the central concepts of evolutionary theory (such as natural selection, fitness, adaptation and function), the relation of biology to other "lower" sciences (can it be reduced to physics and chemistry?), whether there are genuine scientific laws in biology, and the relation between biology and other fields like cognitive science and ethics. At least Junior standing required.
PHIL 3620 Philosophical Perspectives on Economics and Social Sciences (4 Credits)
This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

PHIL 3699 Proseminar in Philosophy (4 Credits)
Philosophy is a diverse discipline with various subfields, most of which are becoming increasingly specialized and methodologically autonomous. Specialization is often (rightly) perceived as an indicator of disciplinary progress and intellectual development. However, it is important that students of philosophy pursue breadth as well as depth. The goal of this course is to provide an overview of a series of seminal texts in philosophy, from a variety of subfields, epochs, and traditions. Each weekly meeting is devoted to the presentation, analysis, and discussion of a text that any student of philosophy should read at some point in her or his career. Requires junior standing or instructor’s permission.

PHIL 3700 Topics in Philosophy (1-4 Credits)
Prerequisite: junior standing or instructor’s permission.

PHIL 3701 Topics in Philosophy (1-4 Credits)
Prerequisite: junior standing or instructor’s permission.

PHIL 3702 Topics in Philosophy (1-4 Credits)
Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

PHIL 3703 Topics in Philosophy (1-4 Credits)
Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

PHIL 3704 Topics in Philosophy (1-4 Credits)
Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

PHIL 3991 Independent Study (1-8 Credits)

PHIL 3992 Directed Study (1-10 Credits)

PHIL 4991 Independent Study (1-10 Credits)

PHIL 4992 Directed Study (1-10 Credits)

PHIL 4995 Independent Research (1-10 Credits)

PHIL 5300 Philosophy Colloquium (4 Credits)

PHIL 5400 Cultural Theory Colloquium (1-5 Credits)

Psychology
Office: Frontier Hall
Mail Code: 2155 S. Race St., Denver, CO 80208
Phone: 303-871-2478
Email:
Web Site: www.du.edu/psychology

The Psychology PhD program in the department of psychology is oriented toward training qualified students to pursue careers in research, teaching and professional practice. Concentrations include: Affect, Social and Cognitive Psychology, Clinical Psychology, and Developmental Psychology. We also offer a specialization in Developmental Cognitive Neuroscience (DCN).

Doctor of Philosophy IN Psychology with a Concentration in Affect, Social and Cognitive
The ASC PhD program will prepare you for research and teaching careers in affective science, social or cognitive psychology. You will work closely with faculty and fellow students in labs using psychophysiological measurement, social cognition paradigms, behavioral measures and neuroscience tools such as fMRI. As a student in the ASC program, you will choose an emphasis: Affect, Social, or Cognitive Psychology. Depending on your emphasis area, there are slight variations in how requirements are completed.
Doctor of Philosophy in Psychology with a Concentration in Clinical Psychology

The graduate program in Clinical Psychology focuses on the etiology, treatment and prevention of child psychopathology.

Doctor of Philosophy in Psychology with a Concentration in Developmental Psychology

The graduate program in Developmental Psychology focuses on human developmental processes—including biological, cultural, social and psychophysiological factors.

Developmental Cognitive Neuroscience

The specialization in Developmental Cognitive Neuroscience is open to students in any of the graduate programs in Psychology. It is designed to equip students with advanced knowledge and training in an interdisciplinary approach to neuroscience and psychology. The coursework covers diverse fields and research methods including neuroimaging, computational modeling, eye-tracking, psychophysiology, neuropsychology, neuroendocrinology, and behavioral genetics. The program prepares students to be leaders in collaborative science approaches.

Doctor of Philosophy in Psychology with a Concentration in Affective, Social & Cognitive Psychology

Degree and GPA Requirements

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

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80 (including a minimum of 26 on the speaking section)
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5 (including a minimum of 8 on the speaking section)
• Minimum CAE Score: 169 (including a minimum of 200 on the speaking section)

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

Doctor of Philosophy in Psychology with a Concentration in Clinical Psychology

Degree and GPA Requirements

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

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80 (including a minimum of 26 on the speaking section)
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5 (including a minimum of 8 on the speaking section)
• Minimum CAE Score: 169 (including a minimum of 200 on the speaking section)

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

Doctor of Philosophy in Psychology with a Concentration in Developmental Psychology

Degree and GPA Requirements

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

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80 (including a minimum of 26 on the speaking section)
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5 (including a minimum of 8 on the speaking section)
• Minimum CAE Score: 169 (including a minimum of 200 on the speaking section)

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

Doctor of Philosophy in Psychology with a Concentration in aFFECT, sOCIAL AND cognitive

Students earn a master’s degree on their way toward obtaining the PhD; however, students are not required to obtain an official master’s degree. All students are required to fulfill the requirements for the master’s degree, regardless of whether or not they apply for graduation for an official master’s degree. Completion of master’s degree requirements is required in order to be advanced to preliminary doctoral candidacy.

Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Master’s degree requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSYC 4920</td>
<td>Ethics-Psych &amp; Rsrch Practice</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Total credits for master’s degree</td>
<td>45</td>
</tr>
</tbody>
</table>

1 PSYC 4290 is required for anyone for whom the Masters degree is a terminal degree. For all others, it is a requirement for the Ph.D.

II. PhD requirements

Statistics Requirements
PSYC 4295  Research Design & Inference  4
PSYC 4300  Correlation and Regression  4
Advanced Stat Course (1 from below):
PSYC 4330  Analysis of Variance  4
PSYC 4350  Structural Equation Modeling for the Social Sciences  4
PSYC 4355  Multilevel Modeling for the Psychological Sciences: Theory and Applications  4

Core coursework requirements
Complete one course from four of the five categories (Cognitive Psychology, Neuroscience, Social/Personality/Emotions, Developmental Psychology, and Clinical Science)
A. Cognitive Psychology
PSYC 4002  Proseminar in Memory and Cognition  4
B. Neuroscience
PSYC 4526  Proseminar in Cog Neuroscience  4
PSYC 4525  Proseminar in Develop Neuropsych  4
PSYC 4262  Affective Neuroscience  4
C. Social/Personality/Emotions
PSYC 4011  Proseminar in Emotion  4
PSYC 4021  Proseminar in Social Psychology  4
PSYC 4020  Proseminar in Personality  4
Note: ASC students must take one core course in affect (Proseminar in Emotion or Proseminar in Affective Neuroscience), one in social (Proseminar in Social Psychology), and one in cognitive psychology (Proseminar in Memory and Cognition or Proseminar in Cognitive Neuroscience), and one additional core course
D. Developmental Psychology
PSYC 4032  Developmental Proseminar: Social-Emotional  4
PSYC 4033  Devel Proseminar: Biological  4
E. Clinical Science
PSYC 4512  Prosem in Psychopathology  4
PSYC 4565  Systems of Psychotherapy  4

Ethics
Complete the following course:
PSYC 4920  Ethics-Psych & Rsrch Practice  2

Tool requirement
8

Specialty Seminars
Students are expected to take at least 2 specialty seminars in their program (or another, pending approval of their advisor) whenever they are offered

Total Credits 120

Minimum number of credits required for the degree: 120

Non-coursework requirements:
- Master’s research paper or thesis and oral defense
- Teaching
- Conceptual Analysis of Dissertation Area (CADA) paper or Comprehensive Exam
- Dissertation Prospectus and Prospectus Meeting
- Dissertation and Oral Defense

Doctor of Philosophy in Psychology with a Concentration in Clinical Psychology

Degree Requirements

Coursework Requirements
Students earn a master’s degree on their way toward obtaining the PhD; however, students are not required to obtain an official master’s degree. All students are required to fulfill the requirements for the master’s degree, regardless of whether or not they apply for graduation for an official master’s degree. Completion of master’s degree requirements is required in order to be advanced to preliminary doctoral candidacy.
### I. Master's degree requirements

The Department requires completion of the master's degree requirements as part of the Ph.D. program. To earn an official master's degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 4920</td>
<td>Ethics-Psych &amp; Rsrch Practice</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total credits for master's degree**: 45

1. **PSYC 4920** is required for anyone for whom the Master's degree is a terminal degree. For all others, it is requirement for the Ph.D.

### II. PhD requirements

#### Statistics Requirement

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSYC 4295</td>
<td>Research Design &amp; Inference</td>
<td>4</td>
</tr>
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<td>PSYC 4300</td>
<td>Correlation and Regression</td>
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</tr>
<tr>
<td>Advanced Stat Course (1 from below):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSYC 4330</td>
<td>Analysis of Variance</td>
<td>4</td>
</tr>
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<td>PSYC 4350</td>
<td>Structural Equation Modeling for the Social Sciences</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4355</td>
<td>Multilevel Modeling for the Psychological Sciences: Theory and Applications</td>
<td>4</td>
</tr>
</tbody>
</table>

#### Core coursework requirements

Complete five cores from each of the categories (Cognitive Psychology, Neuroscience, Social/Personality/Emotions, Developmental Psychology, and Clinical Science)

**A. Cognitive Psychology**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 4002</td>
<td>Prosem in Memory and Cognition</td>
<td>4</td>
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</table>

**B. Neuroscience**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 4526</td>
<td>Prosem in Cog Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4525</td>
<td>Prosem in Develop Neuropsych</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4262</td>
<td>Affective Neuroscience</td>
<td>4</td>
</tr>
</tbody>
</table>

**C. Social/Personality/Emotions**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 4011</td>
<td>Proseminar in Emotion</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4021</td>
<td>Prosem in Social Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4020</td>
<td>Proseminar in Personality</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Clinical Child students must take the PSYC 4021 Proseminar in Social Psychology

**D. Developmental Psychology**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 4032</td>
<td>Developmental Proseminar: Social-Emotional</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4033</td>
<td>Devel Proseminar: Biological</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Clinical Child students must take either PSYC 4032 (Social/Emotional) or PSYC 4033 (Biological Processes)

**E. Clinical Science**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 4512</td>
<td>Prosem in Psychopathology</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4565</td>
<td>Systems of Psychotherapy</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Clinical Students are required to complete both courses.

#### Ethics

Complete the following courses:

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>PSYC 4920</td>
<td>Ethics-Psych &amp; Rsrch Practice</td>
<td>2</td>
</tr>
<tr>
<td>PSYC 4925</td>
<td>Clinical Ethics and Professional Issues in Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Multicultural Competency

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSYC 4571</td>
<td>Multicult Issues &amp; Ment Health</td>
<td>4</td>
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</table>

#### Clinical Assessment

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSYC 4411</td>
<td>Child Assessment-Cognition</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4413</td>
<td>Child Assessment-Personality</td>
<td>4</td>
</tr>
</tbody>
</table>

**Tool requirement**: 8

**Total Credits**: 120
Minimum number of credits required for the degree: 120

Non-coursework Requirements

- Master's research paper or thesis and oral defense
- Dissertation Prospectus and Prospectus Meeting
- Dissertation and Oral Defense
- Profession Wide Competencies
- Technical Standards
- Clinical Training
  - Clinical Practicum
  - Successful Completion of an Externship
  - Successful Completion of an APA approved internship

Doctor of Philosophy in Psychology with a Concentration in Developmental Psychology

Degree Requirements

Coursework Requirements

Students earn a master’s degree on their way toward obtaining the PhD; however, students are not required to obtain an official master’s degree. All students are required to fulfill the requirements for the master’s degree, regardless of whether or not they apply for graduation for an official master’s degree. Completion of master’s degree requirements is required in order to be advanced to preliminary doctoral candidacy.

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<td>The Department requires completion of the master’s degree requirements as part of the Ph.D. program. To earn an official master’s degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.</td>
<td>45</td>
</tr>
<tr>
<td>PSYC 4920</td>
<td>Ethics-Psych &amp; Rsrch Practice ¹</td>
<td>2</td>
</tr>
</tbody>
</table>

¹ PSYC 4920 is required for anyone for whom the Master’s degree is a terminal degree. For all others, it is a requirement for the Ph.D.

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>II. PhD requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistics Requirement</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>PSYC 4330</td>
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<td>PSYC 4355</td>
<td>Multilevel Modeling for the Psychological Sciences: Theory and Applications</td>
<td>4</td>
</tr>
</tbody>
</table>

Core coursework requirements

Complete one course from four of the five categories (Cognitive Psychology, Neuroscience, Social/Personality/Emotions, Developmental Psychology, and Clinical Science)

A. Cognitive Psychology

PSYC 4002 | Prosem in Memory and Cognition | 4       |

B. Neuroscience

PSYC 4526 | Prosem in Cog Neuroscience | 4       |
| PSYC 4525 | Prosem in Develop Neuropsych | 4       |
| PSYC 4262 | Affective Neuroscience | 4       |

C. Social/Personality/Emotions

PSYC 4011 | Proseminar in Emotion | 4       |
<table>
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<tr>
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<tbody>
<tr>
<td>PSYC 4021</td>
<td>Proseminar in Social Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4020</td>
<td>Proseminar in Personality</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4032</td>
<td>Developmental Proseminar: Social-Emotional</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4033</td>
<td>Devel Proseminar: Biological</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Developmental Students are required to complete both courses.

**D. Developmental Psychology**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSYC 4002</td>
<td>Proseminar in Memory and Cognition</td>
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</tr>
<tr>
<td>PSYC 4033</td>
<td>Devel Proseminar: Biological</td>
<td>4</td>
</tr>
<tr>
<td>or PSYC 4031</td>
<td>Developmental Proseminar: Cognition &amp; Perception</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4045</td>
<td>The Developing Brain</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4262</td>
<td>Affective Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4526</td>
<td>Proseminar in Cog Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4660</td>
<td>Perception: A Cognitive Neuroscience Approach</td>
<td>4</td>
</tr>
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</table>

**E. Clinical Science**

<table>
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<tr>
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<tbody>
<tr>
<td>PSYC 4512</td>
<td>Proseminar in Psychopathology</td>
<td>4</td>
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<td>PSYC 4565</td>
<td>Systems of Psychotherapy</td>
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</table>

**Ethics**

Complete the following course:

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</thead>
<tbody>
<tr>
<td>PSYC 4920</td>
<td>Ethics-Psych &amp; Rsrch Practice</td>
<td>2</td>
</tr>
</tbody>
</table>

**Tool requirement**

8 credits

**Total Credits**

120 credits

**Minimum number of credits required for degree: 120**

**Non-coursework Requirements**

- First-Year Project or Paper
- Master’s research paper or thesis and oral defense
- Developmental Comprehensive Exams
- Presentation Requirement
- Dissertation Prospectus and Prospectus Meeting
- Dissertation and Oral Defense

**Specialization: Development Cognitive Neuroscience Requirements**

The following requirements for the DCN program are in addition to the student’s area requirements. The DCN specialization affects how students meet Core and Tool requirements. DCN students in each of the four Areas of the Department have additional Core requirements listed below. It also affects Advanced Clinical requirements for Clinical DCN students and elective requirements for non-clinical DCN Students (see below). The Neuroscience methods courses listed fulfill the student’s Tool Requirement; students are not required to fulfill their area’s Tool requirements.

Any entering student in DCN must demonstrate competency in basic neurobiology (i.e. have taken an undergraduate class in physiological psychology, basic neurobiology, etc.). Otherwise, they need to take Introduction to Neurobiology in the Biology Department.

### Coursework requirements

<table>
<thead>
<tr>
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<tbody>
<tr>
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</tr>
<tr>
<td>PSYC 4033</td>
<td>Devel Proseminar: Biological</td>
<td>4</td>
</tr>
</tbody>
</table>

or PSYC 4031 | Developmental Proseminar: Cognition & Perception |

| PSYC 4045  | The Developing Brain                       | 4       |
| PSYC 4262  | Affective Neuroscience                     | 4       |
| PSYC 4526  | Proseminar in Cog Neuroscience             | 4       |
| PSYC 4660  | Perception: A Cognitive Neuroscience Approach | 4     |

Two of the following tool/method courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 4085</td>
<td>Stress &amp; Health</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4255</td>
<td>Imaging the Mind</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4254</td>
<td>Intro to Neural Network Models</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4360</td>
<td>Programming Psychology: Experiment Building with Matlab</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4365</td>
<td>Programming Psychology: Model-Fitting and Analysis</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4525</td>
<td>Proseminar in Develop Neuropsych</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4688</td>
<td>Clinical Psychopharmacology</td>
<td>4</td>
</tr>
</tbody>
</table>

Genetics (available at IBG at CU Boulder; check with Developmental Cognitive Neuroscience Area Head about how to enroll.)

Build your own tool (Please see DCN Area Head for details)
MASTER OF ARTS IN PSYCHOLOGY WITH A CONCENTRATION IN AFFECT, SOCIAL AND COGNITIVE, CLINICAL PSYCHOLOGY, OR DEVELOPMENTAL PSYCHOLOGY

Degree requirements

Coursework requirements

The MA in Psychology is considered an interim MA for the students enrolled in the PhD in Psychology. To earn an official master’s degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.

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<tr>
<td></td>
<td>Total Credits</td>
<td>45</td>
</tr>
</tbody>
</table>

Minimum number of credits required for the degree: 45

Non-coursework Requirements

- Master’s research paper or thesis and oral defense

Courses

**PSYC 3020 Adolescence (4 Credits)**

Development, behavior, special problems, and characteristics of early and late adolescence. Prerequisites: PSYC 2070 and PSYC 3050, must be major or minor in psychology, must have junior standing.

**PSYC 3029 Imaging the Mind (4 Credits)**

Imaging the Mind is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In class, students will use the smart-to-the-seat classroom. Cross listed with PSYC 4255. Prerequisites: PSYC 2031 and PSYC 3050, must be major or minor in psychology, must have junior standing. Permission of the instructor required.

**PSYC 3032 Introduction to Neural Networks (4 Credits)**

Introduction to basic principles and computational methods in artificial neural network modeling; neural models of cognitive and psychological processes examined and evaluated. Cross listed with PSYC 4254. Prerequisite: PSYC 1001 and PSYC 3050. Must be major or minor in psychology. Must have junior standing. Permission of instructor required.

**PSYC 3035 Seminar: Cognitive Neuroscience (2 Credits)**

This seminar is for students in the cognitive neuroscience specialization, a joint program with Biological Sciences. The goal of the seminar is to provide an opportunity for senior-level cognitive neuroscience majors to apply the knowledge and skills they have acquired in other courses to current cutting-edge topics in the field. Prerequisites: PSYC 2031 and PSYC 3050, must have cognitive neuroscience concentration, must have senior standing.

**PSYC 3150 Senior Honors Research Seminar (1-5 Credits)**

In conjunction with senior research thesis. Prerequisites: PSYC 2750, PSYC 2751 and PSYC 2752.

**PSYC 3151 Senior Honors Research Seminar (1-5 Credits)**

In conjunction with senior research thesis. Prerequisites: PSYC 2750, PSYC 2751 and PSYC 2752.

**PSYC 3152 Senior Honors Research Seminar (1-5 Credits)**

In conjunction with senior research thesis. Prerequisites: PSYC 2750, PSYC 2751 and PSYC 2752.

**PSYC 3350 Cultural Psychology (4 Credits)**

This seminar examines how people's sociocultural context shapes their thoughts, feelings, and behaviors. To approach this question, we read and discuss classic as well as recent theoretical and empirical articles from the field of cultural psychology. Topics include defining culture; dimensions of cultural variation; culture-biology interactions; methodological considerations; cultural influences on cognition, emotion, the self, moral judgment, and health; cultural neuroscience; cultural approaches to race and ethnicity; and mechanisms of cultural influence. Throughout, this course emphasizes sociocultural diversity in psychological processes. Students are encouraged to develop empirically tractable ways of asking and answering questions relating to cultural psychology and to apply concepts of cultural psychology to their own research. Prerequisite: PSYC 2740 and PSYC 3050; must be a major or minor in psychology, must have junior standing.

**PSYC 3440 Gender and Society (4 Credits)**

Prerequisites: PSYC 1001 and PSYC 3050; must be a psychology major or minor, must have at least junior standing.
PSYC 3666 Brain Development & Cognition (4 Credits)
Examines what the brain tells us about development and what development tells us about the brain. Topics include subcortical and cortical developments to the acquisition of language and drawing. Prerequisites: PSYC 2070 and PSYC 3050; must be major or minor in psychology, must have junior standing.

PSYC 3701 Topics in Psychology (1-4 Credits)
Prerequisites: PSYC 1001 and PSYC 3050; must be major or minor in psychology, must have junior standing.

PSYC 3702 Topics in Psychology (4 Credits)
Prerequisites: PSYC 1001 and PSYC 3050; must be major or minor in psychology, must have junior standing.

PSYC 3760 Field Experiences in Psychology (1-2 Credits)
Students meet weekly with professor and complete an unpaid internship at a community organization. Prerequisites: PSYC 2500 or equivalent, 21 years old by October 1, must be major in psychology, must have junior standing. Permission of the instructor required. Corequisite: PSYC 3759.

PSYC 3761 Field Experiences in Psychology (3-5 Credits)
Students meet weekly with professor and complete an unpaid internship at a community organization. This class has a service learning component. Prerequisites: PSYC 2500 or equivalent, PSYC 3759, PSYC 3760, 21 years old by October 1, must be major in psychology, must have junior standing. Permission of the instructor required.

PSYC 3762 Field Experiences in Psychology (1-5 Credits)
Students meet weekly with professor and complete an unpaid internship at a community organization. This class has a service learning component. Prerequisites: PSYC 2500 or equivalent, PSYC 3759, PSYC 3760, PSYC 3761, 21 years old by October 1, must be major in psychology, must have junior standing. Permission of the instructor required.

PSYC 3991 Independent Study (1-10 Credits)
Maximum of 5 hours per quarter not to exceed a total of 10 quarter hours.

PSYC 3992 Directed Study (1-10 Credits)

PSYC 3999 Psychology Senior Assessment (0 Credits)
This course involves a required assessment of graduating psychology majors’ knowledge of the discipline based on coursework taken one quarter prior to graduation. Prerequisites: at least any four of the following courses required for the major: PSYC 1001 or equivalent, PSYC 2300, 3050, PSYC 2500, PSYC 2070, PSYC 2031, PSYC 2740, and at least 163 total credit hours or at least 30 credits of psychology hours.

PSYC 4002 Prosem in Memory and Cognition (4 Credits)
Theory/research on thinking, problem solving, language, creative thought, other aspects of knowing process.

PSYC 4011 Proseminar in Emotion (4 Credits)
Social/physiological aspects of emotions, including motivation, physiological processes, basic emotions, cognitive appraisal, cross-cultural issues, empathy, effects of emotions.

PSYC 4020 Proseminar in Personality (4 Credits)
Personality structure/dynamics, theory and findings, interrelationships between personality and socio-cultural determinants of behavior.

PSYC 4021 Prosem in Social Psychology (4 Credits)
Major theoretical issues and empirical research in social psychology; topics include cultural, social structure, cognitive consistency, social neuroscience, social cognition, person perception, the self, social influence, attitudes, relationships, emotion, coping.

PSYC 4028 Social Cognition (4 Credits)
Social cognition describes how people make sense of themselves and others. The emphasis on "how" is important—social cognition research focuses on perceptual, cognitive, and affective processes that help people think about themselves and others. You will learn about the theories, findings, and methods in a specific area of study.

PSYC 4031 Developmental Proseminar: Cognition & Perception (4 Credits)
Problems/theories in developmental psychology including Piagetian theory, language, emotional, perceptual, personality development, learning, biological bases of behavior, genetic influences.

PSYC 4032 Developmental Proseminar: Social-Emotional (4 Credits)
Problems/theories in developmental psychology including Piagetian theory, language, emotional, perceptual, personality development, learning, biological bases of behavior, genetic influences.

PSYC 4033 Devel Proseminar: Biological (4 Credits)
This course provides an overview of major biological processes during development and their effects on physical, cognitive, and social development. Specific topics will include: history, concepts, and central themes of developmental psychology; theoretical and biological models of human development (e.g., developmental psychobiological systems view); brain development and plasticity; behavioral genetics; sleep and circadian rhythms; sexual differentiation and hormonal influences on behavior; stress and the HPA axis; effects of nutrition and toxic substances.

PSYC 4043 Clinical Approaches: Community (4 Credits)
Community psychology; major theoretical/conceptual issues, assessment/intervention techniques.
PSYC 4045 The Developing Brain (4 Credits)
This course presents an overview of current research and methods in the field of developmental cognitive/affective/social neuroscience. The course examines what the brain tells us about development and what development tells us about the brain. Topics include sensitive periods for neuroplasticity, pediatric neuroimaging methods, attention, language, affective and social development. Cross-listed with course 3045. Prerequisite: Instructor permission.

PSYC 4050 Cultural Psychology (4 Credits)
This seminar examines how people's sociocultural context shapes their thoughts, feelings and behaviors. To approach this question, we read and discuss classic as well as recent, theoretical and empirical articles. Topics include: (1) defining culture; (2) dimensions of cultural variation; (3) culture-biology interactions; (4) methodological considerations; (5) cultural influences on cognition, emotion, the self, moral judgment, and health; (6) cultural neuroscience; (7) cultural approaches to race and ethnicity; and (8) mechanisms of cultural influence. Throughout, this course emphasizes sociocultural diversity in psychological processes. Students are encouraged to develop empirically tractable ways of asking and answering questions relating to cultural psychology and to apply concepts of cultural psychology to their own research.

PSYC 4055 The Neuroscience and Psychology of Parenthood and Parent-Child Relationships (4 Credits)
This course explores the theory, research and issues relevant to parenthood and parent-child relationships. The course overviews the evolutionary, neurobiological, and psychological perspective of parent-child relationships with a focus on the understanding of recent advances in neuroscience research. Topics include neuroplasticity of parental brain, maternal vs. paternal biology for parenting, and social and biological determinants of parent-child relationships. Emphasis is placed on discussion of current research, evaluation of the findings, and proposals and ideas of new research in the field. The goal is not to memorize facts but rather to learn to think like a developmental cognitive/social neuroscientist. Cross-listed with course PSYC 3055. Prerequisite: Instructor permission.

PSYC 4060 History and Systems of Psych (4 Credits)
General nature of scientific progress throughout history as relates to evolution of psychology as scientific/academic discipline; history explored by asking whether prevailing Zeitgeist, the appearance of the "Great Mind," or some combination of both factors was responsible for pivotal changes seen throughout psychology's history.

PSYC 4085 Stress & Health (4 Credits)
This course will serve as an introduction to the field of psychoneuroimmunology, with a focus on stress and development. The first section of the course will review basic immunology including immune system components and functions, and relations between the immune system and other systems. The later portion of the course will focus on effects of stress for different disease mechanisms (infection, allergy, cancer etc).

PSYC 4235 Teaching Psychology (1-5 Credits)
Experiential approach to learning techniques for teaching psychology.

PSYC 4241 Seminar-Discourse Processes (4 Credits)

PSYC 4249 Prosem in Reading and Language (4 Credits)

PSYC 4254 Intro to Neural Network Models (4 Credits)
Cross listed with PSYC 3032.

PSYC 4255 Imaging the Mind (4 Credits)
Imaging Cognition is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In this manner, each student will be exposed individually to the decision issues and interpretation pitfalls involved in fMRI data analysis. In class, students will use the smart-to-the-seat classroom. Cross listed with PSYC 3029.

PSYC 4256 Seminar:Cognitive Neuroscience (4 Credits)
Neural systems underlying human perception, memory, language, pathological syndromes that result from damage to these systems.

PSYC 4257 Psychophys & Neuroscience Lab (4 Credits)

PSYC 4258 Social Neuroscience (4 Credits)

PSYC 4260 Psychophysiology (4 Credits)
This course will serve as an introduction to the field of psychophysiology, with a focus on autonomic psychophysiology (e.g., measures of the electrodermal and the cardiovascular system). Such measures uniquely allow researchers to answer questions about mind-body interactions, emotions, cognition, and health, among others. The first section of the course will review theory of psychophysiology and relevant physiological systems as well as introduce students to the basics of psychophysiological measurement. The second section of the course will be hands-on, allowing students either to write a study proposal involving psychophysiological measurement or to use the psychophysiology lab to design and execute their own study using physiological measures.
PSYC 4262 Affective Neuroscience (4 Credits)
Affective neuroscience is the study of emotions in the brain. In this course, we explore how new frontiers in emotion research, from brain scans to psychoactive drugs to monkey colonies, have changed the way we think about emotions and moods. We aim to learn how scientists ask these new questions: how and what can we learn about emotion from animal models, patient studies, genetic studies, brain scans, and drugs? We learn and debate different theories about what emotions are: when are emotions helpful and harmful? Why do we have them? How many are there? Can we control how we feel? Finally, we learn how to think about emotions scientifically. What kind of evidence matters? How do emotion scholars talk about their work? What kind of questions can we ask, and what kind can we hope to answer?

PSYC 4265 Social Perception and Communication (4 Credits)
The way that people look and communicate evoke immediate and sometimes automatic responses from other people. Accordingly, this course includes topics such as facial structure and function, nonverbal communication, social categorization, behavioral mimicry, and thin-slices.

PSYC 4270 Seminar-Social Cognition (4 Credits)
Theory research in cognitive psychology, including social knowledge structures, categorization of social information, social memory, judgment and inference, cognition-emotion links, effects on social behavior.

PSYC 4295 Research Design & Inference (4 Credits)

PSYC 4300 Correlation and Regression (4 Credits)
The course reviews the logic of statistical inference before introducing the procedures of correlation and regression. We begin with simple bivariate relationships before moving on to multivariate relationships for both categorical and continuous independent variables. Topics in regression include multicollinearity, variable selection, and curvilinear relationships. The course emphasizes the (stringent) requirements needed to be able to interpret correlational data in terms of cause and effect. The course also emphasizes the assessment of interactions in regression analysis for both categorical and continuous independent variables. Also included is basic coverage of logistic regression and regression assumptions. Prerequisite: PSYC 4295.

PSYC 4330 Analysis of Variance (4 Credits)
Complex analysis of variance, other quantitative methodologies. Prerequisite: PSYC 4300 or instructor’s permission.

PSYC 4350 Structural Equation Modeling for the Social Sciences (4 Credits)
This advanced course covers the basics of structural equation modeling and how this flexible approach to statistical analysis can be applied in the social sciences. Specific techniques that will covered will include testing for mediation, path analysis, confirmatory factor analysis, and the analysis of longitudinal data, as well as other related topics. There will be an emphasis on applying these techniques to students’ own research through hands-on demonstrations and homework assignments and an emphasis on interpreting and critiquing structural equation models in published research. A course on correlational methods and regression is a pre/co-requisite.

PSYC 4355 Multilevel Modeling for the Psychological Sciences: Theory and Applications (4 Credits)
This advanced course covers the basics of multilevel (hierarchical) linear modeling and how this flexible approach to statistical analysis can be applied to theory and data in the psychological sciences. Specific techniques that will be covered include the analysis of nested data, family and dyadic data, and longitudinal data as well as mediation and moderation. There will be an emphasis on applying these techniques to students’ own research through hands-on demonstrations and homework assignments. There will also be an emphasis on interpreting and critiquing multilevel modeling analyses in published research. Courses on analysis of variance as well as correlational methods and regression are pre/corequisites.

PSYC 4360 Programming Psychology: Experiment Building with Matlab (4 Credits)
This graduate-level course provides an introduction to computer programming. The goal of the course is to help psychology students develop practical coding skills that will allow them to design and create complex, computer-based experiments. Students will also learn to analyze and plot data in Matlab. No previous experience with programming is required (or expected). The course begins with an introduction to basic principles of programming and the Matlab environment. From there, students learn to code by solving challenges specific to the design/construction of a psychological/vision-based experiment. The class is highly interactive— each class includes a mixture of lecture, group-based problem solving, and coding in teams or alone. This class is highly recommended for students who wish to improve their programming proficiency before enrolling in Psych 4365, although it is not a prerequisite.

PSYC 4365 Programming Psychology: Model-Fitting and Analysis (4 Credits)
An introduction to creating, fitting, and performing statistical inference using computational models with an emphasis on binary choice data. The aims of this course include familiarizing students with the mathematical basis of model-fitting, learning the value of taking a variety of approaches to fitting trial-by-trial data, and giving students practical hands-on experience with maximum likelihood fitting methods. This course will use both MATLAB and R. Though not a prerequisite, this course is intended to follow Programming Psychology: Experiment Building in MATLAB (PSYC 4360), and so will assume students already have a basic knowledge of coding in MATLAB (including debugging, scripts, functions, loops, and plotting). This course is open to graduate students outside of the Department of Psychology.

PSYC 4411 Child Assessment-Cognition (4 Credits)
This course will provide students with a graduate level overview of theory, research, and practice in the measurement of cognitive functioning. Students will gain practical skills in administering standardized measures of cognitive and academic functioning. They will also develop skills in interpreting cognitive test results and recognizing patterns in cognitive profiles related to specific learning and developmental disorders.

PSYC 4413 Child Assessment-Personality (4 Credits)
Overview of evidence-based psychological assessment (emotional, behavioral, and social) of children and adolescents with a focus on integrating theory, research, and clinical practice.
PSYC 4511 Prosem in Psychopathology (4 Credits)
Theories of behavioral/personality disorders on children; survey of clinical/experimental literature.

PSYC 4512 Prosem in Psychopathology (4 Credits)

PSYC 4518 Readings in Family Therapy (4 Credits)
This course will survey major historical and contemporary theories from the field of family therapy. Basic family therapy techniques will be covered, and integrated with other modes of therapy (e.g., individual, marital). In the second half of the course, students will work with families and receive group supervision.

PSYC 4525 Prosem in Develop Neuropsych (4 Credits)
Normal brain development, functional neuroanatomy, clinical conditions that can affect brain functioning in children, adults.

PSYC 4526 Prosem in Cog Neuroscience (4 Credits)
This is a graduate-level introduction to cognitive neuroscience. It covers basic theories of cognition and their neurological support.

PSYC 4540 Adv Topics in Cognitive Devel (4 Credits)
Varying topics; theory/research in cognitive development including Piagetian work. Prerequisite: graduate status or instructor's permission.

PSYC 4545 Memory Dvlpmt:Nature & Nurture (4 Credits)
Theory & research in the field of memory development, with particular emphasis on neurobiological perspectives of memory development. Considers the role of biology (nature), as well as the socio-cultural context (nurture) in which memory develops. Specific topics in memory development will include: early memory development & infantile amnesia, infant visual recognition memory, procedural memory, episodic memory, autobiographical memory, and trauma & memory development. Since the course covers topics in systems level neuroscience (i.e., a class in behavioral or cognitive neuroscience). Classes that fulfill this prerequisite include PSYC 4255, PSYC 4256, PSYC 4257, PSYC 4525 or PSYC 4526 or instructor approval.

PSYC 4565 Systems of Psychotherapy (4 Credits)
The course provides an introduction to evidence-based treatment for children and adolescents. Conceptual and empirical underpinnings of youth therapies are examined. Treatments for three prominent child and adolescent disorders - disruptive behavior problems, depression, and anxiety disorders - are highlighted. Demonstration and practice of specific treatment components is included.

PSYC 4566 Systems of Psychotherapy II (4 Credits)
Conceptual/empirical foundations of interventions for clinical problems, including (but not limited to) parasuicidality, Borderline Personality Disorder, and substance abuse.

PSYC 4571 Multicult Issues & Ment Health (4 Credits)
Theory, research, and practice issues related to the mental health of racial/ethnic minority and other diverse groups.

PSYC 4579 Research Design (4 Credits)

PSYC 4587 Workshop in Marital Therapy (4 Credits)

PSYC 4612 Marital Conflict (1-10 Credits)

PSYC 4620 Advan in Couples Intervention (4 Credits)

PSYC 4625 Marital/Couples Thrpy-Div Popl (4 Credits)
This course will cover the complexities in couples research and intervention that are the focus of current investigations in labs around the world. The major issues revolve around the role that marital problems play in the development, maintenance and treatment of a variety of child and adult problems and vice versa. These will include, adult sexual problems, alcohol and drug use and abuse, anxiety disorders, depression, medical problems, and that marital discord and destructive conflict are generic risk factors for a wide range of child and adult mental health problems and that marital health is a protective factor.

PSYC 4660 Perception: A Cognitive Neuroscience Approach (4 Credits)
An introduction to human perception with a strong emphasis on visual perception. This course evaluates the current understanding of how neural activity in the brain allows people to perceive basic sensory features (e.g., brightness, color, size, position, depth, movement, loudness and pitch) as well as recognize and discriminate complex perceptual patterns (e.g., 2D-shapes, 3D-objects, faces, and scenes). The underlying mechanisms are discussed on the basis of behavioral, neurophysiological, and computational evidence.

PSYC 4688 Clinical Psychopharmacology (4 Credits)
This course offers an in-depth examination of medications used to treat mental disorders, including the neurobiology of these medications. Different options available for each disorder will be discussed, along with issues related to the effective use of psychiatric medications. Prerequisites: Instructor approval required.

PSYC 4920 Ethics-Psych & Rsrch Practice (2 Credits)
Ethical issues on psychological research. Teaching, practice.

PSYC 4925 Clinical Ethics and Professional Issues in Psychology (3 Credits)
Ethical topics related to clinical psychology; professional topics in clinical psychology such as supervision and consultation. Instructor permission required.

PSYC 4930 Psychology Practicum-Clinical (1-5 Credits)
On-the-job training in clinical psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.
PSYC 4931 Psychology Practicum-Teaching (1-5 Credits)
On-the-job training in teaching psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

PSYC 4932 Psychology Practicum-Research (1-5 Credits)
On-the-job training in research psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

PSYC 4934 Practicum: DCN Neuropsychology (1-10 Credits)

PSYC 4992 Directed Study (1-10 Credits)

PSYC 5991 Masters Independent Study (1-10 Credits)

PSYC 5995 Masters Independent Research (1-10 Credits)

PSYC 6981 APA Internship (8 Credits)
1 Year APA approved Internship in clinical psychology - the course is not graded.

PSYC 6991 Ph.D Independent Study (1-10 Credits)

PSYC 6995 Ph.D Independent Research (1-10 Credits)

Religious Studies
Office: Department of Religious Studies, Room 266
Mail Code: 2000 E. Asbury Ave., Denver, CO 80208
Phone: 303-871-2740
Email: rlgs@du.edu
Web Site: du.edu/ahss/religiousstudies/

The Department of Religious Studies offers a master of arts (MA) degree in Religious Studies and, together with the Iliff School of Theology, a doctor of philosophy (PhD) degree, as well as a graduate certificate in Religious Studies.

Why pursue an MA in Religious Studies at the University of Denver?
The Department of Religious Studies offers graduate students the opportunity to study with its distinguished faculty in a program that emphasizes breadth and depth. Religious Studies faculty members are well published and have won several distinguished teaching awards. They have served in leadership roles in national learned societies and have received grants from the National Endowment for the Humanities, the American Council of Learned Societies and the Guggenheim Foundation.

The program provides students with a substantive grounding in the major religious traditions of the world, as well as training in the discipline of religious studies. Through the areas of specialization, it provides students with the opportunity to develop a specific and scholarly expertise in one of the following particular fields of interest: Sacred Texts, Critical Theory and Religion, Religion and International Studies, Philosophy of Religion, Lived Religions, Biblical Studies, Theory of Religion, International and Multicultural Studies, Islamic Studies, and World Religions. Students can use these areas of specializations to deepen their own expertise in a particular area while preparing for thesis work or comprehensive exams.

As part of broader University mandates to support interdisciplinary work and internationalization (study and research abroad), the Department of Religious Studies expects students to embrace multiple disciplinary perspectives. It encourages students to enrich their graduate studies by taking courses in other departments and to work with faculty outside Religious Studies. For example, students in the MA program routinely take graduate-level courses in Anthropology, International Studies, Philosophy and Art History. Similarly, students in the MA program are encouraged to pursue advanced language training in the language(s) of their sub-field as well as modern research languages. Finally, the Department encourages students to study or conduct research abroad, as appropriate, and to seek external support in ways that will enhance their curriculum vitae as well as their scholarly and professional training.

Program advantages include the following:

- The opportunity to develop broad competencies in major religious traditions and the discipline of Religious Studies, while cultivating scholarly expertise in a particular area of specialization.
- Small classes that facilitate professor-student interaction, encouraging faculty mentoring while fostering community and collegiality with other graduate students.
- The opportunity to pursue interdisciplinary training and related interests by taking courses or working one-on-one with faculty in other University of Denver departments.
- Preparation either for doctoral work or for a professional career, with strong support from faculty and the University of Denver's career counselors.
- Opportunities to engage with and conduct research within metropolitan Denver, a culturally and religiously diverse city with a high quality of life.
- Substantial scholarship packages, including tuition credits and opportunities to serve as a research assistant.
What do applicants need in order to qualify for the Religious Studies MA program?

Applicants must have an undergraduate degree from an accredited college, with a minimum grade point average (GPA) of 3.0. Applicants must meet the minimum performance standard set by the Office of Graduate Education for the Graduate Record Examination (GRE) or the Test of English as a Foreign Language (TOEFL). Applicants must have an appropriate background in the study of the humanities. Undergraduate courses in Religious Studies are highly desirable, but all work in related areas will be taken into consideration.

In addition, successful applicants will have the following qualifications:

- Academically qualified for graduate level study
- Prepared to do coursework and conduct research that emphasizes engagement with local and global communities
- Motivated to work collegially with faculty and other students in a community of learning

What can graduates do with a MA in Religious Studies?

The MA degree in religious studies prepares students for PhD work or for teaching and careers in journalism, government, education, and nonprofit organizations in which cross-cultural analytical skills are important. The program provides broad competencies in several religious traditions, while offering students the opportunity to specialize in an area of particular interest.

Joint PhD Program in the Study of Religion

A number of graduates of the Department of Religious Studies' MA program choose to continue their doctoral studies in the Joint PhD program.

The Joint PhD Program, which the Department of Religious Studies offers in partnership with the Iliff School of Theology, is taught by distinguished faculty from the University of Denver and Iliff. The program enrolls students from across the nation and around the world. The facilities and libraries of both institutions are open to all Joint PhD students, offering considerable research and academic resources. Please note that admission to the Joint Doctoral Program is a separate process, distinct from admission to the Department’s MA program. For more details, please visit the joint PhD website at www.du.edu/duiliffjoint/.

Why pursue a Graduate Certificate in Religious Studies at the University of Denver?

The graduate certificate in Religious Studies provides students with an opportunity to acquire graduate-level exposure to the academic study of religion and to several of the world's major religious traditions. This certificate program provides students with the opportunity to do the following:

1. develop an introductory, graduate-level understanding of two major world religious traditions;
2. gain a grasp of pertinent theoretical approaches to the study of religion; and
3. engage major issues in a particular religious tradition or aspect of religion.

For students currently enrolled in graduate programs in fields other than religious studies or the study of religion - such as business, international studies, law or other AHSS disciplines - this certificate will augment the competencies gained in their primary program. For students currently pursuing a career, particularly those in consulting, journalism, the law, the non-profit sector, public policy, education, human resources, faith-based institutions/organizations or other professions where a knowledge of religious beliefs, practices and values can be important, this certificate will enhance their professional credentials or expand their expertise into a new arena.

What do applicants need in order to qualify for the Religious Studies graduate certificate program?

Successful applicants will have the following qualifications:

- Academically qualified for graduate level study
- Prepared to do coursework and conduct research that emphasizes engagement with local and global communities
- Motivated to work with faculty and other students in a community of learning

Why Pursue A graduate Certificate in Religion and International Affairs at the University of Denver

The Graduate Certificate in Religion and International Affairs provides students pursuing MA degrees in the Department of Religious Studies (CAHSS) or the Josef Korbel School of International Studies with the opportunity to enhance their home program of study with specific expertise in the scholarly and professional field of religion and international affairs. This certificate program emphasizes scholarly and practitioner approaches to understanding the intersections between religion and international affairs in the modern world, providing students with an interdisciplinary approach to contemporary case studies as well as theoretical issues.

Master of Arts in Religious Studies

Degree and GPA Requirements

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

Prerequisites:
• Appropriate undergraduate background in relevant arts, humanities or social science disciplines. Generally, some prior coursework in the academic study of religion is expected.

Standardized Test Scores
• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

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

Prerequisites:
• Appropriate undergraduate background in relevant arts, humanities or social science disciplines.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

Certificate in Religion and International Affairs
Interested applicants from the Religious Studies or the Korbel School of International Studies MA programs will submit an application consisting of a 500-word personal statement, a CV, and undergraduate and graduate transcripts to Dr. Andrea Stanton at Andrea.Stanton@du.edu, which will be reviewed by a committee composed equally of Religious Studies and International Studies faculty. Applicants must be enrolled students in good standing in the Department of Religious Studies MA program or the Korbel School of International Studies MA program.
# Master of Arts in Religious Studies

## Degree Requirements

### Coursework Requirements

#### Course requirements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>RLGS 4000</td>
<td>Theory and Methods in the Study of Religion</td>
<td>4</td>
</tr>
<tr>
<td>RLGS 3760</td>
<td>Globalization and Religion: Theory and Methods</td>
<td>4</td>
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Select three of the following:

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<tr>
<td>RLGS 3814</td>
<td>Modern Hinduism</td>
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<tr>
<td>or RLGS 3816</td>
<td>Hinduism Through Texts</td>
<td></td>
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<tr>
<td>RLGS 3820</td>
<td>Buddhism</td>
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<tr>
<td>RLGS 3001</td>
<td>Judaism</td>
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<td>RLGS 3192</td>
<td>Christian Classics</td>
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<td>RLGS 3203</td>
<td>Christianity</td>
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<tr>
<td>RLGS 3500</td>
<td>Islam</td>
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</tbody>
</table>

#### Areas of specialization

Select at least 16 hours in one of the following ten areas of specialization:

**Biblical Studies**

Students must take in addition to the core requirements at least one course in Christianity, Judaism, and Islam plus at least one additional course in either Judaism or Christianity. Students will also be expected to meet minimum competency standards in either Hebrew or Koiné Greek.

<table>
<thead>
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<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>RLGS 3001</td>
<td>Judaism</td>
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<tr>
<td>RLGS 3102</td>
<td>Early Judaism</td>
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<tr>
<td>RLGS 3151</td>
<td>Dead Sea Scrolls</td>
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<tr>
<td>RLGS 3318</td>
<td>Jesus on the Silver Screen</td>
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<td>RLGS 3740</td>
<td>Bodies and Souls</td>
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<tr>
<td>RLGS 3890</td>
<td>Religion and Diaspora</td>
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<tr>
<td>RLGS 3892</td>
<td>Grant Writing as Research and Community Engagement</td>
</tr>
<tr>
<td>RLGS 4100</td>
<td>Hebrew Bible Backgrounds: Seminar in Ancient Israelite Religion</td>
</tr>
<tr>
<td>RLGS 4105</td>
<td>Understanding the Bible: Old Testament</td>
</tr>
<tr>
<td>RLGS 4122</td>
<td>Augustine on Genesis</td>
</tr>
<tr>
<td>RLGS 4130</td>
<td>Prophets of Israel</td>
</tr>
<tr>
<td>RLGS 4191</td>
<td>Early Christian Old Testament Interpretations</td>
</tr>
</tbody>
</table>

**Critical Theory**

Critical theory and religion brings post-World War II theories of religion from a range of disciplines in the social sciences and humanities into conversation with both the original discourses of "critical theory" as developed by the Frankfurt School and the so-called "new critical theory" in its interdisciplinary scope, which focuses on such topics as race, class, gender, ethnicity, and globalization. Students in this area of specialization may choose each year from a prescribed lists of courses both inside and outside the department, including those specifically listed for the university's own "critical theory" curriculum spanning a wide range of fields and departments. At least two courses taken for this area of specialization must have an RLGS prefix.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 3020</td>
<td>Native Religions</td>
</tr>
<tr>
<td>ANTH 3060</td>
<td>Cultural Narratives</td>
</tr>
<tr>
<td>ECON 3040</td>
<td>Marxian Political Economy</td>
</tr>
<tr>
<td>PHIL 3005</td>
<td>Cosmopolitics</td>
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<td>PHIL 3075</td>
<td>Marxism</td>
</tr>
<tr>
<td>PHIL 3210</td>
<td>Philosophy of Movement</td>
</tr>
<tr>
<td>PHIL 3466</td>
<td>Contemporary Continental Philosophy</td>
</tr>
<tr>
<td>RLGS 3302</td>
<td>Islamic Fundamentalism</td>
</tr>
<tr>
<td>RLGS 3315</td>
<td>Religion &amp; Moral Psychology</td>
</tr>
<tr>
<td>RLGS 3318</td>
<td>Jesus on the Silver Screen</td>
</tr>
<tr>
<td>RLGS 3350</td>
<td>Culture, Psyche, and Religion</td>
</tr>
<tr>
<td>RLGS 3370</td>
<td>Freud, Psychology, &amp; Religion</td>
</tr>
</tbody>
</table>
Sacred Texts

The Department of Religious Studies has faculty strength and research resources to support advanced study of sacred texts. Students who choose this concentration may focus on texts of one religious tradition, (e.g., Hebrew Bible, the Christian testament, the Qur'an, etc.) or may opt for a comparative approach. Students must acquire appropriate competency in the relevant language(s), minimally the equivalent of one full year of study, prior to matriculation or independently during the first year in the Program. The University does not offer introductory, graduate-level instruction in biblical Hebrew, koine Greek, Arabic, Sanskrit, Pāli, classical Chinese or Tibetan. Introductory language courses cannot be approved for credit to fulfill degree requirements.

RLGS 3150 The Bible & Dead Sea Scrolls
RLGS 3151 Dead Sea Scrolls
RLGS 3192 Christian Classics
RLGS 3318 Jesus on the Silver Screen
RLGS 3503 Quran and Hadith
RLGS 3740 Bodies and Souls
RLGS 3816 Hinduism Through Texts
RLGS 4105 Understanding the Bible: Old Testament
RLGS 4122 Augustine on Genesis
RLGS 4150 Biblical Aramaic
RLGS 4191 Early Christian Old Testament Interpretations
RLGS 5110 Hebrew Bible Seminar I
RLGS 5111 Hebrew Bible Seminar II
RLGS 5112 Hebrew Bible Seminar III
RLGS 5113 New Testament Seminar I
RLGS 5114 New Testament Seminar II
RLGS 5115 New Testament Seminar III

Religion and International Studies

The specialization in religion and international studies focuses on the role of religion in the interplay of different religions and cultures within a global context. Particular attention may be given to certain regions such as the Americas, Asia, or the Middle East, depending on the interest or availability of faculty. Students must take at least one course in a specific religious tradition beyond the core requirements as well as one course in the theory of religion that pertains to international and multicultural studies. The remaining courses can be chosen from the department’s approved list of courses for the area of specialization. Finally, students must take at least 4 hours of course work (including independent study, service learning, or field work) at a location outside the United States and Canada that meet the student's curricular and long-term professional goals. Depending on the student’s program of study, the department may in certain instances require the passing of a competency exam in a language relevant to that program of study (e.g., if the focus is on the Middle East, the language would be Arabic; if on Latin America, Spanish).

RLGS 3204 Christianity in the British Isles
RLGS 3300 Psychology of Religion
RLGS 3302 Islamic Fundamentalism
RLGS 3350 Culture, Psyche, and Religion
RLGS 3381 Religion & Psychobiography
RLGS 3452 Political Theology
In addition to the core requirements, students must take at least four courses (within or outside the department) in the historical, social, and cultural forms and practices of the world's various religions, which can also include new, indigenous, or African religions. To satisfy requirements for this area of specialization, a student must have taken, transferred in, or waived at least one course during the program in Judaism, Christianity, Islam, Hinduism, Buddhism, or Latino religious traditions, regardless of whether these courses count for core credit or toward the area of specialization.

Lived Religions

Students must take approved courses in each of the three theoretical areas of the study of religion: philosophy of religion, psychology of religion, anthropology of religion. The remaining course, or courses, can be chosen from the department's approved list of courses for the area of specialization.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLGS 3318</td>
<td>Jesus on the Silver Screen</td>
</tr>
<tr>
<td>RLGS 3350</td>
<td>Culture, Psyche, and Religion</td>
</tr>
<tr>
<td>RLGS 3370</td>
<td>Freud, Psychology, &amp; Religion</td>
</tr>
<tr>
<td>RLGS 3381</td>
<td>Religion &amp; Psychobiography</td>
</tr>
<tr>
<td>RLGS 3400</td>
<td>Philosophy of Religion</td>
</tr>
<tr>
<td>RLGS 3465</td>
<td>Derrida and Postmodernism</td>
</tr>
<tr>
<td>RLGS 3475</td>
<td>Deleuze and Semiotics</td>
</tr>
<tr>
<td>RLGS 3641</td>
<td>Religion and Race in America</td>
</tr>
<tr>
<td>RLGS 3693</td>
<td>Religion and the Media</td>
</tr>
<tr>
<td>RLGS 3707</td>
<td>Religion and Film</td>
</tr>
<tr>
<td>RLGS 3760</td>
<td>Globalization and Religion: Theory and Methods</td>
</tr>
<tr>
<td>RLGS 3813</td>
<td>Ritual</td>
</tr>
<tr>
<td>RLGS 3890</td>
<td>Religion and Diaspora</td>
</tr>
<tr>
<td>RLGS 4501</td>
<td>Intersections of Faith and Media</td>
</tr>
</tbody>
</table>

**International and multicultural studies**

This specialization focuses on the role of religion within the context of the globalization process. Particular attention may be given to certain regions such as the Americas, Europe, or Asia. Students must take at least one course in a specific religious tradition beyond the core requirements as well as one course in the theory of religion that pertains to international and multicultural studies. Finally, students must take at least four hours of course work (including independent study, an internship, service learning, or field work) at a location outside North America that meet the student’s curricular and long-term professional goals. Depending on the program of study, the department may require a competency exam in a relevant language.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLGS 3302</td>
<td>Islamic Fundamentalism</td>
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<tr>
<td>RLGS 3350</td>
<td>Culture, Psyche, and Religion</td>
</tr>
<tr>
<td>RLGS 3381</td>
<td>Religion &amp; Psychobiography</td>
</tr>
<tr>
<td>RLGS 3452</td>
<td>Political Theology</td>
</tr>
<tr>
<td>RLGS 3500</td>
<td>Islam</td>
</tr>
<tr>
<td>RLGS 3501</td>
<td>Pilgrimage in Islam</td>
</tr>
<tr>
<td>RLGS 3502</td>
<td>Contemporary Islam</td>
</tr>
<tr>
<td>RLGS 3570</td>
<td>Religion and Morality in the American Public Square</td>
</tr>
<tr>
<td>RLGS 3601</td>
<td>Religion and Culture in Vienna</td>
</tr>
<tr>
<td>RLGS 3641</td>
<td>Religion and Race in America</td>
</tr>
<tr>
<td>RLGS 3680</td>
<td>American Religious Experience</td>
</tr>
<tr>
<td>RLGS 3693</td>
<td>Religion and the Media</td>
</tr>
<tr>
<td>RLGS 3707</td>
<td>Religion and Film</td>
</tr>
<tr>
<td>RLGS 3760</td>
<td>Globalization and Religion: Theory and Methods</td>
</tr>
<tr>
<td>RLGS 3813</td>
<td>Ritual</td>
</tr>
<tr>
<td>RLGS 3814</td>
<td>Modern Hinduism</td>
</tr>
<tr>
<td>RLGS 3890</td>
<td>Religion and Diaspora</td>
</tr>
<tr>
<td>RLGS 3892</td>
<td>Grant Writing as Research and Community Engagement</td>
</tr>
<tr>
<td>RLGS 4501</td>
<td>Intersections of Faith and Media</td>
</tr>
<tr>
<td>RLGS 4676</td>
<td>Latino Religious Cultures: Methods and Theories</td>
</tr>
</tbody>
</table>

**Philosophy of religion**

Students must take at least two courses in the theory of religion plus one course in a specific philosopher, or philosophers, from each of the two historical periods: ancient and modern (Plato to Kant), late modern and postmodern (Hegel to the present). The remaining courses can be chosen from the department’s approved list of courses for this area of specialization, and will likely involve additional courses taken in the Philosophy Department.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>RLGS 3023</td>
<td>Great Thinkers: Maimonides</td>
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<tr>
<td>RLGS 3192</td>
<td>Christian Classics</td>
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<tr>
<td>RLGS 3350</td>
<td>Culture, Psyche, and Religion</td>
</tr>
<tr>
<td>RLGS 3370</td>
<td>Freud, Psychology, &amp; Religion</td>
</tr>
<tr>
<td>RLGS 3400</td>
<td>Philosophy of Religion</td>
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<tr>
<td>RLGS 3452</td>
<td>Political Theology</td>
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<tr>
<td>RLGS 3455</td>
<td>Phenomenology and Theology: Husserl to Marion</td>
</tr>
<tr>
<td>Course</td>
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</tr>
<tr>
<td>RLGS 3460</td>
<td>Nietzsche &amp; The Death of God</td>
</tr>
<tr>
<td>RLGS 3465</td>
<td>Derrida and Postmodernism</td>
</tr>
<tr>
<td>RLGS 3475</td>
<td>Deleuze and Semiotics</td>
</tr>
<tr>
<td>RLGS 3693</td>
<td>Religion and the Media</td>
</tr>
<tr>
<td>RLGS 4402</td>
<td>Plato: Postmodern Perspective</td>
</tr>
<tr>
<td>RLGS 4501</td>
<td>Intersections of Faith and Media</td>
</tr>
</tbody>
</table>

**Islamic studies**

This specialization introduces students to the textual foundations of Islamic theology and legal reasoning, as well as exposing them to major issues in the development of Islamic traditions, contemporary developments, and particularly questions of reform and fundamentalism. In addition to RLGS 3500, students must take a minimum of three additional courses dealing with Islam. Students must pass a competency examination in Arabic, equivalent to two years of coursework.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLGS 3302</td>
<td>Islamic Fundamentalism</td>
</tr>
<tr>
<td>RLGS 3500</td>
<td>Islam</td>
</tr>
<tr>
<td>RLGS 3501</td>
<td>Pilgrimage in Islam</td>
</tr>
<tr>
<td>RLGS 3502</td>
<td>Contemporary Islam</td>
</tr>
<tr>
<td>RLGS 3503</td>
<td>Quran and Hadith</td>
</tr>
</tbody>
</table>

**World religions**

This specialization focuses on the major world religious traditions, as well as enabling students to look comparatively at these traditions. In addition to the core requirements, students must take at least four courses in the world’s major religious traditions.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLGS 3001</td>
<td>Judaism</td>
</tr>
<tr>
<td>RLGS 3102</td>
<td>Early Judaism</td>
</tr>
<tr>
<td>RLGS 3203</td>
<td>Christianity</td>
</tr>
<tr>
<td>RLGS 3204</td>
<td>Christianity in the British Isles</td>
</tr>
<tr>
<td>RLGS 3475</td>
<td>Deleuze and Semiotics</td>
</tr>
<tr>
<td>RLGS 3500</td>
<td>Islam</td>
</tr>
<tr>
<td>RLGS 3501</td>
<td>Pilgrimage in Islam</td>
</tr>
<tr>
<td>RLGS 3502</td>
<td>Contemporary Islam</td>
</tr>
<tr>
<td>RLGS 3503</td>
<td>Quran and Hadith</td>
</tr>
<tr>
<td>RLGS 3680</td>
<td>American Religious Experience</td>
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<tr>
<td>RLGS 3740</td>
<td>Bodies and Souls</td>
</tr>
<tr>
<td>RLGS 3813</td>
<td>Ritual</td>
</tr>
<tr>
<td>RLGS 3814</td>
<td>Modern Hinduism</td>
</tr>
<tr>
<td>RLGS 3816</td>
<td>Hinduism Through Texts</td>
</tr>
<tr>
<td>RLGS 3820</td>
<td>Buddhism</td>
</tr>
<tr>
<td>RLGS 4676</td>
<td>Latino Religious Cultures: Methods and Theories</td>
</tr>
</tbody>
</table>

**Elective Credits**  13

**Total Credits**  49

**Minimum number of credits required for the degree: 45**

Beginning Fall 2016, regardless of their area of specialization, all MA students are required prior to completing the degree to take at least 4 hours outside the department. The course cannot be independent or directed study. Students admitted prior to Fall 2016 do not need to meet this requirement.

Students must declare an area of specialization after completing 32 hours of course work.

**Non-Coursework Requirements**

In order to complete the MA degree, students must revise a research paper into a journal article, write a thesis, pass a set of comprehensive examinations, or complete a substantive research project.

- **Journal Article Track**: To be eligible for the journal article, students must have a 3.5 GPA; to be eligible for the thesis option, students must have a minimum 3.3 GPA. Students pursuing the journal article option will research religious studies journals and select an appropriate target journal with their advisor’s approval. They will expand a course research paper into an article appropriate for the selected journal.

- **Thesis Track**: Students pursuing the thesis option will expand a course research paper into a graduate thesis of 50-60 pages. Both the article and the thesis should allow students to make an original contribution to the field of religious studies, as well as to demonstrate a mastery of relevant theories and background literature.

- **Comprehensive Exam Track**: The comprehensive examination will consist of three written exams over two successive days. Exam questions will deal respectively with two of the five major religious traditions (one drawn from Judaism, Christianity or Islam; one drawn from either Buddhism
or Hinduism) and the theory of religion. General bibliographies for the exams, on which the student will be tested, must be worked out with the instructor administering the exam.

- **Project Track:** Students pursuing the project option will develop a project that will allow them to make an original contribution to the field of applied religious studies. It may take several forms but should include a substantive written component and a formal presentation.

Please note that all completion option defenses may only be scheduled during the regular academic year: Fall, winter or spring quarters.

The Department of Religious Studies allows graduate students to transfer up to 10 hours of previous graduate course work from another institution or another department at the University during the first quarter of the student's admission to the program. The transfer must be approved by the department as well as by the Office of Graduate Studies. Similarly, the Department allows students to earn waivers for the traditions requirements by submitting syllabi from similar courses taken at the undergraduate level.

Students may also take up to 15 hours in independent study, including independent studies with course numbers outside of the department.

In order for a course to fulfill degree requirements, students must earn a B- or better. The minimum grade for any elective course taken for the degree is a C. In cases where a student's failure to earn at least a B- in a single course necessary to fulfill degree requirements turns out to be the sole reason for their inability to graduate after completing 45 credit hours, the student may petition the department to make an exception in that particular instance. Such an exception will only be granted under one or more of the following circumstances: 1) the student did not receive a grade lower than a C in the course in question 2) the student has already successfully discharged all other degree completion options 3) the student has recorded a cumulative grade point average of 3.0 or higher in all courses counted for the MA degree at the University of Denver.

### Certificate in Religion and International Affairs

**Program Requirements**

**Coursework Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core courses</strong></td>
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</tr>
<tr>
<td>INTS 4525</td>
<td>Relation-State Relations in Comparative Perspectives</td>
<td>8</td>
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<tr>
<td>RLGS 3760</td>
<td>Globalization and Religion: Theory and Methods</td>
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<tr>
<td><strong>Elective courses</strong></td>
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<tr>
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<tr>
<td>INTS 4526</td>
<td>Modern Islamic Political Thought</td>
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<tr>
<td>INTS 4534</td>
<td>Topics in Middle East Politics</td>
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<tr>
<td>INTS 4543</td>
<td>Religion and International Studies: The Apocalyptic Tradition</td>
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<td>RLGS 3302</td>
<td>Islamic Fundamentalism</td>
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<td>RLGS 3452</td>
<td>Political Theology</td>
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<td>RLGS 3641</td>
<td>Religion and Race in America</td>
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<td>RLGS 3693</td>
<td>Religion and the Media</td>
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<td>RLGS 3814</td>
<td>Modern Hinduism</td>
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<tr>
<td>RLGS 3890</td>
<td>Religion and Diaspora</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td>24</td>
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</tbody>
</table>

1 Other elective courses may be approved with permission from the director.

**Minimum number of credits required for degree:** 24

### Certificate in Religious Studies

The Graduate Certificate program allows students structured flexibility, providing exposure to religious traditions through the traditions requirement, training in the discipline of religious studies with the theory requirement, and the opportunity to pursue particular interests through elective courses. The certificate requires a minimum of 24 credit hours.

**Program Requirements**

**Coursework Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>Traditions</strong></td>
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<td>Select two of the following:</td>
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<td>RLGS 3814</td>
<td>Modern Hinduism</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<td>RLGS 3816</td>
<td>Hinduism Through Texts</td>
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<td>RLGS 3820</td>
<td>Buddhism</td>
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<td>Christianity</td>
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<td>RLGS 3500</td>
<td>Islam</td>
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<tr>
<td>Theory</td>
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<tr>
<td>RLGS 3000</td>
<td>Judaism (4 Credits)</td>
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<tr>
<td>RLGS 3002</td>
<td>Creation &amp; Humanity (4 Credits)</td>
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<tr>
<td>RLGS 3003</td>
<td>The Moses Traditions: Jewish, Christian, and Muslim Traditions about Moses from Past to Present (4 Credits)</td>
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<tr>
<td>RLGS 3023</td>
<td>Great Thinkers: Maimonides (4 Credits)</td>
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<td>RLGS 3024</td>
<td>Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)</td>
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<tr>
<td>Electives</td>
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<tr>
<td>Students choose three courses from RLGS 3000-level courses</td>
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</table>

**Minimum number of credits required for the degree:** 24

**Courses**

**RLGS 3001 Judaism (4 Credits)**

A literary and historical journey through Judaism. This course examines the “Jewish story” from its roots to its modern-day manifestations, focusing on select, classic Jewish texts in their historical contexts. From them, students explore Jewish tradition and practice and actively engage with and in the vivid interpretive imagination of the authors of Judaism throughout the ages. Cross listed with JUST 3001.

**RLGS 3002 Creation & Humanity (4 Credits)**

Why am I here and what is my place in the world? In this class, students engage a wide-variety of answers to this timeless question. We focus on primary texts regarding the creation of the world and humanity’s role within the world from multiple religious traditions, from ancient Near Eastern mythologies to modern spiritualities and film. Themes of the course include humanity’s relation to the divine, nature, and one another; we also discuss issues of inequality and sustainability. Students also learn to perform fruitful cross-cultural comparison.

**RLGS 3003 The Moses Traditions: Jewish, Christian, and Muslim Traditions about Moses from Past to Present (4 Credits)**

The “Abrahamic Traditions” (Judaism, Christianity & Islam) are described as such because each tradition situates its origin in the figure of Abraham, yet there is another foundational figure who looms even larger in all three traditions – Moses. The Moses Traditions traces Jewish, Christian, and Islamic traditions about Moses from the Hebrew Bible through modern America, and in so doing brings into the foreground the religious and inter-religious importance of this beloved figure. Drawing from over 2,500 years of texts and traditions, students come away with a deeper understanding of: 1) how the figure of Moses is shaped and reshaped throughout history and across the globe, 2) how religious traditions portray and redescribe foundational figures to suit the ever-changing needs of their communities, and 3) how to engage a multi-faceted, culturally-embedded, and millennia-long collection of traditions in a way that yields fruitful insight into the inner workings of the religious imagination. This course is cross-listed with JUST 3003.

**RLGS 3023 Great Thinkers: Maimonides (4 Credits)**

Using “The Guide for the Perplexed” as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. “imaginational” approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with PHIL 3023 and JUST 3023. Prerequisite: junior standing or instructor’s permission.

**RLGS 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)**

Using the “Guide for the Perplexed” as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides’ core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is “metaphysics?”; God’s unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God’s ways as well as “negative theology”—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the “separate intellects”; creation vs. eternity vs. emanation; philosophical and religious perspectives on the origins of the universe and implications for “living in the world with/out God.” In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and PHIL 3024. Prerequisite: Junior standing or instructor’s permission.
RLGS 3086 The Emergence of Monotheism (4 Credits)
This course is cross-listed with JUST 3086. Monotheism, the belief in a singular deity, did not arise out of nothing. Rather, the emergence of monotheism was a multi-stage process spanning several millennia and involving numerous religious traditions, primarily Judaism, Christianity, and Islam. This process was marked by internal and external conflict, as individuals and communities struggled to distinguish themselves from their non-monotheistic predecessors and neighbors, while often attempting to convince others to do the same. In this class, we begin with the ancient Near Eastern religious environment in which the idea of monotheism first appeared, then turn our attention to how the movement toward monotheism shapes the texts of the Hebrew Bible, New Testament, and Quran. We also look to archaeological sites and case studies in material culture to fill out our understanding of the lived experiences at play in the emergence of monotheism.

RLGS 3102 Early Judaism (4 Credits)
This course traces the development of Judaism in history and literature from the Babylonian Exile and the end of the biblical period through the origins of Rabbinic Judaism and the completion of the Babylonian Talmud (c. 650 CE). However, special emphasis is placed on Jewish culture in the late Second Temple period (c. 200 BCE to 100 CE) and its impact on the early Christian movement, including Jewish literature from the time of Jesus, lost texts of the Bible, new evidence from the Dead Sea Scrolls, and the few surviving historical sources of the Second Temple Period. In addition, students analyze how the Bible came to be and understand how sacred texts and their interpretations eventually became the new center of both Judaism and Christianity. Cross listed with JUST 3102.

RLGS 3150 The Bible & Dead Sea Scrolls (4 Credits)
This course includes an advanced study of the Dead Sea Scrolls with a particular focus on the Bible as it appears in the Qumran library. We will discuss the variant versions of the Bible, some of which were previously unknown before the discovery of the Scrolls, and how the findings of the Scrolls may question the very idea of “Bible” itself in the context of the late Second Temple Judaism. Further, we will place particular emphasis on studying the way biblical texts were engaged, interpreted and even written by the authors of the Dead Sea Scrolls. In this way, we shall explore the origins of biblical interpretation and how the notion of the Bible came to be. Cross listed with JUST 3150. Prerequisites: One year of Hebrew language or equivalent or by special permission of the instructor.

RLGS 3151 Dead Sea Scrolls (4 Credits)
The Dead Sea Scrolls represent one of the greatest manuscript finds of the twentieth century and have been said to be the most important discovery in biblical archaeology. These scrolls offer a rare window into early Judaism and Christianity and offer us the earliest and most important witnesses to the (Hebrew) Bible. This course covers the Dead Sea Scrolls in their historical, literary and religious context in English translation, together with relevant scholarly research. Cross listed with JUST 3151.

RLGS 3192 Christian Classics (4 Credits)
Reading and discussion of influential historic books pertaining to Christian life and devotion.

RLGS 3203 Christianity (4 Credits)
This is an introductory course about the Christian religion, with a substantial component devoted to experiential learning. The primary goal of the course is to acquaint students with the richness, dynamism and diversity of one of the world’s largest and most influential religious traditions. Even those students who have some general knowledge of Christianity benefit from the disciplined approach of the academic study of religion.

RLGS 3204 Christianity in the British Isles (4 Credits)
It is the contention of this course that Christianity in the British Isles constitutes a singular chapter in the history of the religion and must be approached and appreciated as such. The circumstances surrounding Christianity’s introduction to Britain—as documented by the Venerable Bede in his Ecclesiastical History of the English People—presaged a destiny for the English Church that would be “peculiar.” With decidedly Roman sympathies, Bede’s reforming agenda is presented as historical fait accompli. The narrative nevertheless bears witness to the vibrant and resilient character of Celtic spirituality. Although Henry VIII officially brought the Protestant Reformation to England from the Continent in the 1530s when he severed the English Church from the Papacy, the extent to which the Reformation in England was ever as theologically “Protestant” as it was in Europe is open to debate. The Oxford movement—at once reforming and catholicizing—would otherwise seem incongruous were that not the case. Indeed, as we shall see, the notion of semper reformanda ecclesia is, perhaps, most suited to this geographical context. Not surprisingly, playwrights, novelists, and filmmakers have found no little inspiration in Anglican reform’s concomitant turmoil and intrigue.

RLGS 3212 Development of the New Testament: The Evolution and Transmission of Christian Scripture (4 Credits)
Using a variety of critical methods, this course explores the social, political, and religious influences that shaped the New Testament as it was written, copied, edited, canonized, and translated into its current forms. Students will perform a variety of exercises in class to illustrate the complicated process by which the New Testament was formed.

RLGS 3300 Psychology of Religion (4 Credits)
Beliefs, feelings and actions representing human religious response of experience; function of religion in individual life.

RLGS 3302 Islamic Fundamentalism (4 Credits)
This writing-intensive course introduces students to the history and scope of fundamentalist movements in the Muslim world, focusing on the Middle East. Beginning with a look at the internal traditions of renewal and reform built around the idea of a return to the fundament or origins of Islam, the course examines the rise of major movements from the 1700s to the present. Students will engage with key questions, including the following: What distinguishes fundamentalism from radicalism? How do Sunni and Shii fundamentalisms differ? What roles have these movements played in politics and society, and how might these evolve in the future? How might policy makers and others best approach fundamentalist groups? A basic knowledge of Islam is assumed; students wishing to enroll without this background knowledge will be provided supplementary readings.
RLGS 3315 Religion & Moral Psychology (4 Credits)
Philosophical foundations and research strategies of psychological studies of moral thought; Aristotelian, Kantian and utilitarian thought included, as well as religious dimensions of morality.

RLGS 3318 Jesus on the Silver Screen (4 Credits)
First and foremost, this is a course in religious studies. It is a course about Jesus, a religious reformer of late ancient Judaism whose movement, by the end of the first century of the Common Era, gave rise to an identifiably separate tradition. It is a course about New Testament portrayals of Jesus in the Gospels. It is a course about contemporary, historical research on the figure of Jesus. It is also a course about film and cinematography, about reading film critically as a "text," and, in this context, the way in which film "translates" or "transforms" Jesus into another medium. Finally, it is a course about how Jesus films serve to convey modern cultural assumptions.

RLGS 3350 Culture, Psyche, and Religion (4 Credits)

RLGS 3370 Freud, Psychology, & Religion (4 Credits)
Readings, discussion, and papers help students learn about the life, intellectual and social environment, and clinical and theoretical work of Sigmund Freud. Attention is given to the influence of Freud's work on the understanding of religion at the beginning of the 21st century.

RLGS 3381 Religion & Psychobiography (4 Credits)
Use of different psychological theories to understand life and religious experience of individuals known through historical records.

RLGS 3400 Philosophy of Religion (4 Credits)
Inquiries into nature of religion, religious experience, language, methods of thinking.

RLGS 3452 Political Theology (4 Credits)
A general inquiry, focusing on the modern and postmodern eras, into various forms of philosophical reflection on the relationship between religion and political theory. Survey of the seminal ideas of such major thinkers as Kant, Hegel, Schmidt, Strauss, Derrida, Agamben, Asad, and Žižek.

RLGS 3455 Phenomenology and Theology: Husserl to Marion (4 Credits)
The implications of phenomenology for theology and the issue of theology in relation to phenomenology. The course starts with a reading of Husserl and 19th-century efforts to chart a "phenomenology of religion" in the work of Otto. It also explores the ideas of later figures such as Heidegger, Merleau-Ponty, Henry, Nancy, and Marion. Junior standing required or permission of the instructor. Cross listed with PHIL 3450.

RLGS 3460 Nietzsche & the Death of God (4 Credits)
This course will involve an intensive reading and discussion of Friedrich Nietzsche's 'Thus Spake Zarathustra,' together with relevant associated materials, especially 'The Gay Science.' Cross listed with PHIL 3460.

RLGS 3465 Derrida and Postmodernism (4 Credits)
Cross listed with PHIL 3465.

RLGS 3475 Deleuze and Semiotics (4 Credits)
Examines the development of the thought of the famous French postmodern thinker Gilles Deleuze with special attention to his cultural and semiotic theory to the degree that it is relevant to the philosophy of religion. The course also investigates how Deleuze's work has shaped, and is beginning to push in new directions, contemporary postmodern philosophy. Prerequisites: must be at least junior standing and have completed at least two undergraduate courses in philosophy.

RLGS 3500 Islam (4 Credits)
Introduction to the history, faith, practice, culture(s), and politics of Islam, starting with the Judeo-Christian Near Eastern context in which it emerged and tracing its theological development and geographic spread around the world. Proceeding thematically along a broad historical frame, the course ends with an examination of the numerous, often competing, trends in contemporary Muslim communities.

RLGS 3501 Pilgrimage in Islam (4 Credits)
Introduction to the ideas and practices of pilgrimage in Islam, focusing on the hajj as Islam's paradigmatic form of pilgrimage and the one to which all others are compared, but also considering other local or "lesser" pilgrimages, often known as ziyarat or visits. The course excavates the history of the practice of pilgrimage, situating it within the social, political, economic and cultural contexts that have helped frame Muslims' understandings of the spiritual and social meanings of various kinds of pilgrimages at different times and places across the Muslim world. The course includes consideration of the hajj experiences of non-Arab Muslims through documentary and news programs, investigates contemporary re-thinkings of the meaning of "hajj," and reflects on the key geo-political and religio-political issues that may surround Muslim pilgrimage in the 21st century.

RLGS 3502 Contemporary Islam (4 Credits)
This course introduces students to contemporary Islam. After a historical overview, the course looks thematically at different spheres of Muslim life. It considers changes that relate to political systems and forms of governance, styles of education, labor and professional work, changes in daily life habits such as timing and organization, changes in gender relations, and changes in religious authority. It also pays attention to the ways in which faith and practice are articulated through cultural practices like pop music and film.
RLGS 3503 Quran and Hadith (4 Credits)
This writing-intensive course introduces students to the key texts of Islam—the Qur’an and hadith—including their origins and meaning as well as how they have been interpreted by Muslims over time, and focusing as well on case studies that highlight issues of crucial relevance for today and the future.

RLGS 3504 Islam and Gender (4 Credits)
This upper-level course introduces students to key debates, historical developments, and thematic issues in the study of Islam and gender. It grounds this study in theoretical texts but takes a lived religion approach, focusing primarily on the production of “modern” gender norms in the colonial and post-colonial era. It proceeds thematically, with class sessions on sexualities, dress, reproduction, family roles, masculinities, pious self-construction, and the gendering of pilgrimage, and concludes with a look at contemporary and likely future debates.

RLGS 3505 Gender and Politics in Muslim Pop Cultures (4 Credits)
This undergraduate/graduate course introduces students to contemporary Muslim popular cultures, in the United States and around the world. It uses gender and politics as thematic lenses, taking a lived religions approach to phenomena that range from pious television programming to online efforts to spread Islamophobia.

RLGS 3570 Religion and Morality in the American Public Square (4 Credits)
Close focus on one or two moral issues in which religion is drawn into public debate in the contemporary U.S. Observation of the debate first hand at demonstrations, town meetings, and discussion groups, etc. Analysis of these observations is facilitated by readings on the subject and class discussion.

RLGS 3601 Religion and Culture in Vienna (4 Credits)
This course focuses on the cultural, religious and intellectual history of the city of Vienna as the hub of culture for Central Europe during the 19th and 20th centuries with special attention to the arts, philosophy, psychoanalysis, and the critique of Christianity. This course examines how religious past, particularly the influence of Judaism, shaped its rich cultural heritage and the birth of modernism. A special segment of the course is devoted to the Nazi period and the Holocaust, including a study of the resistance of religious groups. The course concludes with a history of the post-Nazi period with attention to the development of Vienna as the center of international diplomacy and theories of globalization. The class combines lectures and online discussions with site visits to major cultural and historical sites as well as research centers around the city. The first week of the course is online.

RLGS 3604 Faith & Ethics-Religion Biography (4 Credits)
Modes of reconciling private (faith) and public (ethics) in thought and careers of selected modern individuals.

RLGS 3641 Religion and Race in America (4 Credits)
Explores the relationship between racism and religious activism by focusing on the biographies of activists.

RLGS 3680 American Religious Experience (4 Credits)

RLGS 3693 Religion and the Media (4 Credits)
Interactions between religion and all forms of communications media in American life.

RLGS 3701 Topics in Religious Studies (1-4 Credits)
An exploration of various topics and issues related to the academic study of religion. The subject matter of the course varies and may be taught by the regular faculty of the department or a visiting scholar. Some offerings may include a travel component.

RLGS 3707 Religion and Film (4 Credits)
Understanding religion requires us to take culture seriously. In doing so, we must consider products of culture, including popular culture. This course engages both classic and more recent films as “texts” to be analyzed, not as mere entertainments or diversions. We focus not only on those films that identify themselves explicitly as “religious” or reflect a particular religious tradition, but also moved that render the subject more obliquely, which reveal – via image and sound – religion as a complex human activity.

RLGS 3740 Bodies and Souls (4 Credits)
This course examines the unique place of the body in biblical religion. We ask how the Bible and its interpreters have shaped current views on sex and the gendered body in Western society. How has the Bible been (mis)used in relation to current understandings of the physical body? Is the saying that a “human” does not have a body, but is a body as true for the Hebrew Bible as the Christian New Testament? How have Judaism and Christianity (de)valued sexuality, procreation, and celibacy? How do the biblical traditions shape our modern opinions about the ideal physical body and body modifications? How can we understand “out-of-body” experiences and notions of death and afterlife in Western religion? Students are encouraged to interpret the Bible and their own beliefs from a uniquely embodied perspective. Cross listed with GWST 3740, JUST 3740.

RLGS 3760 Globalization and Religion: Theory and Methods (4 Credits)
This course explores how religious movements around the world both affect, and are affected by, the process of globalization. A major segment of the course is devoted to various theories of globalization and how they account for the increasingly important role of religion. Focus is largely on the relationship between Christianity, Judaism, and Islam.

RLGS 3813 Ritual (4 Credits)
Classical and contemporary theories about the meaning, functions, and processes of ritual, and its relationship to "religion.

RLGS 3814 Modern Hinduism (4 Credits)
Doctrines, practices and history of South Asian Hinduism; conceptions of Gods and gods; image worship and temples; and the influences of caste and gender on the experience of Hinduism. Cross listed with RLGS 3814.
RLGS 3816 Hinduism Through Texts (4 Credits)
History of ancient and medieval Hinduism, viewed through the lens of religious texts. Cross listed with ASIA 2706.

RLGS 3820 Buddhism (4 Credits)
Buddhist life and thought from origins to present in India, Tibet, Japan and China. Cross listed with ASIA 2704.

RLGS 3830 Buddhist Lives (4 Credits)
This course explores the literary canon of Buddhist life stories across time, traditions and cultures. Cross-listed with ASIA 3830.

RLGS 3832 Religious Lives: The Dalai Lamas (4 Credits)
This course explores the many lives of the Dalai Lamas and the transformation of a reincarnated religious teacher into the political leader of Tibet and, eventually, a worldwide religious personality. In order to understand that transformation, the course investigates the institution of the Dalai Lamas from historical, doctrinal, and ritual perspectives. We will look at the role of the Dalai Lama as an embodiment of the bodhisattva of compassion at the center of a tapestry of religious ceremony and ritual performances. The course will also consider the religious, ethical, and political thought of several of the most prominent Dalai Lamas, with significant attention given to the writings and work of the current, fourteenth, Dalai Lama. Cross listed with ASIA 3732.

RLGS 3890 Religion and Diaspora (4 Credits)
When forced to leave a homeland, displaced communities frequently turn to religion to maintain identity and adapt to—or resist—new surrounding culture(s). This course examines the role of religion and identity in three Jewish and Christian communities living in diaspora and poses questions such as the following: What is the relationship between religion and (home)land? How have the biblical themes of exodus, diaspora, promise and restoration been applied to contemporary experiences? And how have our American stories been interpreted through the lens of the Bible? As part of the service learning component, students have the opportunity to work with religious and immigrant aid organizations in the Denver community. Cross listed with JUST 3890.

RLGS 3891 Justice: A Biblical Perspective (4 Credits)
This is a service learning course designed for religious studies undergraduate majors, though non-majors are welcome to enroll. Cross listed with JUST 3891.

RLGS 3892 Grant Writing as Research and Community Engagement (4 Credits)
This service learning / community engagement course introduces student to non-profit work and to scholarship on non-profit activities. It connects students with community partners, continuing the department's commitment to experiential learning and to engagement with living faith communities. Students spend course time discussing scholarly research on grant writing and non-profit grant support and discussing logistical and other issues related to their service learning placements. This course is intended to help provide M.A. students with arenas for future research, including possible thesis topics, while also offering a unique practical opportunity for professional development. Experience in forming a 501(c)3 corporation and writing grant proposals will be an asset for students planning to work in non-profits as well as for those continuing on to doctoral work.

RLGS 3991 Independent Study (1-10 Credits)
RLGS 3992 Directed Study (1-10 Credits)
RLGS 3995 Independent Research (1-10 Credits)

RLGS 4000 Theory and Methods in the Study of Religion (4 Credits)
This course begins with a brief overview of the history of the study of religion in the west, from antiquity to the modern period. When it reaches the modern period, the course shifts to considering "representative" theories of religion, broken down roughly along ideological and/or disciplinary lines.

RLGS 4050 History of Islam (4 Credits)

RLGS 4100 Hebrew Bible Backgrounds: Seminar in Ancient Israelite Religion (4 Credits)
This course is designed to train the student in the method and means of engaging in archeo-historical study of the Hebrew Bible. The content of this course focuses on ancient Israelite religion in Iron Age Palestine, particularly on emergent ideas about God (‘El) and the development and evolution of the priesthood. Cross listed with JUST 4100.

RLGS 4105 Understanding the Bible: Old Testament (4 Credits)

RLGS 4119 Ph.D. Colloquium: Biblical Interpretations (4 Credits)

RLGS 4122 Augustine on Genesis (4 Credits)

RLGS 4130 Prophets of Israel (4 Credits)

RLGS 4150 Biblical Aramaic (4 Credits)
Reading seminar in Biblical Aramaic. This course focuses on the vocabulary, syntax and expression of Aramaic in the Bible as well as in some related post-biblical texts (Targums, Dead Sea Scrolls, etc.).
RLGS 4191 Early Christian Old Testament Interpretations (4 Credits)
RLGS 4402 Plato: Postmodern Perspective (4 Credits)
RLGS 4404 PhD Tutorial (1-10 Credits)

RLGS 4501 Intersections of Faith and Media (4 Credits)
Using Islam and Muslim communities as case studies, this course examines the intersections between faith communities and media in the 20th and 21st centuries, looking at religious approaches to and use of print, radio, recorded voice and music, television, film, and the Internet.

RLGS 4676 Latino Religious Cultures: Methods and Theories (4 Credits)
A survey of the freshest texts, methods, and theories for the study of religiosity among Latinos in the United States.

RLGS 4980 Internship (1-4 Credits)
Designed to provide masters students with valuable experience in non-profit, educational, faith-based, governmental, and related organizations. It helps students translate the knowledge and analytical skills learned in Religious Studies courses into a professional context, while exploring potential career paths and professional opportunities. Students interested in pursuing an internship must meet with the Undergraduate Advisor at the start of the previous quarter to discuss internship goals and identify potential placements. Students meet weekly with a faculty supervisor to monitor their internship experience, and complete the internship by writing a reflective essay. For MA students only.

RLGS 4981 Internship in Religious Community (1-4 Credits)
RLGS 4982 Internship in Religious Community (1-4 Credits)
RLGS 4983 Internship in Religious Community (1-4 Credits)
RLGS 4991 Independent Study (1-10 Credits)
RLGS 4992 Directed Study (1-10 Credits)
RLGS 4995 Independent Research (1-10 Credits)
RLGS 5101 Ph.D. Colloquium: Biblical Interpretations (4 Credits)
RLGS 5110 Hebrew Bible Seminar I (4 Credits)
RLGS 5111 Hebrew Bible Seminar II (4 Credits)
RLGS 5112 Hebrew Bible Seminar III (4 Credits)
RLGS 5113 New Testament Seminar I (4 Credits)
RLGS 5114 New Testament Seminar II (4 Credits)
RLGS 5115 New Testament Seminar III (4 Credits)

RLGS 5301 Colloquium: Religion and Psychological Study (4 Credits)
The course serves two main functions: (1) to gather the students and faculty of the Religion and Psychological Studies concentration of the Joint Ph.D. Program to share research and examine trends in the field and (2) to study a topic of importance to the field, be it historical, contemporary, related to a cognate field, or oriented toward a sub-specialty. Students must be in a doctoral program in order to register.

RLGS 5601 Ph.D. Colloquium: Religion & Social Change (1 Credit)

RLGS 5980 Internship (1-4 Credits)
Designed to provide doctoral students with valuable experience in non-profit, educational, faith-based, governmental, and related organizations. It helps students translate the knowledge and analytical skills learned in Religious Studies courses into a professional context, while exploring potential career paths and professional opportunities. Students interested in pursuing an internship must meet with the Undergraduate Advisor at the start of the previous quarter to discuss internship goals and identify potential placements. Students meet weekly with a faculty supervisor to monitor their internship experience, and complete the internship by writing a reflective essay. For PhD students only.

RLGS 5991 Independent Study (1-10 Credits)
RLGS 5995 Independent Research (1-10 Credits)

School of Art and Art History

Office: Shwayder Art Building
Mail Code: 2121 E. Asbury Ave., Denver, CO 80208
Phone: 303-871-2846 or 800-876-3323
Email: saah-interest@du.edu
Web Site: http://du.edu/art

The School of Art and Art History offers two tracks in our Art History MA degree program: Art History and Art History with a Museum Studies concentration. Our program of about 20 students emphasizes a collegial student-faculty atmosphere. The Art History program offers courses in most areas of world art, with special emphasis on the arts of Europe and the Americas and global contemporary art. In addition to our own Vicki Myhren...
Gallery, our partnerships with the Denver Art Museum and other cultural institutions in Denver provide opportunities for museum internships and exhibition-based courses.

Our graduates are competitive in sought-after positions. Some go on to doctoral studies in the United States or overseas; others hold respected jobs at distinguished art museums or take the road less traveled, entering careers with art-related nonprofit organizations.

At the School of Art and Art History we offer many advantages:

- small classes and personal attention
- in-depth training in Art History and research methods
- an on-site art gallery
- practical museum training
- museum internships in local and national institutions
- a strong alumni network
- vibrant and diverse cultural activities in Denver

**Master of Arts in Art History**

**Degree and GPA Requirements**

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

**Standardized Test Scores**

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842. Scores are considered in relation to the entire application. The stronger the scores, the more competitive the applicant will be. Recommended GRE minimum scores: 153 verbal, 4.0 writing.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

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

**Degree and GPA Requirements**

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

Degree requirements

Coursework requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Core coursework requirements</td>
<td>12</td>
<td></td>
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<tr>
<td>Complete all of the following courses:</td>
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<tr>
<td>ARTH 4301</td>
<td>Seminar in Art History Methods</td>
<td></td>
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<tr>
<td>ARTH 4302</td>
<td>Research Practicum</td>
<td></td>
</tr>
<tr>
<td>ARTH 4995</td>
<td>Master's Research Paper</td>
<td></td>
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<tr>
<td>Art History courses</td>
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<tr>
<td>Complete an additional 32 credits in ARTH courses</td>
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<tr>
<td>Art History seminars</td>
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<tr>
<td>Complete an additional 12 credits in ARTH seminars</td>
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<tr>
<td>Total Credits</td>
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Minimum credits required for degree: 56 credits

Non-coursework requirements:

- Qualifying Examination
- Language Requirement
- Comprehensive Examination
- Master’s Research Paper

Qualifying Examination

A qualifying examination is used by the faculty to determine the newly admitted student’s strengths and weaknesses and to facilitate program planning. The exam is normally taken on the Friday before the first week of classes.

Language Requirement

Demonstration of reading proficiency in one modern foreign language is required for all MA candidates. An exam is offered each quarter by the Department of Languages and Literatures, or the student may take the fourth semester (or sixth quarter) of a college language course and receive a grade of B+ or better to demonstrate reading proficiency. A language should be chosen, in consultation with the graduate adviser, that supports the student’s research interests and career plans, keeping in mind that some PhD programs still require French and German. This requirement must be met before the student advances to candidacy.

Comprehensive Examination

The comprehensive examination is designed to evaluate the student’s retention and synthesis of Art History course work taken at the University of Denver. Students are encouraged to take the test as soon as possible after the final quarter in which they are enrolled in course work. Planning for this examination takes place under supervision of the graduate adviser.

Master’s Research Paper
MA degree students are required to write a research paper of publishable quality. Although work on the master's research paper should not begin prior to completion of the language requirement, students often choose subjects on which they have already conducted some research during prior seminars or lecture classes. Guidelines should be obtained from the School of Art and Art History.

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

**Degree requirements**

**Coursework requirements**

<table>
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<tr>
<td>ARTH 4302</td>
<td>Research Practicum</td>
<td></td>
</tr>
<tr>
<td>ARTH 4651</td>
<td>Museum Methods and Principles (required)</td>
<td></td>
</tr>
<tr>
<td>ARTH 4995</td>
<td>Master's Research Paper</td>
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<tr>
<td></td>
<td><strong>Art History courses</strong></td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Complete an additional 16 credits in ARTH courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Art History seminars</strong></td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Complete an additional 8 credits in ARTH seminar courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Museum Studies courses</strong></td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Complete an additional 16 credits in museum studies courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td>56</td>
</tr>
</tbody>
</table>

**Minimum number of credits required for degree: 56 credits**

**Non-coursework requirements:**

- Qualifying Examination
- Language Requirement
- Comprehensive Examination
- Master’s Research Paper

**Qualifying Examination**

A qualifying examination is used by the faculty to determine the newly admitted student’s strengths and weaknesses and to facilitate program planning. The exam is normally taken on the Friday before the first week of classes.

**Language Requirement**

Demonstration of reading proficiency in one modern foreign language is required for all MA candidates. An exam is offered each quarter by the Department of Languages and Literatures, or the student may take the fourth semester (or sixth quarter) of a college language course and receive a grade of B+ or better to demonstrate reading proficiency. A language should be chosen, in consultation with the graduate adviser, that supports the student’s research interests and career plans, keeping in mind that some PhD programs still require French and German. This requirement must be met before the student advances to candidacy.

**Comprehensive Examination**

The comprehensive examination is designed to evaluate the student's retention and synthesis of Art History course work taken at the University of Denver. Students are encouraged to take the test as soon as possible after the final quarter in which they are enrolled in course work. Planning for this examination takes place under supervision of the graduate adviser.

**Master’s Research Paper**

MA degree students are required to write a research paper of publishable quality. Although work on the master’s research paper should not begin prior to completion of the language requirement, students often choose subjects on which they have already conducted some research during prior seminars or lecture classes. Guidelines should be obtained from the School of Art and Art History.

**Courses**

**ARTH 3656 Curatorial Practicum (4 Credits)**

Students will work in curatorial teams to plan and execute an effective exhibition of contemporary art. This process may include choosing a theme and selecting works of art, researching artists and themes, budgets, scheduling, developing an exhibition checklist, modeling the gallery, visual exhibition design, conservation and collections management factors, shipping, installation, educational outreach to the public, publicity and other issues related to exhibition planning.
AR TH 3661 Learning in Museums (4 Credits)

AR TH 3701 Topics in Art History (1-4 Credits)
Selected themes and topics from the history of art. Content changes and course may be repeated to a maximum of 12 credits.

AR TH 3702 Topics in Contemporary Art (4 Credits)
This course offers an in-depth exploration of contemporary art and critical theory from a cross-disciplinary, global perspective beginning in the 1960s. We couple intensive reading and writing assignments to meetings with guest creatives and thinkers, visits to local art spaces, and roundtable discussions about new research. The particular art historical topic varies from year to year.

AR TH 3812 From New Republic to the Gilded Age: 19th Century American Art (4 Credits)
This is a thematic study of American art and architecture, 1790-1910, including national identity, domesticity, nature, industrialization, death and mourning, westward expansion, Civil War, spirituality, and internationalism. Lectures, discussions and field trips.

AR TH 3813 Arts of the American West (4 Credits)
This class covers a wide range of art objects and styles from the 17th century to the present in the West of the United States, from buffalo robe paintings and baskets to cowboy art and contemporary abstract landscapes. Particular attention is paid to the diversity of art traditions—Native American, Spanish and Mexican, European, Asian and Latin American—as they converge in this geographic space.

AR TH 3815 American Art and Religion (4 Credits)
This class examines sacred art forms, as well as art that documented or commented upon religious experience in the U.S., from the 17th century to the present. Includes fine, decorative, and popular arts as well as architecture, in slide-lecture-discussions and field trips. The diversity of religious experience and spirituality in American art is emphasized.

AR TH 3817 Gothic Art (4 Credits)
This course examines the art of the Late Middle Ages in Europe, from roughly 1140 to 1400. Gothic architecture, sculpture, painting, stained glass and the sumptuous arts (metal, textiles) are examined within their broader social, political and religious contexts. Particular attention is paid to the Gothic Cathedral - that quintessential window into the medieval world—its beliefs, aspirations, social and political realities.

AR TH 3818 Art of Renaissance Europe (4 Credits)
This course provides an examination of the artistic cultures in Europe during the Renaissance (15th and 16th centuries). Depending upon the quarter, this will be a general survey of European art during the Renaissance or a more focused exploration of a sub-period, such as painting in fifteenth-century Italy. Chronological and geographic factors determine the overall theme and structure of the course. Students gain both a sound knowledge of key artistic monuments of the period, as well as a conceptual framework according to which they may organize their knowledge. This class may be repeated for a maximum of 8 credits.

AR TH 3822 Northern Renaissance Art (4 Credits)
This course explores the dramatic developments in the arts (particularly panel painting, manuscript illumination and sculpture) in Northern Europe from around 1350 to 1550. From lavishly decorated Books of Hours and the development of stunningly naturalistic oil paintings on panel in the early 15th century through the development of printing and the rise of self-portraiture, genre and landscape depictions, this class traces the important role played by Dutch, Flemish, German and French artists in the transition from late medieval to early modern artistic forms and practices. The role of art in shaping and expressing religious, civic, political and economic concepts are explored, as well as the rise of the social and intellectual standing of the artist. Among the artists examined include Jan van Eyck, Rogier van der Weyden, Albrecht Dürer, Hieronymus Bosch and Pieter Bruegel the Elder.

AR TH 3823 17th-Century European Art (4 Credits)
This course considers European arts of the 17th century. Depending upon the quarter it may be a general survey of European art during the seventeenth century or a more focused exploration of a sub-period, such as Italian Baroque or the Old Dutch Masters: Rembrandt, Vermeer and Frans Hals. This class may be repeated for a maximum of 8 credits.

AR TH 3832 19th-Century Art (4 Credits)
This course surveys the major art movements in Europe from the late 18th century to the end of the 19th century. Major painters, sculptors, printmakers and architects of the following movements will be presented: Neo-classicism, Romanticism, Academic Painting, Realism, the Pre-Raphaelites, Impressionism, Post-Impressionism, Symbolism and Art Nouveau. Their works will be studied in light of the social, political and cultural milieu in which they appeared. Special attention will be paid to representations of race, class, gender and colonialism.

AR TH 3833 20th-Century Art (4 Credits)
This class studies the development of early 20th-century art in Europe and the U.S., as the center of the avant-garde shifted to America around World War II. The class follows the development of modernism and its theories from 1900 to around 1960. Artists and movements will be considered according to stylistic and theoretical development, and also in relation to social, political and cultural developments of their time.

AR TH 3834 Contemporary Art (4 Credits)
This course surveys the development of contemporary art, focusing primarily on recent decades, but making connections to earlier movements from 1970 to the present. This includes painting, sculpture, performance art, installations and new media art. Students become familiar with various issues of recent art theory and criticism to put these works into a theoretical perspective. In addition to an in-depth look at the broad stylistic movements of the past forty years, this course also examines those figures whose work has come to define the major approaches and concerns for the art of our time.
ARTH 3835 Contemporary Painting: Body, Light, Motion (4 Credits)
As prompt for this course, we will expand on an ambitious, open question posed by Jonathan Harris for the 2001 exhibition Hybrids at the Tate Liverpool: “What is contemporary, international, painting?” What knowledge can be derived from such a traditional medium? How have ever-new technologies affected the image, and how have discourses on the human body influenced the painterly practice? What are the many possibilities for materializing, analyzing, and displaying canvases today? And, in what ways has the globality of networks and connectivity destabilized or rejuvenated painting? The practices and philosophies that formulate hypotheses to such ambitious questions will be investigated from cross-cultural perspectives. Our conversations, which will start with an inquiry into modern and postmodern paintings and theories, will expand into contemporary considerations of religion in art, the relationship between the street and the gallery, the impressions of body politics within the event of painting, the dimensions of space and intersections of technology, as well as the dynamics of the global art scene.

ARTH 3838 Connoisseurship (4 Credits)
In this class the historical roots, theoretical and philosophical underpinnings, and actual practice of connoisseurship are studied using objects from the museum’s collection.

ARTH 3839 Topics in Modern Art (4 Credits)
Selected themes and topics from the 18th century to the present. Topics change, and the course may be repeated to a maximum of 12 credits.

ARTH 3850 Art and the History of Science (4 Credits)
This class explores the connections between art and the history of science, using a broad span of visual material, mainly European art from the Middle Ages to the present. Coverage of the material is thematic, focusing on three major categories: Art and the Natural World; Art and the Human Body; and Art and the Human Mind. We read a wide variety of art historical articles and selected chapters that examine works of art related in the first section to astrology, astronomy and alchemy; botanical, zoological and geological illustration; and color theory, perspective, optics, maps, contemporary earthworks and ecology. In the second section, we explore the evolution of anatomical illustration, as well as mythic, religious and genre images related to medicine, pharmacy and healing as well as works by contemporary artists who are concerned with genetic codes, hybridization and cloning. In the third section, we examine depictions of human temperaments, emotions and madness through the images of selected artists.

ARTH 3862 Mesoamerican Art (4 Credits)
This course is an introduction to the art and archaeology of the native peoples of Mesoamerica in Pre-Columbian times, or from about 2000 BC to AD 1521. Cultures covered include the Olmec, Teotihuacan, Mixtec, Zapotec, Aztec and others. This class presents the cultural sequence of Pre-Columbian Mesoamerica and explores how the various civilizations of Mesoamerica shared aspects of world-view, cosmology and daily life. Students will be able to identify and discuss how these elements manifested in the art and architecture of Mesoamerican cultures. Furthermore, the course investigates issues of shamanism, kingship and power, warfare, and human sacrifice. This class may be used to fulfill the non-Western requirement for majors in the School of Art and Art History.

ARTH 3863 Art of the Maya (4 Credits)
This course is an introduction to the art and archaeology of the Maya from about 300 BC to the present. The Maya are perhaps the most famous of the several cultures comprising what is known as Mesoamerica. A highly advanced culture, they built soaring temples, carved elaborate portraits of their kings and developed a complex writing system including a calendar. The course explores these things with a constant eye to understanding the Maya worldview, cosmology and daily life. By the conclusion of the class, students should be able to read their intricate pictures, discuss the strategies of powerful Maya rulers and understand how Maya art and architecture reflect their concepts of time and the cosmos. This class may be used to fulfill the non-Western requirement for majors in the School of Art and Art History.

ARTH 3864 Buddhism and the Fine Arts (4 Credits)
This survey examines the history, practices, ritual contexts, aesthetics and artistic traditions of Buddhism including architecture, calligraphy, sculpture and painting, in terms of its social and historical context, political and religious functions, as well as issues including artistic production, changing techniques and symbols, and the market/audience. The primary goal is to understand Buddhism as reflected in art and culture.

ARTH 3867 Native American Art (4 Credits)
This course is designed as an introduction to the art and archaeology of the native peoples of North America from the earliest signs of humans in North America to the present. Cultures covered include those from the Southwest, the Northwest, the Southeast Ceremonial Complex, the Plains and contemporary Native American artists. By the conclusion of the class, students will understand the cultural sequence and geographic dispersion of native North America. Students will also understand how the various civilizations of North America shared aspects of world-view, cosmology and daily life, and be able to identify and discuss how these elements manifested in the art and architecture of native North American cultures. This class may be used to fulfill the non-Western requirement for majors in the School of Art and Art History.

ARTH 3868 Art of the Andes (4 Credits)
This course is designed as an introduction to the art and architecture of the native Pre-Columbian peoples of the Andes. Cultures covered include Chavin, Nasca, Wari and the Inca.

ARTH 3871 Women in Art (4 Credits)
This course considers the roles of women in art and explores the impact of race, class and gender on art produced from the Middle Ages to the present with discussions of women artists, women patrons and images of women. Cross listed with GWST 3871.

ARTH 3872 Introduction to Conservation (4 Credits)
This lecture course familiarizes the student with the concepts and challenges of conservation, its role in museums and the care of collections. Specific emphasis is given to the materials, structure, deterioration and preservation of material culture. Field trips to various museums and/or workshops to make appropriate display mounts and storage containers enhance the understanding gained from readings and lectures.
ARTH 3875 History of Collections (4 Credits)
This course traces the history of collections from the Renaissance to the present, addressing the interconnections between artists, patrons, dealers, art markets, provenance, connoisseurship and the historical development of museums and private collections. Each week's readings of journal articles and chapters focus on different types of collections or themes, including royal and imperial collections, cabinets of curiosities, excavating and transporting antiquities, British country estates and the Grand Tour, the establishment of national museums, the relationship between American collectors and dealers, ethnographic objects in Western collections, Nazi looting, restorers and forgers, and artists' collections, to name a few.

ARTH 3910 Art History Travel (4 Credits)
A travel course to selected locations to study major monuments and collections of art and architecture. Location and content change. This class may be repeated for a maximum of 8 credits. Prerequisite: instructor's permission.

ARTH 3991 Independent Study (1-10 Credits)
This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.

ARTH 3992 Directed Study (1-5 Credits)
This class should only be used when a required ARTH course listed in this catalog is not offered in the quarter in which the student must take it. Permission of an instructor and the Director of the School of Art and Art History are required. Permission/registration form is available from the Office of the Registrar.

ARTH 4301 Seminar in Art History Methods (4 Credits)
This seminar considers the history of art history and the development of various methods that art historians use to interpret and understand art. Required of all MA candidates in art history.

ARTH 4302 Research Practicum (4 Credits)
The goal in this course is to learn professional methods and resources for original research in areas of American art where little or no published research exists. Students learn through short exercises in biographical, object-oriented, internet, and archival research; by tackling a 10-week research project of their choice within the topic for the quarter; and by networking with each other to share resources and progress. Required of all MA candidates in art history.

ARTH 4312 Seminar in Precolumbian Art (4 Credits)
Selected topics in Precolumbian Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTH 4313 Seminar in Islamic Art (4 Credits)
Selected topics in Islamic Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTH 4314 Seminar in Medieval Art (4 Credits)
Selected topics in Medieval Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTH 4321 Seminar in Renaissance Art (4 Credits)
Selected topics in Renaissance Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTH 4331 Seminar in 18th Century Art (4 Credits)
Selected topics in 18th century Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTH 4332 Seminar in 19th Century Art (4 Credits)
Selected topics in 19th century Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTH 4333 Seminar in 20th Century Art (4 Credits)
Selected topics in 20th century Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTH 4334 Selected Topics in Contemporary Art: Public Art (4 Credits)
Selected topics in contemporary art. Advanced research papers and presentations. Content changes. May be repeated for a maximum of 8 credits.

ARTH 4336 Seminar in American Art (4 Credits)
Selected topics in American Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTH 4651 Museum Methods and Principles (4 Credits)
This class surveys the major activities, goals, and organization of the art museum within today's world. Students meet with a variety of museum professionals to discuss the changing dynamics within art museums, as well as ethical and practical issues of museum work. The class reads both classic and current literature on museum issues and practice, and participates in research, collection, and exhibition projects. Required of all M.A. art history students pursuing the Museum Studies option.

ARTH 4652 Museum Internship (0-10 Credits)
Arranged internship in student's area of specialization. Students should take ARTH 4651 Museum Methods and Principles first. Prerequisite: instructor's permission.

ARTH 4991 Independent Study (1-10 Credits)
This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.
ARTH 4992 Directed Study (1-5 Credits)
This class should only be used when a required ARTH 4000-level course listed in this catalog is not offered in the quarter in which the student must take it. Permission of an instructor and the Director of the School of Art and Art History are required. Permission/registration form is available from the Office of the Registrar.

ARTH 4995 Master's Research Paper (4 Credits)
Students should see their advisor for guidelines regarding the Master's Research Paper class.

Daniel Felix Ritchie School of Engineering and Computer Science
At the Daniel Felix Ritchie School of Engineering and Computer Science, our mission is to enhance the quality of life for the global society through scientific and technical innovation. Our research programs are always evolving and growing to meet the current and future needs of our world with a focus on two global goals: Develop and Inspire healthy global citizens and Build a smart sustainable world. Our research is focused in six clusters, viz., biomedical devices and technologies; robotics and mechatronics; smart and sustainable cities; cybersecurity and cyberphysical systems; artificial intelligence and data science; and educational research. In addition to our traditional thesis programs, we offer Professional Programs in Cybersecurity, Data Science, and Systems Engineering to help you build the skills employers need and want. Throughout all our programs we prioritize social responsibility, inclusive excellence, and international perspectives as we tailor degrees to the needs and interests of our students.

Computer Science
Office: Department of Computer Science, ECS, Suite 379
Mail Code: 2155 E Wesley Avenue, Denver, CO 80208
Phone: 303-871-2458
Email: info@cs.du.edu
Web Site: Computer Science (http://www.du.edu/rsecs/departments/cs)

Why study Computer Science at the University of Denver?
The Department of Computer Science is based in the University of Denver's Daniel Felix Ritchie School of Engineering and Computer Science. The school reflects two of the University's strongest traditions: academic integrity and a commitment to meeting student needs with dynamic new programs. The Department of Computer Science offers cutting-edge and innovative graduate degree programs:

• MS in Computer Science
• MS in Cybersecurity
• MS in Data Science
• PhD in Computer Science
• Dual degree Undergraduate/Graduate (BS+MS) in Computer Science

We are strong in research and particularly noted in software engineering, information security and privacy, and humane gaming.

Some of our other outstanding advantages include:

• Small classes taught by faculty, not teaching assistants
• Research-active faculty members who publish regularly, land impressive grants and win teaching awards
• An up-to-date curriculum that includes classes in modern software engineering, web technology, multimedia, mobile computing, networks, databases, cyber security and computer game development
• Students who create a peer culture defined by high expectations
• A small yet vital PhD program that enhances the department’s intellectual atmosphere

At the University of Denver, you will find opportunities to research, study leading-edge technology and tools, and gain an integrated knowledge. We emphasize interdisciplinary programs, so you will be ready to meet career challenges around the office or, if you choose, around the world.

In addition, Denver is a first-rate location for internships and jobs, as well as business and government partnerships. The campus is just minutes from the Denver Technological Center — home to many top tech companies — and we enjoy sweeping views of the Rocky Mountains.

Doctor of Philosophy in Computer Science
The department currently has faculty to support PhD students in the following areas:

• Algorithms
• Artificial Intelligence
• Computational Geometry
• Humane Games
• Networks
• Programming Languages
• Robotics
• Security and Privacy
• Software Systems Engineering

Master of Science in Computer Science

The MS program in computer science prepares students for advancement in academic or industrial careers. The program is designed to provide students with a breadth of advanced knowledge in computer science, while permitting them to achieve depth in areas of current interest within the computing field, as well as the emerging technologies that will be gaining importance in the future.

Master of Science in Cybersecurity

The MS program in Cybersecurity prepares students for advancement in academic or industrial careers. Network storage that holds sensitive information – from personal identities to financial records and national secrets – are increasingly vulnerable to malicious attacks. We are witnessing growing concerns and interests in cybersecurity in our globally interconnected society. The increasing dependence of our lives on information technology infrastructures continues to stimulate strong support for this expertise. The program is designed to provide students with a breadth of advanced knowledge in computer science, along with domain knowledge in the field of information security.

Master of Science in Data Science

The MS program in Data Science prepares students for advancement in academic or industrial careers. Data Scientists enable knowledge discovery in almost all of the subfields of science, social science, business, and policy. As businesses and government continue to turn to data-informed decision making, data scientists will become more necessary and influential within society as a whole. This program is designed to provide students with a breadth of advanced knowledge in computer science, along with domain knowledge in the field of information technology, data management and exploration, and machine learning, as well as the emerging technologies that will be gaining importance in the future.

Doctor of Philosophy in Computer Science

Degree and GPA Requirements

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

Prerequisites:

• Prerequisite courses for the PhD include: COMP 1671 Introduction to Computer Science I, COMP 1672 Introduction to Computer Science II, COMP 2673 Introduction to Computer Science III, COMP 2300 Discrete Structures in Computer Science, COMP 2370 Introduction to Computer Science IV

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Competitive applicants typically score 156 or above on the quantitative section of the GRE. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
• This program has minimum GRE score requirements. The minimum quantitative score for the GRE is 152. The minimum written score for the GRE is 2.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Computer Science program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.
Doctor of Philosophy in Computer Science - Lockheed Employees Only

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Computer Science program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Computer Science or Computer Science Systems Engineering

Degree and GPA Requirements

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

Prerequisites:

• Prerequisite courses for the MS include: COMP 1671 Introduction to Computer Science I, COMP 1672 Introduction to Computer Science II, COMP 2673 Introduction to Computer Science III, COMP 2300 Discrete Structures in Computer Science, COMP 2370 Introduction

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Competitive applicants typically score 156 or above on the quantitative section of the GRE. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
• This program has minimum GRE score requirements. The minimum verbal score for the GRE is 146. The minimum quantitative score for the GRE is 156. The minimum written score for the GRE is 3.5.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Computer Science program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.
Master of Science in Computer Science or Computer Science Systems Engineering - Lockheed Employees Only

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Computer Science program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Cybersecurity

Degree and GPA Requirements

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

Prerequisites:

- Applicants must have the prerequisite knowledge equivalent to the following courses below and are required to pass a computer science placement exam prior to matriculation into the graduate program. Students with deficiencies will be eligible to complete the bridge courses prior to matriculation and are required to retake and pass the computer science placement exam prior to matriculation: COMP 1671 Introduction to Computer Science I, COMP 1672 Introduction to Computer Science II, COMP 2673 Introduction to Computer Science III, COMP 2300 Discrete Structures in Computer Science, COMP 2370 Introduction to Algorithms & Data Structures, and COMP 2691 Introduction to Computer Organization (or equivalent). Or students without the prerequisite knowledge may successfully complete the following four bridge courses and are required to pass a computer science placement exam prior to matriculation into the graduate program. Students with deficiencies will be required to demonstrate prerequisite knowledge equivalent to the courses listed above prior to matriculation and are required to retake and pass the computer science placement exam prior to matriculation. The bridge courses are COMP 2001 Bridge Course I: Computer Science Theory Basics, COMP 2002 Bridge Course II: Computer Science Theory Advanced, COMP 2003 Bridge Course III: Computer Science Systems Basics, and COMP 2004 Bridge Course IV: Computer Science Systems Advanced.

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Competitive applicants typically score 156 or above on the quantitative section of the GRE. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
- This program has minimum GRE score requirements. The minimum verbal score for the GRE is 146. The minimum quantitative score for the GRE is 156. The minimum written score for the GRE is 3.5.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Cybersecurity program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Data Science

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

Standardized Test Scores
• The Graduate Record Examination (GRE) is required. Competitive applicants typically score 156 or above on the quantitative section of the GRE. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
• This program has minimum GRE score requirements. The minimum verbal score for the GRE is 146. The minimum quantitative score for the GRE is 156. The minimum written score for the GRE is 3.5.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Data Science program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

DOCTOR OF PHILOSOPHY IN COMPUTER SCIENCE

Degree Requirements
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Three quarters minimum of COMP 4600 : Seminar in Computer Science</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At least 36 credits must be at the 4000-level courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Up to 24 credits may be taken in other relevant disciplines, as approved by the Computer Science Department Graduate Committee.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Courses should be chosen in consultation with, and are subject to the approval of, the student’s advisor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>

Minimum credit hours required: 90 beyond BA or BS degree

Additional degree requirements applicable to PhD students without a master’s degree in Computer Science
• Must complete the requirements of the Master of Science in Computer Science with a thesis at a reasonable pace to remain on pace to complete the PhD in Computer Science on the expected timeline established by the advisor.

Additional Degree Requirements applicable to PhD Students with a 2-year master’s degree in Computer Science or related field
• May take a proficiency test in the four required courses for master's degree (COMP 3351 Programming Languages, COMP 3361 Operating Systems I, COMP 3371 Advanced Data Structures & Algorithms and COMP 3200 Discrete Structures). The test may be offered at a time other than the official final exam time of the term. A grade of B+ (B plus) or better must be obtained in the test.
• If the student chooses not to take the proficiency test, the student must register and attend classes for the four required courses (COMP 3351 Programming Languages, COMP 3361 Operating Systems I, COMP 3371 Advanced Data Structures & Algorithms and COMP 3200 Discrete Structures). A grade of B+ (B plus) or better must be obtained in the courses.
Non-coursework Requirements:
- Written dissertation and oral defense that makes a significant contribution to the research literature in computer sciences
- Tool requirement
- Qualifying examination
- Preliminary examination

Qualifying & Dissertation Examinations

Qualifying Examination
Every PhD student must pass the qualifying exam. It consists of two parts, the breadth requirement and the written and oral exam.

1. Breadth Requirement: To fulfill the breadth requirement the student must take 5 graded courses (20 quarter credits) at the 3000- and 4000-level (not including independent study, internship, or independent research). At most, two may be at the 3000-level. At least three must be at the 4000-level. The course work should cover at least three distinct areas. Five areas should include a sequence of 3000- and 4000-level courses. The GPA in these courses must be at least 3.7/4.0. No course with a grade below a B may be used to fulfill this requirement. Graduate Computer Science courses taken at another university and transferred for credit at DU may be applied to the breadth requirement up to a maximum of 2 courses (8 quarter credits).

2. Written and Oral Exam: Before being admitted to this exam, the student must have fulfilled the breadth requirement. The student selects an area of examination from the list of areas in Table 1. The written part of the exam is a take-home exam. It is a handed out on a Friday and is due the following Tuesday. The oral exam is held the following Friday. The take-home exam consists of a set of research questions, a set of related papers and instructions. The student should prepare a written report of at least 10 but no more than 20 pages with answers to the questions. Study guides or other relevant material to prepare for the exam can be obtained from the chair of the examination committee. The oral portion of the exam is based on a student presentation in which the student explains and defends his/her answers. During the oral exam, questions in other areas of computer science may also be asked.

A failed exam may be retaken once (in the same or another area). Sufficiently prior to the exam date, the department chair will appoint an examination committee of three tenure-track faculty. One of the committee members must be in the area in which the examination will be held. The student's advisor is allowed to be on the committee. The committee creates the take home exam and grades it. After the oral exam, the committee makes a recommendation to the Computer Science faculty on whether the student passes or fails. If the faculty agrees, the committee recommendation stands. If there is a disagreement, the faculty as a whole decides.

Preliminary Examination
Following successful completion of the Qualifying Examination, each student will prepare a dissertation proposal and take the preliminary examination. Passing this examination admits the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student's advisor and should be available to all committee members at least two weeks prior to the examination. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the problem to be solved, motivation for pursuing the research, and evidence to the effect that there is a good likelihood the problem is solvable with reasonable effort.

For full-time students, the preliminary examination must be taken within 5 quarters of passing the qualifying examination. Successful completion of the preliminary examination results in agreement between the student and the committee as to what will constitute successful completion of the dissertation research. The committee may choose to reconvene the examination to allow the student to further research the problem, complete additional course work, or revise the dissertation proposal document.

The examining committee consists of at least three Computer Science faculty members, including the advisor. The preliminary exam is a one hour oral closed exam. If a student passed the preliminary exam, but subsequently switches advisor and hence topic, the preliminary exam must be repeated within one year to ensure capability of the student and feasibility of the project.

Dissertation Defense
After the dissertation has been completed, the student must defend it in a final examination, as specified by the Office of Graduate Studies.

Tool Requirement
It is strongly recommended that students satisfy their tool requirement by demonstrating proficiency in a modern computer typesetting system suitable for writing technical papers that include mathematical equations and graphics. The faculty advisor must approve the specific system used to satisfy this requirement. Other options include reading competency in two languages selected from French, German, and Russian; a series of outside courses in another discipline; or significant laboratory experience involving computer science.
### Master of Science in Computer Science

#### Degree Requirements

**Coursework Requirements**

**Minimum credits required for degree: 48-64**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bridge Courses †</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMP 3001</td>
<td>Bridge Course: Theory Basics</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3002</td>
<td>Bridge Course: Theory Advanced</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3003</td>
<td>Bridge Course: Systems Basics</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3004</td>
<td>Bridge Course: Systems Advance</td>
<td>4</td>
</tr>
</tbody>
</table>

**Required Courses**

16

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 3351</td>
<td>Programming Languages</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3361</td>
<td>Operating Systems I</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3371</td>
<td>Advanced Data Structures &amp; Algorithms</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3200</td>
<td>Discrete Structures</td>
<td>4</td>
</tr>
</tbody>
</table>

**Electives**

20

Students must complete graduate-level electives to satisfy the following requirements.

**4000-level requirement**

3 computer science electives at the 4000-level (other than COMP 499X) are required of which at least one must be a designated "theory" class (see below).

**Theory requirement**

The current pre-approved list of 4000-level "theory" courses includes but is not limited to:

- COMP 4705 Advanced Topics-Programming (Computational Geometry) 4
- COMP 4372 Theory of Algorithms 4

**Advanced programming requirement**

Two electives must include an advanced programming component. These courses must be approved by an advisor. The current pre-approved list includes but is not limited to:

- COMP 3353 Compiler Construction 4
- COMP 3621 Computer Networking 4
- COMP 4621 Computer Networking 4
- COMP 3801 Introduction Computer Graphics 4
- COMP 3705 Topics in Computer Science (Parallel & Distributed Programming) 4
- COMP 4705 Advanced Topics-Programming (Parallel & Distributed Programming) 4

**Seminar attendance requirement**

0

Students must complete three quarters of COMP 4600 - Seminar (0 credits). A passing grade is required for successful completion. In addition, graduate assistants (GTA/GRA) are required to attend all seminars.

**Non-thesis option**

A maximum of 12 quarter hours may be earned in Independent Study (COMP 4991), provided the student can find an advisor for such independent study. No thesis is required. Not eligible for support (GTA, GRA).

12

**Thesis option**

A maximum of 12 credits may be earned for thesis credits (COMP 4995). A thesis of publishable quality, and an oral defense are required. A student receiving any support from the department (GTA, GRA) must complete the degree requirements as per the Thesis option.

12

**Total Credits**

48-64

† Whether a student needs to take these four classes are dependent on placement exam results. The total number of degree credits is reduced by 4 times the number of bridge course exams passed.

### Outside Courses

A maximum of 8 quarter hours may be earned in approved courses outside the COMP designation, including transfer credits from another university. Such credit must be approved in writing by an advisor from the computer science faculty.

Students should follow the rules and regulations stated in the departmental Graduate Student Manual.

### Non-coursework Requirements
• If the thesis option is chosen, a thesis and oral defense are required.

Master of Science in Computer Science Systems Engineering

Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 3361</td>
<td>Operating Systems I</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3381</td>
<td>Software Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3705</td>
<td>Topics in Computer Science</td>
<td>1-4</td>
</tr>
</tbody>
</table>

Application area core (pre-approval required)

The pre-approved application core:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENMT 4100</td>
<td>Systems Engineering</td>
<td>4</td>
</tr>
<tr>
<td>ENMT 4000</td>
<td>Space Systems Design I</td>
<td>4</td>
</tr>
<tr>
<td>or ENMT 4010</td>
<td>Space Systems Design II</td>
<td></td>
</tr>
<tr>
<td>Theory Course (e.g., COMP 3702)</td>
<td>Topics in Database</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3702</td>
<td>Topics in Database</td>
<td></td>
</tr>
</tbody>
</table>

Capstone

2

Independent study

2

Computer science electives

12

Total Credits

45

Minimum credits required for degree: 45

Non-coursework Requirements

• Capstone

MASTER OF SCIENCE IN CYBERSECURITY

Degree Requirements

Coursework Requirements

Minimum credits required for degree: 48-64

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 3001</td>
<td>Bridge Course: Theory Basics</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3002</td>
<td>Bridge Course: Theory Advanced</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3003</td>
<td>Bridge Course: Systems Basics</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3004</td>
<td>Bridge Course: Systems Advance</td>
<td>4</td>
</tr>
</tbody>
</table>

Required Courses

28

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 3731</td>
<td>Computer Forensics</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3361</td>
<td>Operating Systems I</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4621</td>
<td>Computer Networking</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4384</td>
<td>Secure Software Engineering</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4721</td>
<td>Computer Security</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4722</td>
<td>Network Security</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4723</td>
<td>Ethical Hacking</td>
<td>4</td>
</tr>
</tbody>
</table>

Research/Project

12

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 4799</td>
<td>Capstone Project in Cybersecurity</td>
<td>4</td>
</tr>
</tbody>
</table>

In addition, any combination of the following courses can be used to meet the remaining 8 credit hours.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 3904</td>
<td>Internship/Co-Op in Computing</td>
<td>1-8</td>
</tr>
<tr>
<td>COMP 4995</td>
<td>Independent Research</td>
<td>1-8</td>
</tr>
<tr>
<td>COMP 4991</td>
<td>Independent Study</td>
<td>1-8</td>
</tr>
</tbody>
</table>

Electives

8
Students must choose and complete 8 credits of cybersecurity related electives. Elective credits need pre-approval from an advisor.

| Total Credits | 48-64 |

1. Whether a student needs to take these four classes are dependent on placement exam results. The total number of degree credits is reduced by 4 times the number of bridge course exams passed.

**Capstone Project Course**

The Cybersecurity master’s degree is an intensely experiential program. Capstone project coursework will make up the culminating work in the degree. During the student's internship course, a capstone project will be selected and defined, relevant to the internship work. This individualized leaning will be planned with the student's advisor and internship/co-op instructor(s). No thesis is required.

Students should follow the rules and regulations stated in the departmental Graduate Student Manual.

**GTA/GRA Support**

Due to the intensive nature of this program, Cybersecurity students are not eligible for graduate teaching or research support. Consult with Financial Aid at finaid@du.edu or at 303-871-4020 to discuss financial aid options.

**Non-coursework Requirements**

- Capstone

---

### MASTER OF SCIENCE IN DATA SCIENCE

**Degree Requirements**

**Coursework Requirements**

**Minimum credits required for degree: 48-64**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 3005</td>
<td>Data Science Bridge Course 2: Computer Science Programming Basics</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3006</td>
<td>Data Science Bridge: Advanced Python</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3007</td>
<td>Data Science Bridge 3: Data Science Mathematics I</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3008</td>
<td>Data Science Bridge 4: Data Science Mathematics II</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3121</td>
<td>Database Organization &amp; Management I</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4432</td>
<td>Parallel and Distributed Computing</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4433</td>
<td>Data Mining</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4441</td>
<td>Machine Learning</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4442</td>
<td>Introduction to Probability and Statistics for Data Science</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4444</td>
<td>Advanced Probability and Statistics for Data Science</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4581</td>
<td>Algorithms for Data Science</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4447</td>
<td>Data Science Tools 1</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4448</td>
<td>Data Science Tools 2</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4449</td>
<td>Data Science Capstone</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credits**

1. The first four courses, Bridge Courses 1-4, serve to provide a strong foundation for students without computer science backgrounds. All students are expected to have previously taken calculus, although a Bridge Course 4 provides a refresher of the most important concepts. Bridge Course needs are determined by pre-assessment. Based on pre-assessment results, students may test out of one or more bridge courses. The total number of degree credits is 48 credits plus 4 times the number of needed Bridge courses.

**Non-coursework Requirements**

- Capstone
Capstone Project Course
The Data Science master’s degree is an intensely experiential program. Capstone project coursework will make up the culminating work in the degree. During the student’s internship course, a capstone project will be selected and defined, relevant to the internship work. This individualized leaning will be planned with the student’s advisor and internship/co-op instructor(s). No thesis is required.

Students should follow the rules and regulations stated in the departmental Graduate Student Manual.

MASTER OF SCIENCE IN DATA SCIENCE (ONLINE)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 3005</td>
<td>Data Science Bridge Course 2: Computer Science Programming Basics</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3006</td>
<td>Data Science Bridge: Advanced Python</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3007</td>
<td>Data Science Bridge 3: Data Science Mathematics I</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3008</td>
<td>Data Science Bridge 4: Data Science Mathematics II</td>
<td>4</td>
</tr>
<tr>
<td>COMP 3421</td>
<td>Database Organization &amp; Management I</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4333</td>
<td>Parallel and Distributed Computing</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4431</td>
<td>Data Mining</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4432</td>
<td>Machine Learning</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4441</td>
<td>Introduction to Probability and Statistics for Data Science</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4442</td>
<td>Advanced Probability and Statistics for Data Science</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4447</td>
<td>Data Science Tools 1</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4448</td>
<td>Data Science Tools 2</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4449</td>
<td>Data Science Capstone</td>
<td>4</td>
</tr>
<tr>
<td>COMP 4581</td>
<td>Algorithms for Data Science</td>
<td>4</td>
</tr>
</tbody>
</table>

Electives 8 hours.

Total degree 48-64

Non-coursework Requirements
- Capstone

Capstone Project Course
The Data Science master’s degree is an intensely experiential program. Capstone project coursework will make up the culminating work in the degree. During the student’s experiential course, a capstone project will be selected and defined, relevant to the experiential work. This individualized leaning will be planned with the student’s advisor and internship/co-op instructor(s). No thesis is required.

Students should follow the rules and regulations stated in the departmental Graduate Student Manual.

The course COMP 3007 & COMP 3008 is undergoing a title change.

Undergraduate + Graduate BS/MS
The Department of Computer Science at the University of Denver offers a Dual Degree Bachelor of Science and Masters in Computer Science. The BS/MS in Computer Science encompasses the theory and techniques by which information is encoded, stored, communicated, transformed, and analyzed. It is concerned with the theory of algorithms (that is, effective procedures or programs), with the structure of languages for the expression of algorithms, and with the design of algorithms for the solution of practical problems. A central concern is the study of the computer systems (hardware and software) for the automatic execution of these algorithms prepares students for advancement in academic or industrial careers. The program is designed to provide students with a breadth of advanced knowledge in computer science, while permitting them to achieve depth in areas of current interest within the computing field, as well as the emerging technologies that will be gaining importance in the future.

The degree is strongly based in mathematics and, in fact, a student will automatically acquire sufficient credits for a minor in mathematics. One additional minor is required. The second minor may be in any discipline other than mathematics or computer science.

Total Credit Hours: 183 at the undergraduate level (UG) for the Bachelor's degree + 36 at the graduate level (GR) for the master's of science degree

Required courses
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 1671</td>
<td>Introduction to Computer Science I</td>
<td>4</td>
</tr>
<tr>
<td>COMP 1672</td>
<td>Introduction to Computer Science II</td>
<td>4</td>
</tr>
<tr>
<td>COMP 2300</td>
<td>Discrete Structures in Computer Science</td>
<td>1-4</td>
</tr>
</tbody>
</table>
COMP 2355  Intro to Systems Programming  4
COMP 2370  Introduction to Algorithms & Data Structures  4
COMP 2673  Introduction to Computer Science III  4
COMP 2691  Introduction to Computer Organization  4
COMP 3351  Programming Languages  4
COMP 3361  Operating Systems I  4
COMP 3371  Advanced Data Structures & Algorithms  4
COMP 3200  Discrete Structures  4

Other Requirements

Students who intend to obtain a BS/MS in Computer Science must satisfy all the requirements of the Bachelor of Science degree as outlined in the University of Denver Undergraduate Bulletin. One of the two minor areas required in the B.S. program must be in mathematics. The other minor may be in any field. Upon completion of the BS requirements, the student must satisfy the 36 hours at the graduate level of required coursework for the MS.

The eleven courses listed above total 44 quarter hours. An additional 28 hours of 3000-level computer science electives are required. COMP 2400 or COMP 2901, or COMP 2555 may be used to satisfy 8 credits of the required 3000-level elective credits, but COMP 3904 may not be used in this way. In addition there are 3 COMP courses at the 4000-level (other than COMP 4991) are required of which at least one must be a designated "theory" class and one must be a designated “Advanced Programming” course and completion of three quarters of COMP 4600 Seminar (0 credits).

Advanced Programming Requirement

Students must also choose and complete two courses that include an advanced programming component. These courses must be approved by an advisor. The current pre-approved list includes:

Math Minor Requirement

Minimum of 20 quarter hours in MATH courses numbered 1951 or higher. Discrete Structures in Computer Science (COMP 2300) may be counted toward the math minor. Courses not covered by the foregoing two sentences must be approved in writing by a mathematics faculty advisor.

For students entering DU Fall 2010 or later: At least 50% of the required credit hours for minor must be completed at the University of Denver

All electives, especially the MATH and COMP electives, should be selected in close consultation with an academic advisor from the Computer Science Department. The courses for the non-mathematics minor (see Minor courses above) should be selected in consultation with an academic advisor from the department in which the minor is administered.

Sample schedule

First Year

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<tr>
<th>Fall</th>
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<th>Spring</th>
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Second Year

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Fourth Year

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## Courses

**COMP 3001 Bridge Course: Theory Basics (1-4 Credits)**
Bridge Course I: Computer Science Theory Basics This accelerated course covers the basics of discrete mathematics including functions, relations, counting, logic, proofs etc that is necessary to attend CS graduate school. In addition, it includes an introduction to programming and algorithm analysis. 4.000 Credit hours 4.000 Lecture hours.

**COMP 3002 Bridge Course: Theory Advanced (1-4 Credits)**
This accelerated course continues to build on the basics of discrete mathematics by covering material including advanced counting, recurrences, graphs, trees, traversals, automata etc. that is necessary to attend Computer Science graduate school. In addition, it includes an introduction to additional algorithms and data structures. Prerequisite: COMP 3001. 4.000 Credit hours 4.000 Lecture hours.

**COMP 3003 Bridge Course: Systems Basics (1-4 Credits)**
This accelerated course covers the basics of computer systems including assembly language programming, addressing modes, logic design, etc. necessary to attend CS graduate school. In addition, it includes an introduction to C programming language. In particular, standard I/O, data manipulation, pointers, and dynamic memory management. 4.000 Credit hours 4.000 Lecture hours.

**COMP 3004 Bridge Course: Systems Advance (1-4 Credits)**
This accelerated course continues to build on the basics of computer systems by covering material including UNIX tools, version control, process creation, concurrent programming etc that is necessary to attend Computer Science graduate school. In addition, it includes an introduction to a scripting language. Prerequisites: COMP 3003. 4.000 Credit hours 4.000 Lecture hours.

**COMP 3005 Data Science Bridge Course: Computer Science Programming Basics (4 Credits)**
This accelerated course covers the basics of Python programming. By the end of the course students will be able to develop, design and implement Python programs, appreciate the difference between data types, learn to read from and write to files, understand and use data structures, understand and use recursion.

**COMP 3006 Python Software Development (4 Credits)**
This accelerated course covers advanced Python programming for data scientists. Course Objectives: name and demonstrate proficiency using advanced Python programming techniques for data science; analyze a programming task and create a development plan and high-level software design that accomplishes the task; relate common portions of the Python standard library to specific programming tasks; understand and apply aspects of the Python scientific programming ecosystem to achieve a data-science analysis goal; collaborate with another data scientist to develop a software program that completes a given data-science task. Prerequisite: COMP 3005.

**COMP 3007 Data Science Bridge: Data Science Mathematics I (4 Credits)**
This course presents the elements of calculus essential for work in data science. Students will study differentiation and integration in the context of probability density and of optimization.

**COMP 3008 Data Science Bridge: Data Science Mathematics II (4 Credits)**
This course presents the elements of linear algebra and discrete math essential for subsequent coursework in data science.

**COMP 3200 Discrete Structures (4 Credits)**
Discrete mathematical structures and non-numerical algorithms; graph theory, elements of probability, propositional calculus, Boolean algebras; emphasis on applications to computer science. Cross-listed as MATH 3200. Prerequisites: MATH 2200 or COMP 2300 and COMP 1672 or COMP 1771.

**COMP 3341 Multimedia Systems (4 Credits)**
This course covers fundamental issues in design and implementation of multimedia applications. This course also covers technologies in multimedia systems such as multimedia data representation, compression, coding, networking, data management, and I/O technologies. Prerequisite: COMP 3361.

**COMP 3351 Programming Languages (4 Credits)**
Programming language as a component of software development environment; binding, scope, lifetime, value and type of a variable; run-time structure--static, stack-based and dynamic languages; parameter passing--call by reference, value, result, value-result and name; subprogram parameters; role played by side effects, dangling pointers, aliases and garbage; garbage collection; data abstraction - study of object-oriented, functional, and logic languages. Prerequisites: COMP 2370, COMP 2691, and COMP 2355.

**COMP 3352 Elements of Compiler Design (4 Credits)**
Techniques required to design and implement a compiler; topics include lexical analysis, grammars and parsers, type-checking, storage allocation and code generation. Prerequisite: COMP 3351.
COMP 3353 Compiler Construction (4 Credits)
Design and implementation of a major piece of software relevant to compilers. Prerequisite: COMP 3352.

COMP 3361 Operating Systems I (4 Credits)
Operating systems functions and concepts; processes, process communication, synchronization; processor allocation, memory management in multiprogramming, time sharing systems. Prerequisites: COMP 2355, COMP 2370, and COMP 2691 or for MS Cybersecurity COMP 3001, 3002, 3003, 3004, COMP 4355, and COMP 4370.

COMP 3371 Advanced Data Structures & Algorithms (4 Credits)
Design and analysis of algorithms; asymptotic complexity, recurrence equations, lower bounds; algorithm design techniques such as incremental, divide and conquer, dynamic programming, randomization, greedy algorithms, etc. Prerequisites: COMP 2370, MATH 3200.

COMP 3381 Software Engineering I (4 Credits)
An introduction to software engineering. Topics include software processes, requirements, design, development, validation and verification and project management. Cross-listed with COMP 4381. Prerequisites: COMP 3351, COMP 3361 or instructor permission.

COMP 3382 Software Engineering II (4 Credits)
Continuation of COMP 3381. Topics include component-based software engineering, model-driven architecture, and service-oriented architecture. Prerequisite: COMP 3381.

COMP 3400 Advanced Unix Tools (4 Credits)
Design principles for tools used in a UNIX environment. Students gain experience building tools by studying the public domain versions of standard UNIX tools and tool-building facilities. Prerequisites: COMP 2400 and knowledge of C and csh (or another shell), and familiarity with UNIX.

COMP 3410 World Wide Web Programming (4 Credits)
Creating WWW pages with HTML, accessing user-written programs via CGI scripts, creating forms, imagemaps and tables, and Java programming principles and techniques. Prerequisite: COMP 2355.

COMP 3421 Database Organization & Management I (4 Credits)
An introductory class in databases explaining what a database is and how to use one. Topics include database design, ER modeling, database normalization, relational algebra, SQL, and B trees. Each student will design, load, query and update a nontrivial database using a relational database management system (RDBMS). An introduction to a NoSQL database will be included. Prerequisite: COMP 3006. Co-requisite: COMP 3007.

COMP 3431 Data Mining (4 Credits)
Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 2370.

COMP 3501 Introduction to Artificial Intelligence (4 Credits)
Programming in LISP and Prolog with applications to artificial intelligence; fundamental concepts of artificial intelligence; emphasis on general problem-solving techniques including state-space representation, production systems, and search techniques. Prerequisites: MATH 2200, COMP 2370.

COMP 3621 Computer Networking (4 Credits)
An introduction to computer networks with an emphasis on Internet protocols. Topics include: network topologies, routing, Ethernet, Internet protocol, sockets, operating system impact and client/server implementations. Prerequisites: COMP 2355 and COMP 2370.

COMP 3681 Networking for Games (4 Credits)
Implementing the networking code for multiplayer games is a complex task that requires an understanding of performance, security, game design, and advanced programming concepts. In this course, students are introduced to the networking stack and how this is connected to the Internet, learn how to write protocols for games, and implement several large games using a game engine that demonstrate the kind of networking and protocols required by different genres of games. In addition, tools are introduced that help understand and debug networking code, simplify the creation of protocols, and make the development of networking code easier.

COMP 3701 Topics in Computer Graphics (4 Credits)
COMP 3702 Topics in Database (4 Credits)
COMP 3703 Topics-Artificial Intelligence (4 Credits)
COMP 3704 Advanced Topics: Systems (4 Credits)
COMP 3705 Topics in Computer Science (1-4 Credits)
COMP 3731 Computer Forensics (4 Credits)
Computer Forensics involves the examination of information contained in digital media with the aim of recovering and analyzing latent evidence. This course will provide students an understanding of the basic concepts in preservation, identification, extraction and validation of forensic evidence in a computer system. The course covers many systems level concepts such as disk partitions, file systems, system artifacts in multiple operating systems, file formats, email transfers, and network layers, among others. Students work extensively on raw images of memory and disks, and in the process, build components commonly seen as features of commercial forensics tools (e.g. file system carver, memory analyzer, file carver, and steganalysis). Prerequisites: COMP 2355 or for MS Cybersecurity COMP 3001, 3002, 3003, and 3004.
COMP 3801 Introduction Computer Graphics (4 Credits)
Fundamentals of graphics hardware, scan conversion algorithms, 2D and 3D viewing transformations, windows, viewports, clipping algorithms, mathematics for computer graphics, graphics programming using a standard API. Prerequisites: COMP 2370, MATH 1952 or 1962, and MATH 2060.

COMP 3821 Game Programming I (4 Credits)
An introduction to computer game programming. Use of a game engine to create 3D computer games. Topics to include game scripting, simple 3D asset creation, incorporation of assets, keyboard/mouse event handling, animation, game phases and score keeping. Prerequisite: COMP 2370.

COMP 3822 Game Programming II (4 Credits)
An introduction to computer game engine programming. Major class goal is to understand how game engines are created by building subsets of a game engine. Non-exhaustive set of topics include how terrains are generated, how animations are supported, how particle systems are implemented, how physics systems are coded, and how support is provided for higher level scripting languages. All coding will be done in low-level graphics languages. Prerequisites: COMP 3801 and COMP 3821.

COMP 3904 Internship/Co-Op in Computing (0-10 Credits)
Practical experience in designing, writing and/or maintaining substantial computer programs under supervision of staff of University Computing and Information Resources Center. Prerequisites: COMP 2370 and approval of internship committee (see department office).

COMP 3991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in the regular course schedule for that particular year.

COMP 3992 Directed Study (1-10 Credits)

COMP 4333 Parallel and Distributed Computing (4 Credits)
Current techniques for effective use of parallel processing and large scale distributed systems. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course qualifies for the Computer Science "Advanced Programming" requirement. Prerequisites: COMP2370 and COMP2355, or equivalent.

COMP 4334 Parallel and Distributed Computing for Data Science (4 Credits)
Current techniques for effective use of parallel processing and large-scale distributed systems for data science. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course is not to be used for the MS Computer Science. Prerequisite: COMP 4581.

COMP 4355 Advanced System Programming (4 Credits)
This course covers programming in a UNIX environment, including use of common command line utilities, scripting, source control via Git, and integration of POSIX system calls into C/C++ code. These features will be leveraged to solve practical problems cleanly and efficiently. More emphasis will be placed on using these features than on how those features work. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4362 Operating Systems II (4 Credits)
Continuation of COMP 3361. Case studies of existing operating systems programing. Prerequisite: COMP 3621.

COMP 4370 Algorithmic Problem Solving (4 Credits)
The course is intended for students who are familiar with programming syntax but have not had much experience writing computer programs to solve a problem stated as a high-level description. The course will run through multiple such problem descriptions, discuss the design of programs to solve those problems using popular data structures, and have students implement those designs using a programming language. This course does not count for MS Computer Science requirements. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4372 Theory of Algorithms (4 Credits)
NP-completeness; lower bound theory; approximation algorithms; amortized complexity and data structures, randomized algorithms. Assorted topics such as string algorithms, graph algorithms, linear programming, computational geometry. Prerequisite: COMP 3371.

COMP 4384 Secure Software Engineering (4 Credits)
This course is concerned with systematic approaches for the design and implementation of secure software. While topics such as cryptography, networking, network protocols and large scale software development are touched upon, this is not a course on those topics. Instead, this course is on identification of potential threats and vulnerabilities early in the design cycle. The emphasis in this course is on methodologies and paradigms for identifying and avoiding security vulnerabilities, formally establishing the absence of vulnerabilities, and ways to avoid security holes in new software. There are programming assignments designed to make students practice and experience secure software design and development. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4431 Data Mining (4 Credits)
Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 4441 and COMP 4581.
COMP 4432 Machine Learning (4 Credits)
This course will give an overview of machine learning techniques, their strengths and weaknesses, and the problems they are designed to solve. This will include the broad differences between supervised/unsupervised and reinforcement learning as well as associated learning problems such as classification and regression. Techniques covered, at the discretion of the instructor, may include approaches such as linear and logistic regression, neural networks, support vector machines, kNN, decision trees, random forests, Naive Bayes, EM, k-Means, and PCA. After course completion, students will have a working knowledge of these approaches and experience applying them to learning problems. Enforced Prerequisites: COMP 4442 and COMP 4581.

COMP 4433 Data Visualization (4 Credits)
This course explores visualization techniques and theory. The course covers how to use visualization tools to effectively present data as part of quantitative statements within a publication/report and as an interactive system. Both design principles (color, layout, scale, and psychology of vision) as well as technical visualization tools/languages will be covered. Prerequisites: COMP 3006, COMP 4441.

COMP 4441 Introduction to Probability and Statistics for Data Science (4 Credits)
The course introduces fundamentals of probability for data science. Students survey data visualization methods and summary statistics, develop models for data, and apply statistical techniques to assess the validity of the models. The techniques will include parametric and nonparametric methods for parameter estimation and hypothesis testing for a single sample mean and two sample means, for proportions, and for simple linear regression. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Prerequisites: COMP 1671, MATH 1951, MATH 1952; or Data Science Bridge Courses COMP 3005, 3007, and 3008.

COMP 4442 Advanced Probability and Statistics for Data Science (4 Credits)
This course builds on material in Probability and Statistics 1. Students will carry out model fitting and diagnostics for multiple regression, ANOVA, ANCOVA, and generalized linear models. Dimension reductions techniques such as PCA and Lasso are introduced, as are techniques for handling dependent data. The course introduces the principles of resampling and Bayesian Analysis. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Enforced Prerequisites: COMP 4441.

COMP 4444 Data Science Tools 1 (4 Credits)
Organizations are using data science to extract actionable insight from data. To highlight the hidden patterns in the data, this course equips students with essential sills for data collection, cleanup, transformation, feature engineering, summarization, and visualization. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, and various data sets to perform these activities. Enforced Prerequisites: COMP 3006 and COMP 3008. Co-requisite: COMP 4441.

COMP 4448 Data Science Tools 2 (4 Credits)
Building a successful predictive model is a multi-faceted process. This course focuses on hypothesis testing and the development of predictive models. Students will also learn how to perform graph-based modeling and optimization. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, and various data sets to perform these activities. Prerequisite: COMP 4447.

COMP 4449 Data Science Capstone (4 Credits)
Students identify and fill a demand for an innovative data science product, such as a data base tool, analytical software, or domain specific analysis. The product is defined, implemented, documented, tested, and presented by the student or student team with the instructor and other stakeholders acting as a project supervisors to verify that goals are met through the 10-week development process. Prerequisites : COMP 4442, COMP 4448, and COMP 4581.

COMP 4581 Algorithms for Data Science (4 Credits)
This course introduces the design and analysis of algorithms within the context of data science. Topics include: asymptotic complexity and algorithm design techniques such as incremental, divide and conquer, dynamic programming, randomization, greedy algorithms, and advanced sorting techniques. Examples to illustrate techniques are drawn from multi-dimensional clustering (k-means and probabilistic), regression, decision trees, order statistics, data mining using apriori algorithms, and algorithms for generating combinatorial objects. Prerequisites: COMP 3006 and 3008.

COMP 4600 Seminar in Computer Science (0-4 Credits)
Preparation and presentation of lectures on some aspect of current research in computer science; topics not generally encountered in formal courses, may include robotics, pattern recognition, parallel processing, computer applications. 10- to 15- page paper with bibliography required.

COMP 4621 Computer Networking (4 Credits)
The Internet is arguably the most transformative invention in recent history and is at its core a massive global computer network (of networks). Students in this course learn how the Internet works, from the highest-level application layer to the lowest-level hardware layer. Topics covered include the OSI and TCP/IP reference models, physical transmission methods, error detection and correction, addressing, routing algorithms, congestion control and more. Prerequisites: COMP 3001, 3002, 3003, and 3004.
COMP 4701 Special Tpcs-Computer Graphics (1-4 Credits)
COMP 4702 Advanced Topics-Database (3 Credits)
COMP 4703 Adv Topics-Artificial Intell (1-4 Credits)
COMP 4704 Advanced Topics-Systems (3-4 Credits)
COMP 4705 Advanced Topics-Programming (1-4 Credits)
COMP 4708 Special Topics-VLSI (3 Credits)
COMP 4709 Special Tpcs-Computer Security (3 Credits)
COMP 4720 Applied Cryptography (4 Credits)
Block ciphers, one-way hashes, symmetric and asymmetric encryption, public-key infrastructure, digital signatures, security protocols, anonymity, and digital cash.

COMP 4721 Computer Security (4 Credits)
This course gives students an overview of computer and system security along with some cryptography. Some network security concepts are also included. Other concepts include coverage of risks and vulnerabilities, policy formation, controls and protection methods, role-based access controls, database security, authentication technologies, host-based and network-based security issues. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4722 Network Security (4 Credits)
Network Security covers tools and techniques employed to protect data during transmission. It spans a broad range of topics including authentication systems, cryptography, key distribution, firewalls, secure protocols and standards, and overlaps with system security concepts as well. This course will provide an introduction to these topics, and supplement them with hands-on experience. In addition, students will perform an extensive analysis, or development of a security related product independently. Prerequisites: COMP 4721 or COMP 3001, 3002, 3003, and 3004.

COMP 4723 Ethical Hacking (4 Credits)
Ethical hacking is the process of probing computer systems for vulnerabilities and exposing their presence through proof-of-concept attacks. The results of such probes are then utilized in making the system more secure. This course will cover the basics of vulnerability research, footprinting targets, discovering systems and configurations on a network, sniffing protocols, firewall hacking, password attacks, privilege escalation, rootkits, social engineering attacks, web attacks, and wireless attacks, among others. Prerequisites: COMP 3361, or COMP 3001, 3002, 3003, and 3004. Prerequisites: COMP3361 or Permission of Instructor.

COMP 4724 Systems Security Management (4 Credits)
This course covers basic system administration tasks on a Unix environment, with a special focus on command line navigation, file/process access control, setting up network configurations, and managing services related to networks and their security. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4799 Capstone Project in Cybersecurity (8 Credits)
The purpose of the cybersecurity capstone project is to provide an integrative experience that ties together the learning outcomes from academic coursework undertakings and industry skills necessary to be productive in delivering an end product. Students will engage in one of many options available, such as involvement in a research project, a case study, a product development project, or an extensive survey paper. Capstone projects are presented at the end of the quarter in front of a representative group. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in regular course schedule for that particular year.

COMP 4992 Directed Study (1-10 Credits)

COMP 4995 Independent Research (1-17 Credits)
Research projects undertaken in conjunction with a faculty member.

COMP 5991 Independent Study (1-17 Credits)

COMP 5995 Independent Research (1-17 Credits)

Electrical and Computer Engineering
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Phone: 303.871.6618
Email: eceinfo@du.edu
Web Site: ritchieschool.du.edu/departments/ECE

Master'S and Doctoral Degrees
Why study engineering at the University of Denver?
DU's Department of Electrical and Computer Engineering (ECE) is creating the future of technology by providing a graduate education that emphasizes both multi-disciplinary and cross-disciplinary knowledge. The distinguished faculty is creating multi-disciplinary education programs that cover both depth and breadth, and research programs that incorporate and account for technological trends in research and development, along with industry.
Graduate students join the faculty in conducting cutting-edge basic and applied research in emerging disciplines developing novel and unique solutions to old and new problems and opportunities.

All laboratories in the Department contain state-of-the-art equipment and software to support basic and applied research in hardware and software design, hardware/software interfacing, communications and signal processing, image processing, computer vision and pattern recognition, optoelectronics, power and energy systems, robotics, mechatronic systems, intelligent systems, unmanned systems, among other research areas. Small classes support our multi-disciplinary and real-time focus by providing close contact between students and faculty, which allows us to meet students’ individual career goals.

Denver is a first-rate location for business, government and laboratory partnerships, and technology employment. The Colorado Front Range is consistently rated as one of the top high-tech areas in the country, and DU is located just minutes from the Denver Technological Center, the site of many top technology companies. The Department of Electrical and Computer Engineering is committed to active collaboration with these industry leaders. As a result, our students graduate with relevant research experience and a network of employment contacts in the technology sector that is second to none!

The ECE Department offers, among other degrees, a master’s and a PhD degree in Mechatronic Systems Engineering (MSE). DU/ECE is the only University in the United States that offers BS, MS and PhD degrees in MSE.

**Doctor of Philosophy in Electrical and Computer Engineering**

The objective of the PhD in Electrical and Computer Engineering degree program is to provide an educational environment that encourages students to develop the ability to contribute to the advancement of science, engineering and technology, through independent research. The PhD students of the 21st century may pursue academic, research, entrepreneurial, and/or industrial careers. We offer opportunities to develop individualized plans of study based on the students’ previous experience and desired research areas. The plan of study allows students to work on interdisciplinary research, while also satisfying the PhD in ECE degree requirements.

Research requires an in-depth study of engineering problems with a broad knowledge base in science and engineering. Therefore, advanced courses are offered to strengthen the fundamentals and to broaden the engineering and science perspective. The minimum credit requirements are different for individuals entering a program with a closely related master’s degree and for those entering with a bachelor’s only. All requirements for the degree must be completed within seven years (eight years without a master’s degree) from admission to candidacy. A grade of C or better must be obtained in each course in order for that course to count toward the credit hour requirements. An overall minimum GPA of 3.0 is also required for graduation.

The PhD in ECE is appealing to students because it offers the much needed specialization component and the ‘degree identity’ required to be competitive in the job market. Graduates from this program will be well equipped to follow academic careers, or be hired in federal laboratories, industry and the private sector.

**Doctor of Philosophy in Mechatronics Systems Engineering**

The objective of the PhD in Mechatronics Systems Engineering (MSE) degree program is to provide an educational environment that encourages students to develop the ability to contribute to the advancement of science, engineering and technology, through independent research. The PhD students of the 21st century may pursue academic, research, entrepreneurial, and/or industrial careers. We offer opportunities to develop individualized plans of study based on the students’ previous experience and desired research areas. The plan of study allows students to work on interdisciplinary research, while also satisfying the PhD in MSE degree requirements.

Research requires an in-depth study of engineering problems with a broad knowledge base in science and engineering. Therefore, advanced courses are offered to strengthen the fundamentals and to broaden the engineering and science perspective. The minimum credit requirements are different for individuals entering a program with a closely related master’s degree and for those entering with a bachelor’s only. All requirements for the degree must be completed within seven years (eight years without a master’s degree) from admission to candidacy. A grade of C or better must be obtained in each course in order for that course to count toward the credit hour requirements. An overall minimum GPA of 3.0 is also required for graduation.

The PhD in MSE is at the forefront and intersection of the coupled disciplines of Electrical, Mechanical, Computer Engineering, and Computer Science. This unique degree is appealing to students because they will acquire the knowledge and ability to deal with and solve highly complex problems where integration is a key component. This degree provides a holistic approach to graduate education focusing on the ability to cover both breadth and depth of knowledge. Graduates of this program will lay the foundation for the modern engineering departments of the future, where ‘integration’ will be the key ingredient of studies.

**Master of Science in Computer Engineering**

The Master of Science in Computer Engineering (MSCpE) is designed to advance the student’s knowledge in several areas of engineering. This degree provides breadth while permitting the student to achieve depth in a specialization area. This specialization area, with thematic sequences of courses, has been selected to coincide with those of high current interest as well as those emerging technologies that hold promise of increasing importance for the future. The purpose of this program is to serve the profession of engineering and the Colorado community through advanced study in computer engineering, electrical engineering, and other related fields. This program prepares the student for academic and industrial advancement. The program offers a thesis and a non-thesis option.
The Department of ECE offers both part-time and full-time programs. The Department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. The MSCpE program can generally be completed in about four years if one course is taken each quarter, but it is usually possible to take two courses per quarter, bringing completion time closer to the more common duration of two years. Also, students who select the one-year non-thesis will be able to graduate within 12 months, four academic quarters. For part-time students who are working in industry positions and who have chosen the thesis option, a topic related to the job function may be acceptable as the thesis research topic. Furthermore, a qualified staff member at the place of employment may be approved to serve as an adjunct faculty on the thesis committee.

Students not interested in pursuing a degree but interested in taking an occasional course may register as special status students by following an abbreviated admissions process. However, only 15 QH earned as a special status student may be applied toward a MS degree.

Master of Science in Mechatronic Systems Engineering

The Master of Science in Mechatronic Systems Engineering (MSMSE) is designed to advance the student’s knowledge in several areas of engineering. This degree provides breadth while permitting the student to achieve depth in a specialization area. This specialization area, with thematic sequences of courses, has been selected to coincide with those of high current interest as well as those emerging technologies that hold promise of increasing importance for the future. The purpose of this programs is to serve the profession of engineering and the Colorado community through advanced study in computer engineering, electrical engineering, and other related fields. This program prepares the student for academic and industrial advancement. The program offer a thesis and a non-thesis option.

The Department of ECE offers both part-time and full-time programs. The Department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. The MS degree program can generally be completed in about four years if one course is taken each quarter, but it is usually possible to take two courses per quarter, bringing completion time closer to the more common duration of two years. Also, students who select the one-year non-thesis will be able to graduate within 12 months, four academic quarters. For part-time students who are working in industry positions and who have chosen the thesis option, a topic related to the job function may be acceptable as the thesis research topic. Furthermore, a qualified staff member at the place of employment may be approved to serve as an adjunct faculty on the thesis committee.

Students not interested in pursuing a degree but interested in taking an occasional course may register as special status students by following an abbreviated admissions process. However, only 15 QH earned as a special status student may be applied toward a MS degree.

Master of Science in Mechatronic Systems Engineering (Corporate Sponsor Program)

The Master of Science in Mechatronic Systems Engineering (MSMSE) (Corporate Sponsor Program) is a program available only to current Lockheed Martin and United Launch Alliance employees and is designed to advance the student’s knowledge in several areas of engineering. This degree provides breadth while permitting the student to achieve depth in a specialization area. This specialization area, with thematic sequences of courses, has been selected to coincide with those of high current interest as well as those emerging technologies that hold promise of increasing importance for the future. The purpose of this programs is to serve the profession of engineering and the Colorado community through advanced study in computer engineering, electrical engineering, and other related fields. This program prepares the student for academic and industrial advancement. The program offer a thesis and a non-thesis option.

The Department of ECE offers both part-time and full-time programs. The Department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. The MS degree program can generally be completed in about four years if one course is taken each quarter, but it is usually possible to take two courses per quarter, bringing completion time closer to the more common duration of two years. Also, students who select the one-year non-thesis will be able to graduate within 12 months, four academic quarters. For part-time students who are working in industry positions and who have chosen the thesis option, a topic related to the job function may be acceptable as the thesis research topic. Furthermore, a qualified staff member at the place of employment may be approved to serve as an adjunct faculty on the thesis committee.

Students not interested in pursuing a degree but interested in taking an occasional course may register as special status students by following an abbreviated admissions process. However, only 15 QH earned as a special status student may be applied toward a MS degree.

Doctor of Philosophy in Electrical & Computer Engineering

Degree and GPA Requirements

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

• Students with a MS in CpE, MS in MSE, MS in EE, MS in ME, or closely related areas may apply for admission to the PhD in ECE or PhD in MSE programs. Admission with only a BS in this field is also possible, but students with only a BS degree are strongly encouraged to enroll first in the MS (CpE, EE, MSE) programs. All graduate engineering courses presuppose mastery of the subject matter of a modern ABET-accredited curriculum in engineering. Students with a BS in other engineering or related science fields and students with a BScpE, BSEE, or BSME who have not taken graduate academic work for some time may be required to complete preparatory courses that are prerequisites for the core courses of the engineering concentrations on which the qualifying exams are based. These courses carry no credit toward the graduate degree.

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 570
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Electrical and Computer Engineering program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Doctor of Philosophy in Mechatronic Systems Engineering

Degree and GPA Requirements

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

Prerequisites:

• Students with a MS in CpE, MS in MSE, MS in EE, MS in ME, or closely related areas may apply for admission to the PhD in ECE or PhD in MSE programs. Admission with only a BS in this field is also possible, but students with only a BS degree are strongly encouraged to enroll first in the MS (CpE, EE, MSE) programs. All graduate engineering courses presuppose mastery of the subject matter of a modern ABET-accredited curriculum in engineering. Students with a BS in other engineering or related science fields and students with a BScpE, BSEE, or BSME who have not taken graduate academic work for some time may be required to complete preparatory courses that are prerequisites for the core courses of the engineering concentrations on which the qualifying exams are based. These courses carry no credit toward the graduate degree.

Standardized Test Scores/Other Requirements

• We recommend PhD applicants contact faculty to find a research advisor BEFORE submitting the application. If we receive an application and there is no research advisor commitment, we will consider the applicant for the master’s program only.
• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 570
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Mechatronic Systems Engineering program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.
Master of Science in Electrical Engineering, Computer Engineering or Mechatronic Systems Engineering

Degree and GPA Requirements

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

• Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 3.0 on a 4.0 scale.

Prerequisites:

• A Bachelor of Science (BS) degree in computer engineering (BSCpE), electrical engineering (BSEE), or closely related field from a regionally accredited college or university is required for admission to the programs. Those students whose backgrounds differ significantly from EAC/ABET-accredited BS computer, electrical programs may be required to complete prerequisite undergraduate courses. Such courses are not considered part of the 45 quarter hour requirements for the degree. A competency examination may be required of candidates who do not possess a 3.0 GPA or a BS in electronic, electrical, or computer, from an EAC/ABET accredited program. Students with BS degrees in physics, mathematics, computer science, engineering science, electrical engineering technology, engineering physics, or similar BS degrees from a regionally accredited college or university may also be admitted. However, these students should be able to demonstrate competency in the following basic subjects by passing an appropriate competency examination: MSCpE: Circuits and Electronics, Digital Systems, Computer Organization, a high- or low-level computer language; MSEE: Digital Design Methods, Physical Electronics, Introductory Electromagnetics, Signals and Systems, Principles of Communications, Circuits and Electronics; MSE: Controls, Robotics, Signals and Systems, Circuits and Electronics, Digital Design Methods, Mechanics, Electromagnetics.

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 570
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Electrical Engineering program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.
• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Doctor of Philosophy in Electrical and Computer Engineering

Program requirements
All PhD students who have been admitted to the PhD in ECE program must successfully complete three milestones before the PhD degree can be conferred. These milestones refer to:

• Demonstrating that the student is qualified to begin PhD studies
• Demonstrating that the student may identify and formulate a research problem
• Demonstrating that the student can defend her/his dissertation

These three milestones are referred to as the “PhD Qualifying Exam”, the “Comprehensive Exam” (also known as the “PhD Proposal”), and the “Dissertation Defense”, respectively.

Coursework requirements
The PhD in ECE does not have specific course requirements. The coursework plan needs to approved by the student’s advisor and the department chair.

Minimum credit requirements

Students with a Bachelor of Science in Engineering/Science
For students admitted to the PhD program with a bachelor’s degree, 90 QH are required, 75 of which must be completed at the University of Denver. A minimum of 48 QH must be at the 4000-level or higher and may include as many dissertation research hours (Independent Research and Independent Study) as considered appropriate by the advisor and department chair. The student with his/her advisor will develop an appropriate plan of study with core requirements, an area of specialization (depth requirement), breadth requirement and advanced mathematics. The core will consist of 8 QH of coursework. The area of specialization will consist of 16 QH of coursework. An additional 6 QH of coursework (excluding independent research) is required as related breadth requirement. The student must complete a minimum of 16 QH at the 4000-level courses, excluding independent research. Prior to completion of the comprehensive exam, the plan of study must be approved by the student’s PhD committee and the chair.

If a student is entering the PhD program without a relevant master’s degree, the student should work with his/her advisor in order to meet the degree requirements for a master’s degree. All requirements for the given master’s degree must be met.

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1 The breadth requirement must be pre-approved by the student’s advisor.

Students with a Master of Science in Engineering/Science
If a student is admitted with a closely related master’s degree, up to 45 hours may be transferred and applied to the doctorate degree. The student with his or her advisor will develop an appropriate program consisting of a minimum of 28 quarter hours at the 4000-level, which may include as many dissertation research hours (Independent Research and Independent Study) as considered appropriate by the advisor and the department chair. The student with his or her advisor will develop an appropriate plan of study with an area of specialization, breadth requirements and advanced mathematics. Prior to completion of the comprehensive exam, the student’s plan of study must be approved by the student’s PhD committee and the department chair.

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Student with his or her advisor will develop an appropriate plan of study with an area of specialization, breadth requirements and advanced mathematics.

**Total Credits**

- **90**

### Non-coursework Requirements

#### Qualifying Examination

Each student must demonstrate sufficient breadth and depth of basic engineering knowledge relevant to electrical and computer engineering and be able to demonstrate ability to organize and present her/his thoughts in a convincing manner. The PhD Qualifying Exam achieves this through two components: a written Common Exam of basic engineering knowledge (breadth) and two written Specific Area Exams (depth). Failure to pass any component of the PhD Qualifying Exam will prevent the student from continuing in the PhD program.

All PhD students who are admitted into the Department of Electrical and Computer Engineering must pass the PhD Qualifying Exam. There are two components of the PhD Qualifying Exam consisting of three test subject areas. The two components are:

**PhD Common Exam**

This is a common two-hour written exam. Each student, with advice from his/her advisor must choose one of the three subject areas. The Common Exam will be graded as pass/fail. Minimum of 70% is required and serves as passing grade.

- Engineering Mathematics (Calculus, Engineering Analysis, Linear Algebra)
- Circuits and Electronics
- Digital Design, Computer Organization, and HDL

**PhD Specific Area Exam**

This part of the exam will consist of two written subject area texts lasting two hours each. Students must pick two specific subject areas and cannot be the same subject area as the topic chosen for the PhD Common Exam. The Specific Area Exam will be graded as pass/fail; Minimum of 70% is required and serves as passing grade.

- Digital Design, Computer Organization, and HDL (only if NOT taken for the common component)
- Circuits and Electronics (only if NOT taken for the common component)
- Microprocessors
- Data Structures, Algorithms, & Operating Systems
- Control, Signals & Systems
- Electromagnetics
- Power & Energy Systems
- Optoelectronics and Optical Fiber Communication
- Communication & DSP
- Robotics
- Image Processing & Computer Vision
- Pattern Recognition

If a student is unable to pass the PhD Common Exam and/or any of the PhD Specific Area Exams, the student must take the same exam(s) during the second attempt; the student is not allowed to switch subject areas.

All PhD students **must** attempt the PhD Qualifying Exam (first time) by the end of their first year. If a student is unsuccessful at passing all three test areas, the student **must** take the exam for the second time, the next time it is offered. A student shall be considered to have passed the PhD Qualifying Exam only after all three test areas have been successfully completed within the given time constraints identified.

### Comprehensive Examination

The purpose of the Comprehensive Examination is to ascertain the potential of the student for PhD quality research. At least two quarters prior to the final defense, the student shall schedule and take the Comprehensive Examination. This oral and written examination will be attended by a minimum of three faculty members, the same faculty who will attend the student’s final dissertation defense. The Comprehensive Exam may be open to other students based on the requirements of the student’s advisor. The student is expected to make a 30 to 40 minute concise presentation on her/his dissertation topic. The oral and written presentation will highlight previous work in this area, demonstrate a need for the given research, and explain how the given research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. In addition, the student will be expected to answer general fundamental questions in the area of her/his concentration and detailed questions in the area of the student’s graduate course work.

The PhD Qualifying Examination must be taken and passed prior to the student taking the Comprehensive Examination. The Comprehensive Examination can be taken at most 2 times. If the student does not pass the Comprehensive Exam on the second try, the student will be terminated from the program. The comprehensive exam will be graded on a pass/fail system.
Dissertation
The student is required to complete and defend a dissertation of publishable quality based on the student’s original research. The dissertation must be completed in written form in accordance with the University’s Graduate School guidelines. A summary of the dissertation must be presented in a public seminar and subsequently defended by the student in the final oral defense. The defense committee will consist of the student’s entire PhD committee.

Residence Requirement
Enrollment in at least six quarters (four semesters), including at least two consecutive quarters (one semester) of full-time attendance is required for graduation.

PhD Committee
The PhD committee should consist of at least four faculty members. Three faculty members must be from within the student's specialty area; these can include the student’s advisor, other faculty in that degree program and, if necessary, off-campus experts. Finally, for the final oral defense of the dissertation, an oral defense chair, who must be a tenured faculty member outside the Department of Electrical and Computer Engineering and Mechanical and Materials Engineering, needs to be identified in consultation with the DU Graduate Studies Office. The PhD committee needs to be identified with the dissertation advisor and approved by the chair of the department and the Office of Graduate Studies.

Doctor of Philosophy in Mechatronics Systems Engineering

Program requirements
All PhD students who have been admitted to the PhD in ECE or PhD in MSE programs must successfully complete three milestones before the PhD degree can be conferred. These milestones refer to:

- Demonstrating that the student is qualified to begin PhD studies
- Demonstrating that the student may identify and formulate a research problem
- Demonstrating that the student can defend her/his dissertation

These three milestones are referred to as the “PhD Qualifying Exam”, the “Comprehensive Exam” (also known as the “PhD Proposal”), and the “Dissertation Defense”, respectively.

Coursework requirements
The PhD in MSE does not have specific course requirements. The coursework plan needs to approved by the student's advisor and the department chair.

Minimum credit requirements

Students with a Bachelor of Science in Engineering/Science
For students admitted to the PhD program with a bachelor's degree, 90 QH are required, 75 of which must be completed at the University of Denver. A minimum of 48 QH must be at the 4000-level or higher and may include as many dissertation research hours (Independent Research and Independent Study) as considered appropriate by the advisor and department chair. The student with his/her advisor will develop an appropriate plan of study with core requirements, an area of specialization (depth requirement), breadth requirement and advanced mathematics. The core will consist of 8 QH of coursework. The area of specialization will consist of 16 QH of coursework. An additional 6 QH of coursework (excluding independent research) is required as related breadth requirement. The student must complete a minimum of 16 QH at the 4000-level courses, exclusive of independent research. Prior to completion of the comprehensive exam, the plan of study must be approved by the student's PhD committee and the department chair.

If a student is entering the PhD program without a relevant master's degree, the student should work with their advisor in order to meet the degree requirements for a master's degree. All requirements for the given master's degree must be met.

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If a student is admitted with a closely related master’s degree, up to 45 hours may be transferred and applied to the doctorate degree. The student with his or her advisor will develop an appropriate program consisting of a minimum of 28 quarter hours at the 4000-level, which may include as many dissertation research hours (Independent Research and Independent Study) as considered appropriate by the advisor. The student with his or her
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**Total Credits** 90

**Non-coursework Requirements**

**Qualifying Examination**
Each student must demonstrate sufficient breadth and depth of basic engineering knowledge relevant to electrical and computer engineering and be able to demonstrate ability to organize and present her/his thoughts in a convincing manner. The PhD Qualifying Exam achieves this through two components: a written Common Exam of basic engineering knowledge (breadth) and two written Specific Area Exams (depth). Failure to pass any component of the PhD Qualifying Exam will prevent the student from continuing in the PhD program.

All PhD students who are admitted into the Department of Electrical and Computer Engineering must pass the PhD Qualifying Exam. There are two components of the PhD Qualifying Exam consisting of three test subject areas. The two components are

**PhD Common Exam**
This is a common two-hour written exam. Each student, with advice from his/her advisor must choose one of the three subject areas. The Common Exam will be graded as pass/fail; with 70% constituting as passing grade.

- Engineering Mathematics (Calculus, Engineering Analysis, Linear Algebra)
- Circuits and Electronics
- Digital Design, Computer Organization, and HDL

**PhD Specific Area Exam**
This part of the exam will consist of two written subject area texts lasting two hours each. Students must pick two specific subject areas and cannot be the same subject area as the topic chosen for the PhD Common Exam. The Specific Area Exam will be graded as pass/fail; with 70% constituting as passing grade.

- Digital Design, Computer Organization, and HDL (only if NOT taken for the common component)
- Circuits and Electronics (only if NOT taken for the common component)
- Microprocessors
- Data Structures, Algorithms, & Operating Systems
- Control, Signals & Systems
- Electromagnetics
- Power & Energy Systems
- Optoelectronics/Optical Fiber Communication
- Communication & DSP
- Robotics
- Image Processing & Computer Vision
- Pattern Recognition

*Students who will obtain a PhD in Mechatronic Systems Engineering may take both exams from the above list or they may elect to take ONE exam from the list below:

- Solid Mechanics*
- Materials Science*
- Fluids & Heat Transfer*
- Thermodynamics*

If a student is unable to pass the PhD Common Exam and/or any of the PhD Specific Area Exams, the student must take the same exam(s) during the second attempt; the student is not allowed to switch subject areas.

All PhD students must attempt the PhD Qualifying Exam by the end of their first year. If a student is unsuccessful at passing all three test areas, the student will be given an additional year to pass the PhD Qualifying Exam. All students must take and pass the PhD Qualifying Exam by the end of their second year. A student shall be considered to have passed the PhD Qualifying Exam only after all three test areas have been successfully completed within the given time constraints identified.
Comprehensive Examination
The purpose of the Comprehensive Examination is to ascertain the potential of the student for PhD quality research. At least two quarters prior to the final defense, the student shall schedule and take the Comprehensive Examination. This oral and written examination will be attended by a minimum of three faculty members, the same faculty who will attend the student’s final dissertation defense. The Comprehensive Exam may be open to other students based on the requirements of the student’s advisor. The student is expected to make a 30 to 40 minute concise presentation on her/his dissertation topic. The oral and written presentation will highlight previous work in this area, demonstrate a need for the given research, and explain how the given research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. In addition, the student will be expected to answer general fundamental questions in the area of her/his concentration and detailed questions in the area of the student’s graduate course work.

The PhD Qualifying Examination must be taken and passed prior to the student taking the Comprehensive Examination. The Comprehensive Examination can be taken at most 2 times. If the student does not pass the Comprehensive Exam on the second try, the student will be terminated from the program. The comprehensive exam will be graded on a pass/fail system.

Dissertation
The student is required to complete and defend a dissertation of publishable quality based on the student’s original research. The dissertation must be completed in written form in accordance with the University’s Graduate School guidelines. A summary of the dissertation must be presented in a public seminar and subsequently defended by the student in the final oral defense. The defense committee will consist of the student’s entire PhD committee.

Residence Requirement
Enrollment in at least six quarters (four semesters), including at least two consecutive quarters (one semester) of full-time attendance is required for graduation.

PhD Committee
The PhD committee should consist of at least four faculty members. Three faculty members must be from within the student’s specialty area; these can include the student’s advisor, other faculty in that degree program and, if necessary, off-campus experts. Finally, for the final oral defense of the thesis, an oral defense chair, who must be a tenured faculty member outside the Department of Electrical and Computer Engineering and Mechanical and Materials Engineering, needs to be identified in consultation with the DU Graduate Studies Office. The PhD committee needs to be identified with the dissertation advisor and approved by the chair of the department and the Office of Graduate Studies.

Master of Science in Computer Engineering
Minimum Credit Requirements
Every candidate for the MS degree must complete 45 QH of credit, at least 36 of which must be completed at the University of Denver.

Program Structure
Candidates may elect either the thesis or non-thesis option. This choice may be made at any time, although a delay in declaration may impact the completion date. Students who are GTAs or who receive financial support from a University research grant, such as GRAs, are required to elect the thesis option. The program is designed to be completed in about six quarters if two courses (usually 8 QH) are taken each quarter.

Non-Thesis Option
The non-thesis option is the more flexible of the two options. This program is designed with the working professional in mind. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the requirement of 45 QH. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree, after approval by their advisor and the Chair. Each student must take a minimum of 24 quarter hours at the 4000-level.

One Year (four quarters) – Non-thesis Option
The Department of Electrical and Computer Engineering (ECE) offers a one-year, non-thesis option. Students who select the one-year program will be able to graduate within 12 months, four academic quarters, as there are enough courses offered in each specialization to meet the 20 QH depth requirement. The breadth requirement (14 QH) is fulfilled by taking courses offered in other specializations. In addition, every year courses that satisfy the mathematics requirement (3 QH) are offered. The MS non-thesis structure is shown below. QH in each category denote minimum requirements that must be satisfied. Any changes in the student’s plan of study must be approved a-prior by the student’s advisor.

The basic structure of the minimum 45 QH for the non-thesis option is as follows:

Requirements for Non-Thesis Option (minimum QH)
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirement</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Depth Requirement - Specialization Area</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Mathematics Requirement (requires one approved course at the 3000-level or higher)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Breadth Requirement</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>
This indicates minimum number of quarter hours. Any credits over the 3 QH from the mathematics courses will count toward the breadth requirement.

Thesis Option
A thesis permits a candidate to obtain depth in an area of study and it is especially useful for individuals who seek to pursue a subsequent degree, for example, a PhD degree. Thesis candidates work closely with a thesis advisor. The thesis option is required for all GRAs and GTAs. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the 45 QH hour requirements. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree. Each student must take a minimum of 16 quarter hours at the 4000-level. The basic structure of the minimum 45 QH for the thesis option is as follows:

Requirements for Thesis Option (minimum QH)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirement</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Depth Requirement - Specialization Area</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Breadth Requirement</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Thesis</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>45</td>
</tr>
</tbody>
</table>

The breadth requirement must be pre-approved by the student’s advisor.

If a student who has elected to pursue a thesis option, then at any time thereafter elects to change to a non-thesis option, all requirements for the non-thesis must be met. Any independent research taken may be forfeited and students must adhere to the grade requirements of the non-thesis option.

Breadth Requirement (Non-Thesis and Thesis Option)
Breadth Requirement courses (each with not less than 3 QH of credit) may be chosen from courses offered in other specialization areas. A course that appears in more than one specialization area may only be counted toward either the specialization requirement or the breadth requirement. The remaining courses are chosen from appropriate courses numbered 3000 or higher, offered by the Department Mechanical & Materials Engineering, Department of Computer Science or NSM (Natural Sciences and Mathematics). Prior approval by the student’s advisor is required. It is strongly recommended that students choose math related courses to satisfy the breadth requirement.

The MSCpE program offers one area of specialization:
- Computer Systems Engineering

The student's degree program will be a combination of the core courses, specialization areas (depth requirement) and the breadth requirement. Each student is required to complete the 2 core courses. Students may choose from any of the courses from their area of specialization but should keep in mind the 4000-level requirement of the degree.

Core courses for all Computer Engineering Students
The following courses are required for all computer engineering students:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENCE 4110</td>
<td>Modern Digital Systems Design</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3620</td>
<td>Advanced Engineering Mathematics</td>
<td>4</td>
</tr>
</tbody>
</table>

Specialization in Computer Systems Engineering
This area of specialization prepares students with fundamental and working knowledge of methods for analysis, design, and implementation of intelligent systems (IS). Particular attention is given to signal and information processing in IS, design of IS, and implementation of IS using state-of-the-art technology. This is accomplished through several theoretical courses and applied courses. Students must choose from the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENCE 3321</td>
<td>Network Design</td>
<td>4</td>
</tr>
<tr>
<td>ENCE 4231</td>
<td>Embedded Systems Programming</td>
<td>4</td>
</tr>
<tr>
<td>ENCE 4250</td>
<td>Advanced Hardware Description Language (HDL) Modeling and Synthesis</td>
<td>4</td>
</tr>
<tr>
<td>ENCE 4620</td>
<td>Advanced Computer Vision</td>
<td>4</td>
</tr>
<tr>
<td>ENCE 4630</td>
<td>Advanced Pattern Recognition</td>
<td>4</td>
</tr>
<tr>
<td>ENEE 3670</td>
<td>Introduction to Digital Signal Processing</td>
<td>4</td>
</tr>
</tbody>
</table>

MASTER OF SCIENCE IN ELECTRICAL ENGINEERING
The Master of Science in Electrical Engineering (MSEE) is designed to advance the student's knowledge in several areas of engineering. This degree provides breadth while permitting the student to achieve depth in a specialization area. This specialization area, with thematic sequences of courses, has been selected to coincide with those of high current interest as well as those emerging technologies that hold promise of increasing importance.
for the future. The purpose of this program is to serve the profession of engineering and the Colorado community through advanced study in computer engineering, electrical engineering, and other related fields. This program prepares the student for academic and industrial advancement. The program offers a thesis and a non-thesis option.

The Department of ECE offers both part-time and full-time programs. The Department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. The MS degree program can generally be completed in about four years if one course is taken each quarter, but it is usually possible to take two courses per quarter, bringing completion time closer to the more common duration of two years. Also, students who select the one-year non-thesis will be able to graduate within 12 months, four academic quarters. For part-time students who are working in industry positions and who have chosen the thesis option, a topic related to the job function may be acceptable as the thesis research topic. Furthermore, a qualified staff member at the place of employment may be approved to serve as an adjunct faculty on the thesis committee.

Students not interested in pursuing a degree but interested in taking an occasional course may register as special status students by following an abbreviated admissions process. However, only 15 QH earned as a special status student may be applied toward a MS degree.

Minimum Credit Requirements
Every candidate for the MS degree must complete 45 QH of credit, at least 36 of which must be completed at the University of Denver.

Program Structure
Candidates may elect either the thesis or non-thesis option. This choice may be made at any time, although a delay in declaration may impact the completion date. Students who are GTAs or who receive financial support from a University research grant, such as GRAs, are required to elect the thesis option. The program is designed to be completed in about six quarters if two courses (usually 8 QH) are taken each quarter.

Non-Thesis Option
The non-thesis option is the more flexible of the two options. This program is designed with the working professional in mind. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the requirement of 45 QH. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree, after approval by their advisor and the Chair. Each student must take a minimum of 24 quarter hours at the 4000-level.

One Year (four quarters) – Non-thesis Option
The Department of Electrical and Computer Engineering (ECE) offers a one-year, non-thesis option. Students who select the one-year program will be able to graduate within 12 months, four academic quarters, as there are enough courses offered in each specialization to meet the 20 QH depth requirement. The breadth requirement (14 QH) is fulfilled by taking courses offered in other specializations. In addition, every year courses that satisfy the mathematics requirement (3 QH) are offered. The MS non-thesis structure is shown below. QH in each category denote minimum requirements that must be satisfied. Any changes in the student’s plan of study must be approved a-prior by the student’s advisor.

The basic structure of the minimum 45 QH for the non-thesis option is as follows:

Requirements for Non-Thesis Option (minimum QH)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirement</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Depth Requirement - Specialization Area</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Mathematics Requirement (requires one approved course at the 3000-level or higher)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Breadth Requirement</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>45</td>
</tr>
</tbody>
</table>

1. This indicates minimum number of quarter hours. Any credits over the required 3 QH from the mathematics courses will count toward the breadth requirement.

Thesis Option
A thesis permits a candidate to obtain depth in an area of study and it is especially useful for individuals who seek to pursue a subsequent degree, for example, a PhD degree. Thesis candidates work closely with a thesis advisor. The thesis option is required for all GRAs and GTAs. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the 45 QH hour requirements. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree. Each student must take a minimum of 16 quarter hours at the 4000-level. The basic structure of the minimum 45 QH for the thesis option is as follows:

Requirements for Thesis Option (minimum QH)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirement</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Depth Requirement - Specialization Area</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Breadth Requirement</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

1. This indicates minimum number of quarter hours. Any credits over the required 6 QH from the breadth requirement will count toward the total requirement.
Thesis
Total Credits
1

The breadth requirement must be pre-approved by the student’s advisor.

If a student who has elected to pursue a thesis option, then at any time thereafter elects to change to a non-thesis option, all requirements for the non-thesis must be met. Any independent research taken may be forfeited and students must adhere to the grade requirements of the non-thesis option.

Breadth Requirement (Non-Thesis and Thesis Option)
Breadth Requirement courses (each with not less than 3 QH of credit) may be chosen from courses offered in other specialization areas. A course that appears in more than one specialization area may only be counted toward either the specialization requirement or the breadth requirement. The remaining courses are chosen from appropriate courses numbered 3000 or higher, offered by the Department Mechanical & Materials Engineering, Department of Computer Science or NSM (Natural Sciences and Mathematics). Prior approval by the student’s advisor is required. It is strongly recommended that students choose math related courses to satisfy the breadth requirement.

The MSEE program offers three areas of specialization:
• Control & Communication Systems
• Electric Power & Energy Systems
• Optics/Optoelectronics/Photonics

Each student must choose an area of specialization. The student’s degree program will be a combination of the core courses, specialization areas (depth requirement) and the breadth requirement. Each student is required to complete the 2 core courses. Students may choose from any of the courses from their area of specialization but should keep in mind the 4000-level requirement of the degree.

Core courses for all Electrical Engineering Students
The following courses are required for all electrical engineering students, regardless of area of specialization:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENEE 4640</td>
<td>Electromagnetic Compatibility</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3621</td>
<td>Advanced Engineering Mathematics</td>
<td>4</td>
</tr>
</tbody>
</table>

Specialization in Control & Communication Systems
This area of specialization prepares students for basic and applied research and development of complex systems, including, electrical, mechanical, bio-inspired, mechatronic systems, robotic systems, and unmanned systems. This is accomplished through several theoretical courses and applied courses. Students must choose from the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENCE 4231</td>
<td>Embedded Systems Programming</td>
<td>4</td>
</tr>
<tr>
<td>ENEE 3670</td>
<td>Introduction to Digital Signal Processing</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3721</td>
<td>Controls</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3722</td>
<td>and Control Systems Laboratory</td>
<td></td>
</tr>
<tr>
<td>ENEE 4141</td>
<td>Digital Communications</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4350</td>
<td>Reliability 1</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4620</td>
<td>Optimization 1</td>
<td>3,4</td>
</tr>
<tr>
<td>ENGR 4730</td>
<td>Introduction to Robotics</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4735</td>
<td>Linear Systems</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4740</td>
<td>Adaptive Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4745</td>
<td>Adv Non-Linear Control System</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4750</td>
<td>Networked Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4755</td>
<td>Optimal Control</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4760</td>
<td>Multivariable Control</td>
<td>4</td>
</tr>
</tbody>
</table>

1 This course may count toward the specialization with advisors pre-approval. This course may not be offered on a regular basis.

Specialization in Electric Power and Energy Systems
This area of specialization prepares students with the basic foundation and advanced knowledge, required for the research and development in the area of power systems, renewable energy systems, and power electronic devices. This is accomplished through several theoretical courses and applied courses. Students must choose from the following courses:
### Code
<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 3510 Renewable and Efficient Power and Energy Systems</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3540 Electric Power Systems</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3721 Controls</td>
<td>4</td>
</tr>
<tr>
<td>&amp; ENGR 3722 and Control Systems Laboratory</td>
<td></td>
</tr>
<tr>
<td>ENGR 4530 Intro to Power and Energy</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4545 Electric Power Economy</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4560 Power Generation Operation and Control</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4590 Power System Protection</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4735 Linear Systems</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4740 Adaptive Control Systems</td>
<td>4</td>
</tr>
</tbody>
</table>

### Specialization in Optics/Optoelectronics/Photonics
This area of specialization prepares students for research, development, and design of devices and systems operating based on wave theory; focusing on laser, optics, light wave devises, and systems.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENEE 4030</td>
<td>Optoelectronics</td>
<td>4</td>
</tr>
<tr>
<td>ENEE 4141</td>
<td>Digital Communications</td>
<td>4</td>
</tr>
<tr>
<td>ENEE 4035</td>
<td>Nanophotonics</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4200</td>
<td>Introduction to Nanotechnology</td>
<td>4</td>
</tr>
<tr>
<td>ENCE 4250</td>
<td>Advanced Hardware Description Language (HDL) Modeling and Synthesis</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4735</td>
<td>Linear Systems</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4740</td>
<td>Adaptive Control Systems</td>
<td>4</td>
</tr>
</tbody>
</table>

### MASTER OF SCIENCE IN MECHATRONIC SYSTEMS ENGINEERING

#### Minimum Credit Requirements
Every candidate for the MS degree must complete 45 QH of credit, at least 36 of which must be completed at the University of Denver.

#### Program Structure
Candidates may elect either the thesis or non-thesis option. This choice may be made at any time, although a delay in declaration may impact the completion date. Students who are GTAs or who receive financial support from a University research grant, such as GRAs, are required to elect the thesis option. The program is designed to be completed in about six quarters if two courses (usually 8 QH) are taken each quarter.

#### Non-Thesis Option
The non-thesis option is the more flexible of the two options. This program is designed with the working professional in mind. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the requirement of 45 QH. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree, after approval by their advisor and the Chair. Each student must take a minimum of 24 quarter hours at the 4000-level.

#### One Year (four quarters) – Non-thesis Option
The Department of Electrical and Computer Engineering (ECE) offers a one-year, non-thesis option. Students who select the one-year program will be able to graduate within 12 months, four academic quarters, as there are enough courses offered in each specialization to meet the 20 QH depth requirement. The breadth requirement (14 QH) is fulfilled by taking courses offered in other specializations. In addition, every year courses that satisfy the mathematics requirement (3 QH) are offered. The MS non-thesis structure is shown below. QH in each category denote minimum requirements that must be satisfied. Any changes in the student’s plan of study must be approved a-prior by the student’s advisor.

The basic structure of the minimum 45 QH for the non-thesis option is as follows:

#### Requirements for Non-Thesis Option (minimum quarter hours)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirement</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Depth Requirement - Specialization Area</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Mathematics Requirement (requires one approved course at the 3000-level or higher)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Breadth Requirement</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>
This indicates minimum number of quarter hours. Any credits over the required 3 QH from the mathematics courses will count toward the breadth requirement.

**Thesis Option**

A thesis permits a candidate to obtain depth in an area of study and it is especially useful for individuals who seek to pursue a subsequent degree, for example, a PhD degree. Thesis candidates work closely with a thesis advisor. The thesis option is required for all GRAs and GTAs. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the 45 QH hour requirements. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree. Each student must take a minimum of 16 quarter hours at the 4000-level. The basic structure of the minimum 45 QH for the thesis option is as follows:

<table>
<thead>
<tr>
<th>Requirements for Thesis Option (minimum quarter hours)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Title</td>
</tr>
<tr>
<td>Core Requirement</td>
<td>8</td>
</tr>
<tr>
<td>Depth Requirement - Specialization Area</td>
<td>16</td>
</tr>
<tr>
<td>Breadth Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Thesis</td>
<td>15</td>
</tr>
<tr>
<td>Total Credits</td>
<td>45</td>
</tr>
</tbody>
</table>

The breadth requirement must be pre-approved by the student’s advisor.

If a student who has elected to pursue a thesis option, then at any time thereafter elects to change to a non-thesis option, all requirements for the non-thesis must be met. Any independent research taken may be forfeited and students must adhere to the grade requirements of the non-thesis option.

**Breadth Requirement (Non-Thesis and Thesis Option)**

Breadth Requirement courses (each with not less than 3 QH of credit) may be chosen from courses offered in other specialization areas. A course that appears in more than one specialization area may only be counted toward either the specialization requirement or the breadth requirement. The remaining courses are chosen from appropriate courses numbered 3000 or higher, offered by the Department Mechanical & Materials Engineering, Department of Computer Science or NSM (Natural Sciences and Mathematics). Prior approval by the student’s advisor is required. It is strongly recommended that students choose math related courses to satisfy the breadth requirement.

The MSE program offers one area of specialization:

- Robotic Systems

The student’s degree program will be a combination of the core courses, specialization areas (depth requirement) and the breadth requirement. Each student is required to complete the 2 core courses. Students may choose from any of the courses from their area of specialization but should keep in mind the 4000-level requirement of the degree.

**Core courses for all Mechatronic Systems Engineering Students**

The following courses are required for all mechatronic systems engineering students regardless of area of specialization:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENEE 4640</td>
<td>Electromagnetic Compatibility</td>
<td>4</td>
</tr>
<tr>
<td>or ENCE 4110</td>
<td>Modern Digital Systems Design</td>
<td></td>
</tr>
<tr>
<td>ENGR 3620</td>
<td>Advanced Engineering Mathematics</td>
<td>4</td>
</tr>
</tbody>
</table>

**Specialization in Robotics Systems**

This area of specialization is designed to meet the needs of industry and federal research laboratories for engineers with multidisciplinary experience and ability to design and integrate complex systems requiring knowledge from diverse engineering disciplines. Said differently, mechatronic systems involves integration of mechanical, electrical, and computer engineering to design complex systems that perform real-world tasks. This program includes a broad set of common course requirements along with a selection of appropriate technical electives providing both breadth and depth of knowledge in a student’s area of interest.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENCE 4231</td>
<td>Embedded Systems Programming</td>
<td>4</td>
</tr>
<tr>
<td>ENCE 4250</td>
<td>Advanced Hardware Description Language (HDL) Modeling and Synthesis</td>
<td>4</td>
</tr>
<tr>
<td>ENCE 4620</td>
<td>Advanced Computer Vision</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3350</td>
<td>Reliability</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3630</td>
<td>Finite Element Methods</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4620</td>
<td>Optimization</td>
<td>3,4</td>
</tr>
<tr>
<td>ENGR 4730</td>
<td>Introduction to Robotics</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4735</td>
<td>Linear Systems</td>
<td>4</td>
</tr>
</tbody>
</table>
ENME 4020  Adv Finite Element Analysis  
ENMT 4220  Mechatronics II  
ENGR 4740  Adaptive Control Systems  
ENGR 4745  Adv Non-Linear Control System

1 This course may count toward the specialization with advisor's preapproval. This course may not or may not be offered on a regular basis.

Master of Science in Mechatronic Systems Engineering (Corporate Sponsor Program)

Minimum Credit Requirements
Every candidate for the MS degree must complete 45 QH of credit, at least 36 of which must be completed at the University of Denver.

Program Structure
Candidates may elect either the thesis or non-thesis option. This choice may be made at any time, although a delay in declaration may impact the completion date. Students who are GTAs or who receive financial support from a University research grant, such as GRAs, are required to elect the thesis option. The program is designed to be completed in about six quarters if two courses (usually 8 QH) are taken each quarter.

Non-Thesis Option
The non-thesis option is the more flexible of the two options. This program is designed with the working professional in mind. For this option, a grade of B or better must be obtained in each course in order for that course to count toward the requirement of 45 QH. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree, after approval by their advisor and the Chair. Each student must take a minimum of 24 quarter hours at the 4000-level.

One Year (four quarters) – Non-thesis Option
The Department of Electrical and Computer Engineering (ECE) offers a one-year, non-thesis option. Students who select the one-year program will be able to graduate within 12 months, four academic quarters, as there are enough courses offered in each specialization to meet the 20 QH depth requirement. The breadth requirement (14 QH) is fulfilled by taking courses offered in other specializations. In addition, every year courses that satisfy the mathematics requirement (3 QH) are offered. The MS non-thesis structure is shown below. QH in each category denote minimum requirements that must be satisfied. Any changes in the student's plan of study must be approved a-prior by the student's advisor.

The basic structure of the minimum 45 QH for the non-thesis option is as follows:

Requirements for Non-Thesis Option (minimum quarter hours)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENMT 4100</td>
<td>Systems Engineering</td>
<td>4</td>
</tr>
<tr>
<td>ENMT 3210</td>
<td>Mechatronics I</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4810</td>
<td>Advanced Topics (ENGR) (Engr Project Management)</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3721</td>
<td>Controls</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 3620</td>
<td>Advanced Engineering Mathematics (Engineering Analysis)</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4620</td>
<td>Optimization (Optimization in Design) or ENGR 4350</td>
<td>3-4</td>
</tr>
<tr>
<td>ENMT 4000</td>
<td>Space Systems Design I 1</td>
<td>4</td>
</tr>
<tr>
<td>ENMT 4010</td>
<td>Space Systems Design II 1</td>
<td>4</td>
</tr>
<tr>
<td>Open Engineering Electives</td>
<td>12-22</td>
<td>45</td>
</tr>
</tbody>
</table>

1 These courses may be replaced with Open Engineering Electives by Lockheed students / ULA students are prohibited from taking these courses

Thesis Option
A thesis permits a candidate to obtain depth in an area of study and it is especially useful for individuals who seek to pursue a subsequent degree, for example, a PhD degree. Thesis candidates work closely with a thesis advisor. The thesis option is required for all GRAs and GTAs. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the requirement of 45 QH hour requirements. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree. Each student must take a minimum of 16 quarter hours at the 4000-level. The basic structure of the minimum 45 QH for the thesis option is as follows:

Requirements for Thesis Option (minimum quarter hours)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENMT 4100</td>
<td>Systems Engineering</td>
<td>4</td>
</tr>
<tr>
<td>ENMT 3210</td>
<td>Mechatronics I</td>
<td>4</td>
</tr>
</tbody>
</table>
These courses may be replaced with Open Engineering Electives by Lockheed students / ULA students are prohibited from taking these courses

If a student who has elected to pursue a thesis option, then at any time thereafter elects to change to a non-thesis option, all requirements for the non-thesis must be met. Any independent research taken may be forfeited and students must adhere to the grade requirements of the non-thesis option.

Master of Science in Systems Engineering

The Master of Science in Systems Engineering (MS-SysEng) covers depth and breadth in system design, analysis and synthesis, testing, validation and verification. It deviates from traditional system analysis paradigms, centering on how to design, build, test and evaluate high-confidence systems with performance guarantees even in the presence of external or internal disturbances, failures and faults.

The program is built for graduate students and industry professionals, and it includes a thesis and a non-thesis option. The total of 45 QHs is required to complete the MS-SysEng, regardless of followed option. Courses must be at the 4000 level or higher. Students who wish to enroll in 3000 level that also may count as Graduate Courses must receive prior approval by the Program Director or Graduate Coordinator.

To enroll in the program, a Bachelor of Science (BS) in Electrical, Mechanical, Computer, Industrial or Mechatronic Systems Engineering is required. Graduates with a BS in Mathematics, Physics or Computer Science may be asked to enroll in additional courses to satisfy prerequisite requirements.

MS-SysEng Structure: Non-thesis Option (45 QHs)

- **Core required courses**: Minimum 12 QHs
- **Concentration Courses**: Minimum 16 QHs
  - Specialization in Space Systems Engineering
  - Specialization in Systems Engineering
- **Technical Electives**: 16 QHs
  - Choose four courses from ‘thematic sequences’ or, any courses from a provided list of electives
- **Course Project**: 1 QH

For courses to count towards graduation, a grade of B or better is required along with a cumulative GPA of 3.0 or better.

MS-SysEng Structure: Thesis Option (45 QHs)

- **Core required courses**: Minimum 12 QHs
- **Concentration Courses**: Minimum 8-12 QHs
- **Technical Electives**: 8-12 QHs
  - Choose courses from ‘thematic sequences’ or, any courses from a provided list of electives
  - : 13-17 QHs

A cumulative GPA of 3.0 or better is required for graduation. For thesis option students, a grade of C in maximum of two courses is allowed, provided that the cumulative GPA is 3.0 or higher.

The program offers the flexibility of course choice and selection if the minimum QHs for core and concentration courses are met. Core Required and/or Concentration Courses may count as Technical Electives, too. This allows for students to complete the two concentrations on Space Systems and Systems Engineering, instead of registering in (free) electives.

Students wishing to continue for a PhD, may do so by completing 45QHs, post-MS, which include at least 24 QHs of dissertation research.

Specialized Graduate Certificate in the Fundamentals of Space Systems

This Specialized Graduate Certificate requires completion of (a minimum of) four graduate level courses, or 16 QHs. Three courses, 12 QHs, are required courses, and one course, 4 QHs, is an elective course. Completion of this certificate provides expertise in fundamentals of Space Systems
Engineering, Space System Design and Integration, and Space Project Management, where Space Systems include, at a minimum, spacecraft and missiles.

This Introduction to Space Systems certificate is offered (only) to Lockheed Martin employees and professionals.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENMT 4000</td>
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<tr>
<td>ENMT 4010</td>
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<td>4</td>
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<tr>
<td>ENMT 4100</td>
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</tbody>
</table>

**Recommended Elective Courses (Choose at least one course)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENMT 4225</td>
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<tr>
<td>MGMT 4304</td>
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<td>4</td>
</tr>
<tr>
<td>ENGR 4865</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

Note that completion of three Specialized Graduate Certificates leads to the Master of Science in Systems Engineering that requires a minimum of 45 QHs for completion. Detailed information is provided in the RSECS Graduate Catalog.

**Specialized Graduate Certificate in Systems Applications**

This Specialized Graduate Certificate requires completion of (a minimum of) four graduate level courses, or 16 QHs. Two courses, 8 QHs, are required courses, and two courses, 8 QHs, are elective courses. Completion of this certificate provides hands-on expertise in system design, integration, implementation and testing.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENMT 4275</td>
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</tr>
<tr>
<td>ENGR 4680</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

**Recommended Elective Courses (Choose at least two courses)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENMT 4270</td>
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<td>4</td>
</tr>
<tr>
<td>ENMT 4280</td>
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<tr>
<td>ENGR 4620</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>ENCE 4231</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

Note that completion of three Specialized Graduate Certificates leads to the Master of Science in Systems Engineering that requires a minimum of 45 QHs for completion. Detailed information is provided in the RSECS Graduate Catalog.

**Specialized Graduate Certificate in System Design and Architecture**

This Specialized Graduate Certificate requires completion of (a minimum of) four graduate level courses, or 16 QHs. Two courses, 8 QHs, are required courses, and two courses, 8 QHs are elective courses. Completion of this certificate provides expertise with emphasis on support for proposals, after contract award and through critical design reviews, as well as in System Design and Integration.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENMT 4285</td>
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</tr>
<tr>
<td>ENGR 4790</td>
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<td>4</td>
</tr>
</tbody>
</table>

**Recommended Elective Courses (choose at least two courses)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENMT 4225</td>
<td></td>
<td>4</td>
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<tr>
<td>ENMT 4270</td>
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<td>4</td>
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<tr>
<td>ENMT 4280</td>
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<td>4</td>
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<tr>
<td>ENGR 4750</td>
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<td>4</td>
</tr>
</tbody>
</table>

Note that completion of three Specialized Graduate Certificates leads to the Master of Science in Systems Engineering that requires a minimum of 45 QHs for completion. Detailed information is provided in the RSECS Graduate Catalog.
Engineering, Computer Courses

ENCE 3231 Embedded Systems Programming (4 Credits)
Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems. Prerequisite: ENCE 3210.

ENCE 3250 HDL Modeling & Synthesis (3 Credits)
Introduction to Hardware Design Language (HDL). Language syntax and synthesis. Applications related to digital system implementation are developed. Project. Prerequisite: ENCE 2101 or instructor's permission.

ENCE 3261 Fault Tolerant Computing (3 Credits)

ENCE 3321 Network Design (4 Credits)
Introduction to network components. Layering of network architecture. Analysis of Local Area Network (LAN) concepts and architecture based on IEEE standards. Design principles including switching and multiplexing techniques, physical link, signal propagation, synchronization, framing and error control. Application of probability and statistics in error detecting and control. Ethernet, Token-ring, FDDI (Fiber Distributed Data Interface), ATM (Asynchronous Transfer Mode), ISDN (Integrated Service Data Networks). Prerequisite: ENEE 3111, ENCE 2101 or permission of instructor.

ENCE 3350 VLSI Design (3 Credits)
Design of Very Large Scale Integration systems. Examination of layout and simulation of digital VLSI circuits using a comprehensive set of CAD tools in a laboratory setting. Studies of layouts of CMOS combinational and sequential circuits using automatic layout generators. Fundamental structures of the layout of registers, adders, decoders, ROM, PLA’s, counters, RAM and ALU. Application of statistics and probability to chip performance. CAD tools allow logic verification and timing simulation of the circuits designed. Cross listed with ENCE 4501. Prerequisite: ENCE 3231.

ENCE 3620 Computer Vision (4 Credits)
This course is an introduction to the basic concepts in image processing and computer vision. First, an introduction to low-level image analysis methods, including radiometry and geometric image formation, edge detection, feature detection, and image segmentation are presented. Then, geometric-based image transformations (e.g., image warping and morphing) for image synthesis will be presented in the course. Furthermore, methods for reconstructing threedimensional scenes including camera calibration, Epipolar geometry, and stereo feature matching are introduced. Other important topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 4620. Prerequisite: ENEE 3311.

ENCE 3630 Pattern Recognition (4 Credits)
This class provides an introduction to classical pattern recognition. Pattern recognition is the assignment of a physical object or event to one of several prescribed categories. Applications includes automated object recognition in image and videos, face identification, and optical character recognition. Major topics include Bayesian decision theory, Parametric estimation and supervised learning, Linear discriminant functions, Nonparametric methods, Feature extraction for representation and classification, Support Vector Machines. Cross listed with ENCE 4630.

ENCE 3631 Machine Learning (4 Credits)
This class covers topics in machine learning including but not limited to Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, deep learning, neural networks, linear classification techniques, manifold learning, bag of words, and Support Vector Machines. Cross listed with ENCE 4631.

ENCE 4100 High Speed Digital Design (4 Credits)
Fundamental topics related to the development of high speed digital systems. Topics include signal integrity and reliability related to crosstalk, parasitic, and electromagnetic interference caused by device clocking speed and system complexity. Project. Cross listed with ENCE 4610.

ENCE 4110 Modern Digital Systems Design (4 Credits)
This course focuses on the design of digital systems using combinational, sequential, and programmable logic devices and Hardware Description Languages (HDL). Techniques for logic design including asynchronous logic, physical world interfaces to digital systems, and system performance analysis methods are studied. Students also learn HDL-Verilog to program CPLD devices and FPGA systems. Cross listed with ENCE 3100.

ENCE 4210 Microprocessor Systems I (4 Credits)
Introduction to microprocessors and to the design and operation of computer systems. A study of the microprocessor and its basic support components. Analysis of CPU architectures of modern computers. Assembly language programming. Use of an assembler and other development tools for programming and developing microprocessor-based systems. Cross listed with ENCE 3210.

ENCE 4231 Embedded Systems Programming (4 Credits)
Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems.
ENCE 4250 Advanced Hardware Description Language (HDL) Modeling and Synthesis (4 Credits)
This course covers advanced concepts in Hardware Description and Language (HDL) modeling and Synthesis. It covers topics including but not limited to digital system design, simulation, and synthesis using Verilog HDL and VHDL. The course also covers RTL design, behavioral description, system Verilog, and timing analysis using CAD tools.

ENCE 4501 Advanced VLSI Design (4 Credits)
Advanced techniques in the fabrication and design of VLSI circuits and systems. Modeling of parasitic components. Floor-planning, clock distribution, routing, and low power design. Cross listed with ENCE 3501. Prerequisite: ENCE 3501 or permission of instructor.

ENCE 4601 Detection and Estimation Theory (4 Credits)
The subject of the detection and estimation theory course is on signal and information processing for the purpose of making desired inferences. The purpose of this course is to provide the fundamentals of theory and principles underlying the techniques for such processing. The following topics are involved in this course: receiver operating characteristics, hypothesis testing, Neyman-Pearson theorem, detection of deterministic signals with known parameters in Gaussian noise, matched filters principles, detection of random signals with known characteristics, estimator-correlator, linear models, estimation bias, variance, Cramer-Rao bounds and Fisher matrix, Bayesian estimation, maximum likelihood estimation, minimum mean-squared estimation, detection of deterministic signals with unknown parameters, signal parameter estimation, Bayesian approach and generalized likelihood ratio test, detection of random signals with unknown characteristics, unknown noise parameters; signal processing applications. Prerequisite: basic understanding of probability theory and statistics, or permission of instructor.

ENCE 4620 Advanced Computer Vision (4 Credits)
This course covers advanced concepts in image processing and computer vision including but not limited to image radiometry and geometric formation, edge detection, geometric based transformations (e.g., image warping and morphing), camera calibration, Epipolar geometry, and stereo feature matching. Other advanced topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice advanced topics in image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 3620. Prerequisite: ENEE 3311.

ENCE 4630 Advanced Pattern Recognition (4 Credits)
This class covers advanced topics in pattern recognition including but not limited to Bayesian decision theory, parametric estimation and supervised learning, linear discriminant functions, nonparametric methods, feature extraction for representation and classification, manifold learning, bag of words, and Support Vector Machines. Cross listed with.

ENCE 4680 Time-Frequency Signal Analysis (4 Credits)
This course focuses on time-frequency signal processing methods. Many TFRs and their usefulness in many applications is covered. Course topics include: signals and signal properties; uncertainty principle. Review of 1-D transforms: Fourier transform (FT), group delay, instantaneous frequency. Desirable properties: linear vs. quadratic TFRs. Linear TFRs: Short-timer Fourier transform (STFT); Wavelet transform; filter banks. Spectrogram: relation to STFT; tradeoff between TF resolution and cross-term attenuation; application examples. Wigner distribution (WD): definition; properties; signal examples; relation to narrowband ambiguity function; cross-term geometry; applications; Smoothed WDs. Scalogram: relation to wavelet transform; properties; TF resolution' applications. Adaptive TFRs: adaptive spectrogram; positive TFRs; short-time techniques; time-frequency distribution series. Reassignment method; matching pursuit algorithms. TFRs in real-world applications: wireless communications, biomedicine, radar, sonar, detection, estimation, classification, speech processing, image processing, structural health monitoring, and many more. Prerequisites: basic knowledge of signal and systems, and digital signal processing, or permission of instructor.

ENCE 4800 Advanced Topics (CPE) (1-5 Credits)
Various topics in computer engineering as announced. May be taken more than once. Cross-listed with ENCE 3321, ENCE 3620.

ENCE 4900 Machine Learning (4 Credits)
This course provides a broad introduction to machine learning. Topics include: supervised learning (linear regression, logistic regression, parametric/ non-parametric, neural networks, support vector machines); unsupervised learning (clustering, dimensionality reduction, kernel methods); anomaly detection and recommender systems. The course also discusses recent applications of machine learning. Recommended prerequisite: basic probability theory and statistics.

ENCE 4991 Independent Study (1-10 Credits)
ENCE 4992 Directed Study (1-10 Credits)
ENCE 4995 Independent Research (1-18 Credits)
ENCE 5995 Independent Research (1-18 Credits)

Engineering, Electrical Courses
ENCE 3011 Physical Electronics (4 Credits)
The basic physical concepts of electronics, electrons and holes in semiconductors, transport and optical processes. Concentration on device concepts, including material synthesis and device processing, P-N junction diodes, junctions with other materials, bipolar transistors, field effect transistors (JFET, MESFET, MOSFET) and optoelectronic effect transistors (JFET, MESFET, MOSFET) and optoelectronic devices (lasers, detectors). Prerequisites: CHEM 1010, CHEM 1610, PHYS 1213, PHYS 1214 or permission of instructor.
ENEE 3111 Signals & Systems (4 Credits)
Introduces continuous time and discrete time linear system analysis, Fourier series, Fourier transforms and Laplace transforms. Specific engineering tools for discrete time linear system analysis include discrete time convolution, Z-transform techniques, discrete Fourier transform and fast Fourier transform (FFT), and the design and analysis of analog and digital filters for real-world signal processing applications. Prerequisites: ENEE 2021, MATH 2070.

ENEE 3141 Digital Communications (3 Credits)
Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels. Prerequisites: ENEE 3111, ENGR 3611 or permission of instructor.

ENEE 3611 Analysis and Design of Antennas and Antenna Arrays (4 Credits)
Maxwell's equations applied to antenna analysis and design. Topics include fundamental parameters of antennas, radiation integrals and auxiliary potential functions, analysis and design of linear wire antennas, loop antennas, arrays, broadband antennas, frequency independent antennas, aperture antennas and horns. Integrated lab included. Prerequisite: ENEE 2611.

ENEE 3620 Optical Fiber Communications (4 Credits)
A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users with a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA) and ultra-fast optical time-division multiplexing (OTDM). Laboratory. Cross listed with ENEE 4620. Prerequisite: ENEE 3030 or permission of instructor.

ENEE 3641 Introduction to Electromagnetic Compatibility (4 Credits)
The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Cross listed with ENEE 4640. Prerequisites: ENEE 3111, ENEE 2611 and ENEE 2223.

ENEE 3670 Introduction to Digital Signal Processing (4 Credits)
Introduction to the theory and applications of Digital Signal Processing. Special attention is paid to the fast Fourier transform and convolution and to the design and implementation of both FIR and IIR digital filters. Prerequisite: ENEE 3111.

ENEE 4030 Optoelectronics (4 Credits)
Optical fibers: structures, waveguiding, and fabrication; attenuation and dispersion; optical sources (LED, LASER, Fiber laser); power launching and coupling, photodetectors (APD, PIN, MSM); and practical optical transmitter and receivers. Cross listed with ENEE 3030.

ENEE 4035 Nanophotonics (4 Credits)
Nanophotonics provides high-speed, high-bandwidth, and ultra-small optoelectronic components. This course covers nanoscale processes, devices and their applications for harnessing and manipulating light on the nanoscale.

ENEE 4141 Digital Communications (4 Credits)
Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels.

ENEE 4310 Information Theory and Coding (3 Credits)
Information and entropy; coding theory; error detection, correction codes; channel capacity; application to communications engineering.

ENEE 4416 Advanced Digital Signal Processing Topics (4 Credits)
Study of linear discrete-time systems used to perform operation on random processes for the purposes of signal detection, estimation, spectral estimation, enhancement and parametric modeling of signals and systems, linear difference equations, Z-transforms, random sequences, state variables, matched filtering, Wiener filtering. Prerequisite: ENEE 3670.

ENEE 4460 Real-Time Digital Signal Processing (4 Credits)
Digital signal processing algorithms and processing of discrete data, finite word length effects on filters, fixed point arithmetic and floating-point arithmetic. Overview of different architectures of digital signal processors. Programming of the DSP processor, implementation of DSP algorithms on DSP hardware in labs. Prerequisite: ENEE 3111, ENEE 3670, or ENCE 3210.

ENEE 4620 Adv Optical Fiber Comm (4 Credits)
A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users who have a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA), and ultra-fast optical time division multiplexing (OTDM). Advanced Project. Cross listed with ENEE 3620. Prerequisite: instructor permission.
ENEE 4625 Radio over Fiber Comms. (4 Credits)
This course provides comprehensive and technical foundation in Microwave photonic Applications: Radio over optical fiber communications (RoF) is a novel technology in the field of short-range communication applications. The main goal is to enable range extension of 1 to 3 orders of magnitude over a typical ultra wideband radio signal in the range of 3.1-10.6 GHz. This technology allows separation of low cost Base-Station (BS)s from the Central-Station (CS). In the RoF technology is targeting the Personal Area Network (PAN) market that is characterized by very low cost and low power (10 uW) access point. In RoF, the optical fiber is used to carry extremely wide RF signals (several GHz).

ENEE 4630 Optical Networking (4 Credits)
This course provides a technical overview of optical networking. It gives students a solid understanding of optical networking field principles and practice. Underlying principles are reviewed along with common optical solutions and practices. It explains and provides practical tips on how to design and implement Networks. Examples are used to demonstrate key concepts of ATM, SONET/SDH and DWDM implementation. Prerequisite: ENEE 3011 or instructor approval.

ENEE 4635 Optical Wireless Communications (OWC) (4 Credits)
This course addresses describing important issues in optical wireless theory, including coding and modulation techniques for optical wireless, wireless optical CDMA communication systems, Optical MIMO systems and optical wireless technology such as visible light communications, IR links and sensor networks. Project in OWC. No prerequisite.

ENEE 4640 Electromagnetic Compatibility (4 Credits)
The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include: Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Final Project. Cross listed with ENEE 3641.

ENEE 4650 Radio Frequency Design in the Wireless World (4 Credits)
Topics include the following: basic concepts in Radio Frequency design and communications, transceiver architectures, low-noise amplifiers, mixers, oscillators, phase-locked loops, power amplifiers, and transceiver design examples. Final Project. Prerequisites: ENEE 2611, ENEE 2222, and ENEE 3111 or equivalents.

ENEE 4800 Advanced Topics (EE) (1-5 Credits)
Various advanced topics in electrical engineering as announced. May be taken more than once. Cross-listed with ENEE 3035.

ENEE 4991 Independent Study (1-10 Credits)

ENEE 4992 Directed Study (1-10 Credits)

ENEE 4995 Independent Research (1-16 Credits)

ENEE 6991 Ph.D Independent Study (1-10 Credits)

ENEE 6995 Ph.D Independent Research (1-16 Credits)

Engineering
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Phone: 303-871-2107
Email: mmeinfo@du.edu
Web Site: ritchieschool.du.edu/departments/mme/

Master's and Doctoral Degrees
Why study engineering at the University of Denver?
The University of Denver's Department of Mechanical and Materials Engineering (MME) is creating the future of technology by providing a graduate education emphasizing cross-disciplinary knowledge. A distinguished faculty is creating multidisciplinary education and research programs that anticipate technological trends in research and industry. Engineering graduate students join the faculty in conducting cutting-edge research in emerging disciplines to develop unique solutions to old and new problems and opportunities.

The well-equipped laboratories in the department contain state-of-the-art equipment and software to support research in biomedical engineering, advanced materials, atmospheric aerosol science, and mechanical design among others. Small classes support our multidisciplinary and real-time focus by providing close contact between students and faculty, which allows us to meet students’ individual career goals.

Recognizing the different aims and goals of students, we offer joint degree programs in management and engineering for students who wish to add to their technical skills and acquire business skills. The general engineering graduate student can choose courses from mechanical engineering, electrical engineering, computer engineering, computer science, nanoscale science and engineering, materials science, and bioengineering.

Denver is a first-rate location for business, governmental and laboratory partnerships, and technology employment. The Colorado Front Range is consistently rated as one of the top high tech areas in the country, and the University of Denver is located just minutes from the Denver Technological Center, site of many top technology companies. The Department of Mechanical and Materials Engineering is committed to active collaboration with
these industry leaders. As a result, our students graduate with relevant research experience and a network of employment contacts in the technology sector.

**Time Commitment**

Our department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. Many employers will permit additional flexibility by releasing employees early to attend classes.

The master's program offers thesis and non-thesis options and can be completed in one (non-thesis track only) to four years depending on the number of courses taken per quarter. The choice of thesis or non-thesis can be made at any time, although a delay in declaration may impact the completion date.

The doctoral program is generally completed in three to seven years, depending on the number of courses taken per quarter and whether the student enters with a BS or MS.

A student not interested in pursuing a degree, but interested in taking an occasional course, may register as a special status student by following an abbreviated admissions process. If at a later time the student chooses to enter a graduate degree program at DU, you may apply up to 15 special status credits to your degree, with departmental approval. Just follow the regular graduate application requirements, including submitting the application fee, to get started.

**Degree Programs**

The following are our general engineering degrees. Please see the Mechanical and Materials Engineering Programs for our other graduate engineering degrees.

- Master of Science in Engineering (MS ENGE)
- Master of Science in Engineering with a Concentration in Engineering Management (MS ENGE (CM))
- Doctor of Philosophy in Engineering (PhD ENME)

**Doctor of Philosophy in Engineering**

The objective of the Doctor of Philosophy in Engineering (PhD ENGE) program is to provide an educational environment that encourages students to develop the ability to contribute to the advancement of science, engineering, and technology through independent research. The PhD students of the 21st century may pursue academic, research, entrepreneurial and/or industrial careers. Individualized plans of study are based on students’ previous experience and desired research areas. The plan of study allows students to work on interdisciplinary research, while also satisfying the PhD in engineering degree requirements.

The interdisciplinary Engineering PhD program offers opportunities for a student to develop a plan of study combining engineering and a complementary discipline (e.g. natural sciences). In the plan of study, coursework in the complementary discipline can be included up to the maximum number of technical elective credits. The student’s plan of study must be approved by the PhD committee and the department chair. When the student is completing research and coursework in a complementary discipline, the student’s PhD committee must include a faculty member from the related department or division/school.

For a part-time student who is working in an industry position, a topic related to the job function may be acceptable as the dissertation research topic. Furthermore, a student may request for a qualified staff member at the place of employment to serve as a special committee member on the dissertation committee.

**Master of Science in Engineering**

The Master of Science in Engineering (MS ENGE) is designed to advance the knowledge of students in areas differing from those in which they received their bachelor's degree. The program is particularly intended for students with bachelor's degrees in the natural sciences, mathematics, computer science or engineering who are making a change of discipline or wanting to develop expertise in an engineering area, often one that is of emerging importance or interdisciplinary in nature. The program combines a solid background in an area of engineering with a distinctly personal specialization. It enables the student to focus on a particular area of engineering, while providing breadth through its technical elective requirement addressing the student’s specific interests.

A Master of Science in Engineering with a concentration in Management (CM) is also offered (see below). These engineering and management courses are focused on developing core knowledge and competencies in innovation and entrepreneurship, and providing concrete tools to successfully translate ideas and initiative into marketplace success.

**Master of Science in Engineering with a Concentration in Engineering Management**

The degree of Master of Science in Engineering allows students to pursue a concentration in engineering management (MS ENGE (CM)). This is an engineering degree with both engineering and management focuses. The concentration in engineering management is designed to meet the increasing needs of students to enhance their career opportunities as managers or as entrepreneurs by supplementing advanced engineering knowledge with a fundamental understanding of business principles within the context of technology enterprises. Drawing upon the strengths of both
RSECS and the Daniels College of Business, the program provides the relevant content for graduates to lead technology enterprises. Candidates for the degree of master of science with a concentration in management will be on the non-thesis track only.

**Doctor of Philosophy in Engineering**

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

**Prerequisites:**
- Students with a master’s degree in Engineering or closely related areas may apply for the PhD program in Engineering (ENGR). Admission with only a Bachelor of Science degree in this field is also possible, but such students are encouraged to enroll first in the MS ENGR program. Note that although not an admission requirement, students who are not adequately prepared to succeed in our graduate level courses may choose to complete prerequisite undergraduate courses.

**Standardized Test Scores/Other Requirements**
- We recommend PhD applicants contact faculty to find a research advisor BEFORE submitting the application. If we receive an application and there is no research advisor commitment, we will consider the applicant for the master’s program only.
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Engineering program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

**Doctor of Philosophy in Engineering - Lockheed Employees Only**

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

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
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Master of Science in Engineering with a Concentration in Engineering Management

Degree and GPA Requirements

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

Prerequisites:

- Students with a bachelor's degree in Engineering, Mathematics, Chemistry, Biology or Physics is normally required for admission to the MS Engineering with or without the concentration in Management (ENGR/ENGR CM) programs. Note that although not an admission requirement, students who are not adequately prepared to succeed in our graduate level courses may choose to complete prerequisite undergraduate courses.

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842. The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Engineering program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Engineering with a Concentration in Engineering Management - Lockheed Employees Only

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Engineering program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Doctor of Philosophy in Engineering

Program Requirements
Exam Structure:

1. Each student must pass the qualifying exam to continue in the PhD program. In consultation with the advisor, students should expect to take the qualifying exam about one year (24 credits) into their academic study. Students must take exams in three subject areas. The Design exam is required for all participants, and is an open-book exam, where the student will have one week to prepare a written and oral response to an open-ended design problem. The other two exams are closed-book, written exams and should be related to the student’s research area. The exam is offered twice a year: once in the summer interterm (usually in June) and once in the winter interterm (usually in December or early January). The qualifying exam can be retaken only once, and must be completed within one year after the first qualifying comprehensive exam was attempted.

2. After completion of the qualifying exam and coursework, the student should schedule and take the comprehensive exam attended by the student’s PhD committee. The student will be expected to make a concise presentation on his/her dissertation topic. The presentation will highlight previous work in this area, demonstrate a need for the research, and explain how the research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. The comprehensive exam can be retaken only once.

3. After successful completion of the qualifying exam and the comprehensive exam, the student is required to complete and defend a dissertation of publishable quality based on the student’s original research. The dissertation must be completed in written form in accordance with the University’s guidelines, and must be defended by the student in the final oral defense. The defense committee members will consist of the student’s entire PhD committee. The dissertation defense can be retaken only once.

PhD Residence Requirement

Enrollment in at least six quarters, including two consecutive quarters of full-time attendance is required for graduation.

PhD Students with a Bachelor of Science Degree

Program Structure

1. For students entering with a bachelor’s degree, 90 credits are required, at least 75 of which must be completed at the University of Denver.
2. A minimum of 48 credits must be at the 4000- or 5000-level and may include as many dissertation research credits as considered appropriate by the advisor.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University.
7. Students must complete all requirements for the doctoral degree no later than eight years after doctoral studies begin.

Course Requirements:

1. Candidates who hold only a bachelor’s degree on entering the doctoral program are expected to meet all degree requirements of the corresponding master’s degree program (as part of the doctoral requirements).
2. Students are required to take ENME 4950 Graduate Assessment in the last quarter of study. NOTE: Students are required to complete a written self-reflection on their dissertation and upload the report to Assess-It along with dissertation, defense presentation slides, and the completed and signed degree program plan before graduation.
3. PhD students who enter the program with a bachelor’s are required to take ENME 4900 Graduate Professional Development in the first year (this is offered once a year; usually in winter quarter).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENME 4900</td>
<td>Grad Professional Development (Graduate Professional Development)</td>
<td>1</td>
</tr>
<tr>
<td>ENME 4950</td>
<td>Graduate Assessment (Graduate Assessment)</td>
<td>0</td>
</tr>
</tbody>
</table>

**Mechanical Engineering Core Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 3630</td>
<td>Finite Element Methods</td>
<td>4</td>
</tr>
<tr>
<td>ENME 3545</td>
<td>Mechanisms</td>
<td>4</td>
</tr>
<tr>
<td>ENME 3651</td>
<td>Computational Fluid Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4020</td>
<td>Adv Finite Element Analysis</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4520</td>
<td>Intermediate Dynamics (Intermediate Dynamics)</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4541</td>
<td>Advanced Mechanics of Materials (Advanced Mechanics of Materials)</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4630</td>
<td>Viscous Flow (Viscous Flow)</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4670</td>
<td>Advanced Computational Fluid Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4800</td>
<td>Advanced Topics (ME) (Convective Heat Transfer)</td>
<td>4</td>
</tr>
</tbody>
</table>
Bioengineering Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENBI 4500</td>
<td>Biofluids</td>
<td>4</td>
</tr>
<tr>
<td>ENBI 4510</td>
<td>Biomechanics</td>
<td>4</td>
</tr>
<tr>
<td>ENBI 4520</td>
<td>Introduction to Cardiovascular Engineering (Intro to Cardiovascular Engineering)</td>
<td>4</td>
</tr>
<tr>
<td>ENBI 4800</td>
<td>Adv Topics (Bioengineering) (Computational Biomechanics)</td>
<td>4</td>
</tr>
</tbody>
</table>

Materials Science Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 4200</td>
<td>Introduction to Nanotechnology</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4400</td>
<td>Fatigue</td>
<td>4</td>
</tr>
<tr>
<td>MTSC 4010</td>
<td>Mechanical Behavior of Materials</td>
<td>4</td>
</tr>
<tr>
<td>MTSC 4020</td>
<td>Composite Materials I</td>
<td>4</td>
</tr>
<tr>
<td>MTSC 4215</td>
<td>Composite Materials II</td>
<td>4</td>
</tr>
<tr>
<td>MTSC 4450</td>
<td>Fracture Mechanics</td>
<td>4</td>
</tr>
</tbody>
</table>

Electrical & Computer Engineering - Any 4XXX level ENEE or ENCE course

Advanced Math Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 3620</td>
<td>Advanced Engineering Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4300</td>
<td>Advanced Numerical Methods (Advanced Numerical Methods)</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4350</td>
<td>Reliability</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4620</td>
<td>Optimization</td>
<td>4</td>
</tr>
</tbody>
</table>

PhD Students with a Master of Science

1. A minimum of 36 credits must be completed at the 4000- or 5000-level, which may include as many research credits as considered appropriate by the advisor.
2. For students entering with a master’s degree, up to 45 credits may be transferred and applied to the doctorate degree. In addition, a minimum of 45 credits must be completed at DU. The total number of credits required for the degree is 90.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. A student who holds a master’s degree on entering the doctoral program is expected to complete all requirements for the degree no later than seven years after beginning the program.

Course Requirements:

1. Students are required to take ENME 4950 Graduate Assessment in the last quarter of study. **NOTE**: Students are required to complete a written self-reflection on their dissertation and upload the report to Assess-It along with dissertation, defense presentation slides, and the completed and signed degree program plan before graduation.

2. If a PhD student fails his/her qualifying exam on the first try, he/she will be required to take ENME 4900 Graduate Professional Development as well. ENME 4900 will be offered once a year, usually in winter quarter.

Master of Science in Engineering

Program Structure (non-management)

1. Every candidate for this degree must complete 45 credits, at least 36 of which must be completed at the University of Denver.
2. A minimum of six 4000-level courses of at least three credits each are required for non-thesis track; four 4000-level courses of at least three credits each are required for thesis track.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 45 credits and are still working on a thesis or project are eligible for Continuous Enrollment to maintain active student status at the University.
7. Master’s degree candidates are expected to complete degree requirements no later than five years after beginning their programs. These programs are designed to be completed in about six quarters if two courses (eight credits) are taken each quarter.

Course Requirements

1. **Core Courses**: a minimum of nine credits (two courses from ENME, MTSC, ENBI or ECE Core Course List; no more than one course from a single discipline) plus the required courses.
2. **Required Courses**: All master’s students are required to take ENME 4900 *Graduate Professional Development* in the first year (this will be offered once a year; usually in winter quarter) and ENME 4950 *Graduate Assessment* in the last quarter of study. **NOTE**: Students on the **thesis track** are required to complete a written self-reflection on their thesis and upload the report to Assessment.du.edu along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation. Students on the **non-thesis track** are required to upload to Assessment.du.edu an assembled portfolio that includes reports from at least two course projects or homework from the core courses, a mini-proposal and presentation slides from ENME 4950 along with the completed and signed degree program plan.

3. **Technical Electives**: a minimum of 16 credits for thesis track and 28 credits for non-thesis track. These do not include independent research credits.
   a. Technical electives must be in engineering (bioengineering, mechanical engineering, materials science, etc.) or related areas (mathematics, computer science, physics, chemistry, etc.) and are at the advisor’s discretion. 50% or more of the technical elective credits must be in engineering.
   b. A student may take one business/management course as a technical elective. Special permission should be obtained in writing from the advisor **PRIOR TO REGISTRATION** if more than one business/management course is taken.

4. **Advanced Math Requirement**: a minimum of three credits for thesis track and six credits for non-thesis track from the Core Course List or advisor approval.

5. **Thesis Hours**: not allowed for non-thesis track.

6. **Tool Requirement**: As employers of graduates of this degree will inherently expect a basic competency in foundational engineering skills, students must demonstrate these before advancing to candidacy. Candidates with BS degrees from accredited engineering schools, or students completing a thesis, will be exempt from the tool requirement. Candidates with undergraduate degrees from non-engineering majors and completing a non-thesis MS will be required to pass a tool requirement. This will consist of an exam based on the topics in the Fundamentals of Engineering General Exam.

**MS ENGE Thesis/Non-thesis Minimum Credit Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Thesis</th>
<th>Non-Thesis</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>9</td>
<td>9</td>
<td>NA</td>
</tr>
<tr>
<td>Technical Electives</td>
<td>16</td>
<td>28</td>
<td>NA</td>
</tr>
<tr>
<td>Advanced Math</td>
<td>3</td>
<td>6</td>
<td>NA</td>
</tr>
<tr>
<td>Thesis</td>
<td>0</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Total Credits Required</td>
<td>45</td>
<td>45</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Code** | **Title** | **Credits**
--- | --- | ---
ENME 4900 | Grad Professional Development (Graduate Professional Development) | 1
ENME 4950 | Graduate Assessment (Graduate Assessment) | 0
ENGR 3630 | Finite Element Methods | 4
ENME 3545 | Mechanisms | 4
ENME 3651 | Computational Fluid Dynamics | 4
ENME 4020 | Adv Finite Element Analysis | 4
ENME 4520 | Intermediate Dynamics (Intermediate Dynamics) | 4
ENME 4541 | Advanced Mechanics of Materials (Advanced Mechanics of Materials) | 4
ENME 4630 | Viscous Flow (Viscous Flow) | 4
ENME 4670 | Advanced Computational Fluid Dynamics | 4
ENME 4800 | Advanced Topics (ME) (Convective Heat Transfer) | 4
ENBI 4500 | Biofluids | 4
ENBI 4510 | Biomechanics | 4
ENBI 4520 | Introduction to Cardiovascular Engineering (Intro to Cardiovascular Engineering) | 4
ENBI 4800 | Adv Topics (Bioengineering) (Computational Biomechanics) | 4
ENGR 4200 | Introduction to Nanotechnology | 4
ENME 4400 | Fatigue | 4
MTSC 4010 | Mechanical Behavior of Materials | 4
MTSC 4020 | Composite Materials I | 4
MTSC 4215 | Composite Materials II | 4

**Materials Science Core Courses**

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Master of Science in Engineering with a Concentration in Engineering Management

Program Structure (management focus)

1. Every candidate for this degree must complete 45 credits, at least 36 of which must be completed at the University of Denver.
2. A minimum of six 4000-level courses of at least three credits each are required for non-thesis track; four 4000-level courses of at least three credits each are required for thesis track. No courses at the 1000- or 2000-level are acceptable.
3. An overall GPA of 3.0 is required for the degree.
4. Any individual grade lower than C- renders the credit unacceptable.
5. Students who have completed the required 45 credits and are still working on a thesis or project are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
6. Master's degree candidates are expected to complete degree requirements no later than five years after beginning their programs.

Course Requirements:

1. **Core Courses**: a minimum of nine credits (one course from ENME, ENBI, MTSC or ECE Core Course List AND one course from Management Concentration Core Course List) plus required courses.
2. **Required Courses**: All master's students are required to take ENME 4900 Graduate Professional Development in the first year (this will be offered once a year; usually in winter quarter) and ENME 4950 Graduate Assessment in the last quarter of study. **NOTE**: Students on this non-thesis track are required to upload to Assessment.du.edu an assembled portfolio that includes reports from at least two course projects or homework from the core courses, a mini-proposal and presentation slides from ENME 4900, along with the completed and signed degree program plan.
3. **Technical Electives**: a minimum of 16 credits should be selected from ENME, ENBI, MTSC or ECE Core Course List.
4. **Management Electives**: a minimum of 12 credits should be selected from the following provided all prerequisites are met: any 4XXX level ACTG, CMGT, FIN, INFO, INFOR, MGNT, MKTG or REAL courses. These management electives are in addition to the management core credit requirement.
5. **Advanced Math Requirement**:a minimum of three credits from Core Course List or advisor approval.
6. **Tool Requirement**: As employers of graduates of this degree will inherently expect a basic competency in foundational engineering skills, students must demonstrate these before advancing to candidacy. Candidates with BS degrees from accredited engineering schools, or students completing a thesis, will be exempt from the tool requirement. Candidates with undergraduate degrees from non-engineering majors and completing a non-thesis MS will be required to pass a tool requirement. This will consist of an exam based on the topics in the Fundamentals of Engineering General Exam.

MS ENGE with a Concentration in Engineering Management **Minimum** Credit Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Thesis</th>
<th>Non-Thesis</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>NA</td>
<td>NA</td>
<td>9</td>
</tr>
<tr>
<td>Technical Electives</td>
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<td>NA</td>
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<tr>
<td>Management Electives</td>
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<td>NA</td>
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</tr>
<tr>
<td>Advanced Math</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Total Credits Required</td>
<td>NA</td>
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<table>
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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ENME 4900</td>
<td>Grad Professional Development (Graduate Professional Development)</td>
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</tr>
<tr>
<td>ENME 4950</td>
<td>Graduate Assessment (Graduate Assessment)</td>
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</tr>
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</table>

**Concentration in Management Core Courses - see note 4 above**

**Mechanical Engineering Core Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ENGR 3630</td>
<td>Finite Element Methods</td>
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</tr>
<tr>
<td>ENGR 3545</td>
<td>Mechanisms</td>
<td>4</td>
</tr>
<tr>
<td>ENME 3651</td>
<td>Computational Fluid Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4020</td>
<td>Adv Finite Element Analysis</td>
<td>4</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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</tr>
<tr>
<td>ENME 4520</td>
<td>Intermediate Dynamics (Intermediate Dynamics)</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4541</td>
<td>Advanced Mechanics of Materials (Advanced Mechanics of Materials)</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4630</td>
<td>Viscous Flow (Viscous Flow)</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4670</td>
<td>Advanced Computational Fluid Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4800</td>
<td>Advanced Topics (ME) (Convective Heat Transfer)</td>
<td>4</td>
</tr>
<tr>
<td>ENME 4541</td>
<td>Advanced Mechanics of Materials (Advanced Mechanics of Materials)</td>
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Bioengineering Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENBI 4500</td>
<td>Biofluids</td>
<td>4</td>
</tr>
<tr>
<td>ENBI 4510</td>
<td>Biomechanics</td>
<td>4</td>
</tr>
<tr>
<td>ENBI 4520</td>
<td>Introduction to Cardiovascular Engineering (Intro to Cardiovascular Engineering)</td>
<td>4</td>
</tr>
<tr>
<td>ENBI 4800</td>
<td>Adv Topics (Bioengineering) (Computational Biomechanics)</td>
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Materials Science Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 4200</td>
<td>Introduction to Nanotechnology</td>
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</tr>
<tr>
<td>ENME 4400</td>
<td>Fatigue</td>
<td>4</td>
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<tr>
<td>MTSC 4010</td>
<td>Mechanical Behavior of Materials</td>
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<tr>
<td>MTSC 4020</td>
<td>Composite Materials I</td>
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<tr>
<td>MTSC 4215</td>
<td>Composite Materials II</td>
<td>4</td>
</tr>
<tr>
<td>MTSC 4450</td>
<td>Fracture Mechanics</td>
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</tbody>
</table>

Electrical & Computer Engineering - Any 4XXX level ENEE or ENCE course

Advanced Math Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 3620</td>
<td>Advanced Engineering Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4300</td>
<td>Advanced Numerical Methods (Advanced Numerical Methods)</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4350</td>
<td>Reliability</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 4620</td>
<td>Optimization</td>
<td>4</td>
</tr>
</tbody>
</table>

Engineering, Bio Courses

ENBI 4500 Biofluids (4 Credits)
The application of fluid dynamics theory and design to problems within the biomedical community. Specific topics covered include the mechanics of inhaled therapeutic aerosols, basic theory of circulation and blood flow, foundations in biotechnology and bioprocessing, and controlled drug delivery. Cross listed with ENBI 3500.

ENBI 4510 Biomechanics (4 Credits)
An introduction to the mechanical behavior of biological tissues and systems. Specific topics covered include: Analysis of the human musculoskeletal system as sensors, levers, and actuators; Joint articulations and their mechanical equivalents; Kinematic and kinetic analysis of human motion; Introduction to modeling human body segments and active muscle loading for analysis of dynamic activities; Mechanical properties of hard and soft tissues; Mechanical and biological consideration for repair and replacement of soft and hard tissue and joints; Orthopedic implants. Cross listed with ENBI 3510.

ENBI 4520 Introduction to Cardiovascular Engineering (4 Credits)
An introduction to cardiovascular mechanics with a focus on the quantitative understanding of the mechanical phenomena that governs the cardiovascular system. Specific topics covered include: basic principles of circulation including macro and micro circulation, soft tissue mechanics, applications to cardiovascular diseases, modelling techniques, clinical and experimental methods, and design of cardiovascular devices. Recommended prerequisites: ENME 2541 and ENME 2661.

ENBI 4800 Adv Topics (Bioengineering) (1-5 Credits)
Various topics in Bioengineering as announced. May be taken more than once. Prerequisite: varies with offering.

ENBI 4991 Independent Study (1-5 Credits)
ENBI 4992 Directed Study (1-5 Credits)
ENBI 4995 Independent Research (1-18 Credits)

Engineering, Mechanical Courses

ENME 3511 Machine Design (3 Credits)
Application of statics, dynamics, mechanics of materials and manufacturing processes to the design of machine elements and systems. Properties of materials and design criteria. Synthesis and analysis of a machine design project. Prerequisites: ENME 2530 and ENME 2541.

ENME 3545 Mechanisms (4 Credits)
Synthesis, analysis and use of mechanisms. Mechanisms studied include cams, gears and planar linkages, with an emphasis on planar linkages. Prerequisites: ENME 2530 and ENGR 1572.
ENME 3651 Computational Fluid Dynamics (4 Credits)
This course introduces principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer or two phase flow. The conservation equations, their discretations and solutions, are presented. Convergence and validity of solutions along with computational efficiency are explored. Students learn to apply these techniques using the latest software packages. Prerequisites: ENME 2671.

ENME 3661 Mechanical Energy Systems Engineering (4 Credits)
This course covers energy systems engineering analysis from a mechanical and materials engineering perspective. This course covers energy production from traditional energy systems that use fossil fuel combustion such as internal combustion engines, coal-fired plants, and natural gas turbines, to nuclear energy and renewable energy methods such as wind, solar, hydraulic, and geothermal. Lastly, the course will cover emerging technologies for future (21st century) energy systems. Students should have taken at least minimum Thermodynamics, Dynamics, and Fluid Dynamics courses. Prerequisites: ENME 2720, ENME 2510, ENME 2651.

ENME 3720 Introduction to Aerospace Engineering (4 Credits)
This course provides an introduction to aerospace engineering analysis and design. In the atmospheric domain, the basics of aerodynamics are covered, followed by flight mechanics. The approach is from a practical perspective in which analysis and design are intertwined. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

ENME 3810 Mechanical Engineering Capstone Laboratory (3 Credits)
This course is the capstone mechanical engineering laboratory course requiring independent experimental design by student teams. Using experimental equipment available in heat transfer, fluid mechanics, solid mechanics, thermodynamics, and measurement and control, the student team is required to design experiments to solve given problems which will be unique to each team. This course encourages students to develop experimental design and research techniques while continuing to improve skills in fundamental lab notebook keeping, uncertainty analysis in measurements, data acquisition, data analysis, report writing, oral presentations, and laboratory safety and procedures. Prerequisite: ENME 2810.

ENME 4020 Adv Finite Element Analysis (4 Credits)
ENME 4310 Computational Methods for Mechanics and Materials (4 Credits)
An introductory course for the general-purpose computational methods in advanced multiscale materials and mechanics. Students learn the fundamentals on the numerical methods used in mechanical and materials engineering. Cross listed with ENME 3310.

ENME 4360 Elasticity (4 Credits)
Students will be able to apply the fundamental principles of elasticity to solve two- and three-dimensional mechanical engineering problems involved in modern applications of elastic structures, composite materials, tribology and contact mechanics. Dependence on previous knowledge of solid mechanics, continuum mechanics or mathematics is minimized. The emphasis is placed on the engineering applications of elasticity. Suggested prerequisite: ENME 2541.

ENME 4400 Fatigue (4 Credits)
A detailed overview of fatigue. Topics include: stress life and strain life approaches, fracture mechanics, constant amplitude and spectrum loading, life prediction, fatigue at notches, microstructural effects, environmentally assisted fatigue, retardation and acceleration, multi-axial fatigue, design against fatigue and reliability. Cross listed with ENME 3400.

ENME 4520 Intermediate Dynamics (4 Credits)
Development and analysis of dynamic systems through classical and modern approaches. Topics include: reference frames, particle kinematics, Newtonian particle mechanics, Phase Portraits, rigid-body kinematics, Euler’s laws, Lagrange’s Equations, Lagrange Multipliers, and Kane’s Equations. Recommended prerequisites: MATH 2070 and MATH 2080.

ENME 4541 Advanced Mechanics of Materials (4 Credits)
This is a second-level course in mechanics of materials with an emphasis on techniques that are useful for mechanical design. Topics may include energy methods, non-symmetrical and nonlinear bending, shear and torsion of closed and open sections, beams in elastic foundations, membrane stress in axisymmetric shells, axisymmetric bending of cylindrical shells, thick-walled cylinders and disks, curved beams, and elastic stability. Recommended prerequisite: ENME 2541.

ENME 4630 Viscous Flow (4 Credits)
Course covers the fundamentals of fluid mechanics from an advanced point of view with emphasis on the mathematical treatment of viscous-flow phenomena. Topics cover the Navier-Stokes equations and its exact and similarity solutions, laminar boundary layer theory, free-shear flows, and the phenomena of instability and transition to turbulence. Recommended prerequisite: ENME 2661.

ENME 4650 Adv. Fluid Dynamics (4 Credits)
Physical properties of liquids and gases; turbulence and closure models; surface waves and instabilities; non-Newtonian fluid behavior; conformal mapping and airfoil theory.

ENME 4660 Micro Heat Exchangers (4 Credits)
Explores the advance principles and applications of fluid dynamics and heat transfer through the application to micro fluidic heat exchanger design and optimization. Students utilize Mathcad extensively to seek optimized exchanger performance within a clearly defined design space. Students also build small scale heat exchangers from their optimized designs. Prerequisite: ENME 2671.
ENME 4670 Advanced Computational Fluid Dynamics (4 Credits)
Building on the principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer and two phase flow. Specifically, Monte Carlo and volume of fluid techniques are discussed at length. Additionally, students learn how to set up automated design optimization using the latest software packages. Time permitting, students also are introduced to fluid-solid interaction modeling. Prerequisite: ENME 3651.

ENME 4671 Convective Heat Transfer (4 Credits)
The objective of this course is to examine the physical phenomena associated with heat transfer in the presence of fluid flow. We will develop a mathematical description of the processes (fluid flow and heat transfer) for laminar and turbulent flows for both internal and external situations. Exposure to the fundamentals of fluid mechanics and heat transfer is expected before taking this course.

ENME 4800 Advanced Topics (ME) (0-5 Credits)
Determined by interest and demand. May be taken more than once for credit.

ENME 4900 Grad Professional Development (1 Credit)
This course is required for all MME MS graduate students and all MME PhD graduate students who enter with a BS or enter with an MS but fail their first qualifying exam. One of our objectives is for all graduating students to have good written and verbal communication skills. This course is set up to meet those objectives. During this course, students write a mini-proposal and/or literature review. Students follow guidelines for a funding agency (e.g. NSF or NIH) for the mini-proposal. If students have a research advisor, students can coordinate with their advisor. If students do not have a research advisor, students may pick a topic that most interests them. Both a written proposal and an oral presentation are required of all students. Graduate standing is required.

ENME 4950 Graduate Assessment (0 Credits)
This graduate assessment course is required for all MME graduate students to be taken in their last quarter. All required assessment materials are uploaded to DU Assessment to meet the course requirements. Students will receive emails through the DU Assessment system notifying you of what is required to be uploaded.

ENME 4991 Independent Study (1-10 Credits)
ENME 4992 Directed Study (1-10 Credits)
ENME 4995 Independent Research (1-16 Credits)
ENME 5991 Independent Study (1-10 Credits)
ENME 5995 Independent Research (1-16 Credits)

Engineering Courses
ENGR 3210 Intro Nano-Electro-Mechanics (4 Credits)
Familiarize science and engineering students with the electromechanical aspects of the emerging field of Nanotechnology (NEMS). NEMS is a relatively new and highly multidisciplinary field of science and technology with applications to state of the art and future sensors, actuators, and electronics. Starting with an overview of nanotechnology and discussion on the shifts in the electromechanical behavior and transduction mechanisms when scaling the physical dimensions from centimeters to micro-meters and then down to nanometers. Several electromechanical transduction mechanisms at the micro and nanoscale are presented and discussed in an application based context. New electromechanical interactions appearing in the nano and molecular scale, such as intra-molecular forces and molecular motors, are discussed. A detailed discussion and overview of nanofabrication technologies and approaches are also provided. Cross listed with ENGR 4210. Prerequisite: must be an engineering or science major of at least junior standing.

ENGR 3340 Product Development and Market Feasibility (4 Credits)
In this course, students gain knowledge of designing products for market success by developing a product and optimizing its design for specific mass manufacturing technologies. Students gain experience through the design development process including market feasibility research, human-centered design, brainstorming and ideating new concepts, refinement through design iteration, and constructing alpha and beta prototypes that are designed with mass manufacturing considerations. Projects are based upon real world new product development principles. Students learn and practice the fundamentals of design thinking, design process, and entrepreneurship.

ENGR 3510 Renewable and Efficient Power and Energy Systems (4 Credits)
This course introduces the current and future sustainable electrical power systems. Fundamentals of renewable energy sources and storage systems are discussed. Interfaces of the new sources to the utility grid are covered. Prerequisite: ENEE 2021.

ENGR 3520 Introduction to Power Electronics (4 Credits)
This covers fundamentals of power electronics. We discuss various switching converters topologies. Basic knowledge of Efficiency and small-signal modeling for the DC-DC switching converters is covered. Furthermore, magnetic and filter design are introduced. Prerequisites: ENEE 2211 and ENGR 3722.

ENGR 3525 Power Electronics and Renewable Energy Laboratory (1 Credit)
In this course the fundamentals of switching converters and power electronics in a real laboratory set-up are covered. The course incorporates hardware design, analysis, and simulation of various switching converters as a power processing element for different energy sources. The energy sources are power utility, batteries, and solar panels. Prerequisite: ENGR 3520.
ENGR 3540 Electric Power Systems (4 Credits)
This course covers methods of calculation of a comprehensive idea on the various aspects of power system problems and algorithms for solving these problems. Prerequisite: ENGR 3530.

ENGR 3550 Introduction to Machine Drive Control (4 Credits)
This course provides the basic theory for the analysis and application of adjustable-speed drive systems employing power electronic converters and ac or dc machines. Prerequisites: ENGR 3520 and ENGR 3530.

ENGR 3620 Advanced Engineering Mathematics (4 Credits)

ENGR 3621 Advanced Engineering Mathematics (4 Credits)
Applied mathematics for engineers. Topics include vector spaces, normed vector spaces, inner product spaces, linear transformations, finite-dimensional linear transformations, linear operators, finite-dimensional linear operators, linear differential systems, linear difference systems, orthogonal transformations, amplitude estimation, fundamentals of real and functional analysis, and introduction to partial differential equations, and applications to engineering systems.

ENGR 3630 Finite Element Methods (4 Credits)
Introduction to the use of finite element methods in one or two dimensions with applications to solid and fluid mechanics, heat transfer and electromagnetic fields; projects in one or more of the above areas. Prerequisites: ENME 2541 AND ENGR 1572.

ENGR 3650 Probability and Statistics for Engineers (4 Credits)
This course covers quantitative analysis of uncertainty and decision analysis in engineering. It covers the fundamentals of sample space, probability, random variables (discrete and continuous), joint and marginal distributions, random sampling and point estimation of parameters. It also covers statistical intervals, hypotheses testing and simple linear regression. The course includes applications appropriate to the discipline. Prerequisite: MATH 1953.

ENGR 3721 Controls (3,4 Credits)
Modeling, analysis and design of linear feedback control systems using Laplace transform methods. Techniques and methods used in linear mathematical models of mechanical, electrical, thermal and fluid systems are covered. Feedback control system models, design methods and performance criteria in both time and frequency domains. A linear feedback control system design project is required. Prerequisites: ENEE 2021, ENGR 3610 or permission of instructor.

ENGR 3722 Control Systems Laboratory (1 Credit)
This laboratory course serves as supplement to ENGR 3721. It aims at providing "hands on" experience to students. It includes experiments on inverted pendulum, gyroscopes, motor control, feedback controller design, time-domain and frequency domain. Corequisite: ENGR 3721.

ENGR 3730 Robotics (3 Credits)
Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Cross listed with ENGR 4730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or permission of instructor.

ENGR 3731 Robotics Lab (1 Credit)
Laboratory that complements the analysis, design, modeling and application of robotic manipulators. Implementation of the mathematical structures required to support robot operation. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Corequisite: ENGR 3730 or permission of instructor.

ENGR 3742 LabVIEW Programming, a primer for certification as an Applicaitons Developer (4 Credits)
The LabVIEW course covers numeric, Boolean, and string controls; programming structures include loops, sequences, formula, and case structures. VISA (virtual instrumentation and software structure) and SCPI (standard commands for programmable instruments) are used to control test equipment and acquire data via the GPIB (general purpose interface bus, IEEE488 standard). Vis (virtual instruments) for data acquisition and analysis are developed utilizing mathematical, signal processing, and statistical LabVIEW programming modules. LabVIEW structures will be used to mathematically model and solve second order differential equations and Laplace transforms.

ENGR 3800 Topics (ENGR) (1-4 Credits)
Special topics in engineering as announced. May be taken more than once. Prerequisite: varies with offering.

ENGR 3900 Engineering Internship (0-4 Credits)
Students in engineering may receive elective credit for engineering work performed for engineering employers with the approval of the chair or associate chair of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned. Junior, senior, or graduate status in engineering is normally required. May not be used to satisfy technical requirements. May be taken more than one for a maximum of 6 quarter hours. Prerequisite: permission of instructor.
ENGR 4100 Instrumentation and Data Acquisition (4 Credits)
This course examines different instrumentation techniques and describes how different measurement instruments work. Measurement devices include length, speed, acceleration, force, torque, pressure, sound, flow, temperature, and advanced systems. This course also examines the acquisition, processing, transmission and manipulation of data. Final project or paper. Cross listed with ENGR 3100. Prerequisites: PHYS 1213 OR PHYS 1214.

ENGR 4200 Introduction to Nanotechnology (4 Credits)
The most important recent accomplishments so far in the application of nanotechnology in several disciplines are discussed. Then a brief overview of the most important instrument systems used by nanotechnologists is provided. The nature of nanoparticles, nanoparticle composites, carbon nanostructures, including carbon nanotubes and their composites is subsequently discussed. The course also deals with nanopolymers, nanobiological systems, and nano electronic materials and devices. The issues of modeling of nanomaterials and nanostructures is also covered. Multiscale modeling based on finite element simulations, Monte Carlo methods, molecular dynamics and quantum mechanics calculations are briefly addressed. Most importantly, students should obtain appreciation of developments in nanotechnology outside their present area of expertise. Cross listed with ENGR 3210.

ENGR 4210 Introduction to Nano-Electro-Mechanical-Systems (4 Credits)
This course familiarizes science and engineering students to the electromechanical aspects of the emerging field of Nanotechnology (NEMS). NEMS is a relatively new and highly multidisciplinary field of science and technology with applications in the state of the art and future sensors, actuators, and electronics. This course starts with an overview of nanotechnology and discussion on the shifts in the electromechanical behavior and transduction mechanisms when scaling the physical dimensions from centimeters to micro-meters and then down to nanometers. Several electromechanical transduction mechanisms at the micro and nanoscale are presented and discussed in an application based context. New electromechanical interactions appearing in the nano and molecular scale, such as intra-molecular forces and molecular motors, are discussed. A detailed discussion and overview of nanofabrication technologies and approaches are also provided. Cross listed with ENGR 3210.

ENGR 4215 Nanoscale Electromechanical Systems and Nanofabrication Laboratory (4 Credits)
This course provides science and engineering students with comprehensive hands-on experience in design, fabrication and characterization of Nanoscale Electromechanical Systems (NEMS). This laboratory-based course starts with a number of sessions including brief lectures reviewing the fundamentals and theories followed by pre-designed lab experiments. The students are then provided with a choice of different comprehensive design and implementation projects to be performed during the quarter. The projects include design, layout, fabrication, and characterization of the devices potentially resulting in novel findings and publications.

ENGR 4220 Introduction to Micro-Electro-Mechanical-Systems (4 Credits)
This course introduces students to the multi-disciplinary field of Micro-Electro-Mechanical-Systems (MEMS) technology. MEMS and Microsystem technology is the integration of micro-scale electro-mechanical elements, sensors, actuators, and electronics on a common substrate or platform through semiconductor microfabrication technologies. The course gives a brief overview of the involved physical phenomena, electromechanical transduction mechanisms, design principles, as well as fabrication and manufacturing technologies. Cross listed with ENGR 3220.

ENGR 4300 Advanced Numerical Methods (4 Credits)
Fundamental and advanced numerical methods to approximate mathematical problems for engineering applications using modern software such as Matlab. Topics include numerical differentiation and integration, solution to linear and non-linear equations, ordinary and partial differential equations, and initial, boundary, and eigen value problems. Recommended prerequisite: MATH 2070.

ENGR 4350 Reliability (4 Credits)
An overview of reliability-based design. Topics include: fundamentals of statistics, probability distributions, determining distribution parameters, design for six sigma, Monte Carlo simulation, first and second order reliability methods (FORM, SORM). Most Probable Point (MPP) reliability methods, sensitivity factors, probabilistic design. Cross listed with ENGR 3350.

ENGR 4530 Intro to Power and Energy (4 Credits)
Basic concepts of AC systems, single-phase and three-phase networks, electromechanical energy conversion, electric power generation, transformers, transmission lines, AC machinery, DC motors, and contemporary topics in power and energy conversion. Cross listed with ENGR 3530.

ENGR 4540 Electric Power Economy (4 Credits)
This course covers economy aspects of electric power industry and the implications for power and energy engineering in the market environment. Cross listed with ENGR 3540.

ENGR 4550 Probabilistic Methods in Electric Power Systems (4 Credits)
The course covers techniques for probabilistic power system analysis and design, power system reliability, probabilistic structural design and analysis of transmission lines, analysis and assessment of transmission line reliability, probability-based power system design criteria, probabilistic load-flow studies and probabilistic power system stability. Prerequisites: ENGR 3540 or equivalent; permission of instructor; knowledge of MATLAB/Simulink is required.

ENGR 4560 Power Generation Operation and Control (4 Credits)
This course covers economic dispatch of thermal units and methods of solution; transmission system effects; generate with limited energy supply; production cost models; control of generation; interchange of power and energy; power system security; state estimation in power systems; optimal power flow. Prerequisite: ENGR 4540.
ENGR 4590 Power System Protection (4 Credits)
This course covers methods of calculation of fault currents under different types of fault; circuit breakers, current transformers, potential transformers; basic principles of various types of relays; applications of relays in the protection of generator, transformer, line, and bus, etc. Prerequisite: ENGR 4540.

ENGR 4620 Optimization (3,4 Credits)
Engineering problems will be formulated as different programming problems to show the wide applicability and generality of optimization methods. The development, application, and computational aspects of various optimization techniques will be discussed with engineering examples. The application of nonlinear programming techniques will be emphasized. A design project will be assigned.

ENGR 4730 Introduction to Robotics (4 Credits)
Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinematics. Applications include programming and task planning of a manufacturing robot manipulator. Cross listed with ENGR 3730. Prerequisites: ENGR 2520 and MATH 2060 or MATH 2200 or instructor approval.

ENGR 4735 Linear Systems (4 Credits)
This course focuses on linear system theory in time domain. It emphasizes linear and matrix algebra, numerical matrix algebra and computational issues in solving systems of linear algebraic equations, singular value decomposition, eigenvalue-eigenvector and least-squares problems, linear spaces and linear operator theory. It studies modeling and linearization of multi-input/multi-output dynamic physical systems, state-variable and transfer function matrices, analytical and numerical solutions of systems of differential and difference equations, structural properties of linear dynamic physical systems, including controllability, observability and stability. It covers canonical realizations, linear state-variable feedback controller and asymptotic observer design, and the Kalman filter. Cross listed with ENGR 3735. Prerequisites: ENGR 3610, ENGR 3721/3722, or permission of the instructor.

ENGR 4740 Adaptive Control Systems (4 Credits)
Theoretical and application aspects of robust adaptive control design for uncertain dynamical systems. Topics include: parameter estimation, stability, model reference adaptive systems, self-tuning regulators, gain scheduling, design for robustness against unmodeled dynamics and disturbance signals. Examples will be given from aerospace engineering (changes in the dynamics of aircraft), process control, and robotics. Modern alternatives to traditional adaptive control will be discussed (switching multi-model/multi-controller adaptive schemes). Prerequisites: ENEE 3111, ENGR 3610, and ENGR 3721, or permission of instructor. Familiarity with MATLAB/Simulink.

ENGR 4745 Adv Non-Linear Control System (4 Credits)

ENGR 4750 Networked Control Systems (4 Credits)
Fundamental tools and recent advances in networked control. Topics include the control of multi-agent networks found in multi-vehicle coordination, control of sensor networks, unmanned vehicles, and energy systems. Network models, distributed control and estimation, distributed control under limited communications and sensing, formation control, coverage control in mobile sensor networks. Prerequisites: linear algebra, linear control systems, differential equations, familiarity with MATLAB, or permission of instructor.

ENGR 4755 Optimal Control (4 Credits)
Introduction to optimal control theory (control laws that maximize a specified measure of a dynamical system’s performance). Topics include: optimality conditions and constraints; calculus of variations; review of mathematical programming (Language multipliers, convexity, Kuhn-Tucker theorem); Pontryagin’s maximum principle (constraints, Hamiltonians, bang-bang control); dynamic programming and Linear Quadratic Regulation (Riccati, Hamilton-Jacobi equation). Prerequisites: ENGR 3721 (Controls) and ENGR 3735/4735 (Linear Systems) or equivalent courses.

ENGR 4760 Multivariable Control (4 Credits)
Multivariable aspects of control (systems with multiple actuators and sensors); performance analysis of feedback control systems; sensitivity; robustness and stability margins; disturbance attenuation; design tradeoffs; singular value; characteristic locus. Modern H-infinity control theory and ‘mu’ synthesis-based robust control design techniques. Enforced Prerequisites and Restrictions ENGR 3721 (Controls) and ENGR 4735 (Linear Systems at a graduate level) or equivalents.

ENGR 4810 Advanced Topics (ENGR) (1-5 Credits)

ENGR 4885 Graduate Project for non-Thesis Option Master's Degree (1-4 Credits)
This course is required for all Master of Science graduate students with major in Electrical Engineering, Computer Engineering, and Mechatronic Systems Engineering, who choose the non-thesis option. The student will be supervised by his or her faculty advisor to conduct original and independent research with project topic closely related to the student’s depth requirement of the specialization area. The student will deliver a final comprehensive project report and an oral defense for the project. The examination committee for the Master’s project shall consist of at least two faculty members.
ENGR 4991 Independent Study (1-5 Credits)
ENGR 4992 Directed Study (1-10 Credits)
ENGR 4995 Independent Research (1-16 Credits)
ENGR 5991 Independent Study (1-10 Credits)
ENGR 5995 Independent Research (1-16 Credits)

Materials Science Courses

MTSC 4010 Mechanical Behavior of Materials (4 Credits)
Effects of microstructure on mechanical behavior of material; emphasis on recent developments in materials science, fracture, fatigue, creep, wear, corrosion, stress rupture, deformation and residual stress. Cross listed with MTSC 3010.

MTSC 4020 Composite Materials I (4 Credits)

MTSC 4215 Composite Materials II (4 Credits)
A continuation of MTSC 4210: Strength and toughness of composites, thermal behavior, fabrication methods, examples of applications. Prerequisite: MTSC 4210.

MTSC 4450 Fracture Mechanics (4 Credits)
Topics include stress field at a crack tip, linear elastic fracture mechanics, energy release rate, stress intensity factors, plastic zones, plane stress, plane strain, fracture toughness. Airy stress functions, elastic-plastic fracture mechanics, J integral, crack tip opening displacements, experimental testing, fatigue, life prediction, crack closure, weight functions, failure analysis. Cross listed with MTSC 3450.

MTSC 4800 Advanced Topics (MTSC) (1-5 Credits)
Selected topics (depending on student and faculty interest): fracture mechanics, fatigue, nonlinear constitutive models, dynamic behavior of materials, corrosion resistant design, thermodynamics of solids II.

MTSC 4900 Materials Science Seminar (1 Credit)
Weekly presentations by graduate students, faculty, outside speakers, etc., on research in progress or other topics of interest.

MTSC 4991 Independent Study (1-10 Credits)
MTSC 4992 Directed Study (1-10 Credits)
MTSC 4995 Independent Research (1-16 Credits)
MTSC 5995 Independent Research (1-16 Credits)

Mechanical and Materials Engineering

Office: Ritchie School of Engineering and Computer Science
Mail Code: 2155 E Wesley Ave, Room 277, Denver, CO 80208
Phone: 303-871-2107
Email: mmeinfo@du.edu
Web Site: http://ritchieschool.du.edu/departments/mme/

Master's and Doctoral Degrees Offered

Why study engineering at the University of Denver?
The University of Denver's Department of Mechanical and Materials Engineering (MME) is creating the future of technology by providing a graduate education emphasizing cross-disciplinary knowledge. A distinguished faculty is creating multidisciplinary education and research programs that anticipate technological trends in research and industry. Engineering graduate students join the faculty in conducting cutting-edge research in emerging disciplines to develop unique solutions to old and new problems and opportunities.

The well-equipped laboratories in the department contain state-of-the-art equipment and software to support research in biomedical engineering, advanced materials, atmospheric aerosol science, and mechanical design among others. Small classes support our multidisciplinary and real-time focus by providing close contact between students and faculty, which allows us to meet students' individual career goals.

Recognizing the different aims and goals of students, we offer several degree programs for students who wish to add to their technical skills in various areas: MS in Bioengineering; MS and PhD in Materials Science; and MS and PhD in Mechanical Engineering.

Denver is a first-rate location for business, governmental and laboratory partnerships, and technology employment. The Colorado Front Range is consistently rated as one of the top high-tech areas in the country, and the University of Denver is located just minutes from the Denver Technological Center, site of many top technology companies. The Department of Mechanical and Materials Engineering is committed to active collaboration with
these industry leaders. As a result, our students graduate with relevant research experience and a network of employment contacts in the technology sector.

**Time Commitment**

Our department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. Many employers will permit additional flexibility by releasing employees early to attend classes.

The master’s program offers thesis and non-thesis options and can be completed in one (non-thesis track only) to four years depending on the number of courses taken per quarter. The choice of thesis or non-thesis can be made at any time, although a delay in declaration may impact the completion date.

The doctoral program is generally completed in three to seven years, depending on the number of courses taken per quarter and whether the student enters with a BS or MS.

A student not interested in pursuing a degree, but interested in taking an occasional course, may register as special status students by following an abbreviated admissions process. If at a later time the student chooses to enter a graduate degree program at DU, you may apply up to 15 special status credits to your degree, with departmental approval. Just follow the regular graduate application requirements, including submitting the application fee, to get started.

**Degree Programs**

Below are our graduate engineering degrees:

- Master of Science in Bioengineering (MS ENBI)
- Master of Science in Engineering (MS ENGE) (p. 242)(See Department of Engineering program listing)
- Master of Science in Engineering with a Concentration in Management (MS ENGE (CM)) (p. 242)(See Department of Engineering program listing)
- Master of Science in Materials Science (MS MTSC)
- Master of Science in Mechanical Engineering (MS ENME)
- Doctor of Philosophy in Engineering (PhD ENGE) (p. 242)(See Department of Engineering program listing)
- Doctor of Philosophy in Materials Science (PhD MTSC)
- Doctor of Philosophy in Mechanical Engineering (PhD ENME)

**Doctor of Philosophy in Materials Science**

The Doctor of Philosophy in Materials Science (PhD MTSC) is designed to prepare the student for research or faculty position in the materials field. The program is multidisciplinary and involves the Departments of Physics and Astronomy, Chemistry and Biochemistry, Electrical and Computer Engineering, and Mechanical and Materials Engineering (MME), with MME as the administering department. The programs reflect the multidisciplinary nature by providing a thorough grounding in each of the basic disciplines of the field. Depth in specialized areas is achieved through the research interests of faculty in each of the participating departments. With an increasing number of technological fields becoming materials-limited in various ways, the program seeks to prepare students to meet the challenges of property improvement and new materials development, with a broad-based curriculum that stresses fundamentals.

**Doctor of Philosophy in Mechanical Engineering**

The objective of the Doctor of Philosophy in Mechanical Engineering (PhD ENME) program is to provide an educational environment that encourages students to develop the ability to contribute to the advancement of mechanical engineering through independent research.

**Master of Science in Bioengineering**

The Master of Science in Bioengineering (MS ENBI) integrates engineering sciences with biomedical sciences and clinical practice to provide the skill set needed by bioscience companies. The Department of Mechanical and Materials Engineering—in collaboration with the Departments of Electrical and Computer Engineering, Chemistry & Biochemistry, Biological Sciences, and Physics & Astronomy—has designed a cross-disciplinary master of science program to address industrial requirements and the desired qualifications of a 21st century workforce in bioengineering businesses. Students with bachelor’s degrees in chemistry, biological sciences or physics, as well as those with accredited engineering degrees, acquire a specialized expertise in bioengineering by designing programs which leverage the individual students’ undergraduate experience and expertise resident at DU.

**Master of Science in Materials Science**

The Master of Science in Materials Science (MS MTSC) program is designed to prepare the student for research and development work in the materials field. The program is multidisciplinary and involves the Departments of Physics, Chemistry and Engineering, with the Mechanical and Materials Engineering Department administering the degree. The programs reflect the multidisciplinary nature by providing a thorough grounding in each of the basic disciplines of the field. Depth in specialized areas is achieved through the research interests of faculty in each of the participating
departments. With an increasing number of technological fields becoming materials-limited in various ways, the program seeks to prepare students to meet the challenges of property improvement and new materials development, with a broad-based curriculum that stresses fundamentals.

**Master of Science in Mechanical Engineering**

The Master of Science in Mechanical Engineering (MS ENME) is designed to advance the student's knowledge in several areas of engineering. Each degree provides breadth through its flexible technical elective requirement, while permitting the student to achieve depth in one of several areas of specialization; fluid mechanics and heat transfer, mechanical design and analysis, and structure and behavior of materials. These areas of specialization have been selected to coincide with those of high current interest as well as those emerging technologies that hold promise of increasing importance for the future. The purpose of these programs is to serve the profession of engineering and the Colorado community through advanced study in mechanical engineering and related fields. Each program prepares the student for academic and industrial advancement.

**Doctor of Philosophy in Mechanical Engineering or Materials Science**

**Degree and GPA Requirements**

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

**Prerequisites:**

- Students with a master's degree in Mechanical Engineering or closely related areas may apply for the PhD program in Mechanical Engineering (ENME). Admission with only a Bachelor of Science degree in this field is also possible, but such students are encouraged to enroll first in the MS ENME program.

**Standardized Test Scores/Other Requirements**

- We recommend PhD applicants contact faculty to find a research advisor BEFORE submitting the application. If we receive an application and there is no research advisor commitment, we will consider the applicant for the master's program only.
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

**Doctor of Philosophy in Materials Science - Lockheed Employees Only**

**Degree and GPA Requirements**

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

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Materials Science program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Bioengineering

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

Prerequisites:
• Students with a bachelor’s degree in Engineering, Chemistry, Biology or Physics is normally required for admission to the MS Bioengineering (ENBI) program. Note that although not an admission requirement, students who are not adequately prepared to succeed in our graduate level courses may choose to complete prerequisite undergraduate courses.

Standardized Test Scores
• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Bioengineering program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Mechanical Engineering

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

Prerequisites:
• Students with a bachelor’s degree in Mechanical Engineering or closely related field is normally required for admission to the MS Mechanical Engineering (ENME) program.

Standardized Test Scores
• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Mechanical Engineering program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Materials Science
Degree and GPA Requirements

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

Prerequisites:

- Students with a bachelor's degree in Materials Science, Engineering, Physics, Metallurgy, or Chemistry is normally required for admission to the MS Materials Science (MTSC) program. Note that although not an admission requirement, students who are not adequately prepared to succeed in our graduate level courses may choose to complete prerequisite undergraduate courses.

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the Materials Science program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Bioengineering, Materials Science or Mechanical Engineering - Lockheed Employees Only
Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Doctor of Philosophy in Materials Science

Program Requirements

PhD Residence Requirement

Enrollment in at least six quarters, including at least two consecutive quarters of full-time attendance is required for graduation.

Exam Structure

1. Each student must pass the qualifying exam to obtain official entrance into the PhD program. In consultation with the advisor, students should expect to take the qualifying exam about one year (24 credits) into their academic study. Students must take exams in three subject areas. The design exam is required for all participants, and is an open book exam, where the student will have one week to prepare a written and oral response to an open ended design problem. The other two exams are closed-book written exams and should be related to the student's research area. The exam is offered twice a year: once in the summer interterm (usually in June) and once in the winter interterm (usually in December or early January). The qualifying exam can be retaken only once, and must be completed within one year after the first qualifying exam was attempted.

2. After completion of the qualifying exam and coursework, the student should schedule and take the comprehensive exam attended by the student's PhD committee. The student will be expected to make concise presentation on his/her dissertation topic. The presentation will highlight previous work in this area, demonstrate a need for the research, and explain how the research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. The comprehensive exam can be retaken only once.

3. After successful completion of the qualifying exam and the comprehensive exam, the student is required to complete and defend a dissertation of publishable quality based on the student's original research. The dissertation must be completed in written form in accordance with the University's Graduate School guidelines, and must be defended by the student in the final oral defense. The defense committee members will consist of the student's entire PhD committee. The dissertation defense can be retaken only once.

PhD Students with a Bachelor of Science

Program Structure:

1. For students entering with a bachelor's degree, 90 credits are required, at least 75 of which must be completed at the University of Denver.

2. A minimum of 48 credits must be at the 4000 or 5000 level and may include as many dissertation research credits as considered appropriate by the advisor.

3. No courses at the 1000 or 2000 level are acceptable.

4. An overall GPA of 3.0 is required for the degree.

5. Any individual grade lower than C- renders the credit unacceptable.

6. Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.

7. Students must complete all requirements for the doctoral degree no later than eight years after doctoral studies begin.

Course Requirements:

1. Candidates who hold only a bachelor’s degree on entering the doctoral program are expected to meet all degree requirements of the corresponding master's degree program (as part of the doctoral requirements).

2. Students are required to take ENME 4950 Graduate Assessment in the last quarter of study. NOTE: Students are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation.

3. PhD students who enter the program with a bachelor's are required to take ENME 4900 Graduate Professional Development in the first year (this will be offered once a year; usually in winter quarter).

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<td>ENGR 4200</td>
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Materials Science Core Courses
PhD Students with a Master of Science

Program Structure

1. A minimum of 36 credits must be completed at the 4000- or 5000-level, which may include as many research credits as considered appropriate by the advisor.
2. For students entering with a master’s degree, up to 45 credits may be transferred and applied to the doctorate degree. In addition, a minimum of 45 credits must be completed at DU. The total number of credits required for the degree is 90.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. A student who holds a master’s degree on entering the doctoral program is expected to complete all requirements for the degree no later than seven years after beginning the program.

Course Requirements

1. Students are required to take ENME 4950 Graduate Assessment in the last quarter of study. **NOTE:** Students are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation.
2. If a PhD student fails his/her qualifying exam on the first try, he/she will be required to take ENME 4900 Graduate Professional Development as well. ENME 4900 will be offered once a year, usually in winter quarter.

Doctor of Philosophy in Mechanical Engineering

Program Requirements

PhD Residence Requirement

Enrollment in at least six quarters, including at least two consecutive quarters of full-time attendance is required for graduation.

Exam Structure

1. Each student must pass the qualifying exam to obtain official entrance into the PhD program. In consultation with the advisor, students should expect to take the qualifying exam about one year (24 credits) into their academic study. Students must take exams in three subject areas. The design exam is required for all participants, and is an open book exam, where the student will have one week to prepare a written and oral response to an open ended design problem. The other two exams are closed-book written exams and should be related to the student’s research area. The exam is offered twice a year: once in the summer interterm (usually in June) and once in the winter interterm (usually in December or early January). The qualifying exam can be retaken only once, and must be completed within one year after the first qualifying exam was attempted.
2. After completion of the qualifying exam and coursework, the student should schedule and take the comprehensive exam attended by the student’s PhD committee. The student will be expected to make concise presentation on his/her dissertation topic. The presentation will highlight previous work in this area, demonstrate a need for the research, and explain how the research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. The comprehensive exam can be retaken only once.
3. After successful completion of the qualifying exam and the comprehensive exam, the student is required to complete and defend a dissertation of publishable quality based on the student’s original research. The dissertation must be completed in written form in accordance with the University’s Graduate School guidelines, and must be defended by the student in the final oral defense. The defense committee members will consist of the student’s entire PhD committee. The dissertation defense can be retaken only once.

PhD Students with a Bachelor of Science

Program Structure
1. For students entering with a bachelor’s degree, 90 credits are required, at least 75 of which must be completed at the University of Denver.
2. A minimum of 48 credits must be at the 4000- or 5000-level and may include as many dissertation research credits as considered appropriate by the advisor.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Students must complete all requirements for the doctoral degree no later than eight years after doctoral studies begin.

**Course Requirements**

1. Candidates who hold only a bachelor’s degree on entering the doctoral program are expected to meet all degree requirements of the corresponding master’s degree program (as part of the doctoral requirements).
2. Students are required to take ENME 4950 Graduate Assessment in the last quarter of study. **NOTE:** Students are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation.
3. PhD students who enter the program with a bachelor’s are required to take ENME 4900 Graduate Professional Development in the first year (this will be offered once a year; usually in winter quarter).

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**PhD Students with a Master of Science**

**Program Structure:**

1. A minimum of 36 credits must be at the 4000- or 5000-level and may include as many dissertation research credits as considered appropriate by the advisor. The total number of credits required for the degree is 90.
2. For students entering with a master’s degree, up to 45 credits may be transferred and applied to the doctorate degree. In addition, a minimum of 45 credits must be completed at DU. The total number of credits required for the degree is 90.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Students must complete all requirements for the doctoral degree no later than seven years after doctoral studies begin.

**Course Requirements:**
Master of Science in Bioengineering

Program Structure
1. Every candidate for this degree must complete 45 credits, at least 36 of which must be completed at the University of Denver.
2. A minimum of six 4000-level courses of at least three credits each are required for non-thesis track; four 4000-level courses of at least three credits each are required for thesis track.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 45 credits and are still working on a thesis or project are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Master's degree candidates are expected to complete degree requirements no later than five years after beginning their programs.

Course Requirements
1. Core Courses: a minimum of nine credits (two courses from the Bioengineering Core Course List plus required courses) for both thesis and non-thesis tracks.
2. Required Courses: All master's students are required to take ENME 4900 Graduate Professional Development in the first year (this will be offered once a year; usually in winter quarter) and ENME 4950 Graduate Assessment in the last quarter of study. NOTE: Students on the thesis track are required to complete a written self-reflection on their thesis and upload to Assess-It along with their thesis, defense presentation slides, and the completed and signed degree program plan before graduation. Students on the non-thesis track are required to upload to Assess-It an assembled portfolio that includes reports from at least two course projects or homework from the core courses, a mini-proposal and presentation slides from ENME 4900, along with the completed and signed degree program plan.
3. Minor Elective Courses: minimum of eight credits for thesis track; eight credits for non-thesis track. A minor is required by each student and is intended to provide bioengineering students with additional knowledge in an area unassociated with their undergraduate degree. Candidates with non-engineering undergraduate degrees must take courses in engineering chosen from regular engineering course offerings numbered 3000 or higher and must be approved by the advisor. Candidates with engineering undergraduate degrees must take graduate-level coursework in biological sciences or chemistry and biochemistry.
4. Technical Electives: a minimum of eight credits for thesis track and 20 credits for non-thesis track. These do not include independent research credits.
   a. Technical elective courses are intended to provide bioengineering students an opportunity to take additional course work that will expand their knowledge of advanced engineering topics. 50% or more of the technical elective credits must be chosen from engineering course offerings numbered 3000 or higher and approved by the student's advisor.
   b. Students may take one business/management course as a technical elective. Special permission should be obtained in writing from the advisor PRIOR TO REGISTRATION if more than one business/management course is taken.
5. Advanced Math Requirement: a minimum of three credits for both thesis track and non-thesis track from Core Course List or advisor approval.
7. Tool Requirement: As employers of graduates of this degree will inherently expect a basic competency in foundational engineering skills, students must demonstrate these before advancing to candidacy. Candidates with BS degrees from accredited engineering schools, or students completing a thesis, will be exempt from the tool requirement. Candidates with undergraduate degrees from non-engineering majors and completing a non-thesis MS will be required to pass a tool requirement. This will consist of an exam based on the topics in the Fundamentals of Engineering General Exam.

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<tr>
<th>MS ENBI Minimum</th>
<th>Thesis (QH)</th>
<th>Non-Thesis (QH)</th>
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<td>Core</td>
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<td>ENME 4900</td>
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Master of Science in Materials Science

MS Program Structure
1. Every candidate for this degree must complete 45 credits, at least 36 of which must be completed at the University of Denver.
2. A minimum of six 4000-level courses of at least three credits each are required for non-thesis track; four 4000-level courses of at least three credits each are required for thesis track.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 45 credits and are still working on a thesis or project are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Master's degree candidates are expected to complete degree requirements no later than five years after beginning their programs.
8. International students must enroll in at least eight credits each quarter to maintain full-time status, except during the annual vacation term (usually the summer quarter) or the final quarter of study that requires fewer credits than the minimum full-time enrollment to complete the program. Failure to maintain full-time enrollment is a violation of student status and may result in the termination from the program. Based on the recommendation of the academic advisor, an international student advisor may authorize the student to drop below full-time status for academic reasons specifically permitted under immigration regulations. However, academic authorizations may only be given once per degree level and are usually issued during the first term of study.

Course Requirements
1. Core Courses: a minimum of nine credits (two courses from the Materials Science Core Course List plus required courses) for both thesis and non-thesis tracks.
2. Required Courses: All master’s students are required to take ENME 4900 Graduate Professional Development in the first year (this will be offered once a year; usually in winter quarter) and ENME 4950 Graduate Assessment in the last quarter of study. NOTE: Students on the thesis track are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation. Students on the non-thesis track are required to upload to Assess-It an assembled portfolio that includes reports from at least two course projects or homework from the core courses, a mini-proposal and presentation slides from ENME 4900, along with the completed and signed degree program plan.
3. Technical Electives: a minimum of 16 credits for thesis track and 28 credits non-thesis track. These do not include independent research credits.
   a. Technical electives must be in engineering (bioengineering, mechanical engineering, materials science, etc.) or related areas (mathematics, computer science, physics, chemistry, etc.) and are at the advisor’s discretion. 50% or more of the technical elective credits must be in engineering.
   b. Students may take one business/management course as a technical elective. Special permission should be obtained in writing from the advisor Prior to Registration if more than one business/management course is taken.
4. Advanced Math Requirement: a minimum of three credits for thesis track and six credits for non-thesis track from Core Course List or advisor approval.

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<th>MS MTSC Minimum</th>
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<th>Non-Thesis (QH)</th>
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<tr>
<td>Total Credits Required</td>
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Master of Science in Mechanical Engineering

Program Structure
1. Every candidate for this degree must complete 45 credits, at least 36 of which must be completed at the University of Denver.
2. A minimum of six 4000-level courses of at least three credits each are required for non-thesis track; four 4000-level courses of at least three credits each are required for thesis track.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 45 credits and are still working on a thesis or project are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Master's degree candidates are expected to complete degree requirements no later than five years after beginning their programs.
8. International students must enroll in at least eight credits each quarter to maintain full-time status, except during the annual vacation term (usually the summer quarter) or the final quarter of study that requires fewer credits than the minimum full-time enrollment to complete the program. Failure to maintain full-time enrollment is a violation of student status and may result in the termination from the program. Based on the recommendation of the academic advisor, an international student advisor may authorize the student to drop below full-time status for academic reasons specifically permitted under immigration regulations. However, academic authorizations may only be given once per degree level and are usually issued during the first term of study.

Course Requirements
1. Core Courses: a minimum of nine credits (two courses from the Mechanical Engineering Core Course List plus required courses) for both thesis and non-thesis tracks.
2. Required Courses: All master's students are required to take ENME 4900 Graduate Professional Development in the first year (this will be offered once a year, usually in winter quarter) and ENME 4950 Graduate Assessment in the last quarter of study. **NOTE:** Students on the thesis track are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation. Students on the non-thesis track are required to upload to Assess-It an assembled portfolio that includes reports from at least two course projects or homework from the core courses, a mini-proposal and presentation slides from ENME 4900 along with the completed and signed degree program plan.
3. Technical Electives: a minimum of 16 credits for thesis track and 28 credits non-thesis track. These do not include independent research credits.
   a. Technical electives must be in engineering (bioengineering, mechanical engineering, materials science, etc.) or related areas (mathematics, computer science, physics, chemistry, etc.) and are at the advisor's discretion. 50% or more of the technical elective credits must be in engineering.
   b. Students may take one business/management course as a technical elective. Special permission should be obtained in writing from the advisor PRIOR TO REGISTRATION if more than one business/management course is taken.
4. Advanced Math Requirement: a minimum of three credits for thesis track and six credits for non-thesis track from Core Course List or advisor approval.
6. Tool Requirement: As employers of graduates of this degree will inherently expect a basic competency in foundational engineering skills, students must demonstrate these before advancing to candidacy. Candidates with BS degrees from accredited engineering schools, or students completing a thesis, will be exempt from the tool requirement. Candidates with undergraduate degrees from non-engineering majors and completing a non-
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<td>ENME 3545</td>
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<td>ENME 3651</td>
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<td>ENME 4630</td>
<td>Viscous Flow (Viscous Flow)</td>
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<td>ENME 4670</td>
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<td>ENME 4800</td>
<td>Advanced Topics (ME) (Convective Heat Transfer)</td>
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<td>ENGR 4300</td>
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<td>ENGR 4350</td>
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### Mechanical Engineering Core Courses

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### Engineering, Bio Courses

**ENBI 4500 Biofluids (4 Credits)**
The application of fluid dynamics theory and design to problems within the biomedical community. Specific topics covered include the mechanics of inhaled therapeutic aerosols, basic theory of circulation and blood flow, foundations in biotechnology and bioprocessing, and controlled drug delivery. Cross listed with ENBI 3500.

**ENBI 4510 Biomechanics (4 Credits)**
An introduction to the mechanical behavior of biological tissues and systems. Specific topics covered include: Analysis of the human musculoskeletal system as sensors, levers, and actuators; Joint articulations and their mechanical equivalents; Kinematic and kinetic analysis of human motion; Introduction to modeling human body segments and active muscle loading for analysis of dynamic activities; Mechanical properties of hard and soft tissues; Mechanical and biological consideration for repair and replacement of soft and hard tissue and joints; Orthopedic implants. Cross listed with ENBI 3510.

**ENBI 4520 Introduction to Cardiovascular Engineering (4 Credits)**
An introduction to cardiovascular mechanics with a focus on the quantitative understanding of the mechanical phenomena that governs the cardiovascular system. Specific topics covered include: basic principles of circulation including macro and micro circulation, soft tissue mechanics, applications to cardiovascular diseases, modelling techniques, clinical and experimental methods, and design of cardiovascular devices. Recommended prerequisites: ENME 2541 and ENME 2661.

**ENBI 4800 Adv Topics (Bioengineering) (1-5 Credits)**
Various topics in Bioengineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENBI 4991 Independent Study (1-5 Credits)**

**ENBI 4992 Directed Study (1-5 Credits)**

**ENBI 4995 Independent Research (1-18 Credits)**
Engineering, Mechanical Courses

ENME 3511 Machine Design (3 Credits)
Application of statics, dynamics, mechanics of materials and manufacturing processes to the design of machine elements and systems. Properties of materials and design criteria. Synthesis and analysis of a machine design project. Prerequisites: ENME 2520 and ENME 2541.

ENME 3545 Mechanisms (4 Credits)
Synthesis, analysis and use of mechanisms. Mechanisms studied include cams, gears and planar linkages, with an emphasis on planar linkages. Prerequisites: ENME 2530 and ENGR 1572.

ENME 3651 Computational Fluid Dynamics (4 Credits)
This course introduces principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer or two phase flow. The conservation equations, their discretations and solutions, are presented. Convergence and validity of solutions along with computational efficiency are explored. Students learn to apply these techniques using the latest software packages. Prerequisites: ENME 2671.

ENME 3661 Mechanical Energy Systems Engineering (4 Credits)
This course covers energy systems engineering analysis from a mechanical and materials engineering perspective. This course covers energy production from traditional energy systems that use fossil fuel combustion such as internal combustion engines, coal-fired plants, and natural gas turbines, to nuclear energy and renewable energy methods such as wind, solar, hydraulic, and geothermal. Lastly, the course will survey emerging technologies for future (21st century) energy systems. Students should have taken at a minimum Thermodynamics, Dynamics, and Fluid Dynamics courses. Prerequisites: ENME 2720, ENME 2510, ENME 2651.

ENME 3720 Introduction to Aerospace Engineering (4 Credits)
This course provides and introduction to aerospace engineering analysis and design. In the atmospheric domain, the basics of aerodynamics are covered, followed by flight mechanics. The approach is from a practical perspective in which analysis and design are intertwined. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

ENME 3810 Mechanical Engineering Capstone Laboratory (3 Credits)
This course is the capstone mechanical engineering laboratory course requiring independent experimental design by student teams. Using experimental equipment available in heat transfer, fluid mechanics, solid mechanics, thermodynamics, and measurement and control, the student team is required to design experiments to solve given problems which will be unique to each team. This course encourages students to develop experimental design and research techniques while continuing to improve skills in fundamental lab notebook keeping, uncertainty analysis in measurements, data acquisition, data analysis, report writing, oral presentations, and laboratory safety and procedures. Prerequisite: ENME 2810.

ENME 4020 Adv Finite Element Analysis (4 Credits)

ENME 4310 Computational Methods for Mechanics and Materials (4 Credits)
An introductory course for the general-purpose computational methods in advanced multiscale materials and mechanics. Students learn the fundamentals on the numerical methods used in mechanical and materials engineering. Cross listed with ENME 3310.

ENME 4360 Elasticity (4 Credits)
Students will be able to apply the fundamental principles of elasticity to solve two- and three-dimensional mechanical engineering problems involved in modern applications of elastic structures, composite materials, tribology and contact mechanics. Dependence on previous knowledge of solid mechanics, continuum mechanics or mathematics is minimized. The emphasis is placed on the engineering applications of elasticity. Suggested prerequisite: ENME 2541.

ENME 4400 Fatigue (4 Credits)
A detailed overview of fatigue. Topics include: stress life and strain life approaches, fracture mechanics, constant amplitude and spectrum loading, life prediction, fatigue at notches, microstructural effects, environmentally assisted fatigue, retardation and acceleration, multi-axial fatigue, design against fatigue and reliability. Cross listed with ENME 3400.

ENME 4520 Intermediate Dynamics (4 Credits)
Development and analysis of dynamic systems through classical and modern approaches. Topics include: reference frames, particle kinematics, Newtonian particle mechanics, Phase Portraits, rigid-body kinematics, Euler's laws, Lagrange's Equations, Lagrange Multipliers, and Kane's Equations. Recommended prerequisites: MATH 2070 and MATH 2080.

ENME 4541 Advanced Mechanics of Materials (4 Credits)
This is a second-level course in mechanics of materials with an emphasis on techniques that are useful for mechanical design. Topics may include energy methods, non-symmetrical and nonlinear bending, shear and torsion of closed and open sections, beams in elastic foundations, membrane stress in axisymmetric shells, axisymmetric bending of cylindrical shells, thick-walled cylinders and disks, curved beams, and elastic stability. Recommended prerequisite: ENME 2541.

ENME 4560 Viscous Flow (4 Credits)
Course covers the fundamentals of fluid mechanics from an advanced point of view with emphasis on the mathematical treatment of viscous-flow phenomena. Topics cover the Navier-Stokes equations and its exact and similarity solutions, laminar boundary layer theory, free-shear flows, and the phenomena of instability and transition to turbulence. Recommended prerequisite: ENME 2661.

ENME 4650 Adv. Fluid Dynamics (4 Credits)
Physical properties of liquids and gases; turbulence and closure models; surface waves and instabilities; non-Newtonian fluid behavior; conformal mapping and airfoil theory.
ENME 4660 Micro Heat Exchangers (4 Credits)
Explores the advance principles and applications of fluid dynamics and heat transfer through the application to micro fluidic heat exchanger design and optimization. Students utilize Mathcad extensively to seek optimized exchanger performance within a clearly defined design space. Students also build small scale heat exchangers from their optimized designs. Prerequisite: ENME 2671.

ENME 4670 Advanced Computational Fluid Dynamics (4 Credits)
Building on the principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer and two phase flow. Specifically, Monte Carlo and volume of fluid techniques are discussed at length. Additionally, students learn how to set up automated design optimization using the latest software packages. Time permitting, students also are introduced to fluid-solid interaction modeling. Prerequisite: ENME 3651.

ENME 4671 Convective Heat Transfer (4 Credits)
The objective of this course is to examine the physical phenomena associated with heat transfer in the presence of fluid flow. We will develop a mathematical description of the processes (fluid flow and heat transfer) for laminar and turbulent flows for both internal and external situations. Exposure to the fundamentals of fluid mechanics and heat transfer is expected before taking this course.

ENME 4800 Advanced Topics (ME) (0-5 Credits)
Determined by interest and demand. May be taken more than once for credit.

ENME 4900 Grad Professional Development (1 Credit)
This course is required for all MME MS graduate students and all MME PhD graduate students who enter with a BS or enter with an MS but fail their first qualifying exam. One of our objectives is for all graduating students to have good written and verbal communication skills. This course is set up to meet those objectives. During this course, students write a mini-proposal and/or literature review. Students follow guidelines for a funding agency (e.g. NSF or NIH) for the mini-proposal. If students have a research advisor, students can coordinate with their advisor. If students do not have a research advisor, students may pick a topic that most interests them. Both a written proposal and an oral presentation are required of all students. Graduate standing is required.

ENME 4950 Graduate Assessment (0 Credits)
This graduate assessment course is required for all MME graduate students to be taken in their last quarter. All required assessment materials are uploaded to DU Assessment to meet the course requirements. Students will receive emails through the DU Assessment system notifying you of what is required to be uploaded.

ENME 4991 Independent Study (1-10 Credits)
ENME 4992 Directed Study (1-10 Credits)
ENME 4995 Independent Research (1-16 Credits)
ENME 5991 Independent Study (1-10 Credits)
ENME 5995 Independent Research (1-16 Credits)

Engineering Courses
ENGR 3210 Intro Nano-Electro-Mechanics (4 Credits)
Familiarize science and engineering students with the electromechanical aspects of the emerging field of Nanotechnology (NEMS). NEMS is a relatively new and highly multidisciplinary field of science and technology with applications to state of the art and future sensors, actuators, and electronics. Starting with an overview of nanotechnology and discussion on the shifts in the electromechanical behavior and transduction mechanisms when scaling the physical dimensions from centimeters to micro-meters and then down to nanometers. Several electromechanical transduction mechanisms at the micro and nanoscale are presented and discussed in an application based context. New electromechanical interactions appearing in the nano and molecular scale, such as intra-molecular forces and molecular motors, are discussed. A detailed discussion and overview of nanofabrication technologies and approaches are also provided. Cross listed with ENGR 4210. Prerequisite: must be an engineering or science major of at least junior standing.

ENGR 3340 Product Development and Market Feasibility (4 Credits)
In this course, students gain knowledge of designing products for market success by developing a product and optimizing its design for specific mass manufacturing technologies. Students gain experience through the design development process including market feasibility research, human-centered design, brainstorming and ideating new concepts, refinement through design iteration, and constructing alpha and beta prototypes that are designed with mass manufacturing considerations. Projects are based upon real world new product development principles. Students learn and practice the fundamentals of design thinking, design process, and entrepreneurship.

ENGR 3510 Renewable and Efficient Power and Energy Systems (4 Credits)
This course introduces the current and future sustainable electrical power systems. Fundamentals of renewable energy sources and storage systems are discussed. Interfaces of the new sources to the utility grid are covered. Prerequisite: ENEE 2021.

ENGR 3520 Introduction to Power Electronics (4 Credits)
This covers fundamentals of power electronics. We discuss various switching converters topologies. Basic knowledge of Efficiency and small-signal modeling for the DC-DC switching converters is covered. Furthermore, magnetic and filter design are introduced. Prerequisites: ENEE 2211 and ENGR 3722.
ENGR 3525 Power Electronics and Renewable Energy Laboratory (1 Credit)
In this course the fundamentals of switching converters and power electronics in a real laboratory set-up are covered. The course incorporates hardware design, analysis, and simulation of various switching converters as a power processing element for different energy sources. The energy sources are power utility, batteries, and solar panels. Prerequisite: ENGR 3520.

ENGR 3540 Electric Power Systems (4 Credits)
This course covers methods of calculation of a comprehensive idea on the various aspects of power system problems and algorithms for solving these problems. Prerequisite: ENGR 3530.

ENGR 3550 Introduction to Machine Drive Control (4 Credits)
This course provides the basic theory for the analysis and application of adjustable-speed drive systems employing power electronic converters and ac or dc machines. Prerequisites: ENGR 3520 and ENGR 3530.

ENGR 3620 Advanced Engineering Mathematics (4 Credits)

ENGR 3621 Advanced Engineering Mathematics (4 Credits)
Applied mathematics for engineers. Topics include vector spaces, normed vector spaces, inner product spaces, linear transformations, finite-dimensional linear transformations, linear operators, finite-dimensional linear operators, linear differential systems, linear difference systems, orthogonal transformations, amplitude estimation, fundamentals of real and functional analysis, and introduction to partial differential equations, and applications to engineering systems.

ENGR 3630 Finite Element Methods (4 Credits)
Introduction to the use of finite element methods in one or two dimensions with applications to solid and fluid mechanics, heat transfer and electromagnetic fields; projects in one or more of the above areas. Prerequisites: ENME 2541 AND ENGR 1572.

ENGR 3650 Probability and Statistics for Engineers (4 Credits)
This course covers quantitative analysis of uncertainty and decision analysis in engineering. It covers the fundamentals of sample space, probability, random variables (discrete and continuous), joint and marginal distributions, random sampling and point estimation of parameters. It also covers statistical intervals, hypotheses testing and simple linear regression. The course includes applications appropriate to the discipline. Prerequisite: MATH 1953.

ENGR 3671 Controls (3,4 Credits)
Modeling, analysis and design of linear feedback control systems using Laplace transform methods. Techniques and methods used in linear mathematical models of mechanical, electrical, thermal and fluid systems are covered. Feedback control system models, design methods and performance criteria in both time and frequency domains. A linear feedback control system design project is required. Prerequisites: ENEE 2021, ENGR 3610 or permission of instructor.

ENGR 3672 Control Systems Laboratory (1 Credit)
This laboratory course serves as supplement to ENGR 3721. It aims at providing "hands on" experience to students. It includes experiments on inverted pendulum, gyroscopes, motor control, feedback controller design, time-domain and frequency domain. Corequisite: ENGR 3721.

ENGR 3673 Robotics Lab (1 Credit)
Laboratory that complements the analysis, design, modeling and application of robotic manipulators. Implementation of the mathematical structures required to support robot operation. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Cross listed with ENGR 4730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or permission of instructor.

ENGR 3674 LabVIEW Programming, a primer for certification as an Applications Developer (4 Credits)
The LabVIEW course covers numeric, Boolean, and string controls; programming structures include loops, sequences, formula, and case structures. VISA (virtual instrumentation and software structure) and SCPI (standard commands for programmable instruments) are used to control test equipment and acquire data via the GPIB (general purpose interface bus, IEEE488 standard). VIs (virtual instruments) for data acquisition and analysis are developed utilizing mathematical, signal processing, and statistical LabVIEW programming modules. LabVIEW structures will be used to mathematically model and solve second order differential equations and Laplace transforms.

ENGR 3800 Topics (ENGR) (1-4 Credits)
Special topics in engineering as announced. May be taken more than once. Prerequisite: varies with offering.

ENGR 3900 Engineering Internship (0-4 Credits)
Students in engineering may receive elective credit for engineering work performed for engineering employers with the approval of the chair or associate chair of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned. Junior, senior, or graduate status in engineering is normally required. May not be used to satisfy technical requirements. May be taken more than one for a maximum of 6 quarter hours. Prerequisite: permission of instructor.
ENGR 4100 Instrumentation and Data Acquisition (4 Credits)
This course examines different instrumentation techniques and describes how different measurement instruments work. Measurement devices include length, speed, acceleration, force, torque, pressure, sound, flow, temperature, and advanced systems. This course also examines the acquisition, processing, transmission and manipulation of data. Final project or paper. Cross listed with ENGR 3100. Prerequisites: PHYS 1213 OR PHYS 1214.

ENGR 4200 Introduction to Nanotechnology (4 Credits)
The most important recent accomplishments so far in the application of nanotechnology in several disciplines are discussed. Then a brief overview of the most important instrumentation systems used by nanotechnologists is provided. The nature of nanoparticles, nanoparticle composites, carbon nanostructures, including carbon nanotubes and their composites is subsequently discussed. The course also deals with nanopolymers, nanobiological systems, and nano electronic materials and devices. The issues of modeling of nanomaterials and nanostructures is also covered. Multiscale modeling based on finite element simulations, Monte Carlo methods, molecular dynamics and quantum mechanics calculations are briefly addressed. Most importantly, students should obtain appreciation of developments in nanotechnology outside their present area of expertise. Cross listed with ENGR 3210.

ENGR 4210 Introduction to Nano-Electro-Mechanical-Systems (4 Credits)
This course familiarizes science and engineering students to the electromechanical aspects of the emerging field of Nanotechnology (NEMS). NEMS is a relatively new and highly multidisciplinary field of science and technology with applications in the state of the art and future sensors, actuators, and electronics. This course starts with an overview of nanotechnology and discussion on the shifts in the electromechanical behavior and transduction mechanisms when scaling the physical dimensions from centimeters to micro-meters and then down to nanometers. Several electromechanical transduction mechanisms at the micro and nanoscale are presented and discussed in an application based context. New electromechanical interactions appearing in the nano and molecular scale, such as intra-molecular forces and molecular motors, are discussed. A detailed discussion and overview of nanofabrication technologies and approaches are also provided. Cross listed with ENGR 3210.

ENGR 4215 Nanoscale Electromechanical Systems and Nanofabrication Laboratory (4 Credits)
This course provides science and engineering students with comprehensive hands-on experience in design, fabrication and characterization of Nanoscale Electromechanical Systems (NEMS). This laboratory-based course starts with a number of sessions including brief lectures reviewing the fundamentals and theories followed by pre-designed lab experiments. The students are then provided with a choice of different comprehensive design and implementation projects to be performed during the quarter. The projects include design, layout, fabrication, and characterization of the devices potentially resulting in novel findings and publications.

ENGR 4220 Introduction to Micro-Electro-Mechanical-Systems (4 Credits)
This course introduces students to the multi-disciplinary field of Micro-Electro-Mechanical-Systems (MEMS) technology. MEMS and Microsystem technology is the integration of micro-scale electro-mechanical elements, sensors, actuators, and electronics on a common substrate or platform through semiconductor microfabrication technologies. The course gives a brief overview of the involved physical phenomena, electromechanical transduction mechanisms, design principles, as well as fabrication and manufacturing technologies. Cross listed with ENGR 3220.

ENGR 4300 Advanced Numerical Methods (4 Credits)
Fundamental and advanced numerical methods to approximate mathematical problems for engineering applications using modern software such as Matlab. Topics include numerical differentiation and integration, solution to linear and non-linear equations, ordinary and partial differential equations, and initial, boundary, and eigen value problems. Recommended prerequisite: MATH 2070.

ENGR 4350 Reliability (4 Credits)
An overview of reliability-based design. Topics include: fundamentals of statistics, probability distributions, determining distribution parameters, design for six sigma, Monte Carlo simulation, first and second order reliability methods (FORM, SORM). Most Probable Point (MPP) reliability methods, sensitivity factors, probabilistic design. Cross listed with ENGR 3350.

ENGR 4530 Intro to Power and Energy (4 Credits)
Basic concepts of AC systems, single-phase and three-phase networks, electromechanical energy conversion, electric power generation, transformers, transmission lines, AC machinery, DC motors, and contemporary topics in power and energy conversion. Cross listed with ENGR 3530.

ENGR 4540 Power Generation Operation and Control (4 Credits)
This course covers economic dispatch of thermal units and methods of solution; transmission system effects; generate with limited energy supply; production cost models; control of generation; interchange of power and energy; power system security; state estimation in power systems; optimal power flow. Prerequisite: ENGR 4540.
ENGR 4590 Power System Protection (4 Credits)
This course covers methods of calculation of fault currents under different types of fault; circuit breakers, current transformers, potential transformers; basic principles of various types of relays; applications of relays in the protection of generator, transformer, line, and bus, etc. Prerequisite: ENGR 4540.

ENGR 4620 Optimization (3,4 Credits)
Engineering problems will be formulated as different programming problems to show the wide applicability and generality of optimization methods. The development, application, and computational aspects of various optimization techniques will be discussed with engineering examples. The application of nonlinear programming techniques will be emphasized. A design project will be assigned.

ENGR 4730 Introduction to Robotics (4 Credits)
Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Cross listed with ENGR 3730. Prerequisites: ENGR 2520 and MATH 2060 or MATH 2200 or instructor approval.

ENGR 4735 Linear Systems (4 Credits)
This course focuses on linear system theory in time domain. It emphasizes linear and matrix algebra, numerical matrix algebra and computational issues in solving systems of linear algebraic equations, singular value decomposition, eigenvalue-eigenvector and least-squares problems, linear spaces and linear operator theory. It studies modeling and linearization of multi-input/multi-output dynamic physical systems, state-variable and transfer function matrices, analytical and numerical solutions of systems of differential and difference equations, structural properties of linear dynamic physical systems, including controllability, observability and stability. It covers canonical realizations, linear state-variable feedback controller and asymptotic observer design, and the Kalman filter. Cross listed with ENGR 3735. Prerequisites: ENGR 3610, ENGR 3721/3722, or permission of the instructor.

ENGR 4740 Adaptive Control Systems (4 Credits)
Theoretical and application aspects of robust adaptive control design for uncertain dynamical systems. Topics include: parameter estimation, stability, model reference adaptive systems, self-tuning regulators, gain scheduling, design for robustness against unmodeled dynamics and disturbance signals. Examples will be given from aerospace engineering (changes in the dynamics of aircraft), process control, and robotics. Modern alternatives to traditional adaptive control will be discussed (switching multi-model/multi-controller adaptive schemes). Prerequisites: ENEE 3111, ENGR 3610, and ENGR 3721, or permission of instructor. Familiarity with MATLAB/Simulink.

ENGR 4745 Adv Non-Linear Control System (4 Credits)

ENGR 4750 Networked Control Systems (4 Credits)
Fundamental tools and recent advances in networked control. Topics include the control of multi-agent networks found in multi-vehicle coordination, control of sensor networks, unmanned vehicles, and energy systems. Network models, distributed control and estimation, distributed control under limited communications and sensing, formation control, coverage control in mobile sensor networks. Prerequisites: linear algebra, linear control systems, differential equations, familiarity with MATLAB, or permission of instructor.

ENGR 4755 Optimal Control (4 Credits)
Introduction to optimal control theory (control laws that maximize a specified measure of a dynamical system’s performance). Topics include: optimality conditions and constraints; calculus of variations; review of mathematical programming (Language multipliers, convexity, Kuhn-Tucker theorem); Pontryagin’s maximum principle (constraints, Hamiltonians, bang-bang control); dynamic programming and Linear Quadratic Regulation (Ricciti, Hamilton-Jacobi equation). Prerequisites: ENGR 3721 (Controls) and ENGR 3735/4735 (Linear Systems) or equivalent courses.

ENGR 4760 Multivariable Control (4 Credits)
Multivariable aspects of control (systems with multiple actuators and sensors); performance analysis of feedback control systems; sensitivity; robustness and stability margins; disturbance attenuation; design tradeoffs; singular value; characteristic loci. Modern H-infinity control theory and ‘mu’ synthesis-based robust control design techniques. Enforced Prerequisites and Restrictions ENGR 3721 (Controls) and ENGR 4735 (Linear Systems at a graduate level) or equivalents.

ENGR 4810 Advanced Topics (ENGR) (1-5 Credits)

ENGR 4885 Graduate Project for non-Thesis Option Master's Degree (1-4 Credits)
This course is required for all Master of Science graduate students with major in Electrical Engineering, Computer Engineering, and Mechatronic Systems Engineering, who choose the non-thesis option. The student will be supervised by his or her faculty advisor to conduct original and independent research with project topic closely related to the student’s depth requirement of the specialization area. The student will deliver a final comprehensive project report and an oral defense for the project. The examination committee for the Master’s project shall consist of at least two faculty members.
ENGR 4991 Independent Study (1-5 Credits)
ENGR 4992 Directed Study (1-10 Credits)
ENGR 4995 Independent Research (1-16 Credits)
ENGR 5991 Independent Study (1-10 Credits)
ENGR 5995 Independent Research (1-16 Credits)

Materials Science Courses
MTSC 4010 Mechanical Behavior of Materials (4 Credits)
Effects of microstructure on mechanical behavior of material; emphasis on recent developments in materials science, fracture, fatigue, creep, wear, corrosion, stress rupture, deformation and residual stress. Cross listed with MTSC 3010.

MTSC 4020 Composite Materials I (4 Credits)

MTSC 4215 Composite Materials II (4 Credits)
A continuation of MTSC 4210: Strength and toughness of composites, thermal behavior, fabrication methods, examples of applications. Prerequisite: MTSC 4210.

MTSC 4450 Fracture Mechanics (4 Credits)
Topics include stress field at a crack tip, linear elastic fracture mechanics, energy release rate, stress intensity factors, plastic zones, plane stress, plane strain, fracture toughness, Airy stress functions, elastic-plastic fracture mechanics, J integral, crack tip opening displacements, experimental testing, fatigue, life prediction, crack closure, weight functions, failure analysis. Cross listed with MTSC 3450.

MTSC 4800 Advanced Topics (MTSC) (1-5 Credits)
Selected topics (depending on student and faculty interest): fracture mechanics, fatigue, nonlinear constitutive models, dynamic behavior of materials, corrosion resistant design, thermodynamics of solids II.

MTSC 4900 Materials Science Seminar (1 Credit)
Weekly presentations by graduate students, faculty, outside speakers, etc., on research in progress or other topics of interest.

MTSC 4991 Independent Study (1-10 Credits)
MTSC 4992 Directed Study (1-10 Credits)
MTSC 4995 Independent Research (1-16 Credits)
MTSC 5995 Independent Research (1-16 Credits)

Daniels College of Business

The Daniels College of Business is dedicated to educating ethical business leaders, advancing the theory and practice of business, and making a positive global impact. As the eighth-oldest business college in the country, we have helped graduates achieve their career aspirations for more than a century. The College is ranked among the best of the world’s top business schools. We are proud to be one of the 655 business schools accredited by the Association to Advance Collegiate Schools of Business (AACSB). Daniels is the only business school in Colorado to receive high rankings and recognition from Businessweek, the Financial Times, U.S. News & World Report, and Forbes. Daniels is internationally recognized for integrating social, environmental and ethical issues into our traditional curricula. Committed to diversity, we welcome all who want to hone their skills, improve their knowledge, and gain a lasting foundation.

Business Ethics and Legal Studies

Office: Daniels College of Business, 687
Mail Code: Daniels College of Business, 2101 S. University Blvd., Denver, CO 80208
Phone: 303-871-3213
Web Site: https://daniels.du.edu/business-ethics-legal-studies/

Certificate in Global Business and Corporate Social Responsibility

As a joint offering between the Daniels College of Business and the Korbel School of International Studies, this certificate focuses specifically on the challenges and opportunities businesses confront in a globalized and developing world.

A certificate in Global Business and Corporate Social Responsibility (CSR) will enable students to leverage the unique course offerings at Daniels and Korbel to learn about theory and practice related to economic development, business ethics, CSR strategy, social entrepreneurship, business and human rights, sustainability, impact investing, as well as considerations with regards to hard and soft law mechanisms that govern transnational space. These courses will give students the practical content they need to embrace and navigate the complexity of business and governance issues.
Certificate in Global Business and Corporate Social Responsibility

This certificate program is reserved for students who are enrolled in a master's level degree within the Daniels College of Business or the Josef Korbel School of International Studies. Those who have been accepted to a master's level degree are eligible to pursue this certificate program. Interested students should contact the Student Services department in the Daniels College of Business at GradBus.Advising@du.edu. Students should complete a certificate form no later than six months prior to their graduation so the certificate may be formally declared and added to the student's record.

Certificate in Global Business and Corporate Social Responsibility

Program Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 4445</td>
<td>International Business: Strategy and Practice</td>
<td>4</td>
</tr>
<tr>
<td>or INTS 4029</td>
<td>International Business: Strategy and Practice</td>
<td>4</td>
</tr>
<tr>
<td>BUS 4444</td>
<td>Global Bus, Governance &amp; CSR</td>
<td>4</td>
</tr>
<tr>
<td>or INTS 4459</td>
<td>Global Business, Governance &amp; Corporate Social Responsibility</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4324</td>
<td>International Political Economy</td>
<td>4</td>
</tr>
</tbody>
</table>

Elective Courses

Choose a minimum of 12 credits from the following list. Students must complete one elective outside of their primary college:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 4130</td>
<td>Corporate Financial Reporting</td>
<td>2</td>
</tr>
<tr>
<td>MBA 4170</td>
<td>Navigating the Global Economy</td>
<td>2</td>
</tr>
<tr>
<td>MBA 4230</td>
<td>Managing Cost Information</td>
<td>2</td>
</tr>
<tr>
<td>MBA 4280</td>
<td>Mastering Managerial Financial Competencies I</td>
<td>2</td>
</tr>
<tr>
<td>MBA 4285</td>
<td>Mastering Managerial Financial Competencies II</td>
<td>2</td>
</tr>
<tr>
<td>LGST 3600</td>
<td>Business and Global Values</td>
<td>4</td>
</tr>
<tr>
<td>ACTG 4610</td>
<td>Financial Accounting and Reporting</td>
<td>4</td>
</tr>
<tr>
<td>FIN 4630</td>
<td>Managerial Finance</td>
<td>4</td>
</tr>
<tr>
<td>LGST 4700</td>
<td>International Law</td>
<td>4</td>
</tr>
<tr>
<td>FIN 4700</td>
<td>Topics in Finance</td>
<td>4</td>
</tr>
<tr>
<td>MKTG 4705</td>
<td>Topics in Marketing</td>
<td>4</td>
</tr>
<tr>
<td>MGMT 4700</td>
<td>Topics in Management (NGOs &amp; Business, Intro to Management Consulting)</td>
<td>4</td>
</tr>
<tr>
<td>BUS 4700</td>
<td>Special Topics in Business (Global Corruption)</td>
<td>4</td>
</tr>
<tr>
<td>FIN 4180</td>
<td>Global Finance</td>
<td>2</td>
</tr>
<tr>
<td>INTS 4210</td>
<td>Multinational Corporations</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4330</td>
<td>International Business Transactions</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4339</td>
<td>Microfinance, Financial Inclusion and Inclusive Markets</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4549</td>
<td>Managing Microfinance: Balancing Business with Development</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4566</td>
<td>Global and Sustainable Development (Case of Coffee &amp; Chocolate)</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4653</td>
<td>Political Economy of the Resource Curse</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4622</td>
<td>Global Governance</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4710</td>
<td>Topics in International Studies</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4972</td>
<td>Global Environmental Governance</td>
<td>4</td>
</tr>
</tbody>
</table>

Total credits required: 24

1 These courses are open to Korbel students. Students in the Denver MBA do not take ACTG 4610 Financial Accounting and Reporting or FIN 4630 Managerial Finance.

2 These courses are only open to students in the Denver MBA. MBA 4130 Corporate Financial Reporting and MBA 4230 Managing Cost Information together are the equivalent of the 4-credit course ACTG 4610 Financial Accounting and Reporting. MBA 4280 Mastering Managerial Financial Competencies I and MBA 4285 Mastering Managerial Financial Competencies II together are the equivalent of the 4-credit course FIN 4630 Managerial Finance.

Minimum number of credits required: 24
Courses

LGST 4198 E-Commerce Law and Ethics (4 Credits)
The changes in technology and business over the past 20 years have been dramatic and far-reaching. Navigating the even more astonishing changes in the future requires some perspective on the developments of the recent past. How did we get to where we are? What technological, economic and political forces have generated the current state of e-commerce? How are these forces likely to change into the future? What are the basic features of e-commerce as it exists today?

LGST 4550 Business Law for Accountants (4 Credits)
This course provides students with a detailed review of the legal considerations in forming, operating, and dissolving the most common forms of business entities: partnerships, limited liability companies, and corporations. The rights, duties and liabilities of the managers, owners and accountants (internal and external) of these entities are extensively examined. The course also provides an overview of federal securities laws impacting these organizations. Prerequisite: ACTG 4620 or BUS 4620 or LGST 2000 (concurrent registration OK).

LGST 4700 International Law (4 Credits)
Offers both an introduction to public international law (the rights and duties of states and intergovernmental organizations [IGOs]) and to private international law (the rights and duties of individuals, businesses, and non-governmental organizations [NGOs] in their international affairs). Majority of course devoted to key international issues of business law and public policy such as alternative dispute resolution (ADR), privatization, intellectual property, international sales, the Foreign Corrupt Practices Act, trade (GATT and WTO), and the international facilities that deal with the adjudication and resolution of legal issues related to business.

LGST 4701 Topics in Ethics & Legal Study (1-5 Credits)
This course examines complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. At the heart of Great Leadership one finds a values base. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants gain a deep understanding of - and practical experience with - Values Based Leadership in today's world.

LGST 4730 Values Based Leadership in Practice (4 Credits)
The course examines the complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants will gain a deep understanding of - and practical experience with - Values-Based Leadership in today's world.

LGST 4740 Science & Mgmt. of Org. Ethics (4 Credits)
This course examines our knowledge regarding ethical decision making and behavior in organizational contexts. The course also explores the implications of such knowledge for effectively creating and managing ethical organizations. The course will be conducted as a graduate seminar with students playing a central role in identifying topics, researching content areas, and deciding on course outcomes. We will examine conceptual and theoretical models of ethical behavior in organizations, research empirical studies, and develop managerial implications. The overarching goal is to increase knowledge and understanding so as to strengthen capacities to be ethical leaders and managers. Prerequisite: BUS 4100. Non-business students may take the course with permission.

LGST 4760 CEOs and Corporate Governance (4 Credits)
In the wake of the Sarbanes-Oxley and Dodd-Frank laws, corporate governance has become a compelling issue for business students and executives. Corporate board members and leaders of institutional investors share their insights concerning corporate governance from strategic, financial, and legal perspectives. CEO/board dynamics are explored, along with leadership development and executive succession policies. The roles of major board committees, such as the audit, compensation, nominating, and legal compliance committees are given special emphasis. Board responsibilities in corporate crises and re-structuring are examined, along with the legal liabilities of executives, board members, and the corporation. Public policy pressures on corporate governance, including the roles played by the Securities and Exchange Commission and other regulatory bodies are discussed, along with the responses by business organizations, political interest groups, and self-regulatory bodies. Shareholder activism and litigation, along with pressures from other corporate stakeholders are also emphasized in the course. Examples of topics include corporate scandals, executive compensation, global corporate governance systems, and governance reforms. Students engage in a number of case analyses over the course of the quarter, produce a four-part case study, and discuss actual real world solutions with business leaders who have been involved in the issues. Cross-listed with ACTG 4760.

LGST 4780 Leadership, Teams & Values (4 Credits)
This course is designed for Daniel Scholars (who have completed the first quarter of their MBA program including Value Based Leadership) to provide both challenging intellectual discussion and physical engagement around the fundamental ethical dilemma of competition and/or cooperation. The venue for the course is Harbor Island, San Diego, California, and the adjacent waters of San Diego Bay and the Pacific Ocean. Both traditional classrooms and the untraditional learning environment of the off-shore sail boat provide the context of dynamic learning about values, teams and self. Prerequisite: BUS 4100.

LGST 4790 Entrepreneur & Family Business-Organization, Governance Ethics & Leadership (4 Credits)
This course covers the most current legal and ethical issues involving the creation of value, strengthening and growing family businesses through the process of best practices in business governance, coupled with ethical conduct and values based leadership, and legal compliance. Cross listed with LGST 3790. Prerequisite: BUS 4100.
LGST 4980 Internship (1-5 Credits)
LGST 4991 Independent Study (1-10 Credits)
LGST 4992 Directed Study (1-4 Credits)
LGST 4995 Independent Research (1-10 Credits)

Business Information and Analytics
Office: Daniels College of Business, Room 580
Mail Code: Daniels College of Business, Room 580, 2101 S. University Blvd., Denver, CO 80208
Phone: 303-871-3695
Web Site: https://daniels.du.edu/business-information-analytics/

Master of Science in Business Analytics
The University of Denver's Daniels College of Business Master of Science in Business Analytics program focuses on the three pillars of business analytics: data management, analytic modeling, and business decision-making. Graduates will be able to bring value to their organizations by informing data-driven decisions. As part of the program, students consult for our partner organizations (corporate, government, and non-profit) to help them with their data-driven challenges. Through partnerships with IBM/SPSS, Tableau, Microsoft, and other leading technology vendors, Daniels is able to provide the most relevant analytic tools in our classrooms. This gives students an edge in solving complex problems and keeps them on the leading edge of business analytics. This is a STEM designated degree and is a 12–36-month, full or part-time, 58-credit program with two components: Business Analytics Core (54 credits) and Electives (4 credits).

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

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

Standardized Test Scores/Other Requirements
- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.
- The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number for the Business Analytics program is MZR-GT-47. The GRE code number is 4842. The admissions committee will consider GMAT or GRE waiver requests from candidates who meet one of the following standards (on a case-by-case basis):
  - Received an accredited master's degree in a related field.
  - More than 84 months of related professional experience.
  - DU students that meet the provisions for the Masters Accelerated Admissions Process.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
- Minimum TOEFL Score (Paper-based test): 575
- Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
- Minimum CAE Score: 185 (No less than a 170 on any section)

English Conditional Admission: No, this program does not offer English Conditional Admission.
Master of Science in Business Analytics

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFO 4000</td>
<td>Foundations of Business ¹</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4100</td>
<td>Survey of Business Analytics</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4120</td>
<td>Python Programming</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4140</td>
<td>Business Databases</td>
<td>4</td>
</tr>
<tr>
<td>STAT 4610</td>
<td>Business Statistics</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4200</td>
<td>Business Analytics Capstone Planning</td>
<td>2</td>
</tr>
<tr>
<td>INFO 4240</td>
<td>Data Warehousing</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4281</td>
<td>Project Management</td>
<td>2</td>
</tr>
<tr>
<td>INFO 4300</td>
<td>Predictive Analytics</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4340</td>
<td>Data Mining and Visualization</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4360</td>
<td>Complex Data Analytics</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4381</td>
<td>Decision Processes</td>
<td>2</td>
</tr>
<tr>
<td>INFO 4390</td>
<td>Advanced Predictive Modeling with R</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4400</td>
<td>Business Analytics Capstone</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4590</td>
<td>Optimization</td>
<td>4</td>
</tr>
</tbody>
</table>

Elective requirements

4 credits in electives required in 4000 level graduate courses. ²

Total Credits

58

Minimum Number of Credits Required: 58

² General electives may be chosen from INFO courses or from other Daniels courses. Additionally, other business, technology, and statistics-related courses from disciplines outside the business school are possible.

¹ INFO 4000 may be substituted with an elective for students with another business degree

Courses

INFO 4000 Foundations of Business (4 Credits)
The introduction to Business course is an introduction to provides an overview of the business arena, how a business operates, and the supporting functions that are needed in any business enterprise. Students will identify forms of ownership and the processes used in operations, marketing, accounting, finance, personnel, information technology and general management. Moreover, students will learn about social responsibility and business ethics in concurrence with the Daniels College legacy.

INFO 4100 Survey of Business Analytics (4 Credits)
This course provides an overview of business analytics: how business data are collected, processed, and analyzed to support decision making. It will address both how to assess and use data that is readily available as well as how to start with corporate strategy and determine what data is needed, how to generate and process it. The course will also explore how corporate culture, ethics, and globalization can affect data management and analytic decision-making.

INFO 4120 Python Programming (4 Credits)
Python is a popular general purpose programming language which is well suited to a wide range of problems. With the right set of add-ons, it is comparable to domain-specific languages such as R and MATLAB. Python is a scripting language. The following topics will be covered: Importing data, Reading and writing files, Cleaning and Managing Data, Merging and joining DataFrame objects, Plotting and Visualization, Statistical Analysis, Fitting data to probability distributions and Linear models. Packages: Pandas, NumPy, matplotlib, statsmodels, Scikit-learn, and IPython. Principal Content Elements: 1. Introduction to Programming Logic and Design Using Python 2. Data Management 3. Statistical Analysis 4. Advanced Data Management and Statistical Analysis Prerequisites: STAT 4610.

INFO 4140 Business Databases (4 Credits)
This is an introductory database course which covers enterprise database design, modeling and implementation.

INFO 4200 Business Analytics Capstone Planning (2 Credits)
This course prepares the student for the Capstone course by identifying a faculty advisor, company, data, and a business issue to be addressed in the Capstone course in the final quarter. (Must be taken two quarters prior to INFO4400, with the exception of off-cycle students, who will take it the quarter prior to INFO4400.) This course may be taken by MSBA students only.
INFO 4240 Data Warehousing (4 Credits)
This course introduces students to the main components of a data warehouse for business intelligence applications. Students will learn how a data warehouse fits into the overall strategy of a complex enterprise, how to develop data models useful for business intelligence, and how to combine data from disparate sources into a single database that comprises the core of a data warehouse. Students will also explore how to define and specify useful management reports from warehouse data. Prerequisites: INFO 4100, INFO 4140.

INFO 4250 Business Data and Analytics (4 Credits)
Businesses make decisions and improve processes using their own and external data with a variety of data-driven and analytic techniques. This course introduces students to the business data landscape, data management in commercial organizations, and the data-driven decision-making process. Students explore the fundamental concepts behind how data and analytics can improve business performance, using their individual roles and companies as subject matter. Principal Content Elements: 1. Data-driven decision making and performance improvement. 2. Data management in organizations. 3. Organizational transformation based on data-driven insights.

INFO 4280 Predictive Analytics (4 Credits)
This course is designed to prepare students for managerial data analysis and data mining, predictive modeling, model assessment and implementation using large data sets. The course addresses the how, when, why and where of data mining. The emphasis is on understanding the application of a wide range of modern techniques to specific decision-making situations, rather than on mastering the theoretical underpinnings of the techniques. The course covers methods that are aimed at prediction, forecasting, classification, clustering and association. Students gain hands-on experience in using computer software to mine business data sets. Prerequisite: STAT 4610.

INFO 4281 Project Management (2 Credits)
"Cheaper, better, faster" is the mantra of modern business. Innovation, providing new products and services or using improved business processes, has become a prerequisite for businesses to thrive and flourish. Project Management is a discipline which supports innovation by examining how to facilitate one time events such as constructing a building, installing a software system, taking a product to market, reengineering a marketing process, or merging an acquired company. In this course, we examine the science, practice the art, and discuss the folklore of project management to enable students to contribute to and manage projects as well as to judge when to apply this discipline. The course also covers the use of MS Project Professional as a management tool and Crystal Ball as a Monte Carlo simulator for project exercises. Students also learn the fundamentals of process and project simulation for business decision-making. Prerequisite: INFO 4100.

INFO 4240 Data Warehousing (4 Credits)
In this course, students examine the science, practice the art, and discuss the folklore or project management to enable them to contribute to and manage projects as well as to judge when to apply this discipline. The course also covers the use of MS Project Professional as a management tool and Crystal Ball as a Monte Carlo simulator for project exercises. Students also learn the fundamentals of process and project simulation for business decision-making. Prerequisite: INFO 4100.

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INFO 4300 Predictive Analytics (4 Credits)
This course is designed to prepare students for managerial data analysis and data mining, predictive modeling, model assessment and implementation using large data sets. The course addresses the how, when, why and where of data mining. The emphasis is on understanding the application of a wide range of modern techniques to specific decision-making situations, rather than on mastering the theoretical underpinnings of the techniques. The course covers methods that are aimed at prediction, forecasting, classification, clustering and association. Students gain hands-on experience in using computer software to mine business data sets. Prerequisite: STAT 4610.

INFO 4340 Data Mining and Visualization (4 Credits)
In this course, students create business intelligence tools such as balanced scorecards, data visualization and dashboards to inform business decisions. The course will focus on the identification of metrics, measures, and key performance indicators for a variety of business operations, and will introduce numerous analytic methodologies to support the decisions made with regard to these metrics. The focus will be on the advantages and disadvantages of various modeling methodologies and implementations moving towards performance improvement and business understanding. Prerequisite: STAT 4610.

INFO 4360 Complex Data Analytics (4 Credits)
This course addresses the rapidly-growing demands on businesses created by the prevalence of big and unstructured data. These include management of big data, big-data analytics, analysis of unstructured data (to include text mining), and management and analysis of real-time (streaming) data. The focus will be on enhancing business decision-making in the presence of big data, and on how to create the greatest ROI with large data sets.

INFO 4380 Decision Processes (4 Credits)
This course addresses the process of decision making in the enterprise: who makes what decisions based on what information and for what purpose. Business Intelligence is premised on the HP motto: "in God we trust. All others bring data." But what is the cost of collecting and analyzing the data and presenting the results, and what decisions justify that cost? Is the transformation from data to decision always rational, and what are the common pitfalls for human decision makers? We examine the results of recent experiments from behavior economics and their relevance to making business decisions. Prerequisite: INFO 4100.

INFO 4381 Decision Processes (2 Credits)
The competency we want to begin to develop in this course is the ability to make sound business decisions. A quick Google search can reassure you that there is no lack of information about how to make good decisions. And much of that information is confusing, if not downright contradictory. Since you will be making the decisions which impact your business and your career, you will need to decide what constitutes a good decision as well as a good decision process. In this course, we will explore some of the voluminous material available, use it to make decisions, practice with useful tools, identify traps and pitfalls, assess results, and extract guidelines for a decision process. Then we will iterate to update and refine the process.

INFO 4390 Advanced Predictive Modeling with R (4 Credits)
This course serves as an introduction to advanced predictive modeling and statistical learning using the R statistical software. Specific topics include linear, non-linear, and logistic regression, classification, resampling methods, and non-linear regression, tree-based methods, and support vector machines. The students will learn how to communicate their results (business reports, dashboards, etc.) of the various modeling exercises and projects using RStudio and the RMarkdown suite of tools. Enforced Prerequisites and Restrictions: Info 4300.
INFO 4400 Business Analytics Capstone (4 Credits)
This course gives students an opportunity to apply the knowledge and skills learned in this program to a real-world problem submitted by a partner business. Students take a business problem from model construction and data collection through an analysis and presentation of results to recommendations for specific business decisions. Prerequisite: INFO 4200.

INFO 4401 Quantitative Methods (2 Credits)
Businesses can never have perfect information; therefore, they must employ statistical techniques to improve the decision-making process. This course introduces students to managerial decision-making using probability and other statistical techniques to support and validate the chosen decision. A student project will focus on data collection (primary research), data analysis, decision analysis, written/oral presentation skills, and the development of an infographic.

INFO 4590 Optimization (4 Credits)
This course introduces students to the basic optimization modeling techniques and tools as practiced by business analysts to help their enterprises make better-informed decisions. Applications will include mix, selection, assignment, distribution, transportation, financial management, planning, scheduling, and management implementations in a variety of business settings. The course will focus on problem definitions, problem configuration, spreadsheet solutions, LP Software (LINGO) solutions, and interpreting and implementing results.

INFO 4591 Optimization (2 Credits)
This is a two-credit version of INFO4590, intended for dual-undergraduate/graduate students only. Students have the option of taking the first ten lessons (spreadsheet modeling) or the second ten lessons (solver programming) and completing the deliverables associated with their track only. The students taking the spreadsheet track will focus on LOs 1, 2, and 3. The students taking the solver track will focus on LOs 1, 2, 4, and 5. All students will take the common INFO4590 final. The course is only offered in conjunction with INFO4590 during the Winter quarter.

INFO 4610 Business Statistics and Analytics (4 Credits)
Making high quality business decisions is hard. Using data to make business decisions makes the process better. This course introduces students to a variety of techniques in analytics and statistics that facilitate data driven business decisions. Time will be spend identifying appropriate techniques to apply in various scenarios, applying in detail some of the quantitative techniques, and using analytic outputs to inform business decisions. Both technical skills and clear communication of results and decisions will be covered. Choosing proper techniques, technical work using Microsoft Excel, proper interpretation of results, and decision making are skills practiced in this course.

INFO 4700 Topics in Business Analytics (0-10 Credits)
Exploration of current trends and topics in business analytics. Prerequisite: INFO 4100.

INFO 4991 Independent Study (1-10 Credits)
INFO 4992 Directed Study (1-4 Credits)

Executive PhD in Business Administration
The Daniels College of Business Executive PhD is a 90-credit hour comprehensive three-year blended program that immerses students in conducting applied business research. Students will gain rigorous research skills to address the complex programs facing business today. The program will integrate your career experience with a thorough education in quantitative analysis, qualitative analysis and mixed methods, teaching you to find powerful, data-driven business insights.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSBI) since 1923.

Cohort
The Daniels Executive PhD is a cohort-based program with lock-step curriculum which enables students to maximize cross-learning, collaboration and networking.

Class Schedules
This is a hybrid program delivered online and in-person. During the first two years of the program, students will attend nine on-campus immersions which are held from 8am – 5pm Friday and Saturday. In the third year of the program, students are required to come to campus at least once time to meet with their dissertation chair and committee.

Concentrations/Electives
There are no concentrations or electives offered for the Executive PhD Program. The dissertation stage of the program will enable students to conduct research in their area of interest.

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

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

Other Requirements

- Applicants may be contacted by a Daniels representative to schedule an admissions interview, which will be conducted on campus or via webcam. The admissions interview is an opportunity for both you and Daniels staff to evaluate whether or not the program is a good fit. Interviews are by invitation only, sent after all other application requirements have been completed.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
- Minimum TOEFL Score (Paper-based test): 575
- Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
- Minimum CAE Score: 185 (No less than a 170 on any section)

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

Executive PhD in Business Administration

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACTG 6300</td>
<td>Behavioral Research in Accounting Seminar</td>
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<tr>
<td>BUS 6000</td>
<td>Research Methods in Business</td>
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<tr>
<td>BUS 6001</td>
<td>Qualitative Research Methods</td>
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<tr>
<td>BUS 6002</td>
<td>Quantitative Methods I - Making Discoveries with Data</td>
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<tr>
<td>BUS 6003</td>
<td>Quantitative Methods II - Making Discoveries with Data</td>
<td>4</td>
</tr>
<tr>
<td>BUS 6004</td>
<td>Data Analytics</td>
<td>4</td>
</tr>
<tr>
<td>BUS 6300</td>
<td>Seminar in Cross Disciplinary Decision Making Research</td>
<td>4</td>
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<tr>
<td>BUS 6301</td>
<td>Research Seminar in Innovation and Creativity</td>
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<tr>
<td>BUS 6500</td>
<td>Applied Research Practicum Series: I</td>
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<td>BUS 6501</td>
<td>Applied Research Practicum Series: II</td>
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<td>BUS 6502</td>
<td>Applied Research Practicum Series: III</td>
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<td>BUS 6503</td>
<td>Applied Research Practicum IV</td>
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<td>FIN 6300</td>
<td>Seminar in Finance Research</td>
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</tr>
<tr>
<td>MGMT 6300</td>
<td>Seminar in Leadership Strategy Research</td>
<td>4</td>
</tr>
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<td>MGMT 6301</td>
<td>Ethical Leadership Research Seminar</td>
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<td>MKTG 6300</td>
<td>Marketing Research Seminar</td>
<td>4</td>
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<tr>
<td>Dissertation</td>
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<tr>
<td>BUS 6900</td>
<td>Dissertation Research in Business</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 90

Non-Coursework Requirements

Comprehensive Exam

Every PhD student must pass the comprehensive exam. To qualify for the comprehensive exam, the student must complete the required coursework consisting of research methodology/statistics, research seminars and the Applied Research Practicum (ARP) series with a minimum GPA of a 3.0. In no case may more than one-fourth of the coursework counted toward comprehensive exam eligibility and earning the degree be grades of a “C.” A grade lower than “C” renders the credit unacceptable for meeting eligibility to sit for the comprehensive exam and university degree requirements. Coursework taken at another university may not be applied to the coursework requirement.

The program chair will appoint a committee of scholarly qualified faculty to write the comprehensive exam. This exam will cover topics in the research methodology/statistics and research seminar courses. The exam will be take-home, and students will be given several days to complete it.
committee will grade the exam, and make a recommendation to the program chair on whether a student passes or fails. A failed exam may lead to dismissal from the program.

Sufficiently prior to the exam date, the program chair will appoint an examination committee of scholarly qualified faculty. The committee creates the exam and grades it. After the exam, the committee makes a recommendation on whether the student passes or fails.

**Dissertation Proposal Defense**

Following successful completion of the comprehensive exam, each student will prepare a dissertation proposal and defend the proposal to the dissertation committee. A successful dissertation defense qualifies the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student's advisor and should be available to all committee members at least two weeks prior to the exam. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the research question, motivation for pursuing the research, and the research method design that will be used to answer the research question.

The dissertation proposal must be successfully defended within four quarters of passing the comprehensive exam. Successful defense of the dissertation results in agreement between the student and the committee as to what will constitute successful completion of the dissertation research.

The composition of the dissertation proposal committee must comply with the standards specified by the University of Denver Doctoral Degree Requirements and Standards. The dissertation proposal defense is an oral closed exam. If a student successfully defends the dissertation proposal but subsequently switches advisor and hence topic, the dissertation defense must be repeated within one year to ensure capability of the student and feasibility of the project.

**Dissertation Defense**

After the dissertation has been completed, the student must defend it in a final oral exam, as specified by the University of Denver Doctoral Degree Requirements and Standards.

**University of Denver Doctoral Degree Requirements and Standards**

http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/doctoral-degree-requirements/

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**Finance**

Office: Daniels College of Business, Room 555  
Mail Code: Daniels College of Business, Room 555, 2101 S. University Blvd., Denver, CO 80208  
Phone Number: 303-871-3322  
Web Site: https://daniels.du.edu/finance/

**Master of Science in Applied Quantitative Finance**

In the Master's in Applied Quantitative Finance program, you'll study leading-edge theories, models and applications across the major areas of finance. Take advantage of our quarter system to tailor your coursework as well as your internships. Develop your finance leadership and communication skills by participating in a variety of case studies and competitions, as well as hands-on money management. When you graduate, you'll be both a creator of finance knowledge and a disseminator who can grow to lead a finance enterprise.

The Master of Science in Applied Quantitative Finance is a STEM (Science, Technology, Engineering and Math) degree according to the Department of Homeland Security (DHS). The DHS expanded list includes designated degrees that qualify for up to 17 months Optional Practical Training (OPT) Extension for F-1 Nonimmigrant Students.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

**Master of Science in Applied Quantitative Finance**

**Degree and GPA Requirements**

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

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.
- The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number for the Applied Quantitative Finance program is MZR-GT-04. The GRE code number is 4842. The admissions committee will consider GMAT or GRE waiver requests from candidates who meet one of the following standards (on a case-by-case basis):
  - Received an accredited master's degree in a related field.
  - More than 84 months of related professional experience.
  - DU students that meet the provisions for the Masters Accelerated Admissions Process.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
- Minimum TOEFL Score (Paper-based test): 575
- Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
- Minimum CAE Score: 185 (No less than a 170 on any section)

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

Master of Science in Applied Quantitative Finance

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACTG 4610</td>
<td>Financial Accounting and Reporting</td>
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<tr>
<td>FIN 4630</td>
<td>Managerial Finance</td>
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<td>FIN 4170</td>
<td>Quantitative Methods in Finance</td>
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<td><strong>Finance Core Courses</strong></td>
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<tr>
<td>FIN 4000</td>
<td>Financial Modeling and Databases Bootcamp</td>
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<tr>
<td>FIN 4500</td>
<td>Financial Modeling</td>
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<td>FIN 4200</td>
<td>Financial Investments and Markets</td>
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<td>FIN 4410</td>
<td>Financial Planning &amp; Analysis</td>
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<td>Econometrics for Finance</td>
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<td>FIN 4180</td>
<td>Global Finance</td>
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<td>FIN 4110</td>
<td>Ethics in Finance</td>
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<tr>
<td>INFO 4140</td>
<td>Business Databases</td>
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<tr>
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<td>Students can take either FIN 4740 or FIN 4750</td>
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<tr>
<td>FIN 4740</td>
<td>Managerial Microeconomics</td>
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<td>FIN 4750</td>
<td>Managerial Macroeconomics</td>
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<td></td>
<td><strong>Elective requirements</strong></td>
<td><strong>16 credits required in 4000 level FIN courses, including:</strong></td>
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<tr>
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<td>Investments Track</td>
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<tr>
<td>FIN 4860</td>
<td>Derivatives</td>
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<tr>
<td>FIN 4120</td>
<td>Quantitative Methods in Stock Selection</td>
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<tr>
<td>FIN 4130</td>
<td>Financial Risk Management Strategies</td>
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<tr>
<td>FIN 4320</td>
<td>Security Analysis and Valuation</td>
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<tr>
<td>FIN 4330</td>
<td>Portfolio Management and Risk Analytics</td>
<td></td>
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<tr>
<td>FIN 4710</td>
<td>Marsico Investment Fund I</td>
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<tr>
<td>FIN 4720</td>
<td>Marsico Investment Fund II</td>
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<td>FIN 4730</td>
<td>Marsico Investment Fund III</td>
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<tr>
<td>FIN 4890</td>
<td>Fixed Income Analysis</td>
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<tr>
<td>FIN 4700</td>
<td>Topics in Finance (varies)</td>
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Topics - Int'l Monetary Economics & Finance

Topics - Finance Capitals (Travel Course)

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>FIN 4800</td>
<td>An Organized Walk Down Wall Street</td>
</tr>
<tr>
<td>FIN 4980</td>
<td>Finance Internship (varies)</td>
</tr>
<tr>
<td>FIN 4991</td>
<td>Independent Study (varies)</td>
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</table>

Corporate Track

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<th>Course</th>
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<tr>
<td>ACTG 4220</td>
<td>Financial Actg &amp; Analysis</td>
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<tr>
<td>FIN 4140</td>
<td>Enterprise Risk Management</td>
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<td>FIN 4160</td>
<td>Treasury Management</td>
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<td>FIN 4420</td>
<td>Capital Expenditure Analysis</td>
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<td>FIN 4870</td>
<td>Strategic Finance</td>
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<td>FIN 4885</td>
<td>Investment Banking and External Financing</td>
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<tr>
<td>FIN 4700</td>
<td>Topics in Finance</td>
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<tr>
<td>FIN 4800</td>
<td>An Organized Walk Down Wall Street</td>
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<td>FIN 4980</td>
<td>Finance Internship</td>
</tr>
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<td>FIN 4991</td>
<td>Independent Study</td>
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</tbody>
</table>

Investment Banking Track

<table>
<thead>
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<tbody>
<tr>
<td>ACTG 4220</td>
<td>Financial Actg &amp; Analysis</td>
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<tr>
<td>FIN 4885</td>
<td>Investment Banking and External Financing</td>
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<tr>
<td>FIN 4150</td>
<td>Advanced Business Valuation</td>
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<tr>
<td>FIN 4870</td>
<td>Strategic Finance</td>
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<td>FIN 4320</td>
<td>Security Analysis and Valuation</td>
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<td>FIN 4700</td>
<td>Topics in Finance</td>
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<td>FIN 4800</td>
<td>An Organized Walk Down Wall Street</td>
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<tr>
<td>FIN 4980</td>
<td>Finance Internship</td>
</tr>
<tr>
<td>FIN 4991</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

Total Credits: 45-57

1 Students may demonstrate competency in the three prerequisite courses in the following manner:
   - Accepted to the MSAQF program through the University of Denver's Undergraduate Master's Accelerated Admissions Process (MAAP) and earned a B- or better in the undergrad equivalent course as part of their undergraduate degree program. Undergraduate degree must be in finance.
   - Passing an on-campus waiver exam before the start of the MSAQF program.

Courses

FIN 4000 Financial Modeling and Databases Bootcamp (1 Credit)
This bootcamp is designed to equip students with a firm foundation in financial modeling as well as acquire an adequate command of Excel functionality and efficiency. This course also serves as an introduction to financial databases, mainly centered on the Capital IQ platform, which the student will be using throughout his or her academic and professional career. Topics covered include: Excel modeling best practices, keyboard shortcuts and common functions, financial datasets, and practical modeling applications in finance.

FIN 4110 Ethics in Finance (4 Credits)
This second course in the Compass is specifically designed for the Master of Science Finance (MSF) curriculum and focuses on the ethical, professional, social, and legal responsibilities of finance professionals, organizations and markets. Financial institutions are facing a crisis of confidence. Trust is an essential ingredient to maintaining efficient and effective financial markets. The finance industry has acquired a reputation for unethical and unsavory activity and has lost the trust of much of society. Many financial professionals believe they are encouraged and rewarded for engaging in unethical activity. We discuss the ethical issues facing financial institutions and professionals and explore solutions for resolving these issues and restoring trust.

FIN 4150 Advanced Business Valuation (4 Credits)
The objective of this course is to present advanced valuation techniques to deepen students' understanding and enhance their knowledge of valuation theory and practical application.

FIN 4160 Treasury Management (4 Credits)
The objective of the course is to provide students with a comprehensive understanding of how various treasury functions are managed in a corporation and build students' capabilities to assume the role of a proficient treasury manager.
FIN 4180 Global Finance (2 Credits)
This course explores financial management in the international arena. Principal content elements include: The market for foreign exchange, interest rate parity, hedging currency risk, international portfolio management. Upon completion of this course, students should be able to accomplish the following objectives: Explain the determinants of foreign exchange rates; Explain and identify the financial difficulties and opportunities faced by corporations when operating internationally; Apply forwards and options for hedging currency risk; Identify the determinants of the expected returns on international investments; Discuss current issues in international finance. Prerequisites: FIN 4630.

FIN 4200 Financial Investments and Markets (4 Credits)
Introduction to financial markets, securities, instruments, and other factors that determine the financial environment. Prerequisites: STAT 4610 or FIN 4170 or (MBA 4160 and MBA 4360) or (MBA 4280 and MBA 4285). Co-requisites: MBA 4630 and FIN 4630.

FIN 4201 MS Management Managerial Finance (2 Credits)
FIN 4201 introduces concepts and analytical techniques to identify and solve financial management problems. The focus on Performance Metrics (Ratios and Du Pont Analysis), Time Value of Money and Opportunity Costs, and Project Analysis prepares managers to operate in an environment that can at times be driven by the financial performance of the company.

FIN 4320 Equity Analysis (4 Credits)
Examination of statistical and theoretical foundation for determination of market prices and market returns. Includes theoretical implications for investment management of options, futures, stocks and bonds. Prerequisite: FIN 4200.

FIN 4330 Portfolio Management and Risk Analytics (4 Credits)
Case and project approach to foundation of investment portfolio management. Prerequisite: FIN 4200.

FIN 4410 Financial Planning & Analysis (4 Credits)
Advanced course in financial planning and decision-making focusing on capital structure, working capital management, long-range and short-term financial planning, and mergers. Prerequisite: MBA 4112.

FIN 4420 Capital Expenditure Analysis (4 Credits)
Advanced course in capital budgeting examining capital allocation processes and procedures and the theory and applied techniques of capital spending and divestment under conditions of certainty and uncertainty. Related issues of cost of capital and leasing also included. Prerequisite: FIN 4630.

FIN 4500 Financial Modeling (4 Credits)
Use of erect functions and macros to construct financial models from corporate finance, investments and financial markets. Prerequisites: FIN 4170.

FIN 4610 Multinational Financial Management (4 Credits)
Financial analysis of multinational corporation operating in international markets, including exchange rates, international instruments, markets, institutions and futures. Prerequisite: MBA 4112.

FIN 4620 Financial Forecasting (4 Credits)
Analytical skills and tools of finances; theoretical concepts and practical applications. Topics include ratio analysis, breakeven analysis and leverage, securities valuation, capital budgeting, financial forecasting, and working capital management.

FIN 4700 Topics in Finance (4 Credits)
Topics vary each quarter. Course may be taken more than once if topics are different.

FIN 4701 Topics in Finance (1-10 Credits)
Topics vary. For new/experimental courses taught within the Reiman School of Finance.

FIN 4710 Marsico Investment Fund I (4 Credits)
A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: Permission of instructor. (First part of two-quarter course.).

FIN 4720 Marsico Investment Fund II (4 Credits)
A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: FIN 4710. (Second part of two-quarter course.).

FIN 4730 Marsico Investment Fund III (4 Credits)
This course is an elective course that is the third in the series of classes involving the Graduate investment fund class: Marsico Investment Fund I & II. This course allows students to apply the investment, security analysis, and portfolio management tools and techniques that they have learned in their Finance classes. The students manage an actual portfolio, a portion of the University's endowment originally gifted by Tom and Cydney Marsico. The selection of students for this class is competitive. Students must agree to participate for 2 consecutive quarters, and they must be willing to address portfolio issues during the between-quarter periods if necessary. Because the course involves the application of tools and concepts learned in other classes, the best time to take the course is in the last year of a student's program. Prerequisites: FIN 4710 and FIN 4720.
FIN 4740 Managerial Microeconomics (2 Credits)
This course combines the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics, game theory, and industrial organization that they need to make sound managerial decisions. Case studies will be used to develop practical insights into managing the firm's resources to achieve competitive advantage. The course is divided into two principle modules based on market structure: perfect competition and imperfect competition. Both modules cover optimal behavior and strategies.

FIN 4750 Managerial Macroeconomics (2 Credits)
This course covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the global economy and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rate, business cycles, and monetary and fiscal policies. The course uses case studies to analyze real-life macroeconomic issues, and students are encouraged to investigate the potential and limitations of macroeconomic theory with real-world problems. The course is divided into two principle modules: the economy in the long run, and the economy in the short run. Both modules cover impacts of government policies on the business environment in a closed economy and an open economy.

FIN 4760 Managerial Economics (4 Credits)
The first half of this course meshes the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics, game theory, and industrial organization that they need to make sound managerial decisions. Case studies will be used to develop practical insights into managing the firm's resources to achieve a competitive advantage. The second half of this course covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the domestic and global economies and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rates, business cycles, and monetary and fiscal policies. Case studies will be used to analyze real-life macroeconomic issues, and students are encouraged to investigate the potential and limitations of microeconomic theory with real-world problems.

FIN 4800 An Organized Walk Down Wall Street (4 Credits)
After four class sessions in Denver, participants will spend five days in New York visiting exchanges, brokerage firms, investment bankers, commercial banks, asset managers, and other institutions.

FIN 4830 Econometrics for Finance (4 Credits)
This course focuses on econometric and statistical modeling with an emphasis on finance applications. Prerequisite: STAT 4610 or FIN 4170.

FIN 4860 Derivatives (4 Credits)
This course provides a theoretical foundation for the pricing of contingent claims and for designing risk-management strategies. It discusses more advanced material in financial derivatives and is intended for students who have a quantitative background and are interested in enhancing their knowledge of the way in which derivatives can be analyzed. This course covers option pricing models, hedging techniques, and trading strategies. It also includes portfolio insurance, value-at-risk measure, multistep binomial trees to value American options, interest rate options, and other exotic options. Prerequisite: FIN 4200.

FIN 4870 Strategic Finance (4 Credits)
Addresses theory, concepts, and techniques associated with asset management and creation of value from a strategic orientation. Links financial theory and practice to strategic and operational objectives of the firm, prepares student to incorporate risk and uncertainty into analytical decision-making process and to analyze divestiture, restructuring, and liquidation decisions. Prerequisites: MS/Finance students only and FIN 4840.

FIN 4885 Investment Banking and External Financing (4 Credits)
Considers the blend of theory and practice with regard to designing the appropriate capital structure of the firm as well as appropriate use of securities and process for raising capital in different financial markets. Prerequisites: MS/Finance students only and FIN 4840.

FIN 4890 Fixed Income Analysis (4 Credits)
Emphasizes valuation and management of fixed income securities in prevailing environment of complex and innovative financial arrangements. Study of the nature of evolving markets, both domestically and internationally. Prerequisite: FIN 4200.

FIN 4980 Finance Internship (0-10 Credits)
Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Permission of instructor required. Hours and times arranged by student.

FIN 4991 Independent Study (1-10 Credits)
Individual study and report. Hours and times arranged by student.

FIN 4992 Directed Study (1-4 Credits)
FIN 6300 Seminar in Finance Research (4 Credits)
Through a survey of research in the discipline of finance, this course illustrates how theory can shape the literature and the formation of research questions. Analysis of key studies will provide business leaders with the tools to analyze how the academic literature can impact and inform the finance profession across such as areas as corporate governance, corporate finance, investments, and financial institutions.
Management

Office: Daniels College of Business, 455
Mail Code: Daniels College of Business, 2101 S. University Blvd., Denver, CO 80208
Phone: 303-871-2489
Web Site: https://daniels.du.edu/management/

Master of Science in Management

The Master of Science in Management (MSM) is a 45-credit hour, 10-month program designed for people without a business background or degree. You will join a cohort of classmates from various careers, backgrounds and fields of study to learn management skills, ethical leadership, effective communications, and of course, business fundamentals. Wherever your passion lies, the Daniels MSM program can help prepare you for success.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

Master of Science in Management

Degree and GPA Requirements

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

Standardized Test Scores/Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.
- The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number for the Management program is MZR-GT-31. The GRE code number is 4842. The admissions committee will consider GMAT or GRE waiver requests from candidates who meet one of the following standards (on a case-by-case basis):
  - Received an accredited master’s degree in a related field.
  - More than 84 months of related professional experience.
  - DU students that meet the provisions for the Masters Accelerated Admissions Process.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
- Minimum TOEFL Score (Paper-based test): 575
- Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
- Minimum CAE Score: 185 (No less than a 170 on any section)

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

Master of Science in Management

Degree Requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>Fall Quarter</strong></td>
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<tr>
<td>MGMT 4202</td>
<td>Leading Self</td>
<td>4</td>
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<tr>
<td>MGMT 4402</td>
<td>Ethical Leadership</td>
<td>4</td>
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<tr>
<td>INFO 4401</td>
<td>Quantitative Methods</td>
<td>2</td>
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<tr>
<td>MGMT 4301</td>
<td>Organizational Psychology</td>
<td>4</td>
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<tr>
<td>MGMT 4204</td>
<td>Springboard</td>
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<tr>
<td><strong>Winter Quarter</strong></td>
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<tr>
<td>MGMT 4201</td>
<td>Leading Teams</td>
<td>4</td>
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<tr>
<td>MGMT 4302</td>
<td>Leading Talent</td>
<td>4</td>
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Students to experience, personally, the local cultural and socio-economic environment. Another aspect of the trip will include working with a non-profit or other NGO on a social capital project while in the host country, to allow primary research by setting up small team meetings in-country in order to develop a hands-on understanding of the business environment in a host country. In addition to completing secondary research beforehand, students will also be responsible for conducting trip, students will meet with business executives and organizational leaders across a variety of industries to gain a broad understanding of the business environment in a host country. In addition to completing secondary research beforehand, students will also be responsible for conducting primary research by setting up small team meetings in-country in order to develop a hands-on understanding of the business environment in the host country. Another aspect of the trip will include working with a non-profit or other NGO on a social capital project while in the host country, to allow students to experience, personally, the local cultural and socio-economic environment.

The International Experience is designed to expose students to the challenges and opportunities of doing business globally. How do you make well-informed decisions in a global environment, taking into consideration the economic, political, environmental, cultural and historical context of a particular country or region? Conducting business outside the United States involves a unique set of challenges; diverse cultures, laws, languages, and currencies add to the complexity of putting together and managing international business ventures. The international experience will help you prepare for these types of activities by exploring the basic questions which focus on various aspects of international business. As a part of the international experience, students will meet with business executives and organizational leaders across a variety of industries to gain a broad understanding of the business environment in a host country. In addition to completing secondary research beforehand, students will also be responsible for conducting primary research by setting up small team meetings in-country in order to develop a hands-on understanding of the business environment on the ground. Another aspect of the trip will include working with a non-profit or other NGO on a social capital project while in the host country, to allow students to experience, personally, the local cultural and socio-economic environment.

### Courses

**MGMT 4201 Leading Teams (4 Credits)**

"Leading teams" is a graduate course to prepare students to provide formal and informal leadership to a team. Students will learn about the fundamental design principles of high-performing teams as well as common pitfalls that teams are subject to. Students will also learn about how to sustain team performance through effective information-sharing, decision-making, and conflict management. Students will also cover current topics in teams including virtual teams, team creativity and team-based innovation. This course is designed to stimulate student learning by letting students integrate abstract knowledge through concrete firsthand experiences.

**MGMT 4202 Leading Self (4 Credits)**

The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual human/social interaction. This course will focus on providing students the critical skills to "lead the self" towards personal/professional goals as the context for studying intentional change. Students will revisit assumptions held about themselves as they develop intentional strategic approaches to identify career opportunities in their selected fields and lead the self towards the accomplishment of professional objectives.

**MGMT 4203 Leading Organizations (4 Credits)**

Students will develop the ability to think strategically by examining a firm's mission, vision, and values, business model and financial health of the organization. After assessing the firm's strengths and weaknesses, the focus is then placed on the industry and competitive environments using a series of tools and frameworks that result in identifying opportunities and threats. Synthesis in the course takes place when the student is able to provide strategic recommendations that generate added value and competitive advantage for the firm. Learning is facilitated through a work-shop atmosphere that uses case studies of industry leaders currently in the news.

**MGMT 4204 Springboard (1 Credit)**

This course helps you to develop your abilities as a leader and follower working in teams; since most success and progress in business will take place by working with others. Your personal development as a leader and follower is thus of the utmost importance. In short, we hope to fire your imagination as to what is possible, as well as ground your dreams in the realities and complexities of working in the 21st Century. The personal development aspect begins with self-awareness in Leading at the Edge. Within the first few weeks of their graduate program, students are taken to a nature camp 9,000 feet up into the Rocky Mountains where they participate in an intensive (some say "grueling") three-day exercise in self-awareness, outdoor leadership, team-building, and problem solving. Unlike most "rocks 'n ropes" exercises, this intellectually rigorous component, often referred to as Leading at the Edge, is designed to enhance the classwork students engage in, especially in working together on the challenging exercises that make up the MS in Management program. The value creation aspect is supported by a series of workshops. In these workshops, students will focus on applying their new found knowledge to real world situations. The purpose of these Daniels Engagements is to match the personal development aspects of Leading at the Edge with discussions and exercises on creating value, for your self and for your organization, but for the community and for the larger social realms in which businesses operate. For the exercises, students will explore and discuss some of the definitive writings by thought leaders on business. This is intended to facilitate learning basic "business literacy" – exposure to fundamental ideas and concepts that business leaders and writers currently struggle – and to provide material with which to engage your developing skills in (1) critical and creative thinking, and (2) clear communication with others.

**MGMT 4240 Global Business (2 Credits)**

The International Experience is designed to expose students to the challenges and opportunities of doing business globally. How do you make well-informed decisions in a global environment, taking into consideration the economic, political, environmental, cultural and historical context of a particular country or region? Conducting business outside the United States involves a unique set of challenges; diverse cultures, laws, languages, and currencies add to the complexity of putting together and managing international business ventures. The international experience will help you prepare for these types of activities by exploring the basic questions which focus on various aspects of international business. As a part of the international trip, students will meet with business executives and organizational leaders across a variety of industries to gain a broad understanding of the business environment in a host country. In addition to completing secondary research beforehand, students will also be responsible for conducting primary research by setting up small team meetings in-country in order to develop a hands-on understanding of the business environment on the ground. Another aspect of the trip will include working with a non-profit or other NGO on a social capital project while in the host country, to allow students to experience, personally, the local cultural and socio-economic environment.

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**Courses**

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MGMT 4304</td>
<td>Project and Budget Management</td>
<td>4</td>
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<tr>
<td>MGMT 4330</td>
<td>Financial Decision Making for Managers</td>
<td>2</td>
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<tr>
<td>MGMT 4204</td>
<td>Springboard</td>
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<tr>
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<td>Leading Organizations</td>
<td>4</td>
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<tr>
<td>MGMT 4401</td>
<td>Global Leadership</td>
<td>4</td>
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<tr>
<td>MGMT 4410</td>
<td>Qualitative Research Methods</td>
<td>2</td>
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<tr>
<td>MGMT 4303</td>
<td>Negotiations and Change</td>
<td>4</td>
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<tr>
<td>MGMT 4204</td>
<td>Springboard</td>
<td>1</td>
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<tr>
<td><strong>Total Credits</strong></td>
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<td>45</td>
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</table>
MGMT 4280 Business Design (4 Credits)
Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. That innovation(s) is discovered through an investigation of the existing business models and the competitive landscape including: suppliers, customers, competitors, substitutes and barriers of entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of strategies in: marketing, sales, operations, human capital, social responsibility, financing, corporate governance and technology. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of business planning. The result is a written business plan and presentation to funding sources reflecting a sustainable competitive advantage and creation of a defensible market.

MGMT 4301 Organizational Psychology (4 Credits)
This course focuses on psychosocial and behavioral issues in management and leadership to better understand how to drive performance and well-being. The course is founded upon an interdisciplinary approach, with major inputs coming from social psychology, administrative science, engineering, medicine, sociology, and philosophy. The course will center around behavioral analysis and organizational concepts. Students will gain a solid understanding of the latest in organizational psychology from a declarative knowledge standpoint, then put this knowledge into use for procedural knowledge.

MGMT 4302 Leading Talent (4 Credits)
A management course for graduate students grounded in a strong foundation of real experiences managing and leading Human Resource organizations. This course is designed to unify strategy, human resource strategy and principles of management in a highly interactive format employing multiple learning methods.

MGMT 4303 Negotiations and Change (4 Credits)
Negotiations take place daily throughout our lives. Whether it is negotiating as a student with a professor on an assignment extension, a job candidate with a potential employer on salary and benefits, or a chief executive within an organization executing on its strategy, we must know how and when to leverage negotiating strategies and skills in order to achieve a successful outcome. This course explores, through a variety of scenarios, real-world cases, simulations, and role-plays, how negotiators leverage their skills to execute on their strategies to either arrive at a satisfactory agreement or to simply back away from the negotiating table without a deal. Sometimes the best deal is no deal at all. We will explore a number of perspectives including: (1) Definition and characteristics of negotiations, (2) Interdependence and Relationships of the parties, (3) Dynamics of conflict and conflict management, (4) Integrative negotiating process, (5) Negotiating strategy, (6) Ethical conduct, (7) Communications, (8) Negotiating power, (9) Multiple parties, groups, and teams in negotiations, (10) International and Cross-cultural, (11) and Best practices.

MGMT 4304 Project Management for Leaders (4 Credits)
This course will introduce the student to the key elements of a successful project delivery system. The project delivery system consists of five components: training, tools, core skills, company support, and a project delivery process. The process is the means by which projects are consistently and efficiently planned, executed, and completed to the satisfaction of clients. The system is aligned with the principles of a total quality improvement program, namely client focus, project manager commitment, evaluation and measurement, corporate support, and continuous improvement.

MGMT 4305 Business Model Design and Innovation (2 Credits)
Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. Innovation(s) is discovered through an investigation of the existing business models and the industry landscape including: customers, competitors, substitutes, suppliers, and barriers to entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of financial, marketing, sales, operation, talent, technology, and social responsibility strategies. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of a Business Model and a Business Plan. The result is a written business plan and presentation to a potential funding panel.

MGMT 4306 Virtual Business Management Simulation (2 Credits)
The focus of this course is on gaining new venture experience. Through an online/virtual computer simulation, students will be placed into a very realistic international business setting, where they will start up and run a company through multiple rounds of decision-making. The online simulation allows students to build entrepreneurial firms, experiment with strategies, and compete with other student teams in a virtual business world. Designed to mimic the competitive, ever changing marketplace, the simulation lets students gain experience in market analysis, strategy formulation, and the management of a new venture.

MGMT 4330 Financials for Leaders (2 Credits)
This course is intended to help students develop a financial decision-making framework that can be used to assess and understand how financial decisions positively and negatively affect their company’s short-and long-term well-being. Its emphasis is to introduce students to various tools and techniques used in financial management and to demonstrate how they are applied to the managerial decision-making process. This will be accomplished through a combination of class discussions and case study analyses. Topics include decision making, financial statements, ratio analysis, and return-on-investment.

MGMT 4340 Strategic Human Resource Mgmt (4 Credits)
This course focuses on the effective management of human resources in order to create sustained competitive advantage. The course covers the major policy areas of employee influence mechanisms, staffing, training and development, performance appraisal, reward systems, and work design so that students are better prepared to provide direction to the creation and implementation of effective management systems. Prerequisite: MGMT 3900 or permission of instructor.
MGMT 4345 Performance & Rewards System (4 Credits)
Measuring and improving human performance, techniques of individual objective settings including MBO, appraisal and feedback systems, creating and managing compensation programs, job design, analysis and redesign of reward systems in various organizational contexts. Prerequisite: MBA 4121 or equivalent.

MGMT 4350 Business Summit Series: Current Business Issues and Topics (4 Credits)
The Business Summit Series is an elective course that provides students with insights into a variety of contemporary business issues and topics with a practical approach to developing business leadership skills and competencies. Before the course commences, students are invited to provide input and help faculty select the topics that are covered in the series. The faculty will develop modules, with each module covering a discrete business topic a workshop format. The workshops are taught in four-hour segments, with some workshops covering more than four hours, depending on content and learning outcomes. Workshops span practical topics that are not covered in-depth during the core PMBA curriculum, and they also include emerging business subjects. Topics include: Go-To-Market Strategy, Business Development Strategies, Mastering Sales Techniques, Business Consulting Skills, Becoming a Manager, Organizational Change Leadership, Franchise Business Model, and Colorado's Marijuana Industry. Other emerging business topics may include the Colorado small business market and new industry segments. Industry leaders may present to the class as subject matter experts.

MGMT 4401 Global Leadership (4 Credits)
The operation of a far-flung global enterprise (large or small) imposes special demands upon its leaders. This course explores, through a variety of leadership perspectives, actions and strategies that can be employed to succeed in a global firm. These perspectives include: (1) the headquarters and chief executive officer; (2) global functional disciplines (with special emphasis on global human resource management); (3) the country manager; (4) the global product/service manager; and (5) the host country. Throughout the course, students will systematically examine the cross-cultural, operational and ethical complexities of leading and managing a truly "global" company.

MGMT 4402 Ethical Leadership (4 Credits)
Consideration of ethics in business and organizations is relevant for being an effective and successful manager and leader. The course is designed to strengthen capacities in terms of ethical awareness, analysis, and application. An important learning outcome of the course is to facilitate the growth of students in terms of developing practical and ethically sound decisions in their future careers. Decisions include fulfilling responsibilities to create and sustain ethical climates and cultures for teams, business units, and organizations. This course introduces students to fundamental ethical concepts and ethical decision making frameworks. Students will apply these frameworks to cases and issues relevant to one's role as a future manager and leader. Students will also be introduced to current research in moral psychology and behavioral ethics, and students will apply this knowledge in assessing a current case related to business and management ethics. The course will cover current issues such as sexual harassment, privacy in the workplace, and whistleblowing. Students will develop a personalized values-based leadership plan.

MGMT 4403 Business and Society (2 Credits)
This course examines the role of business in society and explores important issues in the relationships between business, government, and society. These issues are approached from a stakeholder perspective, integrating business strategy with law, ethics, and social responsibility. The obligations of business to its multiple stakeholders are established and applied through analysis of companies, cases, and current events.

MGMT 4405 Strategic Execution and Summit Team Competition and Assessment (3 Credits)
Strategic Execution is a Challenge Driven Educational (CDE) course that builds on several previous MS Management courses. Students will leverage the contents from accounting, finance, management, marketing, strategy, and business analytics to engage with corporate partners to examine real-world problems. This course provides you with the opportunity to apply what you have learned so far in the MSM program with a live client. You will work on a project focused on business and management. Scoping the project will be a key learning outcome.

MGMT 4410 Qualitative Research Methods (2 Credits)
This course provides students with an overview of and experience with qualitative methods. You are introduced to a wide variety of qualitative methods, including ethnography, observation, interviewing, grounded theory, discourse analysis, deconstruction, historical methods, and action research. The course is roughly divided into two major sections. The first half of the course introduces you to the epistemological foundations of qualitative research and emphasizes design and data collection. The second half of the course introduces a variety of techniques for coding and analyzing qualitative data and provides exposure to many exemplars of qualitative reports/studies. We will examine conventions for ensuring that qualitative work is rigorous and appropriate for action. Throughout the course you will be given opportunities to try on various methods and gain some hands-on experience in several areas.

MGMT 4440 Power and Influence (4 Credits)
This course presents conceptual models, tactical approaches, and self-assessment tools to help you understand political dynamics as they unfold around you, and to develop your own influence style and negotiation skill. By focusing on specific expressions of power and influence, this course gives you the opportunity to observe its effective—and ineffective—use in different contexts and stages of a person's career. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life.

MGMT 4490 Global Strategy (4 Credits)
Management of multinational enterprises; identification, analysis, and discussion of key policy issues for the international manager within various functional areas; home and host country relationships including assessment of political risk, selection of foreign locations, entry and ownership strategy, personnel and staffing considerations, technology transfer, multinational labor relations, organizing for international operations. Prerequisite: Should be taken in the last possible quarter before graduation and after completion of all advanced requirements and ITEC 3900, MGMT 3900, MKTG 3900, STAT 3910, and FIN 4610.
MGMT 4503 Comparative Management (2 Credits)
Exploration of similarities and dissimilarities of management practices in various cultures, determination of political, economic and cultural factors primarily affecting management theory and practice, transferability of certain management practices to other cultures. Introduction to basic assumptions and approaches of comparative research methodology. Prerequisite: MBA 4121.

MGMT 4515 Introduction to Sport and Entertainment Management (4 Credits)
The purpose of this course is to provide students with a very broad but significant exposure to the business of sports, which represents a global, multi-billion dollar industry. By critically analyzing numerous facets within this business from the perspective of a manager, student come away with knowledge that is wide enough but deep enough to foster a solid understanding of this dynamic and exciting industry. At the same time, this course provides students with specific and valuable insights that foster and stimulate deeper interest in a particular aspect within this industry through subsequent and additional coursework, independent study, and/or internship opportunities.

MGMT 4520 Managing Sport & Entertainment Contracts (4 Credits)
This is a comprehensive and interactive seminar on managing sports and entertainment contracts. The class covers intellectual property; the role of entertainment and sports managers and agents; general contract principles and theory; contract negotiation; management and operating agreements; and sponsorship, endorsement, and licensing agreements.

MGMT 4525 Facility Management (4 Credits)
What is a Public Assembly Facility? Public assembly facilities such as arenas, stadiums, convention centers, and theatres evolved out of the need by social communities to build permanent structures for public assembly, for political and commercial activities, religion, sports, spectacles, artistic expression and for commercial and educational assemblies. This course examines the specific areas of responsibility that one must acknowledge and understand to operate a successful venue of this type. We discuss the core competencies required and the unique areas of concentration that separate a public assembly facility from other venue types. Students realize the significant impact and benefit that facilities like these have on the social, educational and economic environment of communities.

MGMT 4530 Technologies for Sport & Entertainment Management (2 Credits)
This is a specialized course for the MBA student interested in expanding their knowledge of the sports industry as a business and as a world economic force. It provides students with a framework for understanding the scope of the sports business across various venues, as it relates to information technology. Management Sport Technology focuses on understanding the practical uses of computer applications as a tool in sport management activities. Emphasis is placed on demonstrated proficiency in project management, spreadsheet management, database management, and Web page development.

MGMT 4535 Managing Sponsorships for Sport & Entertainment Events (2 Credits)
The purpose of this course is to give students an understanding of sports sponsorship from the perspective of the corporate sponsor and the sports entity. The course identifies and describes the several media distribution channels that are used in corporate sports sponsorship. In addition, students learn how to use sports media distribution properties to create an effective sports marketing plan for corporate sponsors. Students put together a corporate sports marketing plan with a sample sports team.

MGMT 4540 Advanced Seminar in Sports and Entertainment Management (4 Credits)
The purpose of this seminar is to consider current topics in sport and entertainment management. Topics vary by quarter depending on timeliness of topics and interest of students. Potential topics may include public policy questions; ethical issues; current economic impacts and analysis; sport and entertainment management factors and how the various segments (professional, amateur, collegiate, high school, recreational and others) relate; environmental impacts; global issues and other issues that impact the current and future fields of sport and entertainment management.

MGMT 4545 Leadership, Team, and Career Development (2 Credits)
Daniels MBA students are preparing for leadership roles-as entrepreneurs, in corporations, and in not-for-profit organizations. In this course we will look at leadership from a variety of perspectives. Once we have reviewed what the experts have to say about leadership, we will turn our focus to helping you develop your personal theory of leadership. You will answer on important questions: How will I lead? Armed with this knowledge, you will be better equipped to handle leadership challenges as you go forward in life.

MGMT 4555 Interdisciplinary Projects for National Park Service (4 Credits)
A practical application of key business and managerial knowledge, skills, and competencies designed to integrate graduate program elements and provide students with a unique opportunity to work on value-add projects with key managers from the National Park Service. This is an experiential course for integrating and applying multi-disciplined learning outcomes and experiences to real-world challenges, problems, and dilemmas, resulting in solutions for the National Parks Service.

MGMT 4560 Leadership of the Future (4 Credits)
In nearly every aspect of life - science, business, pop culture, environment, technology, global politics - we are inundated with data about how much and how fast the world is changing. How will these major shifts impact what we think of as leadership, and how can one develop to be prepared to lead in a fast-moving, volatile, and complex world? Leadership of the Future is a course that takes a deep look at how we've thought about what "leadership" is in the past from a business perspective, and considers what the future will require of leaders as they seek to effectively lead and make a difference in a complex world. The course is founded upon an interdisciplinary approach, drawing from a variety of disciplines including psychology, administrative science, literature, medicine, and philosophy. The course will center around behavioral analysis and active reflective practice: together we will think deeply about leadership as a behavior within a particular context, and as a practice to cultivate. Students will articulate a set of leadership development goals for themselves and engage experientially in service of self-observation, personal growth, and learning. Cross-listed with MGMT 3560.
MGMT 4620 Organizational Dynamics (4 Credits)
In this course, you will: (1) understand and develop a set of management and leadership skills critical for effectiveness in high performance work environments; (2) develop the ability to analyze organizations and environments from multiple perspectives; (3) explore policies and practices for facilitating organizational change; (4) become a valued and effective member of a work team; and (5) learn how to incorporate effective communication, critical thinking, creative problem solving, and technology, into organizational behaviors and processes.

MGMT 4625 Leading People & Organizations (4 Credits)
This course focuses on the effective management of people, every organization's most critical resource. Employees' knowledge, skills, commitment, creativity, and effort are the basis for sustained competitive advantage. It is people who deal directly with customers, have creative ideas for new products or for process improvements, who devise marketing strategy or take technologies to the next level. In this course, we approach the people side of business from a general management perspective, integrating concepts from organizational behavior, human resource management, strategy, and organizational design. Course topics include motivation, reward systems, engagement; feedback; processes by which work is done and decisions are made, including attention to teams, power dynamics, conflict, and negotiations; the structure of the organization and its systems, including job and organizational design and systems and policies affecting human capital; the organization's culture and history; and the external environment within which the organization operates, including legal, regulatory, demographic, economic and national cultural factors.

MGMT 4630 Strategic Human Resources Management (4 Credits)
This course advances the argument that effective human resource policies will create sustained competitive advantage. To that end, this course will address the effective management of human resources in various policy areas: staffing, diversity, training and development, voice and influence, performance appraisal, and reward systems. Rather than taking a traditional, staff personnel perspective, we will discuss human resource management from the strategic perspective of a general manager. Prerequisite: MGMT 4620.

MGMT 4650 Introduction to Management Consulting (4 Credits)
This course is designed to provide a broad overview of the management consulting profession, including its industry and competitive dynamics, major practice areas, approaches to implementation, management of consulting firms and the future of consulting. In addition, emphasis is given to the practice of consulting through the development of certain high impact skills in evaluation, proposal writing, data gathering and client presentations. The course is relevant to those who: 1) are specifically interested in consulting careers, 2) have job interests that involve staff positions in corporations, 3) want to become line managers who might one day use consultants, 4) wish to develop general consulting skills and familiarity with the consulting industry. The learning process in class will consist of lectures, cases, readings, exercises and guest speakers. This wide variety of learning methods is intended to convey both the necessary knowledge and practical skills necessary for building a sound foundation for becoming a professional consultant. It is essential that everyone comes well-prepared to class, as the learning process depends heavily upon participation.

MGMT 4690 Strategic Management (4 Credits)
This course builds from the premise that managers make decisions that influence the overall success of their organizations. We will concentrate on how top managers create and maximize value for their stakeholders. You will learn about how companies compete against each other in the quest of achieving high performance and market victories. You will learn about how and why some companies are successful while others are not. This course is about strategy. The primary task of strategy is the allocation and commitment of critical resources over relatively long periods of time in pursuit of specific goals and objectives. Strategic decisions take account of the conditions that prevail within the industry environment, both positive and negative, and the resources and capabilities available to managers for meeting environmental challenges. Strategy also requires establishing and managing an internal organizational system that creates and sustains strategic value.

MGMT 4700 Topics in Management (1-4 Credits)

MGMT 4710 Sustaining Family Enterprises (4 Credits)
Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family "banks," family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

MGMT 4740 Global Business I (2 Credits)
Almost all business is impacted by global trends. This course will help students develop a global mindset and understand challenges and opportunities arising from doing business across national boundaries and cultures. Addressing such issues as diverse cultures, laws, languages, currencies and economic contexts, the course will help students make well-informed decisions giving due consideration to the local and global context in which a given business operates. This course must be taken prior to MGMT 4745 and both courses are to be taken as a sequential series.

MGMT 4745 Global Business II (2 Credits)
Almost all business is impacted by global trends. This course will help students develop a global mindset and understand challenges and opportunities arising from doing business across national boundaries and cultures. Addressing such issues as diverse cultures, laws, languages, currencies and economic contexts, the course will help students make well-informed decisions giving due consideration to the local and global context in which a given business operates. This course must be taken after MGMT 4740 and both courses are to be taken as a sequential series.
MGMT 4790 Managing Strategic Alliances (4 Credits)
The purpose of this course is to examine and expand upon the current understanding of the challenges of developing and managing strategic alliances. Reflecting the breadth of the novel features of the structure, the course draws from both strategic management and organizational behavioral disciplines. To order the discussion, we take a process view in addressing why and then how to use a strategic alliance. We initially focus on when to use an alliance. We then turn to the formation of an alliance - examining how to select a partner, which structure to choose and how to negotiate. Following, we discuss post-formation issues of partner relationships, management of the alliance, performance evaluation and alliance termination. We conclude the course with sessions devoted towards managing a portfolio of alliances and network management in general.

MGMT 4980 Graduate Internship in Mgmt (0-10 Credits)
Hours and times arranged by student.

MGMT 4991 Independent Study (1-10 Credits)
Individual research and report. Hours and times arranged by student.

MGMT 4992 Directed Study (1-4 Credits)

MGMT 4995 Independent Research (1-10 Credits)

MGMT 6300 Seminar in Leadership Strategy Research (4 Credits)
The field of strategy is broad and covers a diverse set of 'macro' organizational theories and topics. In this course, you will have a solid overview of research in the field of strategy. This course will enable you to develop a conceptual view of the field and its theoretical roots, topics, and branches and begin to apply strategic management theories to address original research questions and to solve problems within your own organizations. This will require you to critique extant knowledge and to identify what is missing and what is needed to advance understanding. Finally, this course will provide a beginning point for your knowledge of strategy theories that can guide future pursuits. That is, it is not possible to cover the immense strategy literature in one semester but this course should provide you with the knowledge needed to explore the field of strategy on your own as you move forward.

MGMT 6301 Ethical Leadership Research Seminar (4 Credits)
The seminar focuses an exploration of the role of ethics from the lens of a leader. In this area, the course examines a range of ethical and social performance issues and challenges that leaders must confront. Our goal is to broaden student understanding of the different theoretical arguments and tensions in this area, with a focus on issues faced by modern day organizations.

Marketing
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Phone: 303-871-3317
Web Site: https://daniels.du.edu/marketing/

Master of Science in Marketing
The Daniels Master of Science in Marketing program is a 45- to 47-credit degree that combines the in-depth study of marketing practices and principles with values-based leadership and ethical decision making. Your studies span the theoretical to the real world—from an independent study research project of your choosing to client projects that will test your marketing mettle. You'll be immersed in real-time scenarios that let you dive deep into what interests you most to stay ahead of the curve in this rapidly changing industry. We have a strong marketing community, and you will be expected to join us in exhibiting your passion for marketing and engagement with the marketing professional community, your peers and your professors.

You will engage with the Denver marketing professional community in a number of ways. Participation in the required Marketing Leadership and Professionalism series will provide interaction with professionals over the course of your program, while allowing you to sharpen your professional skills. Guest speakers will contribute in many of our classes, sharing case studies directly from their experience. You may choose to engage with Denver professionals through participating in one of the many internships offered to you. Additionally, you will also be invited to take part in several case competitions, sponsored by the professional community, as part of your degree experience.

You will engage with your peers both inside and outside of the classroom through participation in client work, in the DU Marketing Association, in study groups, and in our Marketing@daniels community. You will engage with your professors by contributing to class discussions both in class and online, by becoming an active part of our community, by participating in our online community presence. In all, this program requires your active and thoughtful participation, applying the principles you learn to solve important client and community problems.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSBI) since 1923.
• Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master’s degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master’s degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

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

**Standardized Test Scores/Other Requirements**

• Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

• The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number for the Marketing program is MZR-GT-65. The GRE code number is 4842. The admissions committee will consider GMAT or GRE waiver requests from candidates who meet one of the following standards (on a case-by-case basis):
  • Received an accredited master's degree in a related field.
  • More than 84 months of related professional experience.
  • DU students that meet the provisions for the Masters Accelerated Admissions Process.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
• Minimum TOEFL Score (Paper-based test): 575
• Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
• Minimum CAE Score: 185 (No less than a 170 on any section)

**Master of Science in Marketing**

**Degree Requirements**

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MKTG 4000</td>
<td>Foundations of Marketing &lt;sup&gt;1&lt;/sup&gt;</td>
<td>0</td>
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<tr>
<td>MKTG 4400</td>
<td>Social Awareness and Ethics</td>
<td>2</td>
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<tr>
<td>MKTG 4510</td>
<td>Consumer Behavior</td>
<td>4</td>
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<td>MKTG 4520</td>
<td>Marketing Metrics</td>
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<td>MKTG 4530</td>
<td>Marketing Research</td>
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<td>MKTG 4550</td>
<td>Marketing Planning</td>
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<td>MKTG 4570</td>
<td>Digital Strategies</td>
<td>4</td>
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<td>MKTG 4580</td>
<td>Collaborative Innovation: Designing New Customer Experiences</td>
<td>4</td>
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<tr>
<td>MKTG 4810</td>
<td>Integrated Marketing Communication</td>
<td>4</td>
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<td>MKTG 4980</td>
<td>Marketing Internship &lt;sup&gt;3&lt;/sup&gt;</td>
<td>2</td>
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<tr>
<td>MKTG 4998</td>
<td>Marketing Leadership and Professionalism &lt;sup&gt;2&lt;/sup&gt;</td>
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<td>MKTG 4999</td>
<td>Marketing Assessment &lt;sup&gt;4&lt;/sup&gt;</td>
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**Elective requirements**

12

Course selection includes:

- MKTG 4220: Customer Experience Management
- MKTG 4540: Product and Service Innovation
- MKTG 4605: Current Marketing Perspectives
- MKTG 4630: International Marketing
- MKTG 4635: International Consumer Behavior
- MKTG 4660: Sports & Entertainment Marketing
- MKTG 4800: Global Integrated Marketing Communication
- MKTG 4805: Foundations of Digital Marketing
MKTG 4815  Social Media Marketing
MKTG 4820  Brand Management
MKTG 4825  Mobile Marketing
MKTG 4835  Search Engine Marketing
MKTG 4845  Tech in Marketing: Design Tools and Digital Foundations
MKTG 4850  Integrated Marketing Communication Campaign
MKTG 4900  Advanced Marketing Strategy

Additional Courses
MKTG 4705  Topics in Marketing
MKTG 4980  Marketing Internship
MKTG 4991  Independent Study (varies)

Minimum Number of Credits Required  45-47

1 All students are required to pass the Marketing Foundations exam prior to beginning the degree. The study materials and exam will be accessible online through Canvas.

2 MKTG 4998 is a series of three one-credit courses, which includes a selection of workshops and seminars. Check Canvas for upcoming events. The events will generally be on Fridays, but not every Friday. Please register for this class in each of the first three quarters you are enrolled in the MS in Marketing at Daniels.

3 If limited full-time work experience, 2 hours of internship is required in addition to the 33 required course hours.

4 MKTG 4999 is a required zero-credit course that includes program assessment; you must pass to graduate. Check Canvas for upcoming events. The few events in this course will generally be on Fridays. Please register for this class in the quarter you expect to graduate.

Courses

MKTG 4000 Foundations of Marketing (0 Credits)
This is primarily an online course. The purpose of the course is to ensure that all incoming students have some foundational knowledge of marketing. Most of our incoming students have undergraduate degrees in business and work experience in marketing, and so will already have a working knowledge of marketing vocabulary and may be able to pass the self-check exams in this course without further study. Other students will need to do some reading to pass the assessments. Assessments may be taken as many times as necessary to achieve a score indicating that the student has achieved foundational knowledge of marketing. The course will also integrate a few on-campus professional development tasks to ensure that students get an early start on the next phase of their careers.

MKTG 4100 Marketing Concepts (4 Credits)
Ever wonder what’s behind those Super Bowl ads we love to watch? Or, how Apple decides the price of its newest electronic wonder? Did you notice you can almost always find what you are looking for at the grocery store, whether it’s in season or out? How does that happen? This course provides students with a lens through which they may view the world as a consumer and as a marketer, relating marketing principles and models to consumer and business actions. The course investigates marketing strategy and tactics using contemporary examples from the headlines, active class discussion, and a marketing strategy simulation or client engagement.

MKTG 4220 Customer Experience Management (4 Credits)
In their best-selling book, The Experience Economy, Pine and Gilmore set the stage for what today’s organizations are facing—customers that connect with brands on the basis of the experiences they receive: products and service are no longer a sufficient differentiator. This course takes the student beyond the ‘better product, better service’ approach to the cutting edge concepts of customer experience management (CEM). It provides an understanding of CEM, its best practices, and the tools for its implementation and evaluation. The course considers the challenges of creating and delivering customer experiences in a variety of settings—in-store operations, branded products, and web-based operations. One of the special features of this course is the use of live, case studies from a variety of companies. Among the companies recently represented by guest speakers are Charles Schwab, Comcast, Starbucks, and others.

MKTG 4380 Supply Chain Management (4 Credits)
Today's economy of globally sourced manufacturing, developing markets, synchronized e-commerce, international trade lanes, and intertwined economies demand supply chains of global reach to bring goods and services from around the world to local stores or even the consumer's front door. This course addresses the challenges and illustrates the tools required to build, maintain, and expand global supply chains. The course develops the ability to make sound strategic, tactical, and operational supply chain decisions via an on-line simulation tool, and superior supply chain design and performance is taught through in-depth case studies from the world's top 25 supply chains. Students are able to connect improvements in supply chain design and performance to the financial performance of a firm. Cross listed with MKTG 3380. Prerequisites: MKTG 4360 and MKTG 4370.
MKTG 4400 Social Awareness and Ethics (2 Credits)
Social awareness & ethics uses a fresh integrated approach to applying the basic fundamentals of marketing to complex and evolving scenarios involving social change and insight, cultural trends and topics, and tricky, often emotional, ethical situations. This course also helps students learn skills in a safe environment and leverage their experience and knowledge to investigate business situations and opportunities in a thoughtful and sophisticated manner. This course develops a student's ability to make sound business planning decisions using real information from the external environment. This course will combine business ethics' overarching intent to protect employees, the environment, and their customers with marketing ethics' principles of honesty, fairness, responsibility, and respect. As part of this, students will learn about and apply Daniels Fund Initiate Principles: http://www.danielsfund.org/_Assets/files/Ethics%20Initiative%20Principles.pdf Prerequisites: Pass foundations exam or MKTG 4100.

MKTG 4510 Consumer Behavior (4 Credits)
What makes consumers tick? This course draws on a variety of sources, including concepts and models from psychology, sociology, anthropology, and economics, to offer helpful frameworks for understanding why consumers buy what they buy. These concepts are applied to real-world situations to give students practice at making better product, promotion, pricing, and distribution decisions based on consumer insights.

MKTG 4515 International Consumer Behavior (4 Credits)
The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond one's home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Prerequisites: MKTG 4510.

MKTG 4520 Marketing Metrics (4 Credits)
There's no escape; even marketing managers need to understand financials. This course is designed to introduce MS Marketing students to the principles of financial decision-making and the use of marketing metrics, including customer lifetime value (CLV) and media mix modeling. Students learn how to compute marketing ROI and how to make marketing decisions that enhance the bottom line. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

MKTG 4530 Marketing Research (4 Credits)
Understanding consumers requires careful observation and thoughtful questions. Marketing research represents a methodology for getting the answers needed to be successful in business. This course introduces students to a broad array of marketing research tools, including focus groups, ethnographic studies, survey research, and experiments. Students will learn how and when to apply these tools, as well as how to interpret the results to make sound marketing decisions. Highly recommended students take statistics prior to taking this course. Prerequisites: MKTG 4100.

MKTG 4540 Product and Service Innovation (4 Credits)
Developing and introducing new products and services are the lifeblood for companies and a primary responsibility of product management. This course is focused on the most current innovations in materials, hardware, CPQ, and software. This is a travel course and students will be required to travel to the Consumer Electronics Show in addition to attending class on campus. We'll be using Google Ventures rapid sprint framework to develop/ test new product ideas. At least eight hours of graduate level MKTG courses or with instructor permission.

MKTG 4550 Marketing Planning (4 Credits)
It has been said that "planning without action is futile, and action without planning is fatal." The objective of this course is to enable students to utilize a rigorous planning process to develop action-oriented marketing programs. This activity involves an integrated application of concepts and theories characterized by the logical use of facts -- leading to alternatives -- leading to actions. By the end of the course students should be able to develop effective marketing programs, and to understand the strength and limitations of the principal planning tools a marketing manager has at his/her disposal. The skills developed in this class are particularly important because many organizations now use the marketing plan as the basis for developing the business plan. In fact, marketing-developed plans often must precede the subsequent decisions in planning production, finance, and other corporate activities. Each student will apply the planning process, develop an action plan, and identify specific marketing outcomes for an existing or prospective enterprise. The course utilizes current practices, contemporary exemplars, and rigorous communication/presentation platforms. Eight hours of graduate-level marketing credit or with instructor's permission.

MKTG 4560 Pricing Strategy (4 Credits)
This course provides an overview of all aspects of Pricing, a key driver of growth and profitability. As one of the 4 “Ps” of Marketing, attention and interest in Pricing is growing. This is not surprising, given that Price is the one “P” that drives the topline, with a direct impact on revenue growth, customer growth, market share, and profitability. This Pricing survey course examines established and emerging pricing strategies and principles. In addition, students learn some basic analytical tools that can be applied to pricing strategy decisions and explore approaches to optimize the impact of pricing strategies and tactics, including segmentation, addressing the competition, and communicating value. Prerequisites: MKTG 4510, MKTG 4520, and MKTG 4530 or instructor permission.
MKTG 4570 Digital Strategies (4 Credits)
We’re 20 years into the digital marketing revolution and the ecosystem continues to evolve. From the birth of the Internet and email to the recent addition of messaging apps and the Internet of Things: It’s a fantastic time to be a marketer. In this class, we will take what you learned in consumer behavior and extend it in the social/mobile/search realm. We’ll utilize lessons learned from cognitive neuroscience combined with qualitative/quantitative data to create one-to-one marketing experiences for B2B/B2C consumers. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

MKTG 4580 Insights to Innovation (4 Credits)
Innovation is a driving force of change for organizations and markets. It is becoming increasingly clear that the development of novel and compelling offerings requires the contributions of multiple stakeholders, including customers. Companies such as Apple, Facebook and Google, focus on engaging an ecosystem of partners to develop new value propositions to continually improve customer experiences. This course explores the collaborative processes that drive value creation and innovation. Students will learn to strategically apply design thinking and community-building approaches to innovate customer experiences in ever-changing markets. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

MKTG 4605 Current Marketing Perspectives (4 Credits)
Like most disciplines, marketing is evolving constantly. One can learn about marketing and its classic terms and notions by reading a textbook. But to familiarize oneself with the current pressing issues, emerging ideas, and innovative applications, one must consult both industry practitioners and academic gurus. In this course, students and faculty will meet and interview several top business executives in the Denver area as well as visit their facilities. Such interaction with the managers and faculty will help the students understand the interface of theory and application. In addition, by identifying the current issues in marketing and learning how to develop strategies to handle them, students add to their preparation for the job market.

MKTG 4630 International Marketing (4 Credits)
The shrinking planet and constant pressure to maintain a firm’s growth mean that global marketing continues to grow in importance. This course introduces the various economic, social, cultural, political, and legal dimensions of international marketing from conceptual, methodological and application perspectives, and emphasizes how these factors should affect, and can be integrated into, marketing programs and strategies. This course provides students with methods for analyzing world markets and their respective consumers and environments, and to equip students with the skills in developing and implementing marketing strategies and decision making in international contexts. It includes a combination of lectures and discussions, case analyses of real global marketing issues, videos and readings from the business press, country snapshots, and a group research project in which student teams launch a discrete product in a foreign country of their choice. Prerequisites: MKTG 4100.

MKTG 4635 International Consumer Behavior (4 Credits)
The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond one’s home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Cross-listed with MKTG 3635. Prerequisite: MKTG 4100 or instructor permission.

MKTG 4660 Sports & Entertainment Marketing (4 Credits)
There are few products for which consumers are more passionate than their sports and entertainment expenditures, so this topic is always an exciting one in marketing. This course provides an in-depth look at the processes and practices of marketing sports, concerts, film and other entertainment. The course emphasizes the practical use of advertising, promotion and public relations in creating athlete or entertainer images, providing a quality fan experience, promoting sponsorships or driving event ticket sales. Participation in a current sports marketing project provides context for graduate students to apply theory to practice. Cross listed with MKTG 3660. Prerequisites: MKTG 4100.

MKTG 4670 Competitive Strategies (4 Credits)
This course will examine what is happening in the world of corporate marketing today. Which companies’ marketing strategies are working and why? Which are not working and why? Who is winning in the competitive marketplace and who is losing? How do you know? What is the connection between a company’s marketing strategy and its financial strategy? Prerequisites: MKTG 4100.

MKTG 4675 Entrepreneurial Marketing (4 Credits)
The course objective is to give students the necessary tools and concepts to think strategically and tactically about value creation through new product management.

MKTG 4705 Topics in Marketing (1-4 Credits)
TOPIC CHANGES EACH TERM.
MKTG 4800 Global Integrated Marketing Communication (4 Credits)
The Global IMC class is for graduates who have worked in marketing communications or have taken marketing communications classes and want to gain an understanding of how use this knowledge in the global marketplace. It helps students to understand similarities and differences between markets and how to most effectively approach them. What are the IMC tools that work best and how do you use them with cultural sensitivity? The class features a number of guest speakers and at least one off-site agency visit. The finale to this high-intensity class will have competing teams creating a global campaign. Prerequisites: MKTG 4810 or instructor permission.

MKTG 4805 Foundations of Digital Marketing (4 Credits)
Knowing how to use digital marketing tools as part of an integrated marketing strategy is critical in today's marketplace. This course provides the knowledge and skills to plan and implement a digital marketing strategy using three powerful digital marketing elements: (1) UX/UI - User eXperience design is one of the most difficult aspects for businesses to define and yet it's essential to map out when creating a holistic strategy. User Interface design is one part of the user experience and we will work together to show you best-in-class examples. (2) Facebook Advertising - Facebook is quickly becoming the hyper-targeted advertising platform for businesses of any size. You will walk through Facebook's Blueprint Training to help you understand what types of digital advertising are possible. (3) Email Marketing - Email has long been a staple in digital marketing. We will show you the ins and outs of this digital medium and teach you how to take control of this evolving channel. Cross-listed with MKTG 3480.

MKTG 4810 Integrated Marketing Communication (4 Credits)
IMC is a critical component of marketing strategy and is vital to business success in today's economy. Organizational, technological, and social trends of the past few years have considerably impacted marketing communications by necessitating new communication strategies and adding new delivery tools (e.g., digital and social). Thus, it is important to integrate all marketing communication activities into one master plan. This course is based upon the notion that marketing communications include much more than advertising. The course provides students with a foundation in the development and execution of communications strategies for any organization (large, small, public, or private). Primary emphasis is placed on consumer insight, branding, market segmentation and positioning, message strategy, sales promotion and the execution of marketing communications through appropriate media technologies. Students will develop an understanding of marketing communications practice through a real-world project, readings, lectures, case analyses and discussions. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

MKTG 4815 Social Media Marketing (4 Credits)
Social media marketing is an evolving field with consumers driving the changes marketers are seeing. Based on your business model, social media may be more than just distribution and consumers will be a part of your long-term business strategy beyond revenue. We'll illuminate the increasing importance of social media as it relates to consumer behavior, the purchase cycle and the rise of messaging apps as it relates to business success. We will also develop a strategic model for a diverse range of businesses (B2B, B2C, Product, Service, Online, Online with Brick and Mortar) that will empower you as a marketer to determine your best strategy. Cross-listed with MKTG 3490. Prerequisites: MKTG 4100.

MKTG 4820 Brand Management (4 Credits)
"How do leading organizations create compelling brands that inspire trust, build a sense of community, and fuel loyalty? As consumers find their digital voice, how are brands co-created by firms and users alike? And what can brand managers do to insure their brand equity is sustainable throughout the product lifecycle? In this project-based [WINTER] or interview-based [SUMMER] course, you'll learn the underlying principles and theories from brand authorities, then apply them to real-world client challenges. Join us as we create goal-driven brand strategies, harness tactics to build and amplify the brand, foster brand experiences, conversations and relationships, and then learn ways to measure the resulting impact on brand value. Prerequisites: MKTG 4100. Concurrent enrollment allowed.

MKTG 4825 Mobile Marketing (4 Credits)
Smartphones are the device for today's consumer. Mobile usage easily eclipses all other digital venues and you will be learning how to harness this ever-evolving field. Knowledge of mobile search, mobile applications, mobile advertising and location-based services are essential for today's business leaders. This course will enable students to build creative mobile marketing campaigns that complement digital and traditional marketing strategies. This fast-paced course is a must for people interested in marketing. Cross-listed with MKTG 3475.

MKTG 4835 Search Engine Marketing (4 Credits)
The digital marketing landscape has thousands of tools that marketers can utilize to increase revenue, execute on strategies and develop deep brands. This course will review the most essential of those tools: Google Analytics and Google AdWords. Our goal is to enable students to attain individual certification in Google Analytics and begin the process of getting Google AdWords Fundamentals certified. You will be working with real-world clients, helping them increase revenue! Cross-listed with MKTG 3485.

MKTG 4845 Tech in Marketing: Design Tools and Digital Foundations (4 Credits)
"Software is eating the world." That was the quote from Marc Andreesen way back in 2011. His point was now that software had disrupted the tech industry, it was now evolving into every other industry. Agriculture. Mass transit. Construction. Everything. This prediction has become true with companies like Google and Uber. We're at a point where coding/technology are now a matter of literacy. We are going to work together as a class to make you more literate. We are going to learn how to utilize digital design tools such as Adobe Photoshop and Illustrator to create brand imagery. We'll then move on to learn HTML/CSS and APIs: the building blocks of the Internet. We'll also spend some time prototyping software such as Axure and tap into memes and Gifs. This is a tactical, hands-on class. Cross-listed with MKTG 3495.
MKTG 4850 Integrated Marketing Communication Campaign (4 Credits)
This course builds on all of the courses in the IMC program/concentration as well as other courses offered through the Department of Marketing. In this sense, it is a capstone course, integrating the knowledge and experience acquired through these other courses. Integration is the primary objective of this course—that is, to develop skills in integrating content from other courses into a complete IMC campaign for a brand of the student’s choice. IMC Campaign is a major project course with a single significant outcome, the IMC Campaign. The project is conducted in a team environment with the guidance of the instructor. Prerequisites: MKTG 4810 or instructor permission.

MKTG 4865 SXSWi: Marketing, Technology & Innovation (4 Credits)
This class is focused on documenting/sharing lessons learned from the SXSWi conference in Austin Texas, the premier innovation conference in the US. The course is divided into two distinct halves. First, we will research the SXSWi sessions around subject matter and speaker background as well as planning the final deliverable that summarizes the entire SXSWi event. The second half includes participation in the conference to learn the most up-to-date digital marketing techniques in social, mobile, data and usability.

MKTG 4900 Advanced Marketing Strategy (4 Credits)
Making sound strategic marketing decisions in the real world is complex and challenging, even for seasoned executives. Determining sound strategies is critical. Implementing them effectively and profitably is essential. How can managers increase their chances for making better strategic marketing decisions leading to more successful outcomes more often? This course applies concepts, constructs and learning acquired in prior marketing courses to complex strategic decisions. Live cases are at the heart of the course, challenging teams and individuals to make specific marketing decisions in the context of larger strategic marketing and company contexts, including accounting for top- and bottom-line impact. Prerequisites: At least eight hours of graduate level MKTG courses or with instructor permission.

MKTG 4980 Marketing Internship (0-10 Credits)
We learn by doing. That’s what a marketing internship at Daniels is all about. Recent studies show that one to three internships on a resume go a long way towards landing that first job in marketing. At Daniels, we network with some of the top marketers in Denver and across the US. Our marketing students have worked at National CineMedia, Integer Advertising, Bank of America, Enterprise, Northwestern Mutual Insurance, eBags, Crispin-Porter + Bogusky, Einstein’s, Johns Manville, Ski Magazine, the Pepsi Center, 15 Million Elephants, Flextronics, Merrill Lynch, Dish Network, AEG Live, Altitude Sports & Entertainment, and the list goes on. Not only will students earn school credit, they may very well land a paid internship, and eventually a full-time job. Course requirements include an internship report that covers your experience on the job, a study of the industry, and what they learned from their company. It’s a win-win course where you put into practice the marketing concepts you’ve learned at DU, and discover new marketing tactics from your company co-workers. “Thanks to the University of Denver for fostering this partnership and providing such great students” (NCM Media Networks).

MKTG 4991 Independent Study (1-10 Credits)
Hours and times arranged by student.

MKTG 4998 Marketing Leadership and Professionalism (1 Credit)
This course involves several executive coaching experiences. Beyond the first year, students are expected to remain engaged in several experiences in and around campus to continue to improve their leadership skills. The course is pass/fail for all students. In the weekend leadership experience, you explore yourself as an ethical leader in the world of marketing in the 21st Century. How can you add value to and derive value from the business world that surrounds you? You will evaluate the styles of leadership that will best empower and inspire you to find success in your work. As an introduction to and exploration of your personal leadership style, this course addresses: 1. Your leadership style and how it relates to current and future trends for business, government, and society. 2. How to improve your leadership in three critical areas of marketing—creating economic, social and environmental value. Understanding the power that you have to make an impact as a leader or a follower working in teams, recognizing that most success and progress in business will take place by working with others. Your personal development as a leader and follower is thus of the utmost importance. In short, we hope to fire your imagination as to what is possible, as well as ground your dreams in the realities and complexities of leadership in the 21st Century.

MKTG 4999 Marketing Assessment (0 Credits)
Some experiences are essential to a student’s development, but don’t fit well within the confines of a traditional course. This is a face-to-face, zero-credit required course, held throughout your program. The course involves a series of executive coaching experiences with experts within and outside of Daniels, networking with fellow students and professionals in the Denver area, and assessment of your development through the program.

MKTG 6300 Marketing Research Seminar (4 Credits)
This doctoral seminar focuses on research in marketing strategy which is concerned with understanding the choices and planning of resource deployments to achieve marketing objectives in a target market. This course will expose students cutting-edge research in marketing models in order to help them to define and advance their research interests. This course will also offer in-depth discussions on some important topics in marketing and tools and methodologies required for conducting research in those areas.

Daniels College General

Master of Business Administration in General Business: The Denver MBA
The Daniels College of Business Full-time MBA is a comprehensive 20-month program that immerses students in the study and practice of business. Students will gain the technical expertise and leadership skills required to navigate complex business situations with confidence and integrity.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.
Cohort
Cohort program—experience the MBA core classes with the same set of peers to maximize cross-learning, collaboration and networking.

Concentrations/Electives
Students will have 24 credits to concentrate on a specific business discipline. These concentrations include: Accounting, Business Analytics, Customized, Finance, Marketing, and Real Estate and the Built Environment.

Master of Business Administration in General Business: The Executive MBA Program
The Daniels Executive MBA (EMBA) at the University of Denver is a highly selective academic program designed for the mid-to-senior level professional with ten or more years of professional work experience. Strategically focused and integrated in approach, the EMBA classroom is a dynamic environment of leaders from a wide array of backgrounds and industries. Although the pace of the EMBA experience is accelerated and academically rigorous, it is offered in an efficient once-a-week format which allows for balance between career, school and personal life.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

Cohort
A cohort MBA program with an integrated, lockstep curriculum of 24 courses (60 credit hours).

Class Schedule
Alternating Fridays and Saturdays once a week, from 8 a.m. to 5 p.m. 18 calendar months. Additional required opportunities include the Sailing Experience and the two-week global business travel seminar.

Master of Business Administration in General Business: The Professional MBA Program
The Daniels Professional MBA (PMBA) is an ideal fit for early-to-mid career professionals. It holds the same quality and rigor as our Full-time MBA with a curriculum focus suited for those with five to nine years of professional work experience. Students in the cohort-based PMBA program are fully employed and enjoy a network of like-experienced peers. Gaining exposure to one anothers industries and challenges is a key benefit of this MBA option, as is the global business travel seminar.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

Cohort
A 21-month, cohort program with a sequential curriculum of 60 lockstep credit hours.

Class Schedule
Two classes per evening, on Mondays and Wednesdays from 6 p.m. to 10 p.m., starting either Fall or Spring. Additional required opportunities are offered on some Tuesdays or Thursdays throughout the program, along with attendance at the week-long global business travel seminar and the Leading at the Edge Friday-Sunday weekend.

Master of Business Administration in General Business: MBA@Denver (Online)
The Daniels online MBA program—MBA@Denver—allows our students to earn an MBA while maintaining a balanced life. Our blended format of online classes and in-person immersions offers convenience and connection—not to mention an immediate return on investment. Our program goal is to make our students indispensable to their organization. As our students grow their skills and knowledge-base, they will also grow their network via our outstanding faculty and distinguished Daniels alumni.

Program Highlights
A Collaborative Online Environment. Class discussions are informed by current business issues and class assignments. You'll meet face-to-face and on-screen to work on group projects and connect with your classmates. You'll apply theory to solve current business problems together with your class and professor. Using a mobile app, you can work on your tablet or other mobile device from anywhere around the world, even offline.

A Deep Connection to your Faculty. MBA@Denver faculty are experienced not only in the graduate classroom, but also in business. Over one-half of our faculty have started and/or owned their own businesses and most consult as part of their portfolio. Our faculty teach both online and in class in our residential programs at Daniels, and care deeply about connecting with you. You can expect to receive extensive feedback on your work as well as quick responses to your emails.

Face-to-Face Experiences. To increase your network beyond the live sessions, you will attend two required in-person learning experiences, called immersions, chosen from a visit to DU’s campus, New York, Italy, South Africa and other locations. These multi-day events also give you the chance to push your leadership skills further and meet classmates, faculty and alumni in person.

An Extension Of The Campus Community. As an MBA@Denver student, you’ll be as much a part of the DU and Daniels communities as our on-campus students. You’ll have access to career coaching, academic resources, mentorship programs, student gatherings and more. All students—whether on campus or online—are invited to walk across the stage at commencement to celebrate the hard work that goes into earning a graduate degree.
Live 90-Minute Online Classes

- Hosted via webcam at 6:30 p.m. or 8:30 p.m. during the week
- 15:1 student-to-professor ratio
- Lively peer-to-peer discussions
- Class recordings you can review later

Master of Business Administration in General Business: The Denver MBA

Degree and GPA Requirements

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

Standardized Test Scores/Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.
- The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number for the Denver MBA (full-time) program is MZR-GT-43. The GRE code number is 4842. The admissions committee will consider GMAT or GRE waiver requests from candidates who meet one of the following standards (on a case-by-case basis):
  - Received an accredited master's degree in a related field.
  - More than 84 months of related professional experience.
  - DU students that meet the provisions for the Masters Accelerated Admissions Process.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
- Minimum TOEFL Score (Paper-based test): 575
- Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
- Minimum CAE Score: 185 (No less than a 170 on any section)

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

Master of Business Administration in General Business (in the Executive MBA Program)

Degree and GPA Requirements

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

Other Requirements

- An admissions interview is required of all Executive MBA applicants. Applicants will be contacted for scheduling.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
Master of Business Administration in General Business: The Professional MBA Program

Degree and GPA Requirements

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

Standardized Test Scores/Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.
- The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number for the Part-Time Professional MBA program is MZR-GT-07. The GRE code number is 4842. The admissions committee will consider GMAT or GRE waiver requests from candidates who meet one of the following standards (on a case-by-case basis):
  - Received an accredited master's degree in a related field.
  - More than 84 months of related professional experience.
  - DU students that meet the provisions for the Masters Accelerated Admissions Process.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
- Minimum TOEFL Score (Paper-based test): 575
- Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
- Minimum CAE Score: 185 (No less than a 170 on any section)

Master of Business Administration in General Business: MBA@Denver

Degree and GPA Requirements

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

Standardized Test Scores/Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.
- The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number for the Denver MBA (full-time) program is MZR-GT-43. The GRE code number is 4842. The admissions committee will consider GMAT or GRE waiver requests from candidates who meet one of the following standards (on a case-by-case basis):
• Received an accredited master's degree in a related field.
• More than 84 months of related professional experience.
• DU students that meet the provisions for the Masters Accelerated Admissions Process.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
• Minimum TOEFL Score (Paper-based test): 575
• Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
• Minimum CAE Score: 185 (No less than a 170 on any section)

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

Master of Business Administration in General Business: The Denver MBA

Degree Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MBA 4110</td>
<td>Enterprise Challenge</td>
<td>2</td>
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<tr>
<td>MBA 4160</td>
<td>Opportunities with Data Skills I</td>
<td>2</td>
</tr>
<tr>
<td>MBA 4170</td>
<td>Navigating the Global Economy</td>
<td>2</td>
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<td>MBA 4210</td>
<td>Creating Community Capital: The Social Good Challenge</td>
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<td>MBA 4220</td>
<td>Leading Effective Organizations</td>
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<td>MBA 4230</td>
<td>Managing Cost Information</td>
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<td>MBA 4235</td>
<td>Profit Planning and Measuring Performance</td>
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<td>MBA 4280</td>
<td>Mastering Managerial Financial Competencies I</td>
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<td>MBA 4285</td>
<td>Mastering Managerial Financial Competencies II</td>
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<td>MBA 4290</td>
<td>Economics for Decision Making</td>
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<td>Experiencing Strategic Management through Corporate Challenges</td>
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<td>MBA 4340</td>
<td>Creating Sustainable Enterprise</td>
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<td>MBA 4490</td>
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<td>Mitigating Risk, Securing Value, and Navigating Public Policy</td>
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<td>MBA 4545</td>
<td>Business Law: Principles, Strategy and Tactics</td>
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<td>MBA 4550</td>
<td>Strategic Marketing Decision-Making</td>
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<td>MBA 4670</td>
<td>Global Issues</td>
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<td>MBA 4980</td>
<td>MBA Internship</td>
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<tr>
<td>MBA 4620</td>
<td>Leadership Capstone: Integration and Transition</td>
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</table>

Elective requirements
Students will complete 26 credits in 4000-level general business courses. 26

Total Credits 80

Minimum number of credits required: 80

Non-Coursework Requirements
Denver MBA students must meet the following non course requirements in addition to their coursework requirements in order to graduate:
1. Career Checkpoint 1
2. Career Checkpoint 2
3. Career Checkpoint 3
4. Leadership Peak 1
5. Leadership Peak 2

**Master of Business Administration in General Business with a Concentration in Accounting: The Denver MBA**

**Degree Requirements**

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**Elective requirements**

28 credits in electives/concentration courses required.

**Concentration requirements**

A minimum of 16 of the 28 elective credits must be completed in 4000 level ACTG courses to complete a concentration. Must work directly with the ACTG Department on course selection.

| Total Credits | 80 |

**Minimum number of credits required:** 80

**Non-Coursework Requirements**

Denver MBA students must meet the following non course requirements in addition to their coursework requirements in order to graduate:

1. Career Checkpoint 1
2. Career Checkpoint 2
3. Career Checkpoint 3
4. Leadership Peak 1
5. Leadership Peak 2

Master of Business Administration in General Business with a Concentration in Business Analytics: The Denver MBA

Degree Requirements

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Elective requirements

28 credits in electives/concentration courses required.

Concentration requirements

A minimum of 16 of the 28 elective credits must be completed in 4000 level INFO courses to complete a concentration, including:

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<td>INFO 4140</td>
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<td>INFO 4340</td>
<td>Data Mining and Visualization</td>
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Other 4000-level INFO courses could be substituted for INFO 4340 with faculty approval.

Total Credits 80

Minimum number of credits required: 80

Non-Coursework Requirements

Denver MBA students must meet the following non course requirements in addition to their coursework requirements in order to graduate:

1. Career Checkpoint 1
2. Career Checkpoint 2
3. Career Checkpoint 3
4. Leadership Peak 1
5. Leadership Peak 2

Master of Business Administration in General Business with a Concentration in Business - Customized: The Denver MBA

Degree Requirements

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Elective requirements
28 credits in electives/concentration courses required.

Concentration requirements
A minimum of 16 of the 28 elective credits must be completed in 4000 level Graduate courses approved by Advisor for specified customized concentration.

Total Credits 80

Minimum number of credits required: 80

Non-Coursework Requirements
Denver MBA students must meet the following non course requirements in addition to their coursework requirements in order to graduate:

1. Career Checkpoint 1
2. Career Checkpoint 2
3. Career Checkpoint 3
4. Leadership Peak 1
5. Leadership Peak 2
# Master of Business Administration in General Business with a Concentration in Finance: The Denver MBA

## Degree Requirements

### Core coursework requirements

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### Elective requirements

28 credits in electives/concentration courses required.

### Concentration requirements

A minimum of 16 of the 28 elective credits from either Corporate Finance, Investments, or Investments Banking:

- **Corporate Finance Courses**
  - FIN 4410 Financial Planning & Analysis
  - FIN 4500 Financial Modeling

  In addition, choose two courses from the following:
  - FIN 4150 Advanced Business Valuation
  - FIN 4420 Capital Expenditure Analysis
  - FIN 4885 Investment Banking and External Financing
  - FIN 4700 Topics in Finance
  - FIN 4991 Independent Study

- **Investment Courses**
  - FIN 4200 Financial Investments and Markets
  - FIN 4500 Financial Modeling

  In addition, choose two courses from the following:
  - FIN 4330 Portfolio Management and Risk Analytics
  - FIN 4710 Marsico Investment Fund I
  - FIN 4720 Marsico Investment Fund II
FIN 4860  Derivatives
FIN 4890  Fixed Income Analysis
FIN 4700  Topics in Finance
FIN 4991  Independent Study

Investment Banking Courses
FIN 4410  Financial Planning & Analysis
FIN 4500  Financial Modeling

In addition, choose two courses from the following:
FIN 4885  Investment Banking and External Financing
FIN 4150  Advanced Business Valuation
FIN 4870  Strategic Finance
FIN 4320  Equity Analysis
FIN 4700  Topics in Finance
FIN 4991  Independent Study

Total Credits 80

Minimum number of credits required: 80

Non-Coursework Requirements
Denver MBA students must meet the following non course requirements in addition to their coursework requirements in order to graduate:

1. Career Checkpoint 1
2. Career Checkpoint 2
3. Career Checkpoint 3
4. Leadership Peak 1
5. Leadership Peak 2

Master of Business Administration in General Business with a Concentration in Marketing: The Denver MBA

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### Elective requirements

28 credits in electives/concentration courses required

### Concentration requirements

A minimum of 16 of the 28 elective credits must be completed from the Digital Marketing or Brand Management tracks below:

#### Digital Marketing Courses
- MKTG 4815 Social Media Marketing
- MKTG 4825 Mobile Marketing
- MKTG 4835 Search Engine Marketing
- MKTG 4845 Tech in Marketing: Design Tools and Digital Foundations

#### Brand Management Courses
- MKTG 4220 Customer Experience Management
- MKTG 4530 Marketing Research
- MKTG 4820 Brand Management

In addition, choose one course from the following:
- MKTG 4815 Social Media Marketing
- MKTG 4825 Mobile Marketing
- MKTG 4835 Search Engine Marketing
- MKTG 4845 Tech in Marketing: Design Tools and Digital Foundations

### Total Credits

80

**Minimum number of credits required: 80**

### Non-Coursework Requirements

Denver MBA students must meet the following non course requirements in addition to their coursework requirements in order to graduate:

1. Career Checkpoint 1
2. Career Checkpoint 2
3. Career Checkpoint 3
4. Leadership Peak 1
5. Leadership Peak 2

### Master of Business Administration in General Business with a Concentration in Real Estate and the Built Environment: The Denver MBA

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</table>
### Concentration requirements

A minimum of 16 of the 28 elective credits must be completed in 4000 level REBE courses to complete a concentration, including:

- **Real Estate Courses**
  - REAL 4407: Income Property Finance
  - REAL 4007: Real Estate Financial Analysis
  - Select two courses from the following:
    - REAL 4400: Real Estate Principles and Practices
    - REAL 4477: Income Property Investment
    - REAL 4417: Income Property Valuation and Appraisal
    - REAL 4467: Property Development and Feasibility

- **Property Development Courses**
  - REAL 4407: Income Property Finance
  - REAL 4210: Planning, Entitlements, and Public Finance
  - CMGT 4490: Residential Development
  - CMGT 4480: Const Project Management

- **Integrated Project Delivery Courses**
  - CMGT 4110: Preconstruction Integration and Planning
  - CMGT 4200: Lean Construction Project Management
  - CMGT 4230: Design Management and Schedule Control
  - CMGT 4310: Cost Modeling and Trend Management

**Total Credits**: 80

### Minimum number of credits required: 80

### Non-Coursework Requirements

Denver MBA students must meet the following non course requirements in addition to their coursework requirements in order to graduate:

1. Career Checkpoint 1
2. Career Checkpoint 2
3. Career Checkpoint 3
4. Leadership Peak 1
5. Leadership Peak 2

### Master of Business Administration in General Business: The Executive MBA Program

#### Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>XMBA 4102</td>
<td>Business &amp; Economic Context</td>
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</table>
XMBA 4340  Executive Leadership I  2.5
XMBA 4330  Financial Accounting  2.5
XMBA 4350  Executive Leadership II  2.5
XMBA 4341  Executive Leadership III - Power and Influence  2.5
XMBA 4332  Accounting/Financial Reporting  2.5
XMBA 4331  Foundations of Financial Analysis  2.5
XMBA 4360  Marketing I - Strategic Marketing  2.5
XMBA 4333  Entrepreneurial Mindset II  2.5
XMBA 4351  Marketing II - Product Innovation  2.5
XMBA 4336  Finance II - Financial Decision Making  2.5
XMBA 4231  Marketing III - Supply Chain/Digital Marketing  2.5
XMBA 4337  Finance III - Strategic Finance  2.5
XMBA 4720  Executive Business Law  2.5
XMBA 4334  Accounting III - Strategic Management of Costs  2.5
XMBA 4342  Human Capital Management  2.5
XMBA 4353  Global Business I  2.5
XMBA 4362  Strategic Management  2.5
XMBA 4354  Global Business II  2.5
XMBA 4365  Entrepreneurial Mindset I  2.5
XMBA 4361  Go-to-Market Strategy  2.5
XMBA 4355  Executive MBA Summit Series  2.5
XMBA 4343  The Discipline of Execution  2.5
XMBA 4364  Business Data & Analytics  2.5

Total Credits 60

Minimum number of credits required: 60

Master of Business Administration in General Business: The Professional MBA Program

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 4610</td>
<td>Leading with Integrity</td>
<td>4</td>
</tr>
<tr>
<td>BUS 4611</td>
<td>Experiential Outdoor Leadership</td>
<td>0</td>
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<td>FIN 4760</td>
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<td>ACTG 4610</td>
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<td>MKTG 4100</td>
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<td>MGMT 4690</td>
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<td>EVM 4355</td>
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<td>FIN 4630</td>
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<tr>
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</tr>
<tr>
<td>INFO 4250</td>
<td>Business Data and Analytics</td>
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<tr>
<td>MGMT 4625</td>
<td>Leading People &amp; Organizations</td>
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<tr>
<td>MGMT 4240</td>
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<td>Professional MBA Capstone Project</td>
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<tr>
<td>EVM 4355</td>
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</table>

Elective requirements
8 credits in 4000 level courses 8

Total Credits 60
Minimum number of credits required: 60

Master of Business Administration in General Business with a Concentration in Accounting: The Professional MBA Program

Degree Requirements

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</tr>
<tr>
<td>EVM 4355</td>
<td>Entrepreneurship: Ideation to Creation</td>
<td>1</td>
</tr>
</tbody>
</table>

Concentration requirements
A minimum of 16 credits must be completed in 4000-level ACTG courses to complete a concentration. Must work directly with the ACTG Department on course selection.

Total Credits 68

Minimum number of credits required: 68

Master of Business Administration in General Business with a Concentration in Business Analytics: The Professional MBA Program

Degree Requirements

<table>
<thead>
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<tr>
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Concentration requirements
A minimum of 16 credits must be completed in 4000-level INFO courses to complete a concentration, including:

<table>
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<tr>
<td>INFO 4100</td>
<td>Survey of Business Analytics</td>
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<td>INFO 4140</td>
<td>Business Databases</td>
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<tr>
<td>INFO 4300</td>
<td>Predictive Analytics</td>
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<tr>
<td>INFO 4340</td>
<td>Data Mining and Visualization</td>
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<tr>
<td></td>
<td>Other 4000-level INFO courses could be substituted for INFO 4300 and INFO 4340 with faculty approval.</td>
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</table>

Total Credits: 68

Minimum number of credits required: 68

**Master of Business Administration in General Business with a Concentration in Business - Customized: The Professional MBA Program**

**Degree Requirements**

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</tr>
<tr>
<td>EVM 4355</td>
<td>Entrepreneurship: Ideation to Creation</td>
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</tbody>
</table>

**Concentration requirements**

A minimum of 16 credits must be completed in 4000-level graduate courses approved by Advisor for specified customized concentration.

Total Credits: 68

Minimum number of credits required: 68

**Master of Business Administration in General Business with a Concentration in Finance: The Professional MBA Program**

**Degree Requirements**

<table>
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<td>Managerial Finance</td>
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<td>Code</td>
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<tr>
<td>BUS 4600</td>
<td>Professional MBA Capstone Project</td>
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<tr>
<td>EVM 4355</td>
<td>Entrepreneurship: Ideation to Creation</td>
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</table>

**Concentration requirements**

A minimum of 16 credits from either Corporate Finance or Investments:

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<tbody>
<tr>
<td>FIN 4410</td>
<td>Financial Planning &amp; Analysis</td>
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<tr>
<td>FIN 4500</td>
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In addition, choose two courses from the following:

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<tr>
<td>FIN 4150</td>
<td>Advanced Business Valuation</td>
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<tr>
<td>FIN 4420</td>
<td>Capital Expenditure Analysis</td>
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<tr>
<td>FIN 4885</td>
<td>Investment Banking and External Financing</td>
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<tr>
<td>FIN 4700</td>
<td>Topics in Finance</td>
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<tr>
<td>FIN 4991</td>
<td>Independent Study</td>
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**Investment Courses**

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<tbody>
<tr>
<td>FIN 4200</td>
<td>Financial Investments and Markets</td>
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<td>FIN 4500</td>
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In addition, choose two courses from the following:

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<tr>
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<tbody>
<tr>
<td>FIN 4330</td>
<td>Portfolio Management and Risk Analytics</td>
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<td>FIN 4710</td>
<td>Marsico Investment Fund I</td>
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<td>FIN 4720</td>
<td>Marsico Investment Fund II</td>
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<tr>
<td>FIN 4860</td>
<td>Derivatives</td>
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<tr>
<td>FIN 4890</td>
<td>Fixed Income Analysis</td>
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<tr>
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**Investment Banking Courses**

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<td>FIN 4410</td>
<td>Financial Planning &amp; Analysis</td>
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<tr>
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<tbody>
<tr>
<td>FIN 4885</td>
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<td>FIN 4150</td>
<td>Advanced Business Valuation</td>
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<td>FIN 4320</td>
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<td>FIN 4700</td>
<td>Topics in Finance</td>
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<tr>
<td>FIN 4991</td>
<td>Independent Study</td>
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</table>

**Total Credits**

Minimum number of credits required: 68

**Master of Business Administration in General Business with a Concentration in Marketing: The Professional MBA Program**

**Degree Requirements**

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<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BUS 4610</td>
<td>Leading with Integrity</td>
<td>4</td>
</tr>
<tr>
<td>BUS 4611</td>
<td>Experiential Outdoor Leadership</td>
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</tr>
<tr>
<td>FIN 4760</td>
<td>Managerial Economics</td>
<td>4</td>
</tr>
<tr>
<td>ACTG 4610</td>
<td>Financial Accounting and Reporting</td>
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</tr>
<tr>
<td>MKTG 4100</td>
<td>Marketing Concepts</td>
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</tbody>
</table>
ACTG 4660  Strategic Cost Management  4
MGMT 4690  Strategic Management  4
EVM 4355  Entrepreneurship: Ideation to Creation  1
FIN 4630  Managerial Finance  4
MBA 4610  Business Law and Public Policy  4
STAT 4610  Business Statistics  4
INFO 4250  Business Data and Analytics  4
MGMT 4625  Leading People & Organizations  4
MGMT 4240  Global Business  2
BUS 4660  Professional MBA Capstone Project  4
EVM 4355  Entrepreneurship: Ideation to Creation  1

Concentration requirements
A minimum of 16 credits must be completed from the Digital Marketing or Brand Management tracks below:

<table>
<thead>
<tr>
<th>Digital Marketing Courses</th>
<th>Credits</th>
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<tr>
<td>MKTG 4825 Mobile Marketing</td>
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<tr>
<td>MKTG 4835 Search Engine Marketing</td>
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</tr>
<tr>
<td>MKTG 4845 Tech in Marketing: Design Tools and Digital Foundations</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Brand Management Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MKTG 4220 Customer Experience Management</td>
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<tr>
<td>MKTG 4530 Marketing Research</td>
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<tr>
<td>MKTG 4820 Brand Management</td>
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In addition, choose one course from the following:

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<tr>
<td>MKTG 4825</td>
<td>Mobile Marketing</td>
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<tr>
<td>MKTG 4835</td>
<td>Search Engine Marketing</td>
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<tr>
<td>MKTG 4845</td>
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Total Credits 68

Minimum number of credits required: 68

Master of Business Administration in General Business with a Concentration in Real Estate and the Built Environment: The Professional MBA Program

Degree Requirements

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</tr>
<tr>
<td>ACTG 4610</td>
<td>Financial Accounting and Reporting</td>
<td>4</td>
</tr>
<tr>
<td>MKTG 4100</td>
<td>Marketing Concepts</td>
<td>4</td>
</tr>
<tr>
<td>ACTG 4660</td>
<td>Strategic Cost Management</td>
<td>4</td>
</tr>
<tr>
<td>MGMT 4690</td>
<td>Strategic Management</td>
<td>4</td>
</tr>
<tr>
<td>EVM 4355</td>
<td>Entrepreneurship: Ideation to Creation</td>
<td>1</td>
</tr>
<tr>
<td>FIN 4630</td>
<td>Managerial Finance</td>
<td>4</td>
</tr>
<tr>
<td>MBA 4610</td>
<td>Business Law and Public Policy</td>
<td>4</td>
</tr>
<tr>
<td>STAT 4610</td>
<td>Business Statistics</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4250</td>
<td>Business Data and Analytics</td>
<td>4</td>
</tr>
<tr>
<td>MGMT 4625</td>
<td>Leading People &amp; Organizations</td>
<td>4</td>
</tr>
<tr>
<td>MGMT 4240</td>
<td>Global Business</td>
<td>2</td>
</tr>
<tr>
<td>BUS 4660</td>
<td>Professional MBA Capstone Project</td>
<td>4</td>
</tr>
<tr>
<td>EVM 4355</td>
<td>Entrepreneurship: Ideation to Creation</td>
<td>1</td>
</tr>
</tbody>
</table>
Concentration requirements
A minimum of 16 credits must be completed in 4000 level REBE courses to complete a concentration, including:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>REAL 4407</td>
<td>Income Property Finance</td>
<td>1</td>
</tr>
<tr>
<td>REAL 4007</td>
<td>Real Estate Financial Analysis</td>
<td>1</td>
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Select two courses from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>REAL 4400</td>
<td>Real Estate Principles and Practices</td>
<td>1</td>
</tr>
<tr>
<td>REAL 4477</td>
<td>Income Property Investment</td>
<td>1</td>
</tr>
<tr>
<td>REAL 4417</td>
<td>Income Property Valuation and Appraisal</td>
<td>1</td>
</tr>
<tr>
<td>REAL 4467</td>
<td>Property Development and Feasibility</td>
<td>1</td>
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</table>

Property Development Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>REAL 4407</td>
<td>Income Property Finance</td>
<td>1</td>
</tr>
<tr>
<td>REAL 4210</td>
<td>Planning, Entitlements, and Public Finance</td>
<td>1</td>
</tr>
<tr>
<td>CMGT 4490</td>
<td>Residential Development</td>
<td>1</td>
</tr>
<tr>
<td>CMGT 4480</td>
<td>Const Project Management</td>
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Integrated Project Delivery Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CMGT 4110</td>
<td>Preconstruction Integration and Planning</td>
<td>1</td>
</tr>
<tr>
<td>CMGT 4200</td>
<td>Lean Construction Project Management</td>
<td>1</td>
</tr>
<tr>
<td>CMGT 4230</td>
<td>Design Management and Schedule Control</td>
<td>1</td>
</tr>
<tr>
<td>CMGT 4310</td>
<td>Cost Modeling and Trend Management</td>
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</tbody>
</table>

Total Credits 68

Minimum number of credits required: 68

Master of Business Administration in General Business: MBA@Denver

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Core</td>
<td>FIN 4760 Managerial Economics</td>
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<tr>
<td></td>
<td>BUS 4610 Leading with Integrity</td>
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</tr>
<tr>
<td></td>
<td>ACTG 4610 Financial Accounting and Reporting</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MKTG 4100 Marketing Concepts</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ACTG 4660 Strategic Cost Management</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MGMT 4690 Strategic Management</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>FIN 4630 Managerial Finance</td>
<td>4</td>
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<tr>
<td></td>
<td>MBA 4610 Business Law and Public Policy</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>INFO 4610 Business Statistics and Analytics</td>
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<tr>
<td></td>
<td>INFO 4250 Business Data and Analytics</td>
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<td></td>
<td>MGMT 4625 Leading People &amp; Organizations</td>
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<tr>
<td></td>
<td>MGMT 4740 Global Business I</td>
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<tr>
<td></td>
<td>MGMT 4745 Global Business II</td>
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</tr>
<tr>
<td></td>
<td>BUS 4400 MBA@Denver Capstone</td>
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<tr>
<td>Electives</td>
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<td>Total Credits</td>
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</table>

Minimum number of credits required: 60

Non-Coursework Requirements

- Participation in two immersion experiences
## Finance Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 4200</td>
<td>Financial Investments and Markets</td>
<td>4</td>
</tr>
<tr>
<td>FIN 4410</td>
<td>Financial Planning &amp; Analysis</td>
<td>4</td>
</tr>
<tr>
<td>FIN 4320</td>
<td>Equity Analysis</td>
<td>4</td>
</tr>
<tr>
<td>FIN 4150</td>
<td>Advanced Business Valuation</td>
<td>4</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

## MARKETING Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MKTG 4810</td>
<td>Integrated Marketing Communication</td>
<td>4</td>
</tr>
<tr>
<td>MKTG 4580</td>
<td>Insights to Innovation</td>
<td>4</td>
</tr>
<tr>
<td>MKTG 4820</td>
<td>Brand Management</td>
<td>4</td>
</tr>
<tr>
<td>MKTG 4675</td>
<td>Marketing for Social Impact</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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<td><strong>16</strong></td>
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</table>

## Accounting Concentration (Currently Only available on campus)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>16 credits of 4000 level ACTG coursework</strong></td>
<td></td>
<td><strong>16</strong></td>
</tr>
<tr>
<td>Students must work directly with the Accounting Department on course selection.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>16</strong></td>
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## Business Information Analytics Concentration (Currently Only available on campus)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>INFO 4100</td>
<td>Survey of Business Analytics</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4140</td>
<td>Business Databases</td>
<td>4</td>
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<tr>
<td>INFO 4300</td>
<td>Predictive Analytics</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4340</td>
<td>Data Mining and Visualization</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>16</strong></td>
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</table>

## Real Estate Concentration (Currently Only available on campus)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>REAL 4007</td>
<td>Real Estate Financial Analysis</td>
<td>4</td>
</tr>
<tr>
<td>REAL 4407</td>
<td>Income Property Finance</td>
<td>4</td>
</tr>
<tr>
<td>Select two from the following:</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>REAL 4400</td>
<td>Real Estate Principles and Practices</td>
<td></td>
</tr>
<tr>
<td>REAL 4417</td>
<td>Income Property Valuation and Appraisal</td>
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<tr>
<td>REAL 4467</td>
<td>Property Development and Feasibility</td>
<td></td>
</tr>
</tbody>
</table>

### Property Development Courses

- REAL 4210 | Planning, Entitlements, and Public Finance |
- CMGT 4480 | Const Project Management |
- CMGT 4490 | Residential Development |

### Integrated Project Delivery

- REAL 4110 | Advanced Issues in Real Estate & Construction Management |
- CMGT 4200 | Lean Construction Project Management |
- CMGT 4230 | Design Management and Schedule Control |

| **Total Credits** |                               | **16**  |
Customized Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 credits of approved 4000 level coursework</td>
<td>Graduate courses approved by Advisor for a specified customized concentration.</td>
<td>16</td>
</tr>
</tbody>
</table>

**Accounting Courses**

**ACTG 4155 Accounting Information Technology Systems and Business Environment (4 Credits)**
The course will give students a basic understanding of how to develop a beginning-to-intermediate AIS system. Process flowcharts and entity-relationship diagrams will be used to document the system in Microsoft Visio. The course will explore the database structure used in various accounting IT systems. Students will be Microsoft Access certified by the end of the course. The course will also cover the IT topics contained in the BEC portion of the CPA exam.

**ACTG 4176 Accounting Data Analytics (4 Credits)**
In this course, students explore overarching trends in big data and the impact to accounting and auditing fields while also gaining hands on experience working with business data sets. In today's information world, accountants must be well equipped to understand and utilize the vast and varying data systems that feed a company's decision making process. This course allows students to develop big data skills by learning the SQL language to query data from mock clients. Students execute Computer Assisted Auditing Techniques (CAATs) using both the SQL language as well as the audit mining tool, IDEA. Students simulate the process to request client data files, load complex data sets, design and execute query procedures and summarize results for management. Prerequisite: ACTG 4610.

**ACTG 4201 Financial Accounting for Management (2 Credits)**
This course introduces the student to the fundamentals of financial accounting and reporting with an emphasis on the needs of the user, both internal and external. The goal is to enable the student to become a knowledgeable reader and user of financial statements.

**ACTG 4220 Financial Actg & Analysis (4 Credits)**
Cross-listed with ACTG 3230.

**ACTG 4222 Understanding Financial Statements (4 Credits)**
At the conclusion of this course the student should understand: (1) management decisions that impact published financial statements, (2) the fundamentals of interpretation and analysis of financial statements, (3) economic and ethical issues relating to financial reporting, and (4) management attempts to enhance reported operating results. The course addresses the needs of managers and analysts, hence does not cover promulgated financial reporting rules in depth. The financial reporting topics expand on material presented in introductory Accounting and Finance courses. The focus is on the substance of the reported information. This course is not an approved elective for the MACC degree. Cross listed with ACTG 3220.

**ACTG 4240 Topics & Cases in Financial Accounting (4 Credits)**
This course develops a greater awareness of contemporary accounting issues, focusing on financial reporting. The course is designed to enhance each student's ability to identify, discuss, and resolve open-ended problems (i.e., those having no single "correct" answer) faced by accounting professionals. Each student must commit to being an active participant in the class discussions. Through the use of numerous cases involving all aspects of financial reporting, students identify issues, conduct authoritative research, then present and defend their conclusions using both oral and written presentation formats. Students also write an original research paper on a topic of their choice.

**ACTG 4281 Intermediate Financial Accounting I (4 Credits)**
The focus of this course is the foundation and content of published financial statements. Specifically it covers the following broad topics: (1) Conceptual Framework of Financial Reporting; (2) Financial Statements and Related Disclosures; (3) Assets: Recognition and Measurement; and (4) Liabilities: Recognition and Measurement. Common to each of the topics is an emphasis on reading GAAP and applying GAAP guidance to fact patterns. At the conclusion of the course, students should be aware of the proper accounting treatment for many common situations; moreover, students should be fully comfortable interpreting GAAP literature to address scenarios involving assets, liabilities, and income that were not specifically covered in the class.

**ACTG 4282 Intermediate Financial Accounting II (4 Credits)**
This course is a continuation of Intermediate Financial Accounting. The focus of this course is the application of Generally Accepted Accounting Principles to complex business transactions. In this final course of the sequence, we finish our examination of the balance sheet by exploring the issues involved with stockholders' equity, followed by in-depth study of some of the most complex accounting issues, including revenue recognition, accounting for income taxes, pensions and post-employment benefits, leases, and accounting changes and errors.

**ACTG 4284 Consolidated Financial Statements (2 Credits)**
This course introduces the student to the preparation of financial statements in compliance with GAAP when the reporting entity has investments in other entities that are other than passive investments. This module explores the financial reporting issues relating to partial or full ownership of one business entity by another. It includes use of the equity method as well as issues involved in reporting the financial results of consolidated entities, both at and subsequent to acquisition or formation.
ACTG 4285 Accounting for Foreign Operations (2 Credits)
Topics covered in this course include the financial statement impact of doing business in a foreign currency, having foreign subsidiaries or operations, and certain hedging activities.

ACTG 4290 Advanced Accounting Theory (4 Credits)
This course analyzes trends in accounting through review of major publications of the accounting profession. It places emphasis on theoretical foundations of accounting theory underlying concepts of assets, income determination, and disclosure. Prerequisite: ACTG 4282 or Test Score AC82 >= 1 and Prerequisite or Co-requisite: ACTG 4284.

ACTG 4340 Topics & Cases in Managerial Accounting (4 Credits)
This course focuses upon innovative forensic, management control, productivity and business valuation approaches used by forensic and managerial accountants. Such strategies and techniques are evaluated through classroom discussion of cases and related articles.

ACTG 4354 Cost Accounting (4 Credits)
Accounting information in manufacturing enterprises, standard costs, and budgets. Open to students not having ACTG 3354 or equivalent. Prerequisite: MBA 4110, MBA 4111, or equivalent.

ACTG 4400 Taxation and Business Investment Planning (4 Credits)
This is an introductory tax course that emphasizes a conceptual approach to learning the income tax framework applicable to common business and investment transactions. It is designed to sensitize students to the tax implications of business decisions and to cultivate the student's ability to ask good tax questions. This course will illustrate that effective business planning depends on an accurate assessment of relevant tax factors.

ACTG 4410 Federal Income Taxation (4 Credits)
The course is designed for graduate accounting students that wish to study federal income taxation. This is the first course in taxation, which introduces the federal taxation system, the importance of tax authorities, the concepts of gross income and tax deductions and the tax implications of common property transactions. The course generally focuses on property transactions, but the taxation of individuals is emphasized with an objective of students being able to properly prepare complex individual tax returns.

ACTG 4452 Corporate and Partnership Taxation (4 Credits)
The course is designed for graduate accounting, finance or other business students in their study of advanced topics in federal income taxation. This is the second course in taxation which concentrates on taxation of corporations, limited liability corporations, S corporations and partnerships.

ACTG 4455 Auditing (4 Credits)
This course is designed to provide you with a thorough understanding of auditing and related attest services. This includes gaining requisite knowledge about AICPA (U.S. GAAS) and PCAOB auditing standards and how they are applied in conducting a financial statement audit. Application of these standards applies to planning an audit, the risk assessment process including gaining an understanding of internal control, gathering and evaluating evidence, sampling, and issuing an audit report.

ACTG 4457 Fair Value Auditing (4 Credits)
The purpose of this course is to expose students to the accounting, economic and valuation concepts and challenges that are relevant to auditing fair value measurements and disclosures in financial statements. The role of the FASB, PCAOB, SEC and other standards setters on fair value accounting and measurements are explored. Prerequisite: ACTG 4451 or ACTG 3551.

ACTG 4462 Corporate and Partnership Taxation (4 Credits)
The course will focus on Not-for-Profit (NFP) and Governmental (Govt) financial accounting standards and practices employed by governmental and nonprofit organizations. Upon successful completion of the course, students will master the fundamentals of financial reporting of various kinds of governmental accounting and nonprofit organizations. Social, environmental, and ethical issues are addressed in this course. The content of Governmental and Nonprofit Accounting will be linked to sustainability, leadership and governance.

ACTG 4460 Financial Accounting and Reporting (4 Credits)
The purpose of this course is to provide students with an understanding of the financial statements issued by companies to external parties, such as shareholders and creditors. The course covers the fundamentals of accounting, recording economic events in the accounting records to the preparation of the company's financial statements. In addition, the course examines major transaction categories, accounting policy choices of business firms and their financial statement implications, as well as the content of publicly-traded companies' Form 10-K annual reports.
ACTG 4620 Accounting Ethics (4 Credits)
This course focuses on the idea of community and the ethical and social relationships of accounting leaders and business organizations in their communities. The course focus is on the role of the accounting professional and the unique and special responsibilities associated with that role. This is examined by analyzing a variety of students that will face during their careers. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that emerge directly relate to the state Code of Professional Conduct applicable to CPAs, the Code provisions are discussed and analyzed.

ACTG 4660 Strategic Cost Management (4 Credits)
Strategic cost management methods and practices focus on how to help the firm succeed in contemporary business. Topics in the course include balanced scorecard, cost-volume-profit analysis, target costing, standard costing, and management control. The course will enable students to apply strategic thinking to management planning, decision-making, and management reporting.

ACTG 4700 Graduate Seminar in Accounting (1-17 Credits)
ACTG 4701 Special Topics in Accounting (1-5 Credits)
ACTG 4702 Special Topics in Accounting (1-5 Credits)
ACTG 4703 Special Topics in Accounting (1-5 Credits)
ACTG 4704 Special Topics in Accounting (1-5 Credits)
ACTG 4705 Topics in Accounting (1-4 Credits)

ACTG 4710 Managing the Family Business (4 Credits)
Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family “banks,” family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

ACTG 4740 Valuation and Modeling (4 Credits)
The ultimate purpose of the course is to improve professional decision-making skills. Professional decisions are made using a combination of judgment and analysis. Even skilled professionals (in any field) will make incorrect decisions when working with incorrect or insufficient information. Thus, one key to improving decision-making is improving analytical insights and skills. This course emphasizes the definition, construction, uses and limitations of popular financial models and instruments. Further, the class focuses on how the instruments are used, why they are used and how decisions to use such instruments and tools/techniques to value them are made.

ACTG 4750 Valuing a Business (4 Credits)
This course explores all major aspects of business valuation. Students not only study valuation theory, they appraise an actual business and draft a valuation report in compliance with the American Institute of Certified Public Accountants Statement on Standards for Valuation Services (SSVS) and Reporting Standards of the National Association of Certified Valuation Analysts (NACVA). Prerequisite: ACTG 4740.

ACTG 4760 CEOs and Corporate Governance (4 Credits)
This course examines the current and pressing issue of corporate governance, in its ethical, legal, and social dimensions. Students read the latest views of scholars and experts and gain the perspectives of corporate CEOs and other organization leaders. Topics explored include the history of various governance models, public policy on corporate governance, corporate board functions and responsibilities, the dynamics between CEOs and boards, ethical leadership and corporate culture, ethics and compliance programs, executive liability, nonprofit corporate governance, board and audit committee responsibilities, restructuring and governance, executive compensation problems and solutions, shareholder activism, and corporate governance reforms. Cross-listed with LGST 4760.

ACTG 4795 Graduate Research Seminar (1-17 Credits)
ACTG 4880 Internship - Graduate (0-4 Credits)
Hours and times arranged by student.
ACTG 4991 Independent Study (1-10 Credits)
Hours and times arranged by student.
ACTG 4992 Directed Study (1-10 Credits)
ACTG 6300 Behavioral Research in Accounting Seminar (4 Credits)
This seminar will provide students with the tools needed for educated consumption of behavioral research in accounting. We will focus on the theoretical and methodological issues faced by those who conduct this research, as well as the practical implications of the research for business leaders. Students should leave the course with a basic knowledge of behavioral research in accounting and be better able to create, analyze and critique such research.
Business Core Courses

BUS 4310 Business Communication for Accounting Professionals (4 Credits)
This course emphasizes critical communications skills for future accounting, tax, auditing and consulting professionals. The course develops written communication skills including but not limited to technical writing, reporting the results of research and explaining complex issues. Oral communication assignments include formal presentations, development of debate skills and boardroom presence. Assignments incorporate business etiquette and teambuilding.

BUS 4330 International Business (2 Credits)

BUS 4400 MBA@Denver Capstone (4 Credits)
The MBA@Denver Capstone Course enables the practical application of key management and leadership competencies, skills and knowledge and is designed to integrate core course learning outcomes. You will integrate what you have learned in the MBA@Denver program to analyze a client problem and provide appropriate recommendations and conclusions prepared for and presented to the client. You are strongly encouraged to work with a small business or not-for-profit organization, completing a social capital project with that enterprise. You will gain in-depth exposure, perspective and understanding of strategic business processes, opportunities and challenges within an organization. You will work in teams and will select an organization of your choice to work with as the client. The project will end with an oral presentation and written proposal that is delivered to the client organization and the instructor on an assigned date. Project assignments will emphasize the integration of knowledge from multiple academic disciplines and functional business activities. You are required to identify linkages between an organization’s external and internal organization environments in the context of its organizational strengths, weaknesses, opportunities and threats (SWOT). Projects may include new product or technology development, restructuring, relocation, expansion, downsizing, acquisitions, mergers and acquisitions or joint ventures, and/or other relevant operational performance issues. The goal is to increase the organization’s ability to sustain and thrive. The final plan/proposal should include an implementation timeline for the proposed solutions as appropriate. Enforced Prerequisites and Restrictions: MBA@Denver student must be within one quarter of graduation or have the Director’s permission to take the class. This course is open only to MBA@Denver students (MBA-DEN).

BUS 4444 Global Bus, Governance & CSR (4 Credits)
In an increasingly globalized world, civil society, states and businesses are trying to discern how to govern business conduct across the borders of nation-states. Many of the issues our society faces today—global financial crises, environmental degradation, and corruption, to name a few—are impossible to tackle within a given country. Instead, these issues require collaboration and coordination across a variety of actors spread around the globe. Within this framework, businesses are aware of increased pressure to behave responsibly and adopt a corporate social responsibility (CSR) approach to their conduct. Yet, businesses are unsure how to integrate these goals into their business strategy and engage meaningfully with stakeholders. Likewise, governments recognize the importance of having business at the table, but do not have a clear understanding of how to best engage with the private sector. The response to this conundrum is a focus on global governance, which refers broadly to the way in which global affairs are managed. After a brief overview of economic trends and trajectories around the globe, the course will focus on global governance as a mechanism for change. The class will first explore the opportunities and shortcomings of global governance efforts. The class will build on this scholarship by discussing the role business plays in global governance mechanisms. As society has become aware of, and is acutely concerned with, business conduct, the role of the manager and business strategy in these realms has also changed. Students will analyze these trends and study their implications for government, business, or civil society strategy and practice. The final portion of the course will focus on specific issue areas, including: human rights, labor standards, the natural environment, corruption, and microfinance.

BUS 4445 International Business: Strategy and Practice (4 Credits)
This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc. This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc.

BUS 4600 Professional MBA Capstone Project (4 Credits)
The Capstone Project enables the practical application of key management and leadership competencies, skills and knowledge designed to integrate core course learning outcomes. You will integrate what you have learned in the PMBA program to analyze a client problem and provide appropriate recommendations and conclusions prepared for and presented to the client. The course integrates Daniels’ multi-disciplined learning outcomes and experiences to achieve this goal. The course is a combination of site-based practicum, field project and classroom experiential learning. Through these activities, you will gain an in-depth exposure, perspective and understanding of strategic business processes, opportunities and challenges within a non-profit organization. You will work in teams (4-5 individuals) and will select a non-profit organization of your choice to work with as your client. The project will end with an oral presentation and written proposal delivered to the client and to the instructor on an assigned date. Project assignments will emphasize the integration of knowledge from multiple academic disciplines and functional business activities. Students are required to identify linkages between an organization’s external and internal organization environments in the context of its organizational strengths, weaknesses, opportunities and threats (SWOT). Projects may include new product or technology development, restructuring, relocation, expansion, downsizing, acquisitions, mergers and acquisitions or joint ventures, and/or other relevant operational performance issues. The goal is to increase the organization’s ability to sustain and thrive. The final plan/proposal should include an implementation timeline for the proposed solutions as appropriate.
BUS 4610 Leading with Integrity (4 Credits)
Leadership in these uncertain and volatile times is a primary challenge for all who seek success in business. Today’s business environment is increasing characterized by complex questions without obvious or clear answers. Managers must now be leaders, whether they are managing just a few people or the entire enterprise. Traditionally taught analytical skills alone will not meet the challenge of our times; leading with integrity requires managers to understand numerous social and environmental challenges facing businesses along with the monetary challenges. Evaluation of your leadership style, and how ethical integrity can be incorporated into that style, will expand your impact as a leader and follower working with others. Leading with integrity places you and business in an interconnected world where success, organizationally and personally, is determined not only by profit, but by personal and organizational integrity. This course draws on the history of business practice and ethical leadership to provide a foundation for personal self-discovery and professional direction.

BUS 4611 Experiential Outdoor Leadership (0 Credits)
Personal development begins with an introduction to your Insights’ profile and then moves to focus on self-awareness in Leading at the Edge. Within the first few weeks of your graduate program, all PMBA students are taken to a nature retreat center 9,000 feet up into the Rocky Mountains where you will participate in an intensive three-day exercise in self-awareness, outdoor leadership, team-building, and problem solving. Unlike most “rocks ‘n ropes” exercises, this weekend includes an intellectually rigorous component, called Leading at the Edge, which is designed to enhance the classwork in which you engage, and is intended to enhance the experience students have in their life outside of the academic environment.

BUS 4612 Business Domestic Immersion (0 Credits)
MBA@Denver students are required to take two immersion experiences. BUS 4620-X includes domestic experiences, held in a U.S. city, generally including visits with business leaders on various topics, experiential experiences, and/or specific topic discussions led by qualified faculty. Students may not take the immersion course at the same destination more than once.

BUS 4614 Business International Immersion (0 Credits)
MBA@Denver online students are required to take two immersion experiences. BUS 4614-X includes international experiences, held in a non-U.S. city, generally including visits with business leaders on various topics, experiential experiences, and/or specific topic discussions led by qualified faculty. Students may not take the same section number (X) more than once, though they may take the course more than once.

BUS 4615 Leading at the Edge (2 Credits)
Connects values, globalization, and innovation through a mix of classroom and outdoor experiential learning formats. The course is a two credit hour complement to The Essence of Enterprise course. Using the metaphor of the 10th Mountain Division, the course builds a foundation for learning at Daniels through introductory looks at leadership, team building, and creative problem solving. Through metaphor and experience, the course bonds the cohorts to each other and enhance self confidence to succeed under difficult and changing conditions. The 10th Mountain Division was created out of a global crisis and trained at Camp Hale Colorado, located between Leadville and Vail, during the 1940s. This experience resulted in fourteen patents, including predecessors to the snow cat, snowmobile, and various other forms of outdoor equipment. Following WWII, members of the 10th were responsible for building the country’s most famous ski resorts, such as Aspen and Vail, along with the 10th Mountain Hut System. Individual members became successful businessmen, social entrepreneurs, and civil servants forming companies such as NIKE, leading organizations like the Sierra Club, and founding the Colorado Outdoor Education Center (where training for this course takes place). The group is renowned for exemplary leadership, passion, team dynamics, innovation, and ethics within a global environment.

BUS 4620 Ethics for the 21st Century Professional (4 Credits)
A fundamental purpose is to engage students in ongoing reflection and dialogue about their responsibilities as managers and leaders. Of particular emphasis are the ethical, professional and social responsibilities of managers and leaders, especially as it relates to numerous stakeholders and communities. This course focuses on the idea of “community” and the social relationships of managers and business organizations in their communities. Roles and responsibilities of managers and business firms are examined by analyzing a variety of issues that managers will face during their careers. These specific issues will be examined in terms of their legal, public policy, and ethical dimensions. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that may emerge in their business careers. Cross-listed with ACTG 4620.

BUS 4630 Creating Sustainable Enterprises (4 Credits)
A sustainable enterprise is defined as any human endeavor with integrity in three interconnected dimensions (environmental, cultural, and economic) and whose collective actions meet the needs of the enterprise and its stakeholders today without compromising the ability of future generations to meet their needs. The fundamental purpose of this course is to help prepare students for careers in which success requires a worldview that extends beyond the enterprise level in order for managers to create sustainable cultural, social, and financial value for the organization and society in a responsible manner.

BUS 4635 Global Enterprise Challenges (2 Credits)
As students complete the integration of material from the Compass sequence, this class provides an opportunity for the students to extensively apply the material through: case analysis, presentation, critique of other presentations, and integration of MBA Compass material and first year MBA Core material as appropriate.
BUS 4640 Innovation Design & Execution (4 Credits)
In the last century, the technologies of the industrial age (telegraph, railroads, electricity, radio, telephone, television, automobiles, airplanes, computers) have dramatically altered not only the way business is conducted, but the way we live and learn. These technologies have also enabled undesirable and unintended consequences: urban sprawl, global warming, terrorism, weapons of mass destruction, stress, obesity. Where is technology taking us? In this course, students look at innovation, creativity, entrepreneurship and design, and the role each can play in creating a better business world, a business world less driven by science fiction than inspired by social fiction, a business world which begins to shift from an industrial age of ever more encompassing technology to a creative economic environment based less on stuff and more on people and their needs.

BUS 4700 Special Topics in Business (1-8 Credits)
BUS 4701 Special Topics in Business (1-6 Credits)
BUS 4702 Special Topics in Business (1-6 Credits)
BUS 4703 Special Topics in Business (1-6 Credits)
BUS 4704 Topics in Business (1-6 Credits)
BUS 4705 Topics in Business (1-6 Credits)
BUS 4802 Executing in a PM Enterprise (4 Credits)
This course is the second course in a three-part required series. Pre-requisite: Must be a Lockheed employee.

BUS 4804 Kaiser Leadership Edge - People Leadership (4 Credits)
The People Leadership course is part of the Leadership Edge program designed specifically for the Kaiser Permanente Colorado organization. The program grows the internal leadership capacity necessary to reach their goal of becoming the best solution in health care. By exploring topics and cases from multiple perspectives and across business areas, participants develop a deeper understanding of the challenges and opportunities that Kaiser faces. Signature needed to register. Must be a Kaiser employee to register.

BUS 4805 Kaiser Leadership Edge - Financial Acumen (4 Credits)
The Financial Acumen course is part of the Leadership Edge program designed specifically for the Kaiser Permanente Colorado organization. The program grows the internal leadership capacity necessary to reach their goal of becoming the best solution in health care. By exploring topics and cases from multiple perspectives and across business areas, participants develop a deeper understanding of the challenges and opportunities that Kaiser faces. Signature required to register. Must be a Kaiser employee to register.

BUS 4806 Kaiser Permanente Strategy, Innovation, and Execution (4 Credits)
The Strategy, Innovation and Execution course is part of the Leadership Edge program designed specifically for the Kaiser Permanente Colorado organization. The program grows the internal leadership capacity necessary to reach their goal of becoming the best solution in health care. By exploring topics and cases from multiple perspectives and across business areas, participants develop a deeper understanding of the challenges and opportunities that Kaiser faces. Signature required to register. Must be a Kaiser employee to register.

BUS 4980 Internship (0-10 Credits)
Faculty supervised Internship.

BUS 4991 Independent Study (1-10 Credits)
BUS 4995 Independent Thesis (6 Credits)

BUS 6000 Research Methods in Business (4 Credits)
Business Research Methods introduces students to the nature, scope, and significance of research and research methodologies. Additionally, the course studies primary and secondary research methods with applications to specific problems, using qualitative and quantitative designs for individual investigation on current problems within a student's area of interest. Topics covered include research design, sampling strategy, data types and collections, measurement approach, testing procedures, ethics in data collection and interpreting findings, and the Institutional Review Board (IRB) process.

BUS 6001 Qualitative Research Methods (4 Credits)
Qualitative methods are important for exploring complex social phenomena and developing theories for understanding dynamic relationships and change. This course is designed to help students develop an understanding of the methods and process for conducting qualitative research in general, and case study research in particular. Students will learn to use qualitative methods to develop theories and managerial solutions for current and future business problems.

BUS 6002 Quantitative Methods I - Making Discoveries with Data (4 Credits)
As a PhD student you will do original research ... making discoveries that nobody else has made before. Data analysis is a key tool that facilitates that. Data analysis tools help you unlock the hidden treasures within your data set. These treasures are knowledge and information that is waiting to be discovered and utilized for your benefit. Specifically, you will become familiar with several of the internationally utilized statistical software packages and with the array of statistical analysis techniques. You will understand which statistical analysis technique to use in which situation, and how to interpret the output from your statistical software packages. These skills support managers for better decision making. Managers in business and industry have the resources to accumulate data, and this course develops the techniques to discover the information that your data provides. You will also gain skills in understanding how data collection and analysis will benefit your research.
BUS 6003 Quantitative Methods II - Making Discoveries with Data (4 Credits)
As a PhD student you will do original research ... making discoveries that nobody else has made before. Data analysis is a key tool that facilitates that. Data analysis tools help you unlock the hidden treasures within your data set. These treasures are knowledge and information that is waiting to be discovered and utilized for your benefit. These skills support managers for better decision making. Managers in business and industry have the resources to accumulate data, and this course develops the techniques to discover the information that your data provides. In this course you will learn how these data analysis tools are used for research, and you will plan how you will use your data analysis skills to perform your own research for your doctoral degree.

BUS 6004 Data Analytics (4 Credits)
The main objective of this course is to provide students with a well-grounded understanding and appreciation of the contemporary methods, tools and techniques used to make evidence-based managerial decisions. As managers and practitioners in business, industry and government, you have made substantial investments in putting in place the means to collect and store data, but may not have the basic technical or analytical understanding necessary to chart a road map to discover the full potential of your data. This course intends to provide you with such an understanding and hence help you become a better manager/decision maker.

BUS 6300 Seminar in Cross Disciplinary Decision Making Research (4 Credits)
Leaders are often faced with difficult decisions and the result of these decisions determines their future success. It is important for leaders to understand the cognitive processes which underlie the decision-making process. For example, what factors cause a leader to choose the wrong investment, hire the wrong employee, or select the unethical alternative? This course will provide students with a foundation of seminal theories rooted in Economics, Psychology and Sociology and a comprehensive perspective of organizational decision-making.

BUS 6301 Research Seminar in Innovation and Creativity (4 Credits)
This course is intended to be a multi-disciplinary doctoral seminar investigating the broad questions of innovation and creativity and its application to entrepreneurship. The course will start with an industry-level view of innovation and how technologies evolve and then move from the micro-individual level of creativity to the organizational level while considering the individual, dyadic and group levels.

BUS 6500 Applied Research Practicum Series: I (2 Credits)
ARP I will introduce students to their ARP Instructor's research area. As such students will work closely with their ARP instructor to begin to understand his/her research area and focus. This serves as the introduction for the three-part sequence of ARPs resulting in a completed research project. By the end of ARP I, students will complete a systematic review paper of a research area and a set of research questions of interest.

BUS 6501 Applied Research Practicum Series: II (4 Credits)
Students will work closely with their instructor to create a theoretically supported and actionable research proposal that uniquely contributes to our understanding of the larger business field. Proposals can be focused on qualitative and quantitative (or mixed) methods. This part of the ARP series will help students develop research questions into carefully crafted predictions grounded in theory while considering execution of the study.

BUS 6502 Applied Research Practicum Series: III (4 Credits)
Students will design an appropriate scientific method (e.g., survey, experiment or interview) including a data collection and analysis plan per the final proposal submitted in ARP II. Once appropriately designed, under the direction of their ARP professor, students will collect data appropriate to test the study's hypotheses. Institutional Review Board (IRB) approval must be received prior to data collection which should be of publishable quality (broadly defined).

BUS 6503 Applied Research Practicum IV (4 Credits)
Students, along with oversight and assistance from their respective ARP professor, will analyze data consistent with his/her research proposal (ARP II) and analysis strategy (ARP III). The students will then complete an entire research paper that is ready for presentation and/or publication at appropriate outlets.

BUS 6900 Dissertation Research in Business (2-28 Credits)
Dissertation Proposal Defense Following successful completion of the comprehensive exam, each student will prepare a dissertation proposal and defend the proposal to the dissertation committee. A successful dissertation defense qualifies the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student’s advisor and should be available to all committee members at least two weeks prior to the exam. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the research question, motivation for pursuing the research, and the research method design that will be used to answer the research question. The dissertation proposal must be successfully defended within four quarters of passing the comprehensive exam. Successful defense of the dissertation results in agreement between the student and the committee as to what will constitutes successful completion of the dissertation research. The composition of the dissertation proposal committee must comply with the standards specified by the University of Denver Doctoral Degree Requirements and Standards. The dissertation proposal defense is an oral closed exam. If a student successfully defends the dissertation proposal but subsequently switches advisor and hence topic, the dissertation defense must be repeated within one year to ensure capability of the student and feasibility of the project. Dissertation Defense After the dissertation has been completed, the student must defend it in a final oral exam, as specified by the University of Denver Doctoral Degree Requirements and Standards.

BUS 9000 Study Abroad Tongji University (0-18 Credits)
This course facilitates study abroad through an exchange agreement with Tongji University School of Economics and Management in Shanghai China. University of Denver exchange students may take only graduate level courses at Tongji University and only graduate level courses from Tongji are counted for graduate credit at the University of Denver.
This course facilitates study abroad through an exchange agreement with Doshisha University, Global Business and Management Studies, Kyoto, Japan.

BUS 9002 Study Abroad University of Stockholm (0-18 Credits)
This course facilitates study abroad through an exchange agreement with the University of Stockholm Business School, Stockholm, Sweden.

Business Ethics Legal Studies Courses

LGST 4198 E-Commerce Law and Ethics (4 Credits)
The changes in technology and business over the past 20 years have been dramatic and far-reaching. Navigating the even more astonishing changes in the future requires some perspective on the developments of the recent past. How did we get to where we are? What technological, economic and political forces have generated the current state of e-commerce? How are these forces likely to change into the future? What are the basic features of e-commerce as it exists today?

LGST 4550 Business Law for Accountants (4 Credits)
This course provides students with a detailed review of the legal considerations in forming, operating, and dissolving the most common forms of business entities: partnerships, limited liability companies, and corporations. The rights, duties and liabilities of the managers, owners and accountants (internal and external) of these entities are extensively examined. The course also provides an overview of federal securities laws impacting these organizations. Prerequisite: ACTG 4620 or BUS 4620 or LGST 2000 (concurrent registration OK).

LGST 4700 International Law (4 Credits)
Offers both an introduction to public international law (the rights and duties of states and intergovernmental organizations [IGOs]) and to private international law (the rights and duties of individuals, businesses, and non-governmental organizations [NGOs] in their international affairs). Majority of course devoted to key international issues of business law and public policy such as alternative dispute resolution (ADR), privatization, intellectual property, international sales, the Foreign Corrupt Practices Act, trade (GATT and WTO), and the international facilities that deal with the adjudication and resolution of legal issues related to business.

LGST 4701 Topics in Ethics & Legal Study (1-5 Credits)
This course examines complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. At the heart of Great Leadership one finds a values base. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants gain a deep understanding of - and practical experience with - Values Based Leadership in today's world.

LGST 4730 Values Based Leadership in Practice (4 Credits)
The course examines the complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants will gain a deep understanding of - and practical experience with - Values-Based Leadership in today's world.

LGST 4740 Science & Mgmt. of Org. Ethics (4 Credits)
This course examines our knowledge regarding ethical decision making and behavior in organizational contexts. The course also explores the implications of such knowledge for effectively creating and managing ethical organizations. The course will be conducted as a graduate seminar with students playing a central role in identifying topics, researching content areas, and deciding on course outcomes. We will examine conceptual and theoretical models of ethical behavior in organizations, research empirical studies, and develop managerial implications. The overarching goal is to increase knowledge and understanding so as to strengthen capacities to be ethical leaders and managers. Prerequisite: BUS 4100. Non-business students may take the course with permission.

LGST 4760 CEOs and Corporate Governance (4 Credits)
In the wake of the Sarbanes-Oxley and Dodd-Frank laws, corporate governance has become a compelling issue for business students and executives. Corporate board members and leaders of institutional investors share their insights concerning corporate governance from strategic, financial and legal perspectives. CEO/board dynamics are explored, along with leadership development and executive succession policies. The roles of major board committees, such as the audit, compensation, nominating, and legal compliance committees are given special emphasis. Board responsibilities in corporate crises and re-structuring are examined, along with the legal liabilities of executives, board members, and the corporation. Public policy pressures on corporate governance, including the roles played by the Securities and Exchange Commission and other regulatory bodies are discussed, along with the responses by business organizations, political interest groups, and self-regulatory bodies. Shareholder activism and litigation, along with pressures from other corporate stakeholders are also emphasized in the course. Examples of topics include corporate scandals, executive compensation, global corporate governance systems, and government reforms. Students engage in a number of case analyses over the course of the quarter, produce a four-part case study, and discuss actual real world solutions with business leaders who have been involved in the issues. Cross-listed with ACTG 4760.

LGST 4780 Leadership, Teams & Values (4 Credits)
This course is designed for Daniel Scholars (who have completed the first quarter of their MBA program including Value Based Leadership) to provide both challenging intellectual discussion and physical engagement around the fundamental ethical dilemma of competition and/or cooperation. The venue for the course is Harbor Island, San Diego, California, and the adjacent waters of San Diego Bay and the Pacific Ocean. Both traditional classrooms and the untraditional learning environment of the off-shore sail boat provide the context of dynamic learning about values, teams and self. Prerequisite: BUS 4100.
INFO 4000 Foundations of Business (4 Credits)
The introduction to Business course is an introduction to provides an overview of the business arena, how a business operates, and the supporting functions that are needed in any business enterprise. Students will identify forms of ownership and the processes used in operations, marketing, accounting, finance, personnel, information technology and general management. Moreover, students will learn about social responsibility and business ethics in concurrence with the Daniels College legacy.

INFO 4100 Survey of Business Analytics (4 Credits)
This course provides an overview of business analytics: how business data are collected, processed, and analyzed to support decision making. It will address both how to assess and use data that is readily available as well as how to start with corporate strategy and determine what data is needed, how to generate and process it. The course will also explore how corporate culture, ethics, and globalization can affect data management and analytic decision-making.

INFO 4120 Python Programming (4 Credits)
Python is a popular general purpose programming language which is well suited to a wide range of problems. With the right set of add-ons, it is comparable to domain-specific languages such as R and MATLAB. Python is a scripting language. The following topics will be covered: Importing data, Reading and writing files, Cleaning and Managing Data, Merging and joining DataFrame objects, Plotting and Visualization, Statistical Analysis, Fitting data to probability distributions and Linear models. Packages: Pandas, NumPy, matplotlib, statsmodels, Scikit-learn, and IPython. Principal Content Elements: 1. Introduction to Programming Logic and Design Using Python 2. Data Management 3. Statistical Analysis 4. Advanced Data Management and Statistical Analysis Prerequisites: STAT 4610.

INFO 4140 Business Databases (4 Credits)
This is an introductory database course which covers enterprise database design, modeling and implementation.

INFO 4200 Business Analytics Capstone Planning (2 Credits)
This course prepares the student for the Capstone course by identifying a faculty advisor, company, data, and a business issue to be addressed in the Capstone course in the final quarter. (Must be taken two quarters prior to INFO4400, with the exception of off-cycle students, who will take it the quarter prior to INFO4400.) This course may be taken by MSBA students only.

INFO 4240 Data Warehousing (4 Credits)
This course introduces students to the main components of a data warehouse for business intelligence applications. Students will learn how a data warehouse fits into the overall strategy of a complex enterprise, how to develop data models useful for business intelligence, and how to combine data from disparate sources into a single database that comprises the core of a data warehouse. Students will also explore how to define and specify useful management reports from warehouse data. Prerequisites: INFO 4100, INFO 4140.

INFO 4250 Business Data and Analytics (4 Credits)
Businesses make decisions and improve processes using their own and external data with a variety of data-driven and analytic techniques. This course introduces students to the business data landscape, data management in commercial organizations, and the data-driven decision-making process. Students explore the fundamental concepts behind how data and analytics can improve business performance, using their individual roles and companies as subject matter. Principal Content Elements: 1. Data-driven decision making and performance improvement. 2. Data management in organizations. 3. Organizational transformation based on data-driven insights.

INFO 4280 Project Management (4 Credits)
In this course students examine the science, practice the art, and discuss the folklore or project management to enable them to contribute to and manage projects as well as to judge when to apply this discipline. The course also covers the use of MS Project Professional as a management tool and Crystal Ball as a Monte Carlo simulator for project exercises. Students also learn the fundamentals of process and project simulation for business decision-making. Prerequisite: INFO 4100.

INFO 4281 Project Management (2 Credits)
“Cheaper, better, faster” is the mantra of modern business. Innovation, providing new products and services or using improved business processes, has become a prerequisite for businesses to thrive and flourish. Project Management is a discipline which supports innovation by examining how to facilitate one time events such as constructing a building, installing a software system, taking a product to market, reengineering a marketing process, or merging an acquired company. In this course, we examine the science, practice the art, and discuss the folklore of project management to enable students to contribute to and manage projects as well as to judge when to apply this discipline.
INFO 4300 Predictive Analytics (4 Credits)
This course is designed to prepare students for managerial data analysis and data mining, predictive modeling, model assessment and implementation using large data sets. The course addresses the how, when, why and where of data mining. The emphasis is on understanding the application of a wide range of modern techniques to specific decision-making situations, rather than on mastering the theoretical underpinnings of the techniques. The course covers methods that are aimed at prediction, forecasting, classification, clustering and association. Students gain hands-on experience in using computer software to mine business data sets. Prerequisite: STAT 4610.

INFO 4340 Data Mining and Visualization (4 Credits)
In this course, students create business intelligence tools such as balanced scorecards, data visualization and dashboards to inform business decisions. The course will focus on the identification of metrics, measures, and key performance indicators for a variety of business operations, and will introduce numerous analytic methodologies to support the decisions made with regard to these metrics. The focus will be on the advantages and disadvantages of various modeling methodologies and implementations moving towards performance improvement and business understanding. Prerequisite: STAT 4610.

INFO 4360 Complex Data Analytics (4 Credits)
This course addresses the rapidly-growing demands on businesses created by the prevalence of big and unstructured data. These include management of big data, big-data analytics, analysis of unstructured data (to include text mining), and management and analysis of real-time (streaming) data. The focus will be on enhancing business decision-making in the presence of big data, and on how to create the greatest ROI with large data sets.

INFO 4380 Decision Processes (4 Credits)
This course addresses the process of decision making in the enterprise: who makes what decisions based on what information and for what purpose. Business Intelligence is premised on the HP motto: “in God we trust. All others bring data.” But what is the cost of collecting and analyzing the data and presenting the results, and what decisions justify that cost? Is the transformation from data to decision always rational, and what are the common pitfalls for human decision makers? We examine the results of recent experiments from behavior economics and their relevance to making business decisions. Prerequisite: INFO 4100.

INFO 4381 Decision Processes (2 Credits)
The competency we want to begin to develop in this course is the ability to make sound business decisions. A quick Google search can reassure you that there is no lack of information about how to make good decisions. And much of that information is confusing, if not downright contradictory. Since you will be making the decisions which impact your business and your career, you will need to decide what constitutes a good decision as well as a good decision process. In this course, we will explore some of the voluminous material available, use it to make decisions, practice with useful tools, identify traps and pitfalls, assess results, and extract guidelines for a decision process. Then we will iterate to update and refine the process.

INFO 4390 Advanced Predictive Modeling with R (4 Credits)
This course serves as an introduction to advanced predictive modeling and statistical learning using the R statistical software. Specific topics include linear, non-linear, and logistic regression, classification, resampling methods, and non-linear regression, tree-based methods, and support vector machines. The students will learn how to communicate their results (business reports, dashboards, etc.) of the various modeling exercises and projects using RStudio and the RMarkdown suite of tools. Enforced Prerequisites and Restrictions: Info 4300.

INFO 4400 Business Analytics Capstone (4 Credits)
This course gives students an opportunity to apply the knowledge and skills learned in this program to a real-world problem submitted by a partner business. Students take a business problem from model construction and data collection through an analysis and presentation of results to recommendations for specific business decisions. Prerequisite: INFO 4200.

INFO 4401 Quantitative Methods (2 Credits)
Businesses can never have perfect information; therefore, they must employ statistical techniques to improve the decision-making process. This course introduces students to managerial decision-making using probability and other statistical techniques to support and validate the chosen decision. A student project will focus on data collection (primary research), data analysis, decision analysis, written/oral presentation skills, and the development of an infographic.

INFO 4590 Optimization (4 Credits)
This course introduces students to the basic optimization modeling techniques and tools as practiced by business analysts to help their enterprises make better-informed decisions. Applications will include mix, selection, assignment, distribution, transportation, financial management, planning, scheduling, and management implementations in a variety of business settings. The course will focus on problem definitions, problem configuration, spreadsheet solutions, LP Software (LINGO) solutions, and interpreting and implementing results.

INFO 4591 Optimization (2 Credits)
This is a two-credit version of INFO4590, intended for dual-undergraduate/graduate students only. Students have the option of taking the first ten lessons (spreadsheet modeling) or the second ten lessons (solver programming) and completing the deliverables associated with their track only. The students taking the spreadsheet track will focus on LOs 1, 2, and 3. The students taking the solver track will focus on LOs 1, 2, 4, and 5. All students will take the common INFO4590 final. The course is only offered in conjunction with INFO4590 during the Winter quarter.
INFO 4610 Business Statistics and Analytics (4 Credits)
Making high quality business decisions is hard. Using data to make business decisions makes the process better. This course introduces students to a variety of techniques in analytics and statistics that facilitate data driven business decisions. Time will be spend identifying appropriate techniques to apply in various scenarios, applying in detail some of the quantitative techniques, and using analytic outputs to inform business decisions. Both technical skills and clear communication of results and decisions will be covered. Choosing proper techniques, technical work using Microsoft Excel, proper interpretation of results, and decision making are skills practiced in this course.

INFO 4700 Topics in Business Analytics (0-10 Credits)
Exploration of current trends and topics in business analytics. Prerequisite: INFO 4100.

INFO 4991 Independent Study (1-10 Credits)

INFO 4992 Directed Study (1-4 Credits)

Construction Management Courses

CMGT 4110 Preconstruction Integration and Planning (4 Credits)
This course examines the role of preconstruction services, team integration, and joint design planning in various Integrated Project Delivery (IPD) approaches. Various tools and techniques associated with preconstruction services and design planning from the proposal stage through the design stages of a project are considered.

CMGT 4120 Construction Planning and Scheduling (4 Credits)
Understanding and applying scheduling and control to construction projects is essential to successful construction management. Project scheduling emphasizes network-based schedules, such as critical path management (CPM), network calculations, critical paths, resource scheduling, probabilistic scheduling and computer applications. Project control focuses on goals, flow of information, time and cost control, and change management. Prerequisite: CMGT 4420.

CMGT 4155 Sustainable Development/LEED (4 Credits)
The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis is placed on how LEED project certification influences the overall construction project. Topics include LEED certification techniques for sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design. The following topics are covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student studies and analyzes how management and LEED techniques are applied to current construction projects.

CMGT 4170 Construction Accounting and Financial Management (4 Credits)
Construction financing studied from three perspectives: 1) capital requirements for the construction company, 2) cash flow requirements for project administration, and 3) asset acquisition requirements. Cross listed with CMGT 3170.

CMGT 4177 Environmental Systems and MEP Coordination (4 Credits)
A study of electrical and mechanical systems used in the construction of buildings. Course content includes system design, component selection and utilization for energy conservation, cost estimating or systems, coordination and management of installation. Specific systems included are electrical, air conditioning, heating, ventilation and plumbing, fire protection, life safety, communication, power systems and lighting. The course also considers coordination of MEP systems and explores emerging technology and environmental issues related to mechanical and electrical systems in buildings. Cross listed with CMGT 3177 and XRCM 4177.

CMGT 4200 Lean Construction Project Management (4 Credits)
This advanced course focuses on cutting edge lean tools and other productive strategies for the management of people and processes in the construction industry. The tools and strategies presented draw on the very successful Toyota Production System adapted to the construction industry. Lean construction methodologies such as the Last Planner System, the Lean Project Delivery System, and Integrated Project Delivery are discussed. Topics also include sustainability and the emerging interest in "green construction," as well as the use of Building Information Modeling to enhance the development and management of integrated projects. This course also looks at the human element in relation to motivation, safety, and environmental stresses. A number of case studies are presented to highlight best practices in Lean Construction Project Management. Prerequisite: CMGT 4480.

CMGT 4230 Design Management and Schedule Control (4 Credits)
This course examines the various strategies and techniques associated with managing the design delivery process to align with the construction budget and schedule needs in an integrated fashion. Design planning, scheduling, and resource allocation are considered along with design value determination and management of the design-construct interfaces.

CMGT 4250 Construction Job Site Management (4 Credits)
This course addresses how a successful construction project is managed and administered from design through construction to closeout. Emphasis will focus on how to unite the key stakeholders (contractors, architects, engineers, etc.) to provide them with a workable system for operating as an effective project team. The latest technology, laws and regulations associated with contract administration will be presented. Topics pertinent to each stage of a project are introduced and discussed as they occur throughout the life of the project. Numerous real-world examples will be utilized throughout the course. Various electronic project administration tools and techniques will be demonstrated including Building Information Modeling.
CMGT 4310 Cost Modeling and Trend Management (4 Credits)
This course covers various approaches to construction cost estimating at the conceptual stages of planning and design through detailed construction. Students learn parametric estimating techniques and how they are applied to construct and predict reliable budgets at the earliest stages of design. Students build cost models and refine those models with greater detail as design develops through a project. Building information modeling is introduced and used to create massing models to demonstrate design impacts on project costs. Cost trending techniques are presented to manage, monitor and document project performance relative to cost.

CMGT 4320 Architectural Planning and Design Management (4 Credits)
This course introduces students to the significant value that architecture brings to real estate and the built environment and the various services and professions associated with it. Students will be introduced to principles, protocols and the planning process related to the design function and the link between the architect’s vision and the finished physical structure. Students will be introduced to design, thinking, theory and application. Student will learn to read and interpret the various graphical and written construction documents as well as know how they are developed and what information they contain. Architectural, structural, mechanical, electrical, plumbing and civil drawings and specifications are covered. The business model for design services will be explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction.

CMGT 4401 Residential Practicum I (4 Credits)
A three course sequence designed to emphasize the practical application of the theories and concepts of residential development. The courses provide a capstone experience for seniors. Students are expected to apply their knowledge of general business, real estate and construction management practices by forming a student business entity, acquiring land, building and selling a residential property. Students will apply accounting, finance, marketing, real estate and construction management techniques in the development of a single family residence. Cross listed with CMGT 3401.

CMGT 4410 Construction Building Systems (4 Credits)
A survey of residential and commercial construction materials, means, and methods associated with the various structural and architectural systems used to design and construct buildings. Project plans and specifications are incorporated to teach the basic sequencing and overall construction process. The influence of sustainability in construction is introduced. This class will also have an off campus, experiential learning lab associated with it.

CMGT 4420 Construction Estimating (4 Credits)
This course is designed to provide the student with the theory, principles and techniques of quantity analysis (take-off), labor determinations, overhead and profit analysis. It offers insight into the construction estimating process. The role of the estimator, types of estimating, CSI divisions, bid/contract documents, change order pricing, design/build projects and estimation compilation will be introduced. Discussions regarding the cost/benefit of sustainable materials and typical construction materials will enhance the requisite knowledge of construction estimating. Cross listed with CMGT 3100, XRCM 4420. Prerequisite: CMGT 4320 and CMGT 4410.

CMGT 4438 Legal Issues & Risk Management (4 Credits)
General contract and real estate law, including property rights, title concepts, deeds, purchase contracts, law of agency, environmental issues and disclosures, basics finance concerns, tax law, landlord-tenant law, construction contracts, indemnity agreements, rights and remedies of property owners, contractors and subcontractors issues, and various areas of liability for real estate practitioners and property owners.

CMGT 4480 Const Project Management (4 Credits)
Principles and techniques of construction project management, use of systems analysis, internal and external procedures, planning, programming, budgeting and staffing, controlling major projects, emphasis on construction scheduling techniques with case application. Cross listed with CMGT 3120.

CMGT 4490 Residential Development (4 Credits)
A seminar-style capstone course that integrates various aspects of the construction management curriculum. Emphasis is on topics in the construction and development industries. Cross listed with CMGT 3190.

CMGT 4560 Relational Contracting and Risk Mitigation (4 Credits)
Relational contracting is a construction project delivery framework for multidisciplinary, integrated projects that focuses on aligned goals, high performance, innovation, mutual respect, open communication and a "no blame" culture between Client, Contractor, and Design Team. This approach to contracting, also known as Alliance Contracting, is becoming more prevalent in the United States and is often applied when using integrated project delivery systems. This course compares and contrasts transactional contracting methods with relational contracting methods and the influences on the project team and projects outcomes. Relational contracting is also considered in the context of risk mitigation and project optimization.

CMGT 4580 Strategic Leadership and Integrated Teaming (4 Credits)
This course examines the unique leadership skills and talents associated with leading and facilitating multidisciplinary, integrated design and construction teams. The focus of the course is on applying strategic intelligence and a system of leadership in the development of integrated solutions for the built environment. This leadership model is driven by a compelling purpose and supported by people who share practical values and have excellent processes, to look into the future, create a vision, and bring that vision to reality. Effective strategies for supporting high performance teams are explored.
CMGT 4700 Topics in Construction Mgmt (1-4 Credits)
CMGT 4980 Construction Mgmt Internship (0-10 Credits)
CMGT 4991 Independent Study (1-10 Credits)
CMGT 4992 Directed Study (1-10 Credits)
CMGT 4995 Independent Research (1-10 Credits)

Entrepreneurship Venture Mgt Courses
EVM 4040 Social Entrp in Global Mrkt (4 Credits)
This is a dynamic hybrid course with online readings, cases, quizzes, and blogs, as well as in-class experiential interactions with social enterprises in the community. The distance component of this course is guest speakers from other countries. Students will have the opportunity to network, interact, and work with local social enterprises. A value added component of this course is the coverage of global and cross-cultural concepts and issues critical for successfully running social enterprises in a global context.

EVM 4350 Big Challenges, Big Solutions: The Emerging Start-Up (4 Credits)
Students in the experiential course will start a firm in which they formulate an idea, gather basic data, formulate hypotheses, and then test these hypotheses with potential market participants. Students are likely to pivot several times in this course as the experimentation process helps them shape the emerging firm.

EVM 4351 Designing the Start-Up (4 Credits)
In this class, students will develop an executive summary that outlines the core business concept and the type of governance that will be needed, how the business will scale both in terms of product/service and customers This executive summary will be used to fund the business and determine how the business will be funded-friends and family, credit cards, second mortgages, crowd funding, angel, or VC.

EVM 4355 Entrepreneurship: Ideation to Creation (1-2 Credits)
Entrepreneurship is designed as a general introduction to sustainable entrepreneurship and the application of basic business skills to the creation of innovative enterprises which incorporate renewable, reusable and sustainable approaches to business. Sustainability is unleashing a new wave of innovative and disruptive forces to create new profitable business enterprises. In this course, through a combination of lectures, discussion, outside speakers and practical exercises, we will explore the creation of new enterprises that embrace the triple bottom line of profits, people and planet. It will culminate in a new venture pitch at Denver Startup Week. (BUS 4610 Pre Req).

EVM 4356 Entrepreneurship II: Ideation to Creation (1 Credit)
Entrepreneurship II builds on Entrepreneurship I, requiring students to use their knowledge of sustainable entrepreneurship and the application of basic business skills to create an innovative enterprise which incorporates renewable, reusable and sustainable approaches to business. This is the second of two classes, taken with at least one quarter separating EVM 4355 and EVM 4356.

EVM 4360 Entrepreneurship: Ideation to Creation (2 Credits)
Entrepreneurship is designed as a general introduction to sustainable entrepreneurship and the application of basic business skills to the creation of innovative enterprises which incorporate renewable, reusable and sustainable approaches to business. Sustainability is unleashing a new wave of innovative and disruptive forces to create new profitable business enterprises. In this course, we will explore the creation of new enterprises that embrace the triple-bottom line of profits, people and planet. Students are then required to use their knowledge of sustainable entrepreneurship and the application of basic business skills to create an innovative enterprise which incorporates renewable, reusable and sustainable approaches to business.

EVM 4700 Funding the Business (2,4 Credits)
This course will focus exclusively on financing the business, including crowdfunding, angel investments, and private equity, the documents needed for such funding and the valuation of the firm as a result of funding.

EVM 4704 Topics in EVM (1-8 Credits)
EVM 4710 Innovation/Creativity-Business (4 Credits)
Cross listed with EVM 3710.

EVM 4980 Internship (1-5 Credits)
EVM 4991 Independent Study (1-10 Credits)
EVM 4992 Directed Study (1-4 Credits)

Finance Courses
FIN 4000 Financial Modeling and Databases Bootcamp (1 Credit)
This bootcamp is designed to equip students with a firm foundation in financial modeling as well as acquire an adequate command of Excel functionality and efficiency. This course also serves as an introduction to financial databases, mainly centered on the Capital IQ platform, which the student will be using throughout his or her academic and professional career. Topics covered include: Excel modeling best practices, keyboard shortcuts and common functions, financial datasets, and practical modeling applications in finance.
FIN 4110 Ethics in Finance (4 Credits)
This second course in the Compass is specifically designed for the Master of Science Finance (MSF) curriculum and focuses on the ethical, professional, social, and legal responsibilities of finance professionals, organizations and markets. Financial institutions are facing a crisis of confidence. Trust is an essential ingredient to maintaining efficient and effective financial markets. The finance industry has acquired a reputation for unethical and unsavory activity and has lost the trust of much of society. Many financial professionals believe they are encouraged and rewarded for engaging in unethical activity. We discuss the ethical issues facing financial institutions and professionals and explore solutions for resolving these issues and restoring trust.

FIN 4150 Advanced Business Valuation (4 Credits)
The objective of this course is to present advanced valuation techniques to deepen students’ understanding and enhance their knowledge of valuation theory and practical application.

FIN 4160 Treasury Management (4 Credits)
The objective of the course is to provide students with a comprehensive understanding of how various treasury functions are managed in a corporation and build students' capabilities to assume the role of a proficient treasury manager.

FIN 4180 Global Finance (2 Credits)
This course explores financial management in the international arena. Principal content elements include: The market for foreign exchange, interest rate parity, hedging currency risk, international portfolio management. Upon completion of this course, students should be able to accomplish the following objectives: Explain the determinants of foreign exchange rates; Explain and identify the financial difficulties and opportunities faced by corporations when operating internationally; Apply forwards and options for hedging currency risk; Identify the determinants of the expected returns on international investments; Discuss current issues in international finance. Prerequisites: FIN 4630.

FIN 4200 Financial Investments and Markets (4 Credits)
Introduction to financial markets, securities, instruments, and other factors that determine the financial environment. Prerequisites: STAT 4610 or FIN 4170 or (MBA 4160 and MBA 4360) or (MBA 4280 and MBA 4285). Co-requisites: MBA 4630 and FIN 4630.

FIN 4201 MS Management Managerial Finance (2 Credits)
FIN 4201 introduces concepts and analytical techniques to identify and solve financial management problems. The focus on Performance Metrics (Ratios and Du Pont Analysis), Time Value of Money and Opportunity Costs, and Project Analysis prepares managers to operate in an environment that can at times be driven by the financial performance of the company.

FIN 4320 Equity Analysis (4 Credits)
Examination of statistical and theoretical foundation for determination of market prices and market returns. Includes theoretical implications for investment management of options, futures, stocks and bonds. Prerequisite: FIN 4200.

FIN 4330 Portfolio Management and Risk Analytics (4 Credits)
Case and project approach to foundation of investment portfolio management. Prerequisite: FIN 4200.

FIN 4410 Financial Planning & Analysis (4 Credits)
Advanced course in financial planning and decision-making focusing on capital structure, working capital management, long-range and short-term financial planning, and mergers. Prerequisite: MBA 4112.

FIN 4420 Capital Expenditure Analysis (4 Credits)
Advanced course in capital budgeting examining capital allocation processes and procedures and the theory and applied techniques of capital spending and divestment under conditions of certainty and uncertainty. Related issues of cost of capital and leasing also included. Prerequisite: FIN 4630.

FIN 4500 Financial Modeling (4 Credits)
Use of erect functions and macros to construct financial models from corporate finance, investments and financial markets. Prerequisites: FIN 4170.

FIN 4610 Multinational Financial Management (4 Credits)
Financial analysis of multinational corporation operating in international markets, including exchange rates, international instruments, markets, institutions and futures. Prerequisite: MBA 4112.

FIN 4620 Financial Forecasting (4 Credits)
FIN 4630 Managerial Finance (4 Credits)
Analytical skills and tools of finances; theoretical concepts and practical applications. Topics include ratio analysis, breakeven analysis and leverage, securities valuation, capital budgeting, financial forecasting, and working capital management.

FIN 4700 Topics in Finance (4 Credits)
Topics vary each quarter. Course may be taken more than once if topics are different.

FIN 4701 Topics in Finance (1-10 Credits)
Topics vary. For new/experimental courses taught within the Reiman School of Finance.

FIN 4710 Marsico Investment Fund I (4 Credits)
A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cyndey Marsico. Prerequisite: Permission of instructor. (First part of two-quarter course.).
FIN 4720 Marsico Investment Fund II (4 Credits)
A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: FIN 4710. (Second part of two-quarter course.).

FIN 4730 Marsico Investment Fund III (4 Credits)
This course is an elective course that is the third in the series of classes involving the Graduate investment fund class: Marsico Investment Fund I & II. This course allows students to apply the investment, security analysis, and portfolio management tools and techniques that they have learned in their Finance classes. The students manage an actual portfolio, a portion of the University's endowment originally gifted by Tom and Cydney Marsico. The selection of students for this class is competitive. Students must agree to participate for 2 consecutive quarters, and they must be willing to address portfolio issues during the between-quarter periods if necessary. Because the course involves the application of tools and concepts learned in other classes, the best time to take the course is in the last year of a student's program. Prerequisites: FIN 4710 and FIN 4720.

FIN 4740 Managerial Microeconomics (2 Credits)
This course combines the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics, game theory, and industrial organization that they need to make sound managerial decisions. The course uses case studies to develop practical insights into managing the firm's resources to achieve competitive advantage. The course is divided into two principle modules based on market structure: perfect competition and imperfect competition. Both modules cover optimal behavior and strategies.

FIN 4750 Managerial Macroeconomics (2 Credits)
This course covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the global economy and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rate, business cycles, and monetary and fiscal policies. The course uses case studies to analyze real-life macroeconomic issues, and students are encouraged to investigate the potential and limitations of macroeconomic theory with real-world problems. The course is divided into two principle modules: the economy in the long run, and the economy in the short run. Both modules cover impacts of government policies on the business environment in a closed economy and an open economy.

FIN 4760 Managerial Economics (4 Credits)
The first half of this course meshes the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics, game theory, and industrial organization that they need to make sound managerial decisions. Case studies will be used to develop practical insights into managing the firm's resources to achieve a competitive advantage. The second half of this course covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the domestic and global economies and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rates, business cycles, and monetary and fiscal policies. Case studies will be used to analyze real-life macroeconomic issues, and students are encouraged to investigate the potential and limitations of microeconomic theory with real-world problems.

FIN 4800 An Organized Walk Down Wall Street (4 Credits)
After four class sessions in Denver, participants will spend five days in New York visiting exchanges, brokerage firms, investment bankers, commercial banks, asset managers, and other institutions.

FIN 4830 Econometrics for Finance (4 Credits)
This course focuses on econometric and statistical modeling with an emphasis on finance applications. Prerequisite: STAT 4610 or FIN 4170.

FIN 4860 Derivatives (4 Credits)
This course provides a theoretical foundation for the pricing of contingent claims and for designing risk-management strategies. It discusses more advanced material in financial derivatives and is intended for students who have a quantitative background and are interested in enhancing their knowledge of the way in which derivatives can be analyzed. This course covers option pricing models, hedging techniques, and trading strategies. It also includes portfolio insurance, value-at-risk measure, multistep binomial trees to value American options, interest rate options, and other exotic options. Prerequisite: FIN 4200.

FIN 4870 Strategic Finance (4 Credits)
Addresses theory, concepts, and techniques associated with asset management and creation of value from a strategic orientation. Links financial theory and practice to strategic and operational objectives of the firm, prepares student to incorporate risk and uncertainty into analytical decision-making process and to analyze divestiture, restructuring, and liquidation decisions. Prerequisites: MS/Finance students only and FIN 4840.

FIN 4885 Investment Banking and External Financing (4 Credits)
Considers the blend of theory and practice with regard to designing the appropriate capital structure of the firm as well as appropriate use of securities and process for raising capital in different financial markets. Prerequisites: MS/Finance students only and FIN 4840.

FIN 4890 Fixed Income Analysis (4 Credits)
Emphasizes valuation and management of fixed income securities in prevailing environment of complex and innovative financial arrangements. Study of the nature of evolving markets, both domestically and internationally. Prerequisite: FIN 4200.
FIN 4980 Finance Internship (0-10 Credits)
Daniels College of Business’s graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Permission of instructor required. Hours and times arranged by student.

FIN 4991 Independent Study (1-10 Credits)
Individual study and report. Hours and times arranged by student.

FIN 4992 Directed Study (1-4 Credits)

FIN 6300 Seminar in Finance Research (4 Credits)
Through a survey of research in the discipline of finance, this course illustrates how theory can shape the literature and the formation of research questions. Analysis of key studies will provide business leaders with the tools to analyze how the academic literature can impact and inform the finance profession across such areas as corporate governance, corporate finance, investments, and financial institutions.

Info Tech E-Commerce Courses

ITEC 4270 Emerging Technologies (4 Credits)
Emerging Technologies and Strategies investigates new information technologies. Having a broad view of emerging technologies as they relate to business can provide an organization with a valuable strategic advantage. Those organizations that can most effectively grasp the deep currents of technological evolution can use their knowledge to protect themselves against sudden and fatal technological obsolescence.

ITEC 4280 Intro Software Engineering II (4 Credits)
A continuation of ITEC 4270, this course covers systems development in a client-server Internet/Intranet environment using the Java programming language. Principles of event-driven systems, remote database access, and building GUI (Graphical User Interface) prototypes for interfacing with desktop systems are included. Prerequisite: ITEC 4270 or instructor’s permission.

ITEC 4310 Electronic Commerce (4 Credits)
This course is an overview of electronic commerce (EC) trends and techniques including the underlying technical infrastructure, traditional EDI techniques such as electronic data interchange (EDI) and commerce at light speed (CALS), Internet use for EC, business models for business-to-consumer EC, marketing on the Internet, payment and fulfillment mechanisms, security and regulatory issues, and global implications. Uses lectures, cases, outside speakers from industry and field trips.

ITEC 4320 Networks & Telecommunication (4 Credits)
This course examines network-enabling technologies and concepts, including LANs and WANs. Network design, management, and trouble-shooting issues will be covered. Network design in the age of the Internet will be emphasized, including intranets, extranets, design issues, security and firewalls. Pros and cons of private networks, including virtual private networks, will be discussed. Alternative technologies such as wire line, wireless, satellite and cable will be covered. Cross listed with ITEC 3810. Prerequisite: ITEC 4475.

ITEC 4350 Practicum (1-4 Credits)
This course will consist of an information systems project performed by small teams of students and tailored to individual students’ needs. It will be undertaken for a “client” in the business community. Supervised by a faculty member, each project will permit students to apply what they have learned in a live setting and focus on project management planning, reporting, and problem discovery and resolution. Prerequisite: ITEC 4300 or ITEC 4330.

ITEC 4476 Business Process Analysis and Design (4 Credits)
This course starts with the traditional information technology systems analysis and design and broadens this approach to include analysis and design of better business processes - innovative processes which deliver greater value to customers and enterprises alike through creative uses of information technology. We will analyze past and current examples and look for ways to build on and extend these successful exploitations of information technology to other companies and industries. In short, this course is about exploring innovative ways to create greater business value by analyzing and designing not only the systems, but also the business processes these systems are created to support.

ITEC 4477 Database-Driven Websites (4 Credits)
Using state of the art technologies, this course focuses on the development of dynamic web pages. Technologies include PEARL, ASP, ColdFusion, SQL, Access, and Oracle. Cross listed with ITEC 3477. Prerequisite: ITEC 4475 or current enrollment.

ITEC 4478 XML (4 Credits)
This programming course is the second of a five series Web Services course track designed to prepare the student for the certification exam offered by Microsoft in the development of .NET applications. The second module of the series, XML, provides a thorough understanding of the main techniques surrounding the development of XML applications. Up until now, it has been very difficult to communicate and transfer data between different platforms. The surge of XML as a universal text-based standard readable and interpreted by any other system available, has opened the channel to enhance the development of cross-functional applications. Students will learn to write the codes describing the data, processes it and prepare it for presentation, as well as modeling and designing functional components that will later be used to drive the applications. Topics include: creating well-formed and valid XML documents, parsing the documents and creating the format to display it through the client’s browser, design functional components and the interconnections among them. Some of the tools that the student will learn to use in this course are XML Syntax, DTD, Schema, CSS, XSL, XSLT, DOM, SAX, SOAP, WSDL, and UDDI. Prerequisite: ITEC 4477 or concurrent enrollment.
ITEC 4480 ASP.NET (4 Credits)
The goal of this course is to provide students with the knowledge and skills that are required to develop XML Web services-based solutions to solve common problems in the distributed application domain. The course focuses on using Microsoft Visual Studio .NET, Microsoft ASP.NET, and Universal Description, Discovery, and Integration (UDDI) to enable students to build, deploy, locate and consume Extensible Markup Language (XML) Web services.

ITEC 4481 C#.NET (4 Credits)
The goal of this course is to provide students with the knowledge and skills needed to develop C# applications for the Microsoft .NET Platform. The course focuses on C# program structure, language syntax, and implementation details. C# was created to be the programming language best suited for writing .NET enterprise applications. C# combines the high productivity of Microsoft Visual Basic with the raw power of C++. It is a simple, object-oriented, and type-safe programming language that is based on the C and C++ family of languages.

ITEC 4486 Information Technology Management (4 Credits)
This course focuses on issues central to the effective management of the IT function including, but not limited to: managing the IT organization, IT’s changing role in the enterprise, and managing internal and external relationships.

ITEC 4500 Strategic Info Technologies (4 Credits)
How organizations are using information technologies for competitive advantage.

ITEC 4610 IT Strategy (4 Credits)
Businesses run on information, organized data about customers, markets, competition, and environments. Information systems (interconnected computers, data, people, and processes) are critical to capture, organize, and disseminate that information in ways that provide stakeholder value. This course is designed to help managers, technical and non-technical alike, to explore how to derive greater value and satisfaction, both personally and professionally, from information systems.

ITEC 4700 Topics in Inform. Technology (1-10 Credits)
New topic area discussion in information technology.

ITEC 4980 Internship (0-10 Credits)
Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Permission of instructor required. Hours and times arranged by student.

ITEC 4991 Independent Study (1-8 Credits)
Individual study and report. Hours and times arranged by student.

ITEC 4992 Directed Study (1-4 Credits)

ITEC 4995 Independent Research (1-8 Credits)

MBA - General Courses

MBA 4000 Business Speaking Lab (4 Credits)
Provides students whose primary language is not English the opportunity to enhance their English language skills. No credit toward degree.

MBA 4001 Business Writing Lab (4 Credits)
Provides students whose primary language is not English the opportunity to enhance their English language skills. No credit toward degree.

MBA 4010 Business Speaking Lab II (1 Credit)
Provides students whose primary language is not English the opportunity to enhance their English language skills. No credit toward degree.

MBA 4011 Business Writing Lab II (1 Credit)
Provides students whose primary language is not English the opportunity to enhance their English language skills. No credit toward degree.

MBA 4050 Business Innovation Challenge I (4 Credits)
Apply business skills to a live project in the form of a competition. Learn to work with remote teams using virtual collaboration software. Learn to use brainstorming and innovation techniques to design, recommend, and build break-through solutions to solve a problem or take advantage of an opportunity.

MBA 4060 Business Innovation Challenge II (4 Credits)
Apply business skills to a live project in the form of a competition. Learn to work with remote teams using virtual collaboration software. Learn to use brainstorming and innovation techniques to design, recommend, and build break-through solutions to solve a problem or take advantage of an opportunity.

MBA 4110 Enterprise Challenge (2 Credits)
In recognition of the special value that comes from deep immersion into a subject, students in this course will start a business. Students will incorporate their business, put together an advisory board, identify customers, write an executive business summary, and have a professional business presentation. The final class will consist of presentations to entrepreneurs, representatives from the financial sector, and industry representatives. Students will learn about business by starting a business. This is a highly unstructured class. Students have to structure their projects and present to investors just as an entrepreneur would do.
MBA 4120 Strategic Transitioning from Uncertainty to Risk (2 Credits)
Strategically Transitioning from Uncertainty to Risk is a course that introduces the student to the confluence of entrepreneurship and strategic management. Students will use an organized approach to rapid design leveraging their business ideas created for the Enterprise Challenge in order to develop a sustainable competitive advantage based upon iteration of the business model. Iteration that is discovered through an analysis of the existing business model and the competitive landscape that includes consideration of competitors, customers, suppliers, substitutes, and new entrants. Opportunities to create competitive advantage are analyzed through the design of generic competitive strategies in domestic and international markets, alliances and partnerships, and corporate diversification.

MBA 4130 Corporate Financial Reporting (2 Credits)
The purpose of this course is to provide students with an understanding of the financial statements issued by companies to external parties, such as shareholders and creditors. The course covers the fundamentals of accounting, from recording economic events in the accounting records to the preparation of the company's financial statements, as well as major transaction categories and accounting policies of business firms and their financial statement implications. In addition, the course introduces students to publicly-traded companies' Form 10-K annual reports.

MBA 4140 Ethics in Practice (2 Credits)
The fundamental purposes of the course is to 1) engage students in ongoing reflection and dialogue about their responsibilities as managers and leaders, 2) understand cognitive, behavioral, and principled approaches to ethics, and 3) advance your job prospects by focusing on ethical skills, practices, and exercises that will make you better managers and leaders. Of particular emphasis are the ethical and social responsibilities of managers and leaders, especially as it relates to numerous stakeholders. This course focuses on a systems-oriented approach to the ethical and social relationships of business leaders and business organizations in their communities. These roles will be examined by analyzing a variety of representational issues that characterize current concerns with business ethics. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that may emerge in their business careers. While the core of the curriculum will strengthen foundation business and management skills and competencies, the assumption of this course is that all of these skills and competences must be grounded in a solid ethical and social commitment to values and principles. This course attempts to explore these values in various business contexts.

MBA 4150 Understanding Your Market (2 Credits)
This course focusing on “knowing your customer” through the Segment, Target and Position Model. The STP Model consists of three steps that help you analyze your offering(product or service) and the way you communicate its benefits and value to specific groups. STP stands for: Step 1: Segment your market. Step 2: Target your best customers. Step 3: Position your offering. This model is useful because it helps you identify your most valuable types of customer, and then develop products and marketing messages that ideally suit them. This allows you to engage with each group better, personalize your messages, and sell much more of your product. This course explores the development, evaluation, and implementation of marketing strategy in complex environments. The course deals primarily with an in-depth analysis of a variety of concepts, theories, facts, analytical procedures, techniques, and models. The course addresses strategic issues such as: -In what environment do we operate? What impact will the environment have on marketing decisions? -How should the market be segmented for best return on investment? -Which market should be targeted to achieve highest profitability? -How shall we position the offering in the minds of our customers? -Which marketing models are most appropriately applied to the business problem at hand?.

MBA 4160 Opportunities with Data Skills I (2 Credits)
Develop an understanding of the basic concepts of probability and statistics, and how they relate to managerial type problems and decision making. Develop experience performing and interpreting standard data analysis methodologies. Obtain familiarity with a statistical software package.

MBA 4170 Navigating the Global Economy (2 Credits)
Businesses today, whether domestic or multi-national, are part of a complex global economy. The challenges firms face today—global financial crises, corruption, and finite resources, to name a few—are impossible to tackle without a solid understanding of the broader political and economic institutions and environment. This class will provide a foundation to students’ understanding of the international political economy, international institutions, and trends and patterns across developed, emerging, and developing countries. Students will explore some of the myths of the global economy, the variations of capitalism that exist across time and space, as well as the role of international institutions and emerging economies in shaping the business environment.

MBA 4205 Strategic Career Management (4 Credits)
Strategic Career Management offers graduate business students a theoretical and practical understanding of career management within the context of the current and projected labor market. The course facilitates the development of personal short- and long-term career action plans, and provides students with the tools and frameworks for developing other employees’ careers once they are in managerial roles. This course is offered in conjunction with the Suitts Center for Career Services. Major components of the course include in-depth self-assessment, labor market assessment (macro and micro), creating a career development and action plan, positioning and branding oneself within the marketplace, and lifelong career management. Prerequisite or Corequisite: BUS 4610.
MBA 4210 Creating Community Capital: The Social Good Challenge (2 Credits)
Creating Community Capital: The Social Good Challenge is a Challenge Driven Educational (CDE) course that builds off prior foundational and experiential courses. The course is a practicum designed to address social issues; its purpose is to provide the opportunity for students to address a social issue with the discipline of business tools and techniques. Through the Challenge experience, students learn first-hand how to use business skills for social change as they design organizational initiatives to address social problems. The goal for students will be to create a novel response to a social problem that is more effective, efficient, sustainable, or just than current responses. The course emphasizes learning by doing, supported by intensive faculty coaching and field work. A small number of formal class sessions will provide structure in the course, and will focus on collaborative problem solving; the remainder of time students will engage with community for-profit, non-profit, and government organizations to design and execute a social good initiative.

MBA 4220 Leading Effective Organizations (2 Credits)
This course introduces the human side of organizations. Its theme is leading people and organizations for high performance in changing times. It includes traditional organizational behavior concepts such as motivation, power and politics, organizational design and culture. The global context of business is emphasized as a central factor in leading organizations; and the course includes integrating themes of sustainability, engagement, and inclusion – creating organizations that are sustainable, that attract and engage talented people, and that exemplify inclusive excellence. Critical and analytical thinking skills are developed and reinforced throughout the course.

MBA 4230 Managing Cost Information (2 Credits)
Managing cost information is essential for the execution of a business strategy because it enables managers to understand the financial implications of their decisions. In this course, students will learn how to measure, report, interpret, and use cost information. Topics in the course include (traditional and advanced) costing system design; breakeven analysis; cost information for decision making. Prerequisites: MBA 4130.

MBA 4235 Profit Planning and Measuring Performance (2 Credits)
Profit Planning and Measuring Performance provides students with the necessary skills to effectively perform planning and performance evaluation processes. In this course, students will learn how to prepare operating and capital budgets, analyze budget variances, identify key performance indicators, and design management control systems. Prerequisite: MBA 4234. Concurrent enrollment allowed.

MBA 4250 Values in Global Marketplace (4 Credits)
This course examines the ethical, legal, and public policy dimensions of business in the global marketplace. Prerequisite: BUS 4200.

MBA 4260 MBA Internship (0-8 Credits)
The internship typically is taken in either the third or fourth quarter of the MBA program and is a fulltime work experience (roughly 400 hours of work) at a sponsoring company. A participant can register for additional courses beyond the internship with approval of the sponsoring company. Prerequisites: MBA 4220, MBA 4231, BUS 4300.

MBA 4265 Introduction to Analytics (2 Credits)
This course is designed to expose students to the world of analytics. Analytic thought and management are covered to show the students the world better decision making through data. Unintended consequences and ethical use of data and analytics are also a topic.

MBA 4270 Integrative Challenge (4 Credits)
Field study experience at end of MBA program to provide students with exposure to current, relevant and challenging issues faced by Colorado businesses; practical application of business knowledge, managerial skills, professional competencies designed to integrate all graduate program elements and provide distinctive advantage in career development. Prerequisites: MBA 4221, 4232.

MBA 4280 Mastering Managerial Financial Competencies I (2 Credits)
This course and Mastering Managerial Financial Concepts II discusses basic principles of finance and provides practical tools for financial decisions and valuation. The purpose of these two courses is to give students a thorough introduction to the basics of finance. You will learn how to value distant and uncertain cash flows. You will learn how to apply the tools to make investment decisions for a firm. You will also survey the fundamental drivers of financing policy in a corporation and learn how financial markets interact with businesses. Unless you understand finance, you cannot have a thorough understanding of a company’s decision-making process. Prerequisites: MBA 4130. Concurrent enrollment allowed.

MBA 4285 Mastering Managerial Financial Competencies II (2 Credits)
This course and Mastering Managerial Financial Concepts I discusses basic principles of finance and provides practical tools for financial decisions and valuation. The purpose of these two courses is to give students a thorough introduction to the basics of finance. You will learn how to value distant and uncertain cash flows. You will learn how to apply the tools to make investment decisions for a firm. You will also survey the fundamental drivers of financing policy in a corporation and learn how financial markets interact with businesses. Unless you understand finance, you cannot have a thorough understanding of a company’s decision-making process. Prerequisites: MBA 4280. Concurrent enrollment allowed.

MBA 4290 Economics for Decision Making (2 Credits)
MBA 4290 emphasizes the standard tools of microeconomic analysis for the business manager. The focus is on managerial decision-making, and to emphasize real world economic decision makers for firm managers. The goal is for students to understand the current business environment and possess the tools to make sound managerial choices. The course will emphasize analytical problem solving to highlight the decisions managers must make under constrained conditions. There will be a series of short quizzes to emphasize these skills based on class lecturers and homework. We will also use case studies to develop practical insights into managing the firm’s resources to achieve competitive advantage.
MBA 4310 Experiencing Strategic Management through Corporate Challenges (2 Credits)
Experiencing Strategic Management through Corporate Challenges is a Challenge Driven Educational (CDE) course that builds off several previous foundational and experiential courses. Students will leverage the content from accounting, finance, management, marketing, economics, globalization, business stats and analysis in order to engage with corporate partners to examine real-world problems. Students will address issues involving vision / mission / values of the organization, the key industry forces that influence the corporate environment, ways of maintaining and sustaining a core competency, and critical strategy implementation issues that lead to a competitive advantage. The course will be offered in a work-shop atmosphere in which students will meet in class once a week and the remaining time outside of the classroom where students are expected to apply the various aspects of strategic analysis and management.

MBA 4340 Creating Sustainable Enterprise (2 Credits)
All students should be able to demonstrate an understanding of: (1) the concept of sustainability as a decision-making model; (2) the environmental, cultural, social justice, equity, and economic issues inherent in principles of sustainability; (3) the intra- and inter-generational aspects of sustainability; (4) the interconnectedness of individuals, societies, eco-systems, cultures and cultural products in understanding issues of sustainability; and (4) the roles that multiple academic disciplines and perspectives play in identifying, understanding, and addressing issues of sustainability. All students should be able to demonstrate the ability to: (1) apply critical thinking and analysis toward understanding and solving problems related to sustainability; (2) communicate about issues of sustainability across academic disciplines and to non-academics.

MBA 4350 Bien's Int Bus Exp in Europe (1-4 Credits)
The objective of this course is to provide an international experience to our students who are interested in international business. This is achieved through field trips, academic and professional presentations, journaling and cultural immersion. Students reflect on similarities and differences in business practices and broader cultural issues that exist between the U.S. and Scandinavian countries.

MBA 4351 Doing Business in Europe (4 Credits)
The objective of this course is to expose students to issues of international business and cultural diversity through field trips and academic and professional presentations in four Scandinavian countries. Topics to be covered include managing production and operations, international marketing, the European Union, personnel development, cross-cultural aspects of international management, and the role of government. The course includes office visits and plant tours of both large and small production facilities and presentations by industry management. The course is intended also to be an interesting and informative cultural experience with visits to a Viking museum, a ship museum, several castles, and with time for individualized travel in Europe after the course is over. A research project of 15-20 pages is required and due at the end of the summer quarter.

MBA 4360 Opportunities with Data Skills II (2 Credits)
Develop an understanding of more complex concepts of probability and statistics, and how they relate to managerial type problems and decision making. Develop experience performing and interpreting complex analysis methodologies. Obtain further familiarity with statistical software packages. Develop experience integrating data skills with project for Corporate Challenge. Prerequisites: MBA 4160.

MBA 4410 Global Challenge I (0-4 Credits)
This course provides you with the opportunity to apply what you have learned in the first year of your Denver MBA program with a live client. You will work on a project focused on entrepreneurship, social good, or a corporate partner. Scoping the project will be a key learning outcome, as will learning about cross-cultural issues. Students will design an on the ground itinerary and travel to a foreign country. Enforced Prerequisites: MBA 4110, MBA 4210, and MBA 4310.

MBA 4470 International Business Theory in Practice (2 Credits)
International business is its own field of academic study with rich theories and frameworks. Facing a dynamic, and increasingly chaotic, external business environment, business students need to understand both the theories and how they can be applied. To that end, this course draws on the rich international business writings to better understand global business practices and to ultimately make better business decisions. Students will actively explore current international business issues, will interact with local international business leaders, and learn specific concerns facing key regions or countries globally. Prerequisite: MBA 4170.

MBA 4490 Global Macroeconomics (2 Credits)
Managerial macroeconomics covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the global economy and affect the business environment. It explores issues related to inflation, interest rates business cycles, and monetary and fiscal policies. The course will use case studies to analyze real-life macroeconomic issues. Students are encouraged to investigate the potential and limitations of macroeconomic theory with real-world problems, and the goal is to understand the macroeconomic environment. Prerequisites: MBA 4290.

MBA 4510 Global Challenge II (2 Credits)
This course provides you with the opportunity to apply what you have learned in the first year of your Denver MBA program, plus what you learned on the ground during your travel, on a project with a live client. You will work on a project focused on entrepreneurship, social good, or with a corporate partner. The key learning outcome is how to pivot based on your learning while in the host country.

MBA 4540 Mitigating Risk, Securing Value, and Navigating Public Policy (2 Credits)
This course is a cornerstone graduate course delivering a comprehensive introduction to major topics, theories and issues relevant to business in its interactions with Business & Society.

MBA 4545 Business Law: Principles, Strategy and Tactics (2 Credits)
This course provides an overview of essential topics in business law, introducing the ways in which legal considerations impact business strategy, inform business tactics, and affect managerial decision-making.
MBA 4550 Strategic Marketing Decision-Making (2 Credits)
Strategy sets the direction for an enterprise, all of its employees, programs, tasks and activities. All must be planned and executed “on strategy”. Marketing Strategy essentially is the overall company’s strategy applied and executed within the Marketing Department. Deciding upon a strategy offering the best opportunities for the organization to succeed is critical. Being able to implement it effectively is essential. Making informed strategic marketing decisions in the real world is highly complex, challenging and demanding. Choosing among strategic alternatives requires qualitative and quantitative analysis of options, making tough choices and trade-offs, and assessing requirements for executing a bona fide option successfully. Case analysis provides the primary learning methodology for the course. This is a case-based course. This course effectively approaches strategic decision-making through the lens of Marketing; that is, through marketing-focused cases and decisions, although making successful decisions in a marketing context requires evaluating them in a larger strategic perspective and company context. It also requires thorough understanding and application of basic marketing concepts, industry (external) and company (internal) situation analyses, and identification of critical issues and success factors, and the application of basic financial analysis— all of which are foundation blocks for making successful strategic decisions out in the real world. Each case features a specific marketing situation that serves as a “portal” for strategic decision-making. The specific situations include pricing, distribution, new product introductions, branding, communications, sales and distribution and the like. Every case evaluation, like every real-world decision, requires financial analysis. Students must be able to analyze income statements and selective balance sheet factors. Marketing and financial metrics play roles in case strategic decision-making. (Students will be provided with a financial “refresher” package in the first class that includes problems representative of those the cases contain. A student who struggles with the practice financial problems is likely to struggle analyzing cases in the course. The good news is that this course provides a great opportunity to learn how to use financial analytical tools before it really counts—later in your careers. Suggestion: seize this opportunity to improve your financial skill set; you will need it someday.) The course involves identification, synthesis, integration and application of basic marketing concepts within strategic decision-making contexts. Core marketing concepts are reviewed in classes on a high level. (PowerPoint slides on each review topic will be posted in Canvas, and these become the de facto “textbook” and reference for course content.) Prerequisites: MBA 4150.

MBA 4610 Business Law and Public Policy (4 Credits)
The political and legal risks confronting business are among the most serious and can even affect corporate survival, as demonstrated by the scandals and crises of the past three decades. This course attempts to equip managers with the tools and perspectives to manage such enterprise risks, to prevent conflicts from escalating into crises, and to properly respond to legal challenges and political controversies when they do occur. In particular, this course provides a background and foundation in the fundamental concepts of business law and public policy. It elevates your ability to (1) analyze important legal questions and problems facing business, and (2) analyze trends and forces in public policy that affect business.

MBA 4620 Leadership Capstone: Integration and Transition (2 Credits)
This course is a capstone course to integrate the leadership learning and development across the two-years of the MBA. In it, students will explore further their three core areas of development as a leader: 1) Emotional Intelligence; 2) Self-Leadership, and 3) Capacity to Develop Teams. These areas of study are reflective of interconnected areas of development within the Daniels Leadership Development (p3) model. At its core the model investigates purpose, principles, and presence, and in its outer ring explores perspective, partnerships, and practices. Students in this course will deepen their understanding and fluency with the P3 model by exploring the particular areas of emotional intelligence, self-leadership, and team building. They will conclude the course with a study of models of organizational and individual change and transition, in preparation for their own professional transition and deepening of capacity to lead change. The course is designed to be experiential — work will be done in the context of a team — and reflective, with an emphasis on self-reflection and individual learning. The course is organized to provide students with a platform for integrating learning during the last quarter of the MBA.

MBA 4670 Global Issues (2 Credits)
Develop a personal viewpoint regarding the “Global Tilt.” Explore current global issues and their implications for business and careers. Develop future scanning strategy/skills to keep up with global issues. Assess the changing “permeability” of national borders. Prerequisites: MBA 4470.

MBA 4690 Enterprise Solutions (4 Credits)
A practical application of key business and managerial knowledge, skills, and competencies designed to integrate all graduate program elements and provide students with a distinctive advantage in career development.

MBA 4691 Project Analysis 1 (2 Credits)
Capstone class for MBA program. Students should be full-time MBA students in their final 2 quarters of the program or receive faculty permission.

MBA 4692 Project Analysis 2 (2 Credits)
Students should be full-time MBA students in their final 2 quarters of the program or receive faculty permission. Students must have taken Project Analysis 1 to enroll.

MBA 4900 MBA 4900 Topics: (4 Credits)
MBA 4900 is a topics course. That is, you may take this course up to a maximum of four times when registering for an extension elective. The extension elective follows an immersion and is generally, though not always, held in another country. In some instances, this course may be held in the U.S. You will notice that each topic on your transcript will have a different course title. You are not allowed to repeat the same title course. This course will introduce you to the application of international business practice in an international setting while offering opportunities for acquiring hands-on cross-cultural experience to participants in the course. Assigned work and online interaction during the quarter preceding the travel course will prepare students for the experience so that time on the ground can be leveraged for maximum impact. The countries visited offer an outstanding opportunity to learn about international business issues. Students will have the opportunity to meet first hand with a variety of business and other organizations as well as conduct field research to better understand the Italian business environment and its role in the global economy.
Management Courses

MGMT 4201 Leading Teams (4 Credits)
“Leading teams” is a graduate course to prepare students to provide formal and informal leadership to a team. Students will learn about the fundamental design principles of high-performing teams as well as common pitfalls that teams are subject to. Students will also learn about how to sustain team performance through effective information-sharing, decision-making, and conflict management. Students will also cover current topics in teams including virtual teams, team creativity and team-based innovation. This course is designed to stimulate student learning by letting students integrate abstract knowledge through concrete firsthand experiences.

MGMT 4202 Leading Self (4 Credits)
The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual human/social interaction. This course will focus on providing students the critical skills to “lead the self” towards personal/professional goals as the context for studying intentional change. Students will revisit assumptions held about themselves as they develop intentional strategic approaches to identify career opportunities in their selected fields and lead the self towards the accomplishment of professional objectives.

MGMT 4203 Leading Organizations (4 Credits)
Students will develop the ability to think strategically by examining a firm’s mission, vision, and values, business model and financial health of the organization. After assessing the firm’s strengths and weaknesses, the focus is then placed on the industry and competitive environments using a series of tools and frameworks that result in identifying opportunities and threats. Synthesis in the course takes place when the student is able to provide strategic recommendations that generate added value and competitive advantage for the firm. Learning is facilitated through a work-shop atmosphere that uses case studies of industry leaders currently in the news.

MGMT 4204 Springboard (1 Credit)
This course helps you to develop your abilities as a leader and follower working in teams; since most success and progress in business will take place by working with others. Your personal development as a leader and follower is thus of the utmost importance. In short, we hope to fire your imagination as to what is possible, as well as ground your dreams in the realities and complexities of working in the 21st Century. The personal development aspect begins with self-awareness in Leading at the Edge. Within the first few weeks of their graduate program, students are taken to a nature camp 9,000 feet up into the Rocky Mountains where they participate in an intensive (some say “grueling”) three-day exercise in self-awareness, outdoor leadership, team-building, and problem solving. Unlike most “rocks ‘n ropes” exercises, this intellectually rigorous component, often referred to as Leading at the Edge, is designed to enhance the classwork students engage in, especially in working together on the challenging exercises that make up the MS in Management program. The value creation aspect is supported by a series of workshops.” In these workshops, students will focus on applying their new found knowledge to real world situations. The purpose of these Daniels Engagements is to match the personal development aspects of Leading at the Edge with discussions and exercises on creating value, for your self and for your organization, but for the community and for the larger social realms in which businesses operate. For the exercises, students will explore and discuss some of the definitive writings by thought leaders on business. This is intended to facilitate learning basic “business literacy” – exposure to fundamental ideas and concepts that business leaders and writers currently struggle – and to provide material with which to engage your developing skills in (1) critical and creative thinking, and (2) clear communication with others.

MGMT 4240 Global Business (2 Credits)
The International Experience is designed to expose students to the challenges and opportunities of doing business globally. How do you make well-informed decisions in a global environment, taking into consideration the economic, political, environmental, cultural and historical context of a particular country or region? Conducting business outside the United States involves a unique set of challenges; diverse cultures, laws, languages, and currencies add to the complexity of putting together and managing international business ventures. The international experience will help you prepare for these types of activities by exploring the basic questions which focus on various aspects of international business. As a part of the international trip, students will meet with business executives and organizational leaders across a variety of industries to gain a broad understanding of the business environment in a host country. In addition to completing secondary research beforehand, students will also be responsible for conducting primary research by setting up small team meetings in-country in order to develop a hands-on understanding of the business environment on the ground. Another aspect of the trip will include working with a non-profit or other NGO on a social capital project while in the host country, to allow students to experience, personally, the local cultural and socio-economic environment.

MGMT 4280 Business Design (4 Credits)
Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. That innovation(s) is discovered through an investigation of the existing business models and the competitive landscape including: suppliers, customers, competitors, substitutes and barriers of entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of strategies in: marketing, sales, operations, human capital, social responsibility, financing, corporate governance and technology. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of business planning. The result is a written business plan and presentation to funding sources reflecting a sustainable competitive advantage and creation of a defensible market.
MGMT 4301 Organizational Psychology (4 Credits)
This course focuses on psychosocial and behavioral issues in management and leadership to better understand how to drive performance and well-being. The course is founded upon an interdisciplinary approach, with major inputs coming from social psychology, administrative science, engineering, medicine, sociology, and philosophy. The course will center around behavioral analysis and organizational concepts. Students will gain a solid understanding of the latest in organizational psychology from a declarative knowledge standpoint, then put this knowledge into use for procedural knowledge.

MGMT 4302 Leading Talent (4 Credits)
A management course for graduate students grounded in a strong foundation of real experiences managing and leading Human Resource organizations. This course is designed to unify strategy, human resource strategy and principles of management in a highly interactive format employing multiple learning methods.

MGMT 4303 Negotiations and Change (4 Credits)
Negotiations take place daily throughout our lives. Whether it is negotiating as a student with a professor on an assignment extension, a job candidate with a potential employer on salary and benefits, or a chief executive within an organization executing on its strategy, we must know how and when to leverage negotiating strategies and skills in order to achieve a successful outcome. This course explores, through a variety of scenarios, real-world cases, simulations, and role-plays, how negotiators leverage their skills to execute on their strategies to either arrive at a satisfactory agreement or to simply back away from the negotiating table without a deal. Sometimes the best deal, is no deal at all. We will explore a number of perspectives including: (1) Definition and characteristics of negotiations, (2) Interdependence and Relationships of the parties, (3) Dynamics of conflict and conflict management, (4) Integrative negotiating process, (5) Negotiating strategy, (6) Ethical conduct, (7) Communications, (8) Negotiating power, (9) Multiple parties, groups, and teams in negotiations, (10) International and Cross-cultural, (11) and Best practices.

MGMT 4304 Project Management for Leaders (4 Credits)
This course will introduce the student to the key elements of a successful project delivery system. The project delivery system consists of five components: training, tools, core skills, company support, and a project delivery process. The process is the means by which projects are consistently and efficiently planned, executed, and completed to the satisfaction of clients. The system is aligned with the principles of a total quality improvement program, namely client focus, project manager commitment, evaluation and measurement, corporate support, and continuous improvement.

MGMT 4305 Business Model Design and Innovation (2 Credits)
Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. Innovation(s) is discovered through an investigation of the existing business models and the industry landscape including: customers, competitors, substitutes, suppliers, and barriers to entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of financial, marketing, sales, operation, talent, technology, and social responsibility strategies. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of a Business Model and a Business Plan. The result is a written business plan and presentation to a potential funding panel.

MGMT 4306 Virtual Business Management Simulation (2 Credits)
The focus of this course is on gaining new venture experience. Through an online/virtual computer simulation, students will be placed into a very realistic international business setting, where they will start up and run a company through multiple rounds of decision-making. The online simulation allows students to build entrepreneurial firms, experiment with strategies, and compete with other student teams in a virtual business world. Designed to mimic the competitive, ever changing marketplace, the simulation lets students gain experience in market analysis, strategy formulation, and the management of a new venture.

MGMT 4330 Financials for Leaders (2 Credits)
This course is intended to help students develop a financial decision-making framework that can be used to assess and understand how financial decisions positively and negatively affect their company's short-and long-term well-being. Its emphasis is to introduce students to various tools and techniques used in financial management and to demonstrate how they are applied to the managerial decision-making process. This will be accomplished through a combination of class discussions and case study analyses. Topics include decision making, financial statements, ratio analysis, and return-on-investment.

MGMT 4340 Strategic Human Resource Mgmt (4 Credits)
This course focuses on the effective management of human resources in order to create sustained competitive advantage. The course covers the major policy areas of employee influence mechanisms, staffing, training and development, performance appraisal, reward systems, and work design so that students are better prepared to provide direction to the creation and implementation of effective management systems. Prerequisite: MGMT 3900 or permission of instructor.

MGMT 4345 Performance & Rewards System (4 Credits)
Measuring and improving human performance, techniques of individual objective settings including MBO, appraisal and feedback systems, creating and managing compensation programs, job design, analysis and redesign of reward systems in various organizational contexts. Prerequisite: MBA 4121 or equivalent.
MGMT 4350 Business Summit Series: Current Business Issues and Topics (4 Credits)
The Business Summit Series is an elective course that provides students with insights into a variety of contemporary business issues and topics with a practical approach to developing business leadership skills and competencies. Before the course commences, students are invited to provide input and help faculty select the topics that are covered in the series. The faculty will develop modules, with each module covering a discrete business topic a workshop format. The workshops are taught in four-hour segments, with some workshops covering more than four hours, depending on content and learning outcomes. Workshops span practical topics that are not covered in-depth during the core PMBA curriculum, and they also include emerging business subjects. Topics include: Go-To-Market Strategy, Business Development Strategies, Mastering Sales Techniques, Business Consulting Skills, Becoming a Manager, Organizational Change Leadership, Franchise Business Model, and Colorado’s Marijuana Industry. Other emerging business topics may include the Colorado small business market and new industry segments. Industry leaders may present to the class as subject matter experts.

MGMT 4401 Global Leadership (4 Credits)
The operation of a far-flung global enterprise (large or small) imposes special demands upon its leaders. This course explores, through a variety of leadership perspectives, actions and strategies that can be employed to succeed in a global firm. These perspectives include: (1) the headquarters and chief executive officer; (2) global functional disciplines (with special emphasis on global human resource management); (3) the country manager; (4) the global product/service manager; and (5) the host country. Throughout the course, students will systematically examine the cross-cultural, operational and ethical complexities of leading and managing a truly “global” company.

MGMT 4402 Ethical Leadership (4 Credits)
Consideration of ethics in business and organizations is relevant for being an effective and successful manager and leader. The course is designed to strengthen capacities in terms of ethical awareness, analysis, and application. An important learning outcome of the course is to facilitate the growth of students in terms of making practically wise and ethically sound decisions in their future careers. Decisions include fulfilling responsibilities to create and sustain ethical climates and cultures for teams, business units, and organizations. This course introduces students to fundamental ethical concepts and ethical decision making frameworks. Students will apply these frameworks to cases and issues relevant to one’s role as a future manager and leader. Students will also be introduced current research in moral psychology and behavioral ethics, and students will apply this knowledge in assessing a current case related to business and management ethics. The course will cover current issues such as sexual harassment, privacy in the workplace, and whistleblowing. Students will develop a personalized values-based leadership plan.

MGMT 4403 Business and Society (2 Credits)
This course examines the role of business in society and explores important issues in the relationships between business, government, and society. These issues are approached from a stakeholder perspective, integrating business strategy with law, ethics, and social responsibility. The obligations of business to its multiple stakeholders are established and applied through analysis of companies, cases, and current events.

MGMT 4405 Strategic Execution and Summit Team Competition and Assessment (3 Credits)
Strategic Execution is a Challenge Driven Educational (CDE) course that builds off several previous MS Management courses. Students will leverage the contents from accounting, finance, management, marketing, strategy, and business analytics to engage with corporate partners to examine real-world problems. This course provides you with the opportunity to apply what you have learned so far in the MSM program with a live client. You will work on a project focused on business and management. Scoping the project will be a key learning outcome.

MGMT 4410 Qualitative Research Methods (2 Credits)
This course provides students with an overview of and experience with qualitative methods. You are introduced to a wide variety of qualitative methods, including ethnography, observation, interviewing, grounded theory, discourse analysis, deconstruction, historical methods, and action research. The course is roughly divided into two major sections. The first half of the course introduces you to the epistemological foundations of qualitative research and emphasizes design and data collection. The second half of the course introduces a variety of techniques for coding and analyzing qualitative data and provides exposure to many exemplars of qualitative reports/studies. We will examine conventions for ensuring that qualitative work is rigorous and appropriate for action. Throughout the course you will be given opportunities to try on various methods and gain some hands-on experience in several areas.

MGMT 4450 Power and Influence (4 Credits)
This course presents conceptual models, tactical approaches, and self-assessment tools to help you understand political dynamics as they unfold around you, and to develop your own influence style and negotiation skill. By focusing on specific expressions of power and influence, this course gives you the opportunity to observe its effective—and ineffective—use in different contexts and stages of a person’s career. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life.

MGMT 4490 Global Strategy (4 Credits)
Management of multinational enterprises; identification, analysis, and discussion of key policy issues for the international manager within various functional areas; home and host country relationships including assessment of political risks, selection of foreign locations, entry and ownership strategy, personnel and staffing considerations, technology transfer, multinational labor relations, organizing for international operations. Prerequisite: Should be taken in the last possible quarter before graduation and after completion of all advanced requirements and ITEC 3900, MGMT 3900, MKTG 3900, STAT 3910, and FIN 4610.

MGMT 4503 Comparative Management (2 Credits)
Exploration of similarities and dissimilarities of management practices in various cultures, determination of political, economic and cultural factors primarily affecting management theory and practice, transferability of certain management practices to other cultures. Introduction to basic assumptions and approaches of comparative research methodology. Prerequisite: MBA 4121.
MGMT 4515 Introduction to Sport and Entertainment Management (4 Credits)
The purpose of this course is to provide students with a very broad but significant exposure to the business of sports, which represents a global, multi-billion dollar industry. By critically analyzing numerous facets within this business from the perspective of a manager, student come away with knowledge that is wide enough but deep enough to foster a solid understanding of this dynamic and exciting industry. At the same time, this course provides students with specific and valuable insights that foster and stimulate deeper interest in a particular aspect within this industry through subsequent and additional coursework, independent study, and/or internship opportunities.

MGMT 4520 Managing Sport & Entertainment Contracts (4 Credits)
This is a comprehensive and interactive seminar on managing sports and entertainment contracts. The class covers intellectual property; the role of entertainment and sports managers and agents; general contract principles and theory; contract negotiation; management and operating agreements; and sponsorship, endorsement, and licensing agreements.

MGMT 4525 Facility Management (4 Credits)
What is a Public Assembly Facility? Public assembly facilities such as arenas, stadiums, convention centers, and theatres evolved out of the need by social communities to build permanent structures for public assembly, for political and commercial activities, religion, sports, spectacles, artistic expression and for commercial and educational assemblies. This course examines the specific areas of responsibility that one must acknowledge and understand to operate a successful venue of this type. We discuss the core competencies required and the unique areas of concentration that separate a public assembly facility from other venue types. Students realize the significant impact and benefit that facilities like these have on the social, educational and economic environment of communities.

MGMT 4530 Technologies for Sport & Entertainment Management (2 Credits)
This is a specialized course for the MBA student interested in expanding their knowledge of the sports industry as a business and as a world economic force. It provides students with a framework for understanding the scope of the sports business across various venues, as it relates to information technology. Management Sport Technology focuses on understanding the practical uses of computer applications as a tool in sport management activities. Emphasis is placed on demonstrated proficiency in project management, spreadsheet management, database management, and Web page development.

MGMT 4535 Managing Sponsorships for Sport & Entertainment Events (2 Credits)
The purpose of this course is to give students an understanding of sports sponsorship from the perspective of the corporate sponsor and the sports entity. The course identifies and describes the several media distribution channels that are used in corporate sports sponsorship. In addition, students learn how to use sports media distribution properties to create an effective sports marketing plan for corporate sponsors. Students put together a corporate sports marketing plan with a sample sports team.

MGMT 4540 Advanced Seminar in Sports and Entertainment Management (4 Credits)
The purpose of this seminar is to consider current topics in sport and entertainment management. Topics vary by quarter depending on timeliness of topics and interest of students. Potential topics may include public policy questions; ethical issues; current economic impacts and analysis; sport and entertainment management factors and how the various segments (professional, amateur, collegiate, high school, recreational and others) relate; environmental impacts; global issues and other issues that impact the current and future fields of sport and entertainment management.

MGMT 4545 Leadership, Team, and Career Development (2 Credits)
Daniels MBA students are preparing for leadership roles-as entrepreneurs, in corporations, and in not-for-profit organizations. In this course we will look at leadership from a variety of perspectives. Once we have reviewed what the experts have to say about leadership, we will turn our focus to helping you develop your personal theory of leadership. You will answer on important questions: How will I lead? Armed with this knowledge, you will be better equipped to handle leadership challenges as you go forward in life.

MGMT 4555 Interdisciplinary Projects for National Park Service (4 Credits)
A practical application of key business and managerial knowledge, skills, and competencies designed to integrate graduate program elements and provide students with a unique opportunity to work on value-add projects with key managers from the National Park Service. This is an experiential course for integrating and applying multi-disciplined learning outcomes and experiences to real-world challenges, problems, and dilemmas, resulting in solutions for the National Parks Service.

MGMT 4560 Leadership of the Future (4 Credits)
In nearly every aspect of life - science, business, pop culture, environment, technology, global politics - we are inundated with data about how much and how fast the world is changing. How will these major shifts impact what we think of as leadership, and how can one develop to be prepared to lead in a fast-moving, volatile, and complex world? Leadership of the Future is a course that takes a deep look at how we've thought about what "leadership" is in the past from a business perspective, and considers what the future will require of leaders as they seek to effectively lead and make a difference in a complex world. The course is founded upon an interdisciplinary approach, drawing from a variety of disciplines including psychology, administrative science, literature, medicine, and philosophy. The course will center around behavioral analysis and active reflective practice: together we will think deeply about leadership as a behavior within a particular context, and as a practice to cultivate. Students will articulate a set of leadership development goals for themselves and engage experientially in service of self-observation, personal growth, and learning. Cross-listed with MGMT 3560.

MGMT 4620 Organizational Dynamics (4 Credits)
In this course, you will: (1) understand and develop a set of management and leadership skills critical for effectiveness in high performance work environments; (2) develop the ability to analyze organizations and environments from multiple perspectives; (3) explore policies and practices for facilitating organizational change; (4) become a valued and effective member of a work team; and (5) learn how to incorporate effective communication, critical thinking, creative problem solving, and technology, into organizational behaviors and processes.
MGMT 4625 Leading People & Organizations (4 Credits)
This course focuses on the effective management of people, every organization's most critical resource. Employees' knowledge, skills, commitment, creativity, and effort are the basis for sustained competitive advantage. It is people who deal directly with customers, have creative ideas for new products or for process improvements, who devise marketing strategy or take technologies to the next level. In this course, we approach the people side of business from a general management perspective, integrating concepts from organizational behavior, human resource management, strategy, and organizational design. Course topics include motivation, reward systems, engagement; feedback; processes by which work is done and decisions are made, including attention to teams, power dynamics, conflict, and negotiations; the structure of the organization and its systems, including job and organizational design and systems and policies affecting human capital; the organization's culture and history; and the external environment within which the organization operates, including legal, regulatory, demographic, economic and national cultural factors.

MGMT 4630 Strategic Human Resources Management (4 Credits)
This course advances the argument that effective human resource policies will create sustained competitive advantage. To that end, this course will address the effective management of human resources in various policy areas: staffing, diversity, training and development, voice and influence, performance appraisal, and reward systems. Rather than taking a traditional, staff personnel perspective, we will discuss human resource management from the strategic perspective of a general manager. Prerequisite: MGMT 4620.

MGMT 4650 Introduction to Management Consulting (4 Credits)
This course is designed to provide a broad overview of the management consulting profession, including its industry and competitive dynamics, major practice areas, approaches to implementation, management of consulting firms and the future of consulting. In addition, emphasis is given to the practice of consulting through the development of certain high impact skills in evaluation, proposal writing, data gathering and client presentations. The course is relevant to those who: 1) are specifically interested in consulting careers, 2) have job interests that involve staff positions in corporations, 3) want to become line managers who might one day use consultants, 4) wish to develop general consulting skills and familiarity with the consulting industry. The learning process in class will consist of lectures, cases, readings, exercises and guest speakers. This wide variety of learning methods is intended to convey both the necessary knowledge and practical skills necessary for building a sound foundation for becoming a professional consultant. It is essential that everyone comes well-prepared to class, as the learning process depends heavily upon participation.

MGMT 4690 Strategic Management (4 Credits)
This course builds from the premise that managers make decisions that influence the overall success of their organizations. We will concentrate on how top managers create and maximize value for their stakeholders. You will learn about how companies compete against each other in the quest of achieving high performance and market victories. You will learn about how and why some companies are successful while others are not. This course is about strategy. The primary task of strategy is the allocation and commitment of critical resources over relatively long periods of time in pursuit of specific goals and objectives. Strategic decisions take account of the conditions that prevail within the industry environment, both positive and negative, and the resources and capabilities available to managers for meeting environmental challenges. Strategy also requires establishing and managing an internal organizational system that creates and sustains strategic value.

MGMT 4700 Topics in Management (1-4 Credits)

MGMT 4710 Sustaining Family Enterprises (4 Credits)
Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family "banks," family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

MGMT 4740 Global Business I (2 Credits)
Almost all business is impacted by global trends. This course will help students develop a global mindset and understand challenges and opportunities arising from doing business across national boundaries and cultures. Addressing such issues as diverse cultures, laws, languages, currencies and economic contexts, the course will help students make well-informed decisions giving due consideration to the local and global context in which a given business operates. This course must be taken prior to MGMT 4745 and both courses are to be taken as a sequential series.

MGMT 4745 Global Business II (2 Credits)
Almost all business is impacted by global trends. This course will help students develop a global mindset and understand challenges and opportunities arising from doing business across national boundaries and cultures. Addressing such issues as diverse cultures, laws, languages, currencies and economic contexts, the course will help students make well-informed decisions giving due consideration to the local and global context in which a given business operates. This course must be taken after MGMT 4740 and both courses are to be taken as a sequential series.
MGMT 4790 Managing Strategic Alliances (4 Credits)
The purpose of this course is to examine and expand upon the current understanding of the challenges of developing and managing strategic alliances. Reflecting the breadth of the novel features of the structure, the course draws from both strategic management and organizational behavioral disciplines. To order the discussion, we take a process view in addressing why and then how to use a strategic alliance. We initially focus on when to use an alliance. We then turn to the formation of an alliance - examining how to select a partner, which structure to choose and how to negotiate. Following, we discuss post-formation issues of partner relationships, management of the alliance, performance evaluation and alliance termination. We conclude the course with sessions devoted towards managing a portfolio of alliances and network management in general.

MGMT 4980 Graduate Internship in Mgmt (0-10 Credits)
Hours and times arranged by student.

MGMT 4991 Independent Study (1-10 Credits)
Individual research and report. Hours and times arranged by student.

MGMT 4992 Directed Study (1-4 Credits)

MGMT 4995 Independent Research (1-10 Credits)

MGMT 6300 Seminar in Leadership Strategy Research (4 Credits)
The field of strategy is broad and covers a diverse set of ‘macro’ organizational theories and topics. In this course, you will have a solid overview of research in the field of strategy. This course will enable you to develop a conceptual view of the field and its theoretical roots, topics, and branches and begin to apply strategic management theories to address original research questions and to solve problems within your own organizations. This will require you to critique extant knowledge and to identify what is missing and what is needed to advance understanding. Finally, this course will provide a beginning point for your knowledge of strategy theories that can guide future pursuits. That is, it is not possible to cover the immense strategy literature in one semester but this course should provide you with the knowledge needed to explore the field of strategy on your own as you move forward.

MGMT 6301 Ethical Leadership Research Seminar (4 Credits)
The seminar focuses an exploration of the role of ethics from the lens of a leader. In this area, the course examines a range of ethical and social performance issues and challenges that leaders must confront. Our goal is to broaden student understanding of the different theoretical arguments and tensions in this area, with a focus on issues faced by modern day organizations.

Marketing Courses

MKTG 4000 Foundations of Marketing (0 Credits)
This is primarily an online course. The purpose of the course is to ensure that all incoming students have some foundational knowledge of marketing. Most of our incoming students have undergraduate degrees in business and work experience in marketing, and so will already have a working knowledge of marketing vocabulary and may be able to pass the self-check exams in this course without further study. Other students will need to do some reading to pass the assessments. Assessments may be taken as many times as necessary to achieve a score indicating that the student has achieved foundational knowledge of marketing. The course will also integrate a few on-campus professional development tasks to ensure that students get an early start on the next phase of their careers.

MKTG 4100 Marketing Concepts (4 Credits)
Ever wonder what’s behind those Super Bowl ads we love to watch? Or, how Apple decides the price of its newest electronic wonder? Did you notice you can almost always find what you are looking for at the grocery store, whether it’s in season or out? How does that happen? This course provides students with a lens through which they may view the world as a consumer and as a marketer, relating marketing principles and models to consumer and business actions. The course investigates marketing strategy and tactics using contemporary examples from the headlines, active class discussion, and a marketing strategy simulation or client engagement.

MKTG 4220 Customer Experience Management (4 Credits)
In their best-selling book, The Experience Economy, Pine and Gilmore set the stage for what today’s organizations are facing—customers that connect with brands on the basis of the experiences they receive: products and service are no longer a sufficient differentiator. This course takes the student beyond the ‘better product, better service’ approach to the cutting edge concepts of customer experience management (CEM). It provides an understanding of CEM, its best practices, and the tools for its implementation and evaluation. The course considers the challenges of creating and delivering customer experiences in a variety of settings—in-store operations, branded products, and web-based operations. One of the special features of this course is the use of live, case studies from a variety of companies. Among the companies recently represented by guest speakers are Charles Schwab, Comcast, Starbucks, and others.

MKTG 4380 Supply Chain Management (4 Credits)
Today’s economy of globally sourced manufacturing, developing markets, synchronized e-commerce, international trade lanes, and intertwined economies demand supply chains of global reach to bring goods and services from around the world to local stores or even the consumer’s front door. This course addresses the challenges and illustrates the tools required to build, maintain, and expand global supply chains. The course develops the ability to make sound strategic, tactical, and operational supply chain decisions via an on-line simulation tool, and superior supply chain design and performance is taught through in-depth case studies from the world’s top 25 supply chains. Students are able to connect improvements in supply chain design and performance to the financial performance of a firm. Cross listed with MKTG 3380. Prerequisites: MKTG 4360 and MKTG 4370.
MKTG 4400 Social Awareness and Ethics (2 Credits)
Social awareness & ethics uses a fresh integrated approach to applying the basic fundamentals of marketing to complex and evolving scenarios involving social change and insight, cultural trends and topics, and tricky, often emotional, ethical situations. This course also helps students learn skills in a safe environment and leverage their experience and knowledge to investigate business situations and opportunities in a thoughtful and sophisticated manner. This course develops a student’s ability to make sound business planning decisions using real information from the external environment. This course will combine business ethics’ overarching intent to protect employees, the environment, and their customers with marketing ethics’ principles of honesty, fairness, responsibility, and respect. As part of this, students will learn about and apply Daniels Fund Initiative Principles: http://www.danielsfund.org/_Assets/files/Ethics%20Initiative%20Principles.pdf Prerequisites: Pass foundations exam or MKTG 4100.

MKTG 4510 Consumer Behavior (4 Credits)
What makes consumers tick? This course draws on a variety of sources, including concepts and models from psychology, sociology, anthropology, and economics, to offer helpful frameworks for understanding why consumers buy what they buy. These concepts are applied to real-world situations to give students practice at making better product, promotion, pricing, and distribution decisions based on consumer insights.

MKTG 4515 International Consumer Behavior (4 Credits)
The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of consumers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond one’s home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Prerequisites: MKTG 4510.

MKTG 4520 Marketing Metrics (4 Credits)
There’s no escape; even marketing managers need to understand financials. This course is designed to introduce MS Marketing students to the principles of financial decision-making and the use of marketing metrics, including customer lifetime value (CLV) and media mix modeling. Students learn how to compute marketing ROI and how to make marketing decisions that enhance the bottom line. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

MKTG 4530 Marketing Research (4 Credits)
Understanding consumers requires careful observation and thoughtful questions. Marketing research represents a methodology for getting the answers needed to be successful in business. This course introduces students to a broad array of marketing research tools, including focus groups, ethnographic studies, survey research, and experiments. Students will learn how and when to apply these tools, as well as how to interpret the results to make sound marketing decisions. Highly recommended students take statistics prior to taking this course. Prerequisites: MKTG 4100.

MKTG 4540 Product and Service Innovation (4 Credits)
Developing and introducing new products and services are the lifeblood for companies and a primary responsibility of product management. This course is focused on the most current innovations in materials, hardware, CPG, and software. This is a travel course and students will be required to travel to the Consumer Electronics Show in addition to attending class on campus. We'll be using Google Ventures rapid sprint framework to develop/test new product ideas. At least eight hours of graduate level MKTG courses or with instructor permission.

MKTG 4550 Marketing Planning (4 Credits)
It has been said that "planning without action is futile, and action without planning is fatal." The objective of this course is to enable students to utilize a rigorous planning process to develop action-oriented marketing programs. This activity involves an integrated application of concepts and theories characterized by the logical use of facts -- leading to alternatives -- leading to actions. By the end of the course students should be able to develop effective marketing programs, and to understand the strength and limitations of the principal planning tools a marketing manager has at his/her disposal. The skills developed in this class are particularly important because many organizations now use the marketing plan as the basis for developing the business plan. In fact, marketing-developed plans often must precede the subsequent decisions in planning production, finance, and other corporate activities. Each student will apply the planning process, develop an action plan, and identify specific marketing outcomes for an existing or prospective enterprise. The course utilizes current practices, contemporary exemplars, and rigorous communication/presentation platforms. Eight hours of graduate-level marketing credit or with instructor's permission.

MKTG 4560 Pricing Strategy (4 Credits)
This course provides an overview of all aspects of Pricing, a key driver of growth and profitability. As one of the 4 “Ps” of Marketing, attention and interest in Pricing is growing. This is not surprising, given that Price is the one “P” that drives the topline, with a direct impact on revenue growth, customer growth, market share, and profitability. This Pricing survey course examines established and emerging pricing strategies and principles. In addition, students learn some basic analytical tools that can be applied to pricing strategy decisions and explore approaches to optimize the impact of pricing strategies and tactics, including segmentation, addressing the competition, and communicating value. Prerequisites: MKTG 4510, MKTG 4520, and MKTG 4530 or instructor permission.
MKTG 4570 Digital Strategies (4 Credits)
We’re 20 years into the digital marketing revolution and the ecosystem continues to evolve. From the birth of the Internet and email to the recent addition of messaging apps and the Internet of Things: It’s a fantastic time to be a marketer. In this class, we will take what you learned in consumer behavior and extend it in the social/mobile/search realm. We’ll utilize lessons learned from cognitive neuroscience combined with qualitative/quantitative data to create one-to-one marketing experiences for B2B/B2C consumers. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

MKTG 4580 Insights to Innovation (4 Credits)
Innovation is a driving force of change for organizations and markets. It is becoming increasingly clear that the development of novel and compelling offerings requires the contributions of multiple stakeholders, including customers. Companies such as Apple, Facebook and Google, focus on engaging an ecosystem of partners to develop new value propositions to continually improve customer experiences. This course explores the collaborative processes that drive value creation and innovation. Students will learn to strategically apply design thinking and community-building approaches to innovate customer experiences in ever-changing markets. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

MKTG 4605 Current Marketing Perspectives (4 Credits)
Like most disciplines, marketing is evolving constantly. One can learn about marketing and its classic terms and notions by reading a textbook. But to familiarize oneself with the current pressing issues, emerging ideas, and innovative applications, one must consult both industry practitioners and academic gurus. In this course, students and faculty will meet and interview several top business executives in the Denver area as well as visit their facilities. Such interaction with the managers and faculty will help the students understand the interface of theory and application. In addition, by identifying the current issues in marketing and learning how to develop strategies to handle them, students add to their preparation for the job market.

MKTG 4630 International Marketing (4 Credits)
The shrinking planet and constant pressure to maintain a firm’s growth mean that global marketing continues to grow in importance. This course introduces the various economic, social, cultural, political, and legal dimensions of international marketing from conceptual, methodological and application perspectives, and emphasizes how these factors should affect, and can be integrated into, marketing programs and strategies. This course provides students with methods for analyzing world markets and their respective consumers and environments, and to equip students with the skills in developing and implementing marketing strategies and decision making in international contexts. It includes a combination of lectures and discussions, case analyses of real global marketing issues, videos and readings from the business press, country snapshots, and a group research project in which student teams launch a discrete product in a foreign country of their choice. Prerequisites: MKTG 4100.

MKTG 4635 International Consumer Behavior (4 Credits)
The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond one’s home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Cross-listed with MKTG 3635. Prerequisite: MKTG 4100 or instructor permission.

MKTG 4660 Sports & Entertainment Marketing (4 Credits)
There are few products for which consumers are more passionate than their sports and entertainment expenditures, so this topic is always an exciting one in marketing. This course provides an in-depth look at the processes and practices of marketing sports, concerts, film and other entertainment. The course emphasizes the practical use of advertising, promotion and public relations in creating athlete or entertainer images, providing a quality fan experience, promoting sponsorships or driving event ticket sales. Participation in a current sports marketing project provides context for graduate students to apply theory to practice. Cross listed with MKTG 3660. Prerequisites: MKTG 4100.

MKTG 4670 Competitive Strategies (4 Credits)
This course will examine what is happening in the world of corporate marketing today. Which companies’ marketing strategies are working and why? Which are not working and why? Who is winning in the competitive marketplace and who is losing? How do you know? What is the connection between a company’s marketing strategy and its financial strategy? Prerequisites: MKTG 4100.

MKTG 4675 Entrepreneurial Marketing (4 Credits)
The course objective is to give students the necessary tools and concepts to think strategically and tactically about value creation through new product management.

MKTG 4705 Topics in Marketing (1-4 Credits)
TOPIC CHANGES EACH TERM.
MKTG 4800 Global Integrated Marketing Communication (4 Credits)
The Global IMC class is for graduates who have worked in marketing communications or have taken marketing communications classes and want to gain an understanding of how use this knowledge in the global marketplace. It helps students to understand similarities and differences between markets and how to most effectively approach them. What are the IMC tools that work best and how do you use them with cultural sensitivity? The class features a number of guest speakers and at least one off-site agency visit. The finale to this high-intensity class will have competing teams creating a global campaign. Prerequisites: MKTG 4810 or instructor permission.

MKTG 4805 Foundations of Digital Marketing (4 Credits)
Knowing how to use digital marketing tools as part of an integrated marketing strategy is critical in today's marketplace. This course provides the knowledge and skills to plan and implement a digital marketing strategy using three powerful digital marketing elements: (1) UX/UI - User experience design is one of the most difficult aspects for businesses to define and yet it's essential to map out when creating a holistic strategy. User Interface design is one part of the user experience and we will work together to show you best-in-class examples. (2) Facebook Advertising – Facebook is quickly becoming the hyper-targeted advertising platform for businesses of any size. You will walk through Facebook's Blueprint Training to help you understand what types of digital advertising are possible. (3) Email Marketing – Email has long been a staple in digital marketing. We will show you the ins and outs of this digital medium and teach you how to take control of this evolving channel. Cross-listed with MKTG 3480.

MKTG 4810 Integrated Marketing Communication (4 Credits)
IMC is a critical component of marketing strategy and is vital to business success in today's economy. Organizational, technological, and social trends of the past few years have considerably impacted marketing communications by necessitating new communication strategies and adding new delivery tools (e.g., digital and social). Thus, it is important to integrate all marketing communication activities into one master plan. This course is based upon the notion that marketing communications include much more than advertising. The course provides students with a foundation in the development and execution of communications strategies for any organization (large, small, public, or private). Primary emphasis is placed on consumer insight, branding, market segmentation and positioning, message strategy, sales promotion and the execution of marketing communications through appropriate media technologies. Students will develop an understanding of marketing communications practice through a real-world project, readings, lectures, case analyses and discussions. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

MKTG 4815 Social Media Marketing (4 Credits)
Social media marketing is an evolving field with consumers driving the changes marketers are seeing. Based on your business model, social media may be more than just distribution and consumers will be a part of your long-term business strategy beyond revenue. We'll illuminate the increasing importance of social media as it relates to consumer behavior, the purchase cycle and the rise of messaging apps as it relates to business success. We will also develop a strategic model for a diverse range of businesses (B2B, B2C, Product, Service, Online, Online with Brick and Mortar) that will empower you as a marketer to determine your best strategy. Cross-listed with MKTG 3490. Prerequisites: MKTG 4100.

MKTG 4820 Brand Management (4 Credits)
“How do leading organizations create compelling brands that inspire trust, build a sense of community, and fuel loyalty? As consumers find their digital voice, how are brands co-created by firms and users alike? And what can brand managers to do insure their brand equity is sustainable throughout the product lifecycle? In this project-based [WINTER] or interview-based [SUMMER] course, you'll learn the underlying principles and theories from brand authorities, then apply them to real-world client challenges. Join us as we create goal-driven brand strategies, harness tactics to build and amplify the brand, foster brand experiences, conversations and relationships, and then learn ways to measure the resulting impact on brand value. Prerequisite: MKTG 4100. Concurrent enrollment allowed.

MKTG 4825 Mobile Marketing (4 Credits)
Smartphones are the device for today's consumer. Mobile usage easily eclipses all other digital venues and you will be learning how to harness this ever-evolving field. Knowledge of mobile search, mobile applications, mobile advertising and location-based services are essential for today's business leaders. This course will enable students to build creative mobile marketing campaigns that complement digital and traditional marketing strategies. This fast-paced course is a must for people interested in marketing. Cross-listed with MKTG 3475.

MKTG 4835 Search Engine Marketing (4 Credits)
The digital marketing landscape has thousands of tools that marketers can utilize to increase revenue, execute on strategies and develop deep brands. This course will review the most essential of those tools: Google Analytics and Google AdWords. Our goal is to enable students to attain individual certification in Google Analytics and begin the process of getting Google AdWords Fundamentals certified. You will be working with real-world clients, helping them increase revenue! Cross listed with MKTG 3485.

MKTG 4845 Tech in Marketing: Design Tools and Digital Foundations (4 Credits)
“Software is eating the world.” That was the quote from Marc Andreesen way back in 2011. His point was now that software had disrupted the tech industry, it was now evolving into every other industry. Agriculture. Mass transit. Construction. Everything. This prediction has become true with companies like Google and Uber. We’re at a point where coding/technology are now a matter of literacy. We are going to work together as a class to make you more literate. We are going to learn how to utilize digital design tools such as Adobe Photoshop and Illustrator to create brand imagery. We’ll then move on to learn HTML/CSS and APIs: the building blocks of the Internet. We’ll also spend some time prototyping software such as Axure and tap into memes and Gifs. This is a tactical, hands-on class. Cross-listed with MKTG 3495.
MKTG 4850 Integrated Marketing Communication Campaign (4 Credits)
This course builds on all of the courses in the IMC program/concentration as well as other courses offered through the Department of Marketing. In this sense, it is a capstone course, integrating the knowledge and experience acquired through these other courses. Integration is the primary objective of this course—that is, to develop skills in integrating content from other courses into a complete IMC campaign for a brand of the student’s choice. IMC Campaign is a major project course with a single significant outcome, the IMC Campaign. The project is conducted in a team environment with the guidance of the instructor. Prerequisites: MKTG 4810 or instructor permission.

MKTG 4865 SXSWi: Marketing, Technology & Innovation (4 Credits)
This class is focused on documenting/sharing lessons learned from the SXSWi conference in Austin Texas, the premier innovation conference in the US. The course is divided into two distinct halves. First, we will research the SXSWi sessions around subject matter and speaker backgound as well as planning the final deliverable that summarizes the entire SXSWi event. The second half includes participation in the conference to learn the most up-to-date digital marketing techniques in social, mobile, data and usability.

MKTG 4900 Advanced Marketing Strategy (4 Credits)
Making sound strategic marketing decisions in the real world is complex and challenging, even for seasoned executives. Determining sound strategies is critical. Implementing them effectively and profitably is essential. How can managers increase their chances for making better strategic marketing decisions leading to more successful outcomes more often? This course applies concepts, constructs and learning acquired in prior marketing courses to complex strategic decisions. Live cases are at the heart of the course, challenging teams and individuals to make specific marketing decisions in the context of larger strategic marketing and company contexts, including accounting for top- and bottom-line impact. Prerequisites: At least eight hours of graduate level MKTG courses or with instructor permission.

MKTG 4980 Marketing Internship (0-10 Credits)
We learn by doing. That’s what a marketing internship at Daniels is all about. Recent studies show that one to three internships on a resume go a long way towards landing that first job in marketing. At Daniels, we network with some of the top marketers in Denver and across the US. Our marketing students have worked at National CineMedia, Integer Advertising, Bank of America, Enterprise, Northwestern Mutual Insurance, eBags, Crispin-Porter + Bogusky, Einstein’s, Johns Manville, Ski Magazine, the Pepsi Center, 15 Million Elephants, Flextronics, Merrill Lynch, Dish Network, AEG Live, Altitude Sports & Entertainment, and the list goes on. Not only will students earn school credit, they may very well land a paid internship, and eventually a full-time job. Course requirements include an internship report that covers your experience on the job, a study of the industry, and what they learned from their company. It’s a win-win course where you put into practice the marketing concepts you’ve learned at DU, and discover new marketing tactics from your company co-workers. “Thanks to the University of Denver for fostering this partnership and providing such great students” (NCM Media Networks).

MKTG 4991 Independent Study (1-10 Credits)
Hours and times arranged by student.

MKTG 4998 Marketing Leadership and Professionalism (1 Credit)
This course involves several executive coaching experiences. Beyond the first year, students are expected to remain engaged in several experiences in and around campus to continue to improve their leadership skills. The course is pass/fail for all students. In the weekend leadership experience, you explore yourself as an ethical leader in the world of marketing in the 21st Century. How can you add value to and derive value from the business world that surrounds you? You will evaluate the styles of leadership that will best empower and inspire you to find success in your work. As an introduction to and exploration of your personal leadership style, this course addresses: 1. Your leadership style and how it relates to current and future trends for business, government, and society. 2. How to improve your leadership in three critical areas of marketing—creating economic, social and environmental value. Understanding the power that you have to make an impact as a leader or a follower working in teams, recognizing that most success and progress in business will take place by working with others. Your personal development as a leader and follower is thus of the utmost importance. In short, we hope to fire your imagination as to what is possible, as well as ground your dreams in the realities and complexities of leadership in the 21st Century.

MKTG 4999 Marketing Assessment (0 Credits)
Some experiences are essential to a student’s development, but don’t fit well within the confines of a traditional course. This is a face-to-face, zero-credit required course, held throughout your program. The course involves a series of executive coaching experiences with experts within and outside of Daniels, networking with fellow students and professionals in the Denver area, and assessment of your development through the program.

MKTG 6300 Marketing Research Seminar (4 Credits)
This doctoral seminar focuses on research in marketing strategy which is concerned with understanding the choices and planning of resource deployments to achieve marketing objectives in a target market. This course will expose students cutting-edge research in marketing models in order to help them to define and advance their research interests. This course will also offer in-depth discussions on some important topics in marketing and tools and methodologies required for conducting research in those areas.

Real Estate Courses
REAL 4000 Business of the Built Environment (4 Credits)
The emphasis of this course is on the importance of real estate and the built environment and its impacts and influences on how we live, work, and play. The course employs a full life cycle sustainable model that links the various phases, functions, and professions of real estate, project delivery, and asset/facility management to create holistic, value generating solutions for society. Professional practices/skillsets associated with the many career options that engage the built environment are explored.
REAL 4002 The Business of Real Estate (2 Credits)
This is an introduction to home ownership, real estate industry and its markets; legal aspects of home ownership from consumer's point of view, including property rights, title, concepts, deeds, and purchase contracts. Listing contracts, law of agency, types of mortgages, basics of home loan finance, appraisal, investment and tax benefits are also covered in this class. Partially satisfies Colorado Real Estate sales licensing requirements.

REAL 4007 Real Estate Financial Analysis (4 Credits)
Alternative analysis formats that can be applied to a wide array of real estate analysis issues; simulates working/decision-making environment; structured overview of analysis tools focused on specific facets of multidimensional real estate decision-making environment; applications in investment analysis, feasibility analysis, valuation, market analysis, and report writing and presentation. Prerequisite: REAL 4407.

REAL 4010 Real Estate Capital Markets (4 Credits)
This course exposes students to the commercial real estate capital markets; including real estate investment trusts (REITs) and commercial mortgage-backed securities (CMBS), plus institutional investors. The complexities of capital market products are discussed, students receive a greater understanding of the alternatives that are available. The class includes lectures, guest speakers, readings, class discussions, a major REIT analysis project, and case studies. Cross listed with REAL 3010. Prerequisite: REAL 4007.

REAL 4110 Advanced Issues in Real Estate & Construction Management (4 Credits)
This course concentrates on five advanced real estate and construction management topics; the design build environment, negotiation skills in real estate and construction management, real estate capital markets, the entitlement process – urban planning, zoning, PUDs and underutilized tax advantages in real estate. Cross listed with REAL 3110. Prerequisite: REAL 4407.

REAL 4140 Global Perspectives in Real Estate (4 Credits)
This course focuses on inbound U.S. and outbound U.S. real estate transactions and the cultural issues that impact these transactions. This can also be taken as a Burns Global Delegation travel course. Cross listed with REAL 3140, XRCM 4140.

REAL 4210 Planning, Entitlements, and Public Finance (4 Credits)
Real estate development, place making, and community building require the combined efforts of the public, for-profit, and non-profit sectors. Participants in the real estate development process need to understand and appreciate the sometimes competing and sometimes collaborative interests of governments, agencies, and the private developer. This course is designed to familiarize students with the overall context of urban planning and land use. Students discover the variety of participants in the development process and also become familiar with the project entitlement process, zoning, and land use regulation. Students also examine public/private financing structures such as public-private-partnerships (P3s) and become familiar with detailed calculations relating to Tax Incremental Financing (TIF) and Metropolitan Districts.

REAL 4337 RE Securities/Syn/Entrep (4 Credits)
Introduction to real estate securities; emphasis on private offerings; determining whether a contemplated transaction involves a security, and what happens if it does; exemptions from registration (Reg D); registration requirements; investor suitability, how to syndicate, acquisition of property, marketing or the property, tax structure and formation of syndication, compensation to syndicators, real estate tax considerations. Cross listed with REAL 3337, XRCM 4337.

REAL 4347 Mgmt of Income Properties (4 Credits)
Explore the complexities of managing apartments, condominiums, office buildings, industrial property and shopping centers. This course covers rental markets, development of rental schedules, leasing techniques and negotiations, repairs and maintenance, tenant relations, merchandising, selection and training of personnel, accounting, and owner relations. Cross listed with REAL 3347.

REAL 4357 Corporate Real Estate & Management (4 Credits)
This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. Over the ten week period we will address the diverse but critical components that together account for Facility Management. These shall include: Building Life Cycles and sustainability, facility management as part of the enterprise model within a corporate structure, regulatory agencies, professional relationships and the impact of the build environment on the bottom line, contracting and budget management, move-add-change (MAC) / operations, and general administrative services.

REAL 4369 Real Estate Taxation (4 Credits)
Tax factors affecting investments and operations in real estate; special attention is given to legal forms of ownership, depreciation, tax basis, tax impacts of exchanges, syndications, real estate securities, and other federal tax laws affecting real estate. Cross listed with REAL 3369.

REAL 4400 Real Estate Principles and Practices (4 Credits)
Principles of real estate, real estate industry and its markets; legal aspects of home ownership from consumer's point of view, including property rights, title concepts, deeds, purchase contracts, listing contracts, law of agency, environmental issues and disclosures, types of mortgages, basics of home loan financing, appraisal investment and tax benefits. Partially satisfies Colorado real estate broker licensing requirements. Cross listed with REAL 1777.

REAL 4407 Income Property Finance (4 Credits)
This course explores conventional and alternative financing, mortgage banking, law and markets, loan underwriting analysis and the impact of monetary and fiscal policies on the real estate and mortgage markets, with emphasis on decision making from the equity investors point of view. Specific topics include an overview and history of real estate finance, the taxation and legal aspects of real estate finance, compounding and discounting, functions of interest and real estate capital markets and securities. Specific areas of focus are residential property finance, income property finance, and construction and development financing. Cross listed with REAL 3307.
REAL 4417 Income Property Valuation and Appraisal (4 Credits)
Residential/Commercial appraising, including market cost and income approaches to value, gross rent multiplier analysis, neighborhood and site analysis, valuation of income properties including market cost and income approaches to value, capitalization theory and techniques, mortgage-equity analysis, and investment value concepts. Prerequisite: REAL 4407.

REAL 4467 Property Development and Feasibility (4 Credits)
Commercial real estate development analysis and feasibility includes economic base analysis, tenant demand analysis, development and construction cost analysis, lease-up analysis, financial feasibility, leasing and property management practices. Five major property types (office, industrial, retail, apartment and hotel) are covered. Prerequisite: REAL 4007.

REAL 4477 Income Property Investment (4 Credits)
Comprehensive analytical framework for real estate investment decision-making, equity investment decisions via discounted cash flow, and risk analysis models and strategic planning concepts, structuring parameters to maximize rates of return while controlling downside risks; emphasis on theory, concept building, and practical application to various types of investment properties. Cross listed with REAL 3377. Prerequisite: REAL 4007.

REAL 4500 Argus Financial Analysis (4 Credits)
This course concentrates on practical applications of the Argus (TM) Real Estate Financial Software through interactive examples and case studies. Participants will be exposed to the software's capabilities, fundamentals, and unique nuances. Cross listed with REAL 4500, XRCM 4702. Prerequisite: REAL 4007.

REAL 4701 Topics in Real Estate (1-5 Credits)

REAL 4800 NAIOP Challenge (2-4 Credits)
A unique non-traditional course, where the students will work on a complex real estate problem culminating in an internal competition and external competition which includes a written report and an oral presentation. Cross listed with CMGT 3800, CMGT 4800, REAL 3800.

REAL 4890 Internship (0-10 Credits)

REAL 4980 Adv Valuation/Report Writing (1-10 Credits)
Advanced cutting-edge techniques not yet institutionalized nor commonly practiced in the field. Includes writing skills workshops appropriate to specialized nature of appraisal reports, and composition of a complex field problem report to prepare student for writing "demonstration" report required for MAI professional designation. Prerequisite: REAL 4417.

REAL 4991 Independent Study (1-10 Credits)

REAL 4992 Directed Study (1-10 Credits)

REAL 4995 Independent Research (1-10 Credits)

Statistics Courses
STAT 3920 Strategic Management of Operations (4 Credits)
The operations function is the unit of the organization that produces the products and/or delivers the service for which the company earns revenue. It is the largest unit of the organization with which all other units interact. Therefore, efficient management of this function is a critical success factor for any company. This course focuses on an organization's management (planning, organizing, staffing, directing, and controlling) when converting inputs into products and services. Companies today must remain competitive in the global marketplace, and careful consideration of various options regarding cost containment and use of technology are required. This course will explore how operations managers meet these challenges in the manufacturing and services firms in response to changes in economic conditions. Students will be exposed to a number of quantitative tools as well as becoming familiar with new systems and methods in the operations management field. When appropriate, optimization software such as Microsoft Solver will be utilized to conduct analysis. Prerequisite: STAT 3900.

STAT 4040 Basic Math-Graduate Students (2 Credits)

STAT 4045 Basic Math-Evening MBA Stdnt (1 Credit)

STAT 4050 Basic Statistics-Grad Students (2 Credits)

STAT 4100 Quantitative Methods I (4 Credits)
An introduction to the methods of quantitative analysis commonly used in business, with an emphasis on finance applications. Topics include descriptive statistics, probability, probability distributions, fundamentals of statistical inference, correlation, and simple and multiple regression analysis.

STAT 4200 Quantitative Methods II (4 Credits)

STAT 4300 Production & Operation Mgmt (3 Credits)

STAT 4350 Statistical Computing (4 Credits)
Introduction to and training in the use of modern statistical software packages. Exposure to several of SAS, STATISTICA, S-PLUS, and SPSS with focus on one to best fit student needs. Data acquisition, management, graphs, analyses, reports, customizing and programming. Cross listed with STAT 3350.

STAT 4400 Risky Business (4 Credits)
An interterm travel course to Las Vegas that deals with the theory, practice, and business of gambling.
STAT 4500 Prob Thry Math Gamb (4 Credits)
This course covers the theory of probability and the formal study of mathematics underlying gambling and games of chance. Topics include probability concepts, probability rules, expectation, permutations and combinations, the law of large numbers, the law of "averages," history of gambling, house advantage, fallacies and betting systems, volatility and operations, game odds and price setting, games of pure chance, games with a skill component. Prerequisite: a previous course in statistics or permission of instructor. Cross listed with STAT 3500.

STAT 4510 Applied Decision Theory (4 Credits)
Application of classical and Bayesian decision theory and game theory to practical problems. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

STAT 4610 Business Statistics (4 Credits)
This course introduces students to basic analytical tools in statistics and operations management, and provides theoretical concepts and skills that are building blocks for future courses. The approach is to present students with a "corporate" view of how statistical tools are used to analyze data and facilitate business decision-making. Students will familiarize themselves with all of the statistical techniques and models presented in the course and will demonstrate knowledge in applying the appropriate techniques and models to various data sets and interpreting the results of the analysis. The Microsoft Excel Data Analysis and Solver Toolkits will be used to conduct statistical analyses, allowing students to become more proficient overall in using Microsoft Excel and to place their emphasis on applications to core business disciplines, statistical reasoning, and proper interpretation of results. A rich variety of such problems and settings will be discussed in class.

STAT 4640 Regrns/Correlation Analysis (4 Credits)
Simple linear regression analysis, methods of estimation, multivariate multiple regression and correlation, tests of reliability and significance, simultaneous equations model and applications. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

STAT 4650 Applied Multivariate Analysis (4 Credits)
The introduction and application of multivariate analytical techniques and model building for problem solving in business and other settings. Cross listed with STAT 3650. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

STAT 4680 Sampling Theory & Application (4 Credits)
Simple and stratified random sampling; multistage, cluster, and sequential sampling; optimum allocation and economic efficiency; ratio estimation methods; design of sample studies of various human and physical populations; financial auditing by probability sampling. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

STAT 4687 Advanced Statistics (4 Credits)

STAT 4700 Intro Computer Simulation (4 Credits)
Deterministic and probabilistic model structures, planning models, heuristics and artificial intelligence, Monte Carlo methods, simulation programming languages, model design, experimentation, and verification. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

STAT 4704 Topics in Statistics (1-5 Credits)
Various topics including travel courses.

STAT 4709 Computer Simulation Methods for Business (4 Credits)
Large-scale simulation in business and economics, deterministic and probabilistic model structures, corporate planning models, heuristics and artificial intelligence; Monte Carlo methods, model design, experimentation and verification, tactical problems in total systems simulation. Cross listed with STAT 3709.

STAT 4710 Statistical Quality Control (4 Credits)
Applies the basic concepts of statistics to quality improvement in the business environment. Topics include a summary of Total Quality Management (TQM) and where Statistical Quality Control fits in, the tools of Statistical Process Control, Deming's Continuous Improvement Cycle, as well as the evaluation of Process Capability and Sampling. Cross listed with STAT 3710. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

STAT 4780 Dsgn & Analysis Exp & Survey (4 Credits)

STAT 4783 Forecasting-Financial Envirn (4 Credits)
Cross listed with FIN 3610, STAT 3620.

STAT 4793 Sem: Statistical Methods (1-5 Credits)

STAT 4794 Sem: Operations Research (1-5 Credits)

STAT 4795 Grad Research Sem-Statistics (1-5 Credits)

STAT 4800 Dsgn & Analysis Exp & Survey (4 Credits)
Designing experiments, analysis of results of experiments, nonparametric and parametric tests, randomization, factorial and nonfactorial designs, Latin squares, survey methodology, survey techniques for field investigations. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

STAT 4810 Nonparametric Statistics (4 Credits)
Statistical procedures applicable in many situations where standard normal theory methods are not. Especially useful when data are of categorical or rank type or when sampled population is excessively skewed. Emphasis will be on applications, making use of the laws of probability. Cross listed with STAT 3110. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.
STAT 4830 Stats-Econ & Bus Forecasting (4 Credits)
Methods to explain, discover, and predict business and economic forces, bases for evaluating such methods. Prerequisite: STAT 4100 or equivalent. Cross-listed with FIN 4620.

STAT 4840 Decision Sciences (4 Credits)
Decision-making techniques, processes, and support systems; basic decision models dealing with certainty, uncertainty, and static and dynamic time frames; emphasis on viewing all decision problems from perspective of a generalized decision-making structure; introduction to computerized decision support systems. Prerequisites: MBA 4111, MBA 4112, or permission of instructor.

STAT 4850 Operations Research I (4 Credits)
Linear programming, including transportation, warehousing, assignment models, and sensitivity analysis, integer programming and game theory. Permission of instructor required.

STAT 4860 Operations Research II (4 Credits)
Non-linear models and optimization, Kuhn Tucker conditions, quadratic and dynamic programming, inventory and queuing models, simulation. Permission of instructor required.

STAT 4870 Advanced Statistics (4 Credits)
Discrete and continuous probability distributions, sampling distributions, estimation methods, moment generating functions, analysis of variance, test of reliability, and significance by parametric and non-parametric methods. Prerequisites: MBA 4111, MBA 4112, or permission of instructor.

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Real Estate and Construction Management

Office: Daniels College of Business, Room 380
Mail Code: Daniels College of Business, Room 380, 2101 S. University Blvd. Denver CO 80208
Phone: 303-871-3432
Web Site: https://daniels.du.edu/burns-school/

Master of Science in Real Estate and the Built Environment

The Franklin L. Burns School of Real Estate and Construction Management at the Daniels College of Business allows you to combine the core competencies across the full spectrum of the built environment. Students will have a sound understanding of the Development and Delivery sides of real estate, property development and integrated project delivery. Our core curriculum includes courses in Real Estate Feasibility, Real Estate Finance, Investment and Appraisal in addition to courses in Project Feasibility, Construction Estimating, Procurement, Project Delivery, Scheduling, and Contract Administration. This holistic, integrated approach adds value in a way that a single discipline perspective cannot, and establishes a firm basis upon which to build a selected area of expertise. It can be completed in one year full time or 18 months part time.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

Master of Science in Real Estate and the Built Environment, Executive (Online)

This program mirrors the on campus Master of Science in Real Estate and the Built Environment degree. This Executive program is a flexible, online degree program designed for working professionals with at least eight years of relevant work experience who want to progress in their corporate or entrepreneurial careers in real estate, property development or integrated project delivery. One intensive three-day course in residence may be required in addition to your online studies. The online classes are offered in a synchronous manner one evening per week for a total of 10 weeks. This program can be completed in as little as 18 months or up to five years.
Master of Science in Real Estate and the Built Environment

Degree and GPA Requirements

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

Standardized Test Scores/Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.
- The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number for the Real Estate & the Built Environment program is MZR-GT-58. The GRE code number is 4842. The admissions committee.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
- Minimum TOEFL Score (Paper-based test): 575
- Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
- Minimum CAE Score: 185 (No less than a 170 on any section)

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

Executive Master of Science in Real Estate and the Built Environment

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

Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
- Minimum TOEFL Score (Paper-based test): 575
- Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
- Minimum CAE Score: 185 (No less than a 170 on any section)

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

Certificate in Real Estate and The Built Environment

Degree and GPA Requirements

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

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

**Other Requirements**

• Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
• Minimum TOEFL Score (Paper-based test): 575
• Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
• Minimum CAE Score: 185 (No less than a 170 on any section)

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

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

**Degree Requirements**

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<thead>
<tr>
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<th>Title</th>
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<td></td>
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<td>REAL 4000</td>
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<td>REAL 4407</td>
<td>Income Property Finance *</td>
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<td>Mgmt of Income Properties</td>
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<td>Real Estate Financial Analysis *</td>
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<td>Real Estate Capital Markets</td>
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<td>CMGT 4155</td>
<td>Sustainable Development/LEED</td>
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<td>CMGT 4177</td>
<td>Environmental Systems and MEP Coordination</td>
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<td>CMGT 4250</td>
<td>Construction Job Site Management</td>
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### Master of Science in Real Estate and the Built Environment, Executive

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<td>XRCM 4007</td>
<td>Real Estate Financial Analysis *</td>
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<td>XRCM 4010</td>
<td>Real Estate Capital Markets</td>
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<tr>
<td>XRCM 4140</td>
<td>Global Perspectives in Real Estate</td>
<td>4</td>
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<tr>
<td>XRCM 4337</td>
<td>RE Securities/Syn/Entrep</td>
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<tr>
<td>XRCM 4369</td>
<td>Real Estate Taxation</td>
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<tr>
<td>XRCM 4777</td>
<td>Real Estate Principles and Practices (*)</td>
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<tr>
<td>XRCM 4417</td>
<td>Income Property Valuation and Appraisal *</td>
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<tr>
<td>XRCM 4477</td>
<td>Income Property Investment *</td>
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<td>XRCM 4702</td>
<td>Argus Financial Analysis</td>
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<td>XRCM 4980</td>
<td>Adv Valuation/Report Writing *</td>
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<td><strong>Construction Management Electives:</strong></td>
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<tr>
<td>XRCM 4120</td>
<td>Construction Planning and Scheduling</td>
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<tr>
<td>XRCM 4155</td>
<td>Sustainable Development/LEED</td>
<td>4</td>
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<tr>
<td>XRCM 4177</td>
<td>Environmental Systems and MEP Coordination</td>
<td>4</td>
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<tr>
<td>XRCM 4250</td>
<td>Construction Job Site Management</td>
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</tr>
<tr>
<td>XRCM 4320</td>
<td>Architectural Planning and Design Management</td>
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</tbody>
</table>

* Required coursework for the MAI professional designation. Students must complete all 8 of the courses indicated to satisfy the MAI educational requirement. Most courses must be completed here at the Burns School and cannot be completed from another entity; questions please contact Dr. Mark Levine.

** Undergraduate degree in Construction Management, Architecture, Engineering or approved major required for this track.
### Construction Management Courses

**CMGT 4110 Preconstruction Integration and Planning (4 Credits)**
This course examines the role of preconstruction services, team integration, and joint design planning in various Integrated Project Delivery (IPD) approaches. Various tools and techniques associated with preconstruction services and design planning from the proposal stage through the design stages of a project are considered.

**CMGT 4120 Construction Planning and Scheduling (4 Credits)**
Understanding and applying scheduling and control to construction projects is essential to successful construction management. Project scheduling emphasizes network-based schedules, such as critical path management (CPM), network calculations, critical paths, resource scheduling, probabilistic scheduling and computer applications. Project control focuses on goals, flow of information, time and cost control, and change management. Prerequisite: CMGT 4420.

**CMGT 4155 Sustainable Development/LEED (4 Credits)**
The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis is placed on how LEED project certification influences the overall construction project. Topics include LEED certification techniques for sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design. The following topics are covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student studies and analyzes how management and LEED techniques are applied to current construction projects.

**CMGT 4170 Construction Accounting and Financial Management (4 Credits)**
Construction financing studied from three perspectives: 1) capital requirements for the construction company, 2) cash flow requirements for project administration, and 3) asset acquisition requirements. Cross listed with CMGT 3170.

**CMGT 4177 Environmental Systems and MEP Coordination (4 Credits)**
A study of electrical and mechanical systems used in the construction of buildings. Course content includes system design, component selection and utilization for energy conservation, cost estimating or systems, coordination and management of installation. Specific systems included are electrical, air conditioning, heating, ventilation and plumbing, fire protection, life safety, communication, power systems and lighting. The course also considers coordination of MEP systems and explores emerging technology and environmental issues related to mechanical and electrical systems in buildings. Cross listed with CMGT 3177 and XRCM 4177.

**CMGT 4200 Lean Construction Project Management (4 Credits)**
This advanced course focuses on cutting edge lean tools and other productive strategies for the management of people and processes in the construction industry. The tools and strategies presented draw on the very successful Toyota Production System adapted to the construction industry. Lean construction methodologies such as the Last Planner System, the Lean Project Delivery System, and Integrated Project Delivery are discussed. Topics also include sustainability and the emerging interest in “green construction,” as well as the use of Building Information Modeling to enhance the development and management of integrated projects. This course also looks at the human element in relation to motivation, safety, and environmental stresses. A number of case studies are presented to highlight best practices in Lean Construction Project Management. Prerequisite: CMGT 4480.

**CMGT 4230 Design Management and Schedule Control (4 Credits)**
This course examines the various strategies and techniques associated with managing the design delivery process to align with the construction budget and schedule needs in an integrated fashion. Design planning, scheduling, and resource allocation are considered along with design value determination and management of the design-construct interfaces.
CMGT 4250 Construction Job Site Management (4 Credits)
This course addresses how a successful construction project is managed and administered from design through construction to closeout. Emphasis will focus on how to unite the key stakeholders (contractors, architects, engineers, etc.) to provide them with a workable system for operating as an effective project team. The latest technology, laws and regulations associated with contract administration will be presented. Topics pertinent to each stage of a project are introduced and discussed as they occur throughout the life of the project. Numerous real-world examples will be utilized throughout the course. Various electronic project administration tools and techniques will be demonstrated including Building Information Modeling.

CMGT 4310 Cost Modeling and Trend Management (4 Credits)
This course covers various approaches to construction cost estimating at the conceptual stages of planning and design through detailed construction. Students learn parametric estimating techniques and how they are applied to construct and predict reliable budgets at the earliest stages of design. Students build cost models and refine those models with greater detail as design develops through a project. Building information modeling is introduced and used to create massing models to demonstrate design impacts on project costs. Cost trending techniques are presented to manage, monitor and document project performance relative to cost.

CMGT 4320 Architectural Planning and Design Management (4 Credits)
This course introduces students to the significant value that architecture brings to real estate and the built environment and the various services and professions associated with it. Students will be introduced to principles, protocols and the planning process related to the design function and the link between the architect’s vision and the finished physical structure. Students will be introduced to design, thinking, theory and application. Student will learn to read and interpret the various graphical and written construction documents as well as know how they are developed and what information they contain. Architectural, structural, mechanical, electrical, plumbing and civil drawings and specifications are covered. The business model for design services will be explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction.

CMGT 4401 Residential Practicum I (4 Credits)
A three course sequence designed to emphasize the practical application of the theories and concepts of residential development. The courses provide a capstone experience for seniors. Students are expected to apply their knowledge of general business, real estate and construction management practices by forming a student business entity, acquiring land, building and selling a residential property. Students will apply accounting, finance, marketing, real estate and construction management techniques in the development of a single family residence. Cross listed with CMGT 3401.

CMGT 4410 Construction Building Systems (4 Credits)
A survey of residential and commercial construction materials, means, and methods associated with the various structural and architectural systems used to design and construct buildings. Project plans and specifications are incorporated to teach the basic sequencing and overall construction process. The influence of sustainability in construction is introduced. This class will also have an off campus, experiential learning lab associated with it.

CMGT 4420 Construction Estimating (4 Credits)
This course is designed to provide the student with the theory, principles and techniques of quantity analysis (take-off), labor determinations, overhead and profit analysis. It offers insight into the construction estimating process. The role of the estimator, types of estimating, CSI divisions, bid/contract documents, change order pricing, design/build projects and estimation compilation will be introduced. Discussions regarding the cost/benefit of sustainable materials and typical construction materials will enhance the requisite knowledge of construction estimating. Cross listed with CMGT 3100, XRCM 4420. Prerequisite: CMGT 4320 and CMGT 4410.

CMGT 4438 Legal Issues & Risk Management (4 Credits)
General contract and real estate law, including property rights, title concepts, deeds, purchase contracts, law of agency, environmental issues and disclosures, basics finance concerns, tax law, landlord-tenant law, construction contracts, indemnity agreements, rights and remedies of property owners, contractors and subcontractors issues, and various areas of liability for real estate practitioners and property owners.

CMGT 4480 Const Project Management (4 Credits)
Principles and techniques of construction project management, use of systems analysis, internal and external procedures, planning, programming, budgeting and staffing, controlling major projects, emphasis on construction scheduling techniques with case application. Cross listed with CMGT 3120.

CMGT 4490 Residential Development (4 Credits)
A seminar-style capstone course that integrates various aspects of the construction management curriculum. Emphasis is on topics in the construction and development industries. Cross listed with CMGT 3190.

CMGT 4560 Relational Contracting and Risk Mitigation (4 Credits)
Relational contracting is a construction project delivery framework for multidisciplinary, integrated projects that focuses on aligned goals, high performance, innovation, mutual respect, open communication and a “no blame” culture between Client, Contractor, and Design Team. This approach to contracting, also known as Alliance Contracting, is becoming more prevalent in the United States and is often applied when using integrated project delivery systems. This course compares and contrasts transactional contracting methods with relational contracting methods and the influences on the project team and projects outcomes. Relational contracting is also considered in the context of risk mitigation and project optimization.
CMGT 4580 Strategic Leadership and Integrated Teaming (4 Credits)
This course examines the unique leadership skills and talents associated with leading and facilitating multidisciplinary, integrated design and construction teams. The focus of the course is on applying strategic intelligence and a system of leadership in the development of integrated solutions for the built environment. This leadership model is driven by a compelling purpose and supported by people who share practical values and have excellent processes, to look into the future, create a vision, and bring that vision to reality. Effective strategies for supporting high performance teams are explored.

CMGT 4700 Topics in Construction Mgmt (1-4 Credits)
CMGT 4980 Construction Mgmt Internship (0-10 Credits)
CMGT 4991 Independent Study (1-10 Credits)
CMGT 4992 Directed Study (1-10 Credits)
CMGT 4995 Independent Research (1-10 Credits)

Real Estate Courses

REAL 4000 Business of the Built Environment (4 Credits)
The emphasis of this course is on the importance of real estate and the built environment and its impacts and influences on how we live, work, and play. The course employs a full life cycle sustainable model that links the various phases, functions, and professions of real estate, project delivery, and asset/facility management to create holistic, value generating solutions for society. Professional practices/skillsets associated with the many career options that engage the built environment are explored.

REAL 4002 The Business of Real Estate (2 Credits)
This is an introduction to home ownership, real estate industry and its markets; legal aspects of home ownership from consumer’s point of view, including property rights, title, concepts, deeds, and purchase contracts. Listing contracts, law of agency, types of mortgages, basics of home loan finance, appraisal, investment and tax benefits are also covered in this class. Partially satisfies Colorado Real Estate sales licensing requirements.

REAL 4007 Real Estate Financial Analysis (4 Credits)
Alternative analysis formats that can be applied to a wide array of real estate analysis issues; simulates working/decision-making environment; structured overview of analysis tools focused on specific facets of multidimensional real estate decision-making environment; applications in investment analysis, feasibility analysis, valuation, market analysis, and report writing and presentation. Prerequisite: REAL 4407.

REAL 4010 Real Estate Capital Markets (4 Credits)
This course exposes students to the commercial real estate capital markets; including real estate investment trusts (REITs) and commercial mortgage-backed securities (CMBS), plus institutional investors. The complexities of capital market products are discussed, students receive a greater understanding of the alternatives that are available. The class includes lectures, guest speakers, readings, class discussions, a major REIT analysis project, and case studies. Cross listed with REAL 3010. Prerequisite: REAL 4007.

REAL 4110 Advanced Issues in Real Estate & Construction Management (4 Credits)
This course concentrates on five advanced real estate and construction management topics; the design build environment, negotiation skills in real estate and construction management, real estate capital markets, the entitlement process – urban planning, zoning, PUDs and underutilized tax advantages in real estate. Cross listed with REAL 3110. Prerequisite: REAL 4407.

REAL 4140 Global Perspectives in Real Estate (4 Credits)
This course focuses on inbound U.S. and outbound U.S. real estate transactions and the cultural issues that impact these transactions. This can also be taken as a Burns Global Delegation travel course. Cross listed with REAL 3140, XRCM 4140.

REAL 4210 Planning, Entitlements, and Public Finance (4 Credits)
Real estate development, place making, and community building require the combined efforts of the public, for-profit, and non-profit sectors. Participants in the real estate development process need to understand and appreciate the sometimes competing and sometimes collaborative interests of governments, agencies, and the private developer. This course is designed to familiarize students with the overall context of urban planning and land use. Students discover the variety of participants in the development process and also become familiar with the project entitlement process, zoning, and land use regulation. Students also examine public/private financing structures such as public-private-partnerships (P3s) and become familiar with detailed calculations relating to Tax Incremental Financing (TIF) and Metropolitan Districts.

REAL 4337 RE Securities/Syn/Entrep (4 Credits)
Introduction to real estate securities; emphasis on private offerings; determining whether a contemplated transaction involves a security, and what happens if it does; exemptions from registration (Reg D); registration requirements; investor suitability, how to syndicate, acquisition of property, marketing or the property, tax structure and formation of syndication, compensation to syndicators, real estate tax considerations. Cross listed with REAL 3337, XRCM 4337.

REAL 4347 Mgmt of Income Properties (4 Credits)
Explore the complexities of managing apartments, condominiums, office buildings, industrial property and shopping centers. This course covers rental markets, development of rental schedules, leasing techniques and negotiations, repairs and maintenance, tenant relations, merchandising, selection and training of personnel, accounting, and owner relations. Cross listed with REAL 3347.
REAL 4357 Corporate Real Estate & Management (4 Credits)
This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. Over the ten week period we will address the diverse but critical components that together account for Facility Management. These shall include: Building Life Cycles and sustainability, facility management as part of the enterprise model within a corporate structure, regulatory agencies, professional relationships and the impact of the build environment on the bottom line, contracting and budget management, move-add-change (MAC) / operations, and general administrative services.

REAL 4369 Real Estate Taxation (4 Credits)
Tax factors affecting investments and operations in real estate; special attention is given to legal forms of ownership, depreciation, tax basis, tax impacts of exchanges, syndications, real estate securities, and other federal tax laws affecting real estate. Cross listed with REAL 3369.

REAL 4400 Real Estate Principles and Practices (4 Credits)
Principles of real estate, real estate industry and its markets; legal aspects of home ownership from consumer's point of view, including property rights, title concepts, deeds, purchase contracts, listing contracts, law of agency, environmental issues and disclosures, types of mortgages, basics of home loan financing, appraisal investment and tax benefits. Partially satisfies Colorado real estate broker licensing requirements. Cross listed with REAL 1777.

REAL 4407 Income Property Finance (4 Credits)
This course explores conventional and alternative financing, mortgage banking, law and markets, loan underwriting analysis and the impact of monetary and fiscal policies on the real estate and mortgage markets, with emphasis on decision making from the equity investors point of view. Specific topics include an overview and history of real estate finance, the taxation and legal aspects of real estate finance, compounding and discounting, functions of interest and real estate capital markets and securities. Specific areas of focus are residential property finance, income property finance, and construction and development financing. Cross listed with REAL 3307.

REAL 4417 Income Property Valuation and Appraisal (4 Credits)
Residential/Commercial appraising, including market cost and income approaches to value, gross rent multiplier analysis, neighborhood and site analysis, valuation of income properties including market cost and income approaches to value, capitalization theory and techniques, mortgage-equity analysis, and investment value concepts. Prerequisite: REAL 4407.

REAL 4467 Property Development and Feasibility (4 Credits)
Commercial real estate development analysis and feasibility includes economic base analysis, tenant demand analysis, development and construction cost analysis, lease-up analysis, financial feasibility, leasing and property management practices. Five major property types (office, industrial, retail, apartment and hotel) are covered. Prerequisite: REAL 4007.

REAL 4477 Income Property Investment (4 Credits)
Comprehensive analytical framework for real estate investment decision-making, equity investment decisions via discounted cash flow, and risk analysis models and strategic planning concepts, structuring parameters to maximize rates of return while controlling downside risks; emphasis on theory, concept building, and practical application to various types of investment properties. Cross listed with REAL 3377. Prerequisite: REAL 4007.

REAL 4500 Argus Financial Analysis (4 Credits)
This course concentrates on practical applications of the Argus (TM) Real Estate Financial Software through interactive examples and case studies. Participants will be exposed to the software's capabilities, fundamentals, and unique nuances. Cross listed with REAL 4500, XRCM 4702. Prerequisite: REAL 4007.

REAL 4701 Topics in Real Estate (1-5 Credits)

REAL 4800 NAIOP Challenge (2-4 Credits)
A unique non-traditional course, where the students will work on a complex real estate problem culminating in an internal competition and external competition which includes a written report and an oral presentation. Cross listed with CMGT 3800, CMGT 4800, REAL 3800.

REAL 4890 Internship (0-10 Credits)

REAL 4980 Adv Valuation/Report Writing (1-10 Credits)
Advanced cutting-edge techniques not yet institutionalized nor commonly practiced in the field. Includes writing skills workshops appropriate to specialized nature of appraisal reports, and composition of a complex field problem report to prepare student for writing "demonstration" report required for MAI professional designation. Prerequisite: REAL 4417.

REAL 4991 Independent Study (1-10 Credits)

REAL 4992 Directed Study (1-10 Credits)

REAL 4995 Independent Research (1-10 Credits)

School of Accountancy
Office: Daniels College of Business, Rooms 355-379
Mail Code: 2101 S. University Blvd., Suite 355, Denver, CO 80208
Phone: 303-871-2032
Web Site: http://daniels.du.edu/accountancy/
Master of Accountancy

The Master of Accountancy (MAcc) program at the Daniels College of Business School of Accountancy provides rigorous training in both accounting fundamentals and the latest practices and technologies, preparing you for a rewarding career. The best indicator of the program's strength is the success of our graduates: nearly all of our domestic MAcc graduates accept positions before graduation.

Through demonstrated prerequisite knowledge, formal coursework, and elective internship opportunities students will develop technical knowledge in accounting. Students will gain a broad understanding of related disciplines including critical thinking, communication, and interpersonal skills to be effective business advisors and establish the ethical grounding to act with integrity.

An undergraduate accounting or business major is not necessary and work experience is not a requirement for admission to the MAcc. Students may work toward meeting foundation requirements during their course of study. Foundation requirements are demonstrated competency in introductory and intermediate financial accounting and introductory managerial accounting. Students with an undergraduate degree in accounting meet the competency requirement by having earned a B- or better in these foundation courses at an AACSB-accredited school. Students with an AACSB-accredited accounting undergraduate degree who earned less than a B- in these foundation courses and students holding other undergraduate degrees may demonstrate competency by passing on-campus competency exams or by completing the foundation courses for the MAcc degree.

Our mission as a School of Accountancy in a great private university dedicated to the public good is to foster Enlightened Practice, Professional Achievement, Knowledge Creation, and a Commitment to Community among our graduates, faculty, and others engaged in the accounting profession and related disciplines.

• Enlightened Practice means ensuring that our graduates understand the theory and practice of accounting and its ramifications on society, the profession, and organizations.
• Professional Achievement includes accomplishment at each level of one’s career and commitment to life-long learning, competence, and integrity.
• Knowledge Creation means scholarship which improves our understanding of accounting, the practice of accounting and the process of educating future accountants.
• Commitment to Community is the process of giving of oneself both to the community that supports one’s efforts and achievements and to the community at large. Commitment to Community is a vital aspect of the accounting profession and is critical to the School’s ongoing success.

The Master of Accountancy (MAcc) is a comprehensive program of study with focus on in-depth accounting knowledge and skills. MAcc students hone their skills as professional business advisors and increase their breadth of understanding of related disciplines and the social and ethical responsibilities for professional accountants. Specialty tracks are available to help students focus their curriculum in one of four areas: (1) data analytics, (2) taxation, (3) assurance, or (4) valuation.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

Master of Accountancy

Degree and GPA Requirements

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

Standardized Test Scores/Other Requirements

• Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.
• The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number for the Master of Accountancy program is MZR-GT-82. The GRE code number is 4842. The admissions committee will consider GMAT or GRE waiver requests from candidates who meet one of the following standards (on a case-by-case basis):
  • Received an accredited master’s degree in a related field.
  • More than 84 months of related professional experience.
  • DU students that meet the provisions for the Masters Accelerated Admissions Process.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
• Minimum TOEFL Score (Paper-based test): 575
• Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
• Minimum CAE Score: 185 (No less than a 170 on any section)

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

Master of Accountancy in Accounting

Degree Requirements

Coursework Requirements

Students with an AACSB accredited accounting undergraduate degree who earned a B- or better in required accounting foundation courses.¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td><strong>Accounting Core Courses</strong></td>
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<td>Maximum number of required credits for Accounting</td>
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<td>Core Courses</td>
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<tr>
<td>ACTG 4155</td>
<td>Accounting Information Technology Systems and</td>
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<td>Business Environment</td>
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<td>ACTG 4176</td>
<td>Accounting Data Analytics</td>
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<tr>
<td>ACTG 4240</td>
<td>Topics &amp; Cases in Financial Accounting</td>
<td>4</td>
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<tr>
<td>ACTG 4340</td>
<td>Topics &amp; Cases in Managerial Accounting</td>
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<tr>
<td>ACTG 4284</td>
<td>Consolidated Financial Statements</td>
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<td>ACTG 4285</td>
<td>Accounting for Foreign Operations</td>
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<tr>
<td>ACTG 4354</td>
<td>Cost Accounting</td>
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<tr>
<td>ACTG 4400</td>
<td>Taxation for Business and Investment Planning</td>
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<td>ACTG 4462</td>
<td>Corporate and Partnership Taxation</td>
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<tr>
<td>ACTG 4520</td>
<td>Forensic Accounting and Auditing</td>
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<td>ACTG 4551</td>
<td>Auditing</td>
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<tr>
<td>ACTG 4552</td>
<td>Advanced Auditing</td>
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<td>ACTG 4557</td>
<td>Fair Value Auditing</td>
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<td>ACTG 4575</td>
<td>Accounting Information System Risk, Control and</td>
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<td>Audit</td>
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<td>ACTG 4620</td>
<td>Accounting Ethics</td>
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<tr>
<td>ACTG 4700</td>
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<td>ACTG 4710</td>
<td>Managing the Family Business</td>
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<tr>
<td>ACTG 4740</td>
<td>Valuation and Modeling</td>
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<td>ACTG 4750</td>
<td>Valuing a Business</td>
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<td>ACTG 4760</td>
<td>CEOs and Corporate Governance</td>
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<tr>
<td>ACTG 4880</td>
<td>Internship - Graduate</td>
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Minimum number of credits required: 40

¹ Students must demonstrate competency in introductory and intermediate financial accounting and introductory managerial accounting. Competency in accounting courses can be demonstrated by earning a B- or better in equivalent courses as part of an AACSB accredited degree in accounting.

² Must be advisor approved. Faculty advisors help you build a customized degree to meet your learning goals. Electives must be graduate (4000-level) courses. An overall GPA of 3.0 and an accounting GPA of 3.0 is required for graduation.

Degree Requirements

Students with undergraduate degrees other than accounting, students with non-AACSB accredited accounting degrees, and students with an AACSB accredited accounting undergraduate degree who earned less than a B- in accounting foundation courses.

Coursework Requirements

<table>
<thead>
<tr>
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<td></td>
<td>Core Courses</td>
<td></td>
</tr>
</tbody>
</table>
ACTG 4155 Accounting Information Technology Systems and Business Environment (4 Credits)
The course will give students a basic understanding of how to develop a beginning-to-intermediate AIS system. Process flowcharts and entity-relationship diagrams will be used to document the system in Microsoft Visio. The course will explore the database structure used in various accounting IT systems. Students will be Microsoft Access certified by the end of the course. The course will also cover the IT topics contained in the BEC portion of the CPA exam.

ACTG 4176 Accounting Data Analytics (4 Credits)
In this course, students explore overarching trends in big data and the impact to accounting and auditing fields while also gaining hands on experience working with business data sets. In today's information world, accountants must be well equipped to understand and utilize the vast and varying data systems that feed a company's decision making process. This course allows students to develop big data skills by learning the SQL language to query data from mock clients. Students execute Computer Assisted Auditing Techniques (CAATs) using both the SQL language as well was the audit data mining tool, IDEA. Students simulate the process to request client data files, load complex data sets, design and execute query procedures and summarize results for management. Prerequisite: ACTG 4610.

ACTG 4201 Financial Accounting for Management (2 Credits)
This course introduces the student to the fundamentals of financial accounting and reporting with an emphasis on the needs of the user, both internal and external. The goal is to enable the student to become a knowledgeable reader and user of financial statements.

1 Students must demonstrate competency in introductory and intermediate financial accounting and introductory managerial accounting. Competency in accounting courses can be demonstrated by earning a B- or better in equivalent courses as part of an AACSB accredited degree in accounting, or by passing the on-campus competency exams, or by completing the accounting foundation courses for the MAcc degree.

2 Must be advisor approved. Faculty advisors help you build a customized degree plan to meet your learning goals. Electives must be graduate (4000-level) courses.

An overall GPA of 3.0 and an accounting GPA of 3.0 is required for graduation.

Minimum number of credits required for degree: 40-56
ACTG 4220 Financial Actg & Analysis (4 Credits)
Cross-listed with ACTG 3230.

ACTG 4222 Understanding Financial Statements (4 Credits)
At the conclusion of this course the student should understand: (1) management decisions that impact published financial statements, (2) the fundamentals of interpretation and analysis of financial statements, (3) economic and ethical issues relating to financial reporting, and (4) management attempts to enhance reported operating results. The course addresses the needs of managers and analysts, hence does not cover promulgated financial reporting rules in depth. The financial reporting topics expand on material presented in introductory Accounting and Finance courses. The focus is on the substance of the reported information. This course is not an approved elective for the MACC degree. Cross listed with ACTG 3220.

ACTG 4240 Topics & Cases in Financial Accounting (4 Credits)
This course develops a greater awareness of contemporary accounting issues, focusing on financial reporting. The course is designed to enhance each student's ability to identify, discuss, and resolve open-ended problems (i.e., those having no single "correct" answer) faced by accounting professionals. Each student must commit to being an active participant in the class discussions. Through the use of numerous cases involving all aspects of financial reporting, students identify issues, conduct authoritative research, then present and defend their conclusions using both oral and written presentation formats. Students also write an original research paper on a topic of their choice.

ACTG 4281 Intermediate Financial Accounting I (4 Credits)
The focus of this course is the foundation and content of published financial statements. Specifically it covers the following broad topics: (1) Conceptual Framework of Financial Reporting; (2) Financial Statements and Related Disclosures; (3) Assets: Recognition and Measurement; and (4) Liabilities: Recognition and Measurement. Common to each of the topics is an emphasis on reading GAAP and applying GAAP guidance to fact patterns. At the conclusion of the course, students should be aware of the proper accounting treatment for many common situations; moreover, students should be fully comfortable interpreting GAAP literature to address scenarios involving assets, liabilities, and income that were not specifically covered in the class.

ACTG 4282 Intermediate Financial Accounting II (4 Credits)
This course is a continuation of Intermediate Financial Accounting. The focus of this course is the application of Generally Accepted Accounting Principles to complex business transactions. In this final course of the sequence, we finish our examination of the balance sheet by exploring the issues involved with stockholders' equity, followed by in-depth study of some of the most complex accounting issues, including revenue recognition, accounting for income taxes, pensions and post-employment benefits, leases, and accounting changes and errors.

ACTG 4284 Consolidated Financial Statements (2 Credits)
This course introduces the student to the preparation of financial statements in compliance with GAAP when the reporting entity has investments in other entities that are other than passive investments. This module explores the financial reporting issues relating to partial or full ownership of one business entity by another. It includes use of the equity method as well as issues involved in reporting the financial results of consolidated entities, both at and subsequent to acquisition or formation.

ACTG 4285 Accounting for Foreign Operations (2 Credits)
Topics covered in this course include the financial statement impact of doing business in a foreign currency, having foreign subsidiaries or operations, and certain hedging activities.

ACTG 4290 Advanced Accounting Theory (4 Credits)
This course analyzes trends in accounting through review of major publications of the accounting profession. It places emphasis on theoretical foundations of accounting theory underlying concepts of assets, income determination, and disclosure. Prerequisite: ACTG 4282 or Test Score AC82 >= 1 and Prerequisite or Co-requisite: ACTG 4284.

ACTG 4340 Topics & Cases in Managerial Accounting (4 Credits)
This course focuses upon innovative forensic, management control, productivity and business valuation approaches used by forensic and managerial accountants. Such strategies and techniques are evaluated through classroom discussion of cases and related articles.

ACTG 4354 Cost Accounting (4 Credits)
Accounting information in manufacturing enterprises, standard costs, and budgets. Open to students not having ACTG 3354 or equivalent. Prerequisite: MBA 4110, MBA 4111, or equivalent.

ACTG 4400 Taxation for Business and Investment Planning (4 Credits)
This is an introductory tax course that emphasizes a conceptual approach to learning the income tax framework applicable to common business and investment transactions. It is designed to sensitize students to the tax implications of business decisions and to cultivate the student's ability to ask good tax questions. This course will illustrate that effective business planning depends on an accurate assessment of relevant tax factors.

ACTG 4410 Federal Income Taxation (4 Credits)
The course is designed for graduate accounting students that wish to study federal income taxation. This is the first course in taxation, which introduces the federal taxation system, the importance of tax authorities, the concepts of gross income and tax deductions and the tax implications of common property transactions. The course generally focuses on property transactions, but the taxation of individuals is emphasized with an objective of students being able to properly prepare complex individual tax returns.

ACTG 4462 Corporate and Partnership Taxation (4 Credits)
The course is designed for graduate accounting, finance or other business students in their study of advanced topics in federal income taxation. This is the second course in taxation which concentrates on taxation of corporations, limited liability corporations, S corporations and partnerships.
ACTG 4520 Forensic Accounting and Auditing (4 Credits)
Students will have an opportunity to learn, study, and discuss practical aspects of accounting as it is used to detect and prosecute fraud. Students will be exposed to improprieties, common fraud schemes, illegalities, and harassments.

ACTG 4551 Auditing (4 Credits)
This course is designed to provide you with a thorough understanding of auditing and related attest services. This includes gaining requisite knowledge about AICPA (U.S. GAAS) and PCAOB auditing standards and how they are applied in conducting a financial statement audit. Application of these standards applies to planning an audit, the risk assessment process including gaining an understanding of internal control, gathering and evaluating evidence, sampling, and issuing an audit report.

ACTG 4552 Advanced Auditing (4 Credits)
This course is designed to build on the foundation of auditing knowledge developed in ACTG 4551 and apply that knowledge to specific accounts and assertions in a financial statement audit. Students also examine selected SEC enforcement actions and discuss what audit procedures may have been beneficial to prevent the misstatement. Prerequisite: ACTG 4551 or ACTG 3551.

ACTG 4557 Fair Value Auditing (4 Credits)
The purpose of this course is to expose students to the accounting, economic and valuation concepts and challenges that are relevant to auditing fair value measurements and disclosures in financial statements. The role of the FASB, PCAOB, SEC and other standards setters on fair value accounting and measurements are explored. Prerequisite: ACTG 4551 or ACTG 3551.

ACTG 4575 Accounting Information System Risk, Control and Audit (4 Credits)
An auditor cannot just “audit the numbers” without strong consideration to the IT systems that generate those numbers. Today’s accounting professionals must possess a strong understanding of accounting information system risks and controls. Topics specifically covered in this course include IT security controls, datacenter controls, data backup and disaster recovery planning, SDLC and change control processes. Students perform hands on simulated audit exercises and case studies to truly experience the role of an IT auditor. Prerequisites: ACTG 3551 or ACTG 4551.

ACTG 4607 Not-for-Profit & Governmental Accounting (4 Credits)
The course will focus on Not-for-Profit (NFP) and Governmental (Govt) financial accounting standards and practices employed by governmental and nonprofit organizations. Upon successful completion of the course, students will master the fundamentals of financial reporting of various kinds of governmental accounting and nonprofit organizations. Social, environmental, and ethical issues are addressed in this course. The content of Governmental and Nonprofit Accounting will be linked to sustainability, leadership and governance.

ACTG 4610 Financial Accounting and Reporting (4 Credits)
The purpose of this course is to provide students with an understanding of the financial statements issued by companies to external parties, such as shareholders and creditors. The course covers the fundamentals of accounting, from recording economic events in the accounting records to the preparation of the company’s financial statements. In addition, the course examines major transaction categories, accounting policy choices of business firms and their financial statement implications, as well as the content of publicly-traded companies’ Form 10-K annual reports.

ACTG 4620 Accounting Ethics (4 Credits)
This course focuses on the idea of community and the ethical and social relationships of accounting leaders and business organizations in their communities. The course focus is on the role of the accounting professional and the unique and special responsibilities associated with that role. This is examined by analyzing a variety of issues that students will face during their careers. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that emerge directly relate to the state Code of Professional Conduct applicable to CPAs, the Code provisions are discussed and analyzed.

ACTG 4660 Strategic Cost Management (4 Credits)
Strategic cost management methods and practices focus on how to help the firm succeed in contemporary business. Topics in the course include balanced scorecard, cost-volume-profit analysis, target costing, standard costing, and management control. The course will enable students to apply strategic thinking to management planning, decision-making, and management reporting.
ACTG 4700 Graduate Seminar in Accounting (1-17 Credits)
ACTG 4701 Special Topics in Accounting (1-5 Credits)
ACTG 4702 Special Topics in Accounting (1-5 Credits)
ACTG 4703 Special Topics in Accounting (1-5 Credits)
ACTG 4704 Special Topics in Accounting (1-5 Credits)
ACTG 4705 Topics in Accounting (1-4 Credits)
ACTG 4710 Managing the Family Business (4 Credits)
Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family “banks,” family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

ACTG 4740 Valuation and Modeling (4 Credits)
The ultimate purpose of the course is to improve professional decision-making skills. Professional decisions are made using a combination of judgment and analysis. Even skilled professionals (in any field) will make incorrect decisions when working with incorrect or insufficient information. Thus, one key to improving decision-making is improving analytical insights and skills. This course emphasizes the definition, construction, uses and limitations of popular financial models and instruments. Further, the class focuses on how the instruments are used, why they are used and how decisions to use such instruments and tools/techniques to value them are made.

ACTG 4750 Valuing a Business (4 Credits)
This course explores all major aspects of business valuation. Students not only study valuation theory, they appraise an actual business and draft a valuation report in compliance with the American Institute of Certified Public Accountants Statement on Standards for Valuation Services (SSVS) and Reporting Standards of the National Association of Certified Valuation Analysts (NACVA). Prerequisite: ACTG 4740.

ACTG 4760 CEOs and Corporate Governance (4 Credits)
This course examines the current and pressing issue of corporate governance, in its ethical, legal, and social dimensions. Students read the latest views of scholars and experts and gain the perspectives of corporate CEOs and other organization leaders. Topics explored include the history of various governance models, public policy on corporate governance, corporate board functions and responsibilities, the dynamics between CEOs and boards, ethical leadership and corporate culture, ethics and compliance programs, executive liability, nonprofit corporate governance, board and audit committee responsibilities, restructuring and governance, executive compensation problems and solutions, shareholder activism, and corporate governance reforms. Cross-listed with LGST 4760.

ACTG 4795 Graduate Research Seminar (1-17 Credits)
ACTG 4880 Internship - Graduate (0-4 Credits)
Hours and times arranged by student.
ACTG 4991 Independent Study (1-10 Credits)
Hours and times arranged by student.
ACTG 4992 Directed Study (1-10 Credits)
ACTG 6300 Behavioral Research in Accounting Seminar (4 Credits)
This seminar will provide students with the tools needed for educated consumption of behavioral research in accounting. We will focus on the theoretical and methodological issues faced by those who conduct this research, as well as the practical implications of the research for business leaders. Students should leave the course with a basic knowledge of behavioral research in accounting and be better able to create, analyze and critique such research.

Joint Doctoral Program in the Study of Religion
This PhD program is a joint venture between the University of Denver and the Iliff School of Theology. With faculty from both schools equally available for coursework and mentoring, the Joint Doctoral Program (JDP) combines the expansive opportunities of the University of Denver with the deep theological resources of the Iliff School of Theology. Coursework emphasizes interdisciplinary dialogue and research. Some of the areas that participate include the University’s graduate schools of Professional Psychology, Social Work, Education and International Studies, as well as the departments of Anthropology, Art History, Communication Studies, English, Philosophy, Religious Studies, the Center for Judaic Studies, and others. This degree equips students to become scholar-teachers who are committed to addressing contemporary social and spiritual matters.

DU Iliff Joint Doctoral Program in the Study of Religion
Office: Iliff School of Theology I-107
Doctor of Philosophy in the Study of Religion

The Joint Doctoral Program in the Study of Religion (JDP), housed at the University of Denver and the Iliff School of Theology, has been developing leaders in the field of religion for over thirty years. The program offers students a rich and rigorous, yet flexible and interdisciplinary, environment for academic conversation and study. Students in the JDP benefit from a strong sense of community. Our students participate in a range of colloquia, workshops, and symposia that promote innovative and relevant scholarship. The JDP prepares students for careers in academia, religious communities, governmental organizations, counseling centers, and a variety of other vocational venues. Through close peer and faculty relationships and support, students develop their professional identities within the academic study of religion.

Across various specializations, JDP faculty are committed to educating all our students in the critical study of religion and to helping them develop the ability to understand their areas of specialization as a part of the larger discipline. The curriculum of the JDP seeks to prepare students to understand and participate in conversations about key ideas, themes, theories, questions, problems, and trends in the study of religion, including those within professional organizations such as the American Academy of Religion.

Spheres of Inquiry for Interdisciplinary Study

The academic program utilizes lenses for study and research called spheres of inquiry.

- Lived Religion (persons and communities)
- Conceptual Approaches to Religion (issues, concepts, and social and cultural phenomena)
- Religion in Text, Image, and Artifact

The spheres are not discrete tracks of study but are intended to create spaces for conversation among faculty and students who have different areas of specialization. Each year, three colloquia will be offered, one for each sphere, focusing on a different theme. One faculty member will serve as moderator, but several faculty will participate as determined by their research interests. During their course work, students must take one colloquium in each sphere, though they may take more than one if they choose, since the themes will vary year to year.

Program Strengths for In-Depth Study

The JDP has resources to offer specialized study in a limited number of subject areas. The strengths of JDP faculty determine the most productive opportunities for study and for directed research, such as dissertation projects. The academic areas below are not distinct concentrations, but rather areas of strength among the current faculty of DU and Iliff.

- Bible, Ancient Judaism, Early Christianity
- Religion, Art, and Media
- Religion, Race, and Ethnicity
- Religion and Politics
- Theories of Religion
- Religion and Human Experience

Certificate in Latinx Studies

Highlighting our commitment to diversity and our celebration of inclusive excellence, the Joint PhD program in the Study of Religion offers a certificate in Latinx Studies. Guided by faculty at both DU and Iliff, Joint PhD students consider questions of Latinx histories and culture from a theological and religious studies perspective and engage directly with Latinx communities through a variety of field placement and outreach opportunities. This certificate prepares student to teach Latinx Studies focusing on religion, theology, and social praxis.

Doctor of Philosophy in Religion

Degree and GPA Requirements

- A completed master’s degree relevant to the student’s proposed concentration(s) from a regionally-accredited university or a comparably accredited institution outside the United States is required. A GPA from all graduate work of no less than 3.0 is required for admission into the program.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master’s degree or higher from a regionally accredited institution supersedes the minimum standards for the
baccalaureate. For applicants with graduate coursework but who have not earned a master’s degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

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

**Standardized Test Scores**
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS/CAE scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

**Certificate in Latinx Studies**
Only students admitted to the DU/Iliff Joint Doctoral Program in the Study of Religion may apply.

Students will need to complete the certificate application form and an interview with the Latinx Certificate Coordinator.

Students must demonstrate a commitment to Latinx communities and Latinx Studies and demonstrate an initial awareness of Latinx cultural contexts and the effects of systemic inequities experienced by these communities and the religious or social legacies of such experiences.

**Doctor of Philosophy in the Study of Religion**

**Degree requirements**

**Coursework requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>Core coursework requirements</strong></td>
<td></td>
<td>24</td>
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<tr>
<td>RLGN 4000</td>
<td>Theories and Methods in the Study of Religion</td>
<td>4</td>
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<tr>
<td>RLGN 5000</td>
<td>Pedagogy and the Teaching of Religion</td>
<td>4</td>
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<tr>
<td>RLGN 6000</td>
<td>Dissertation Proposal Seminar</td>
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<tr>
<td>RLGN 5010</td>
<td>Lived Religion Colloquium</td>
<td>4</td>
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<tr>
<td>RLGN 5020</td>
<td>Conceptual Approaches to Religion Colloquium</td>
<td>4</td>
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<tr>
<td>RLGN 5030</td>
<td>Religion in Text, Image, and Artifact Colloquium</td>
<td>4</td>
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<tr>
<td><strong>Additional coursework</strong></td>
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<td>42</td>
</tr>
<tr>
<td>Complete 42 credits of additional elective coursework, including any approved transfer credits, before beginning dissertation research. The maximum number of Independent Study credits allowed is 12.</td>
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</table>

**Comprehensive Exam Review Courses**

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>RLGN 6010</td>
<td>Comprehensive Review I: Perspectives in the Study of Religion</td>
<td>4</td>
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<tr>
<td>RLGN 6020</td>
<td>Comprehensive Review II: Area Theories and Methods</td>
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<td>RLGN 6030</td>
<td>Comprehensive Review III: Knowledge in a Professional Field</td>
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<tr>
<td>RLGN 6040</td>
<td>Comprehensive Review IV: Knowledge in Minor Areas or Subfields</td>
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**Dissertation Research**

Complete 8 credits of dissertation research. Register for 1 dissertation research credit each quarter beginning in the fall of the year following completion of comps and dissertation proposal course until 8 credits are reached. Then register for 1 credit every fall until graduation.

**Total Credits**

Minimum number of credits required for degree: 90 credits

**Non-coursework Requirements**

- Successful defense of a dissertation proposal
- Demonstrated proficiency in one research language, other than the student’s native language
- For students who also need to demonstrate expertise in ancient languages in order to pursue their research, an exam will be administered by appropriate faculty.
• Writing and successful defense of a dissertation
• Successful completion of the oral defense
• Completion of all requirements for the degree within seven years.

Certificate in Latinx Studies

Program Requirements

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<th>Code</th>
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<tr>
<td></td>
<td><strong>Required Courses</strong></td>
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<tr>
<td>RLGS 4676</td>
<td>Latino Religious Cultures: Methods and Theories</td>
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<tr>
<td>RLGN 4608</td>
<td>Hispanic Ethics and Theology</td>
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<td><strong>Elective Courses</strong></td>
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<td>Choose from the following selection of courses to complete 12 credit hours of elective coursework.</td>
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<tr>
<td>RLGN 4204</td>
<td>Multi-Cultural Pastoral Care &amp; Counseling</td>
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<td>RLGN 4401</td>
<td>Race, Gender, Class: Historical &amp; Social Analysis of Racism in the Modern World</td>
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<td>RLGN 4402</td>
<td>American Indian Cultures and Religious Traditions</td>
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<td>RLGN 4404</td>
<td>Race and Religion in the United States</td>
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<td>RLGN 4405</td>
<td>Social Construction &amp; Selfhood</td>
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<td>RLGN 4409</td>
<td>Social Movements from Liberationist Perspectives</td>
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<td>RLGN 4504</td>
<td>Muslims, Jews and Christians in Medieval Spain</td>
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<td>RLGN 4505</td>
<td>16th-Century Spanish Mystics &amp; Reformers</td>
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<td>RLGN 4614</td>
<td>Liberation Theologies</td>
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<td>RLGN 4640</td>
<td>Doing Christian Ethics from the Margins</td>
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<td>RLGN 5401</td>
<td>Colloquium: Post-Colonial Discourse and Other Myths: A Theological Critique of Dominance</td>
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<tr>
<td>RLGN 4641</td>
<td>Formative Figures in Christian Ethics: The 20th Century White Male Canon</td>
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<td>SOWK 4465</td>
<td>Human Security: Intervention Strategies for Economic &amp; Social Development</td>
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<td>SOWK 4635</td>
<td>Immigration Policies and Services</td>
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<td>SOWK 4749</td>
<td>Culturally Responsive Practice with LatinX</td>
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<td>SOWK 4750</td>
<td>Critical Perspectives on the Latinx Context</td>
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<td>SOWK 4751</td>
<td>Global Relations and Poverty in Mexico</td>
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<td>SOWK 4753</td>
<td>Social Development in Latin America</td>
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<td>SOWK 4757</td>
<td>Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course</td>
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<tr>
<td>SOWK 4764</td>
<td>Historical Trauma and Healing</td>
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<tr>
<td>SOWK 4990</td>
<td>Topics in Social Work</td>
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<tr>
<td>SOWK 5120</td>
<td>Introduction to Advanced Qualitative Research Methods</td>
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<td>SOWK 5121</td>
<td>Qualitative Data Analysis</td>
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<tr>
<td>HED 4284</td>
<td>Inclusive Excellence in Organizations</td>
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<td>HED 4287</td>
<td>Critical Race Theory and Education</td>
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<tr>
<td>INTS 4341</td>
<td>Illicit Markets in the Americas</td>
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<td>INTS 4386</td>
<td>Transnational Migration in the Americas</td>
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<tr>
<td>INTS 4450</td>
<td>Democracy and Militarism in Latin America</td>
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<td>INTS 4453</td>
<td>Political Economic Development in Latin America</td>
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<tr>
<td>INTS 4514</td>
<td>Population, Environment, and Development in Latin America</td>
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<tr>
<td>INTS 4794</td>
<td>Inequality in Latin America and the Caribbean</td>
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<tr>
<td>INTS 4664</td>
<td>Emerging Powers: Development in Brazil, India and Beyond</td>
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<td><strong>Internship/Field Placement</strong></td>
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<tr>
<td></td>
<td>Complete a 4 credit hour field placement assignment within a Latinx community service setting approved by the Latinx Certificate Coordinator.</td>
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<td>In some cases, the field placement may be replaced by an intensive Latin American immersion equivalent.</td>
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</tbody>
</table>

Total Credits

Minimum number of credit hours to fulfill the Certificate: 24 credits

Non-coursework requirements:
• Students must demonstrate competency in Spanish language as evidenced by passing a Spanish qualifying exam. 2000-level Spanish-speaking courses are available at the university, but undergraduate classes will not count toward the 90-hour degree, and financial aid may not be applied to these undergraduate classes.

• A comprehensive exam in Latinx Religion, Theology, or Ethics.

• Students will write a dissertation on a topic of Latinx Religion, Theology, or Ethics.

• At least one dissertation committee member must also be Latinx Certificate faculty.

Courses

RLGN 4000 Theories and Methods in the Study of Religion (4 Credits)
This course begins with a brief overview of the history of the study of religion in the west, from antiquity to the modern period. When we reach the modern period, the course shifts to considering 'representative' theories of religion, broken down roughly along ideological and/or disciplinary lines.

RLGN 4101 Ph.D. Colloquium in Biblical Interpretation (2 Credits)
Discussion of selected topics in the field of biblical studies, e.g., northwest Semitic inscriptions, Hebrew poetry, Judges, Acts of Andrew, literature of rabbinic Judaism, American biblical studies.

RLGN 4102 Hebrew Bible Seminar: Language and Text (4 Credits)
This seminar focuses on the Biblia Hebraica Stuttgartensia; Hebrew grammar and syntax; and text critical methodology.

RLGN 4103 New Testament Seminar: Language and Text (2-4 Credits)
This seminar focuses on advanced Greek grammar, reading and vocabulary building; textual criticism; and reference tools.

RLGN 4104 Hebrew Bible Environments (4 Credits)
An exploration of the Hebrew Bible in its historical contexts.

RLGN 4105 Empire and the Rise of Christianity (4 Credits)
This course covers approximately the first five centuries of Christian history with a view toward understanding the role empire played in the rise of Christianity, both in terms of the confluence between Christianity and the Roman Empire as well as its role in the development of Christian beliefs, practices, production of discourse, institutions, and strategies of social control.

RLGN 4106 Second Century Life & Thought (4 Credits)
An attempt to understand Christian life and thought in the Roman Empire in the Second-century by analyzing primary sources.

RLGN 4107 Women in Early Christianity (4 Credits)
An exploration of the role women played in early Christianity, with attention given to the social and literary constructions of women in Greco-Roman antiquity.

RLGN 4108 Jewish and Christian Non-Canonical Literature (4 Credits)
This seminar examines Jewish and Hellenistic backgrounds; the social scientific study of early Christianity; and the New Testament in its literary environment.

RLGN 4109 Formation of the Bible (4 Credits)
This course focuses on the development of the Christian Bible. Some attention, however, will be given to the emergence of the Jewish canon, primarily as it relates to and impacts the Christian canon. The chronological expanse of the course ranges from the Hellenistic through the late Roman period. The approach of the course is necessarily literary and historical, but theoretical issues about what constitutes scripture and canon will also be given attention.

RLGN 4110 Hebrew Reading (2 Credits)
Advanced work in biblical languages or a selected issue in a language study.

RLGN 4111 Greek Reading (2 Credits)
Selected readings from the New Testament and other early Christian literature. Greek I, II and Exegesis are prerequisites Offered each year. May be repeated for credit.

RLGN 4112 Language Seminar (2-4 Credits)
Advanced work in biblical languages or a selected issue in a language study.

RLGN 4113 The Bible and Its Afterlives: Jonah (4 Credits)
This course invites students to place the biblical book of Jonah in conversation with works of literature, art, and theology that interpret Jonah or explore themes in the book, including the nature of God, prophecy, election, death, and transformation. The course will introduce students to the history of interpretation (or reception history) by considering Jonah's afterlives in a variety of Jewish, Christian, and Islamic texts, artistic programs, and manuscript illuminations.

RLGN 4115 Hebrew Bible Literature: Genesis (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4116 Hebrew Bible Literature: Exodus (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4117 Hebrew Bible Literature: Leviticus (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.
RLGN 4118 Hebrew Bible Literature: Numbers (4 Credits)

RLGN 4119 Hebrew Bible Literature: Deuteronomy (4 Credits)
The book of Deuteronomy for centuries has been viewed as laying out a political view of Israel's life together. Josephus, for example, described
Deuteronomy as Israel's politeia or "form of government." Government certainly is an issue in the book, particularly as it involves the conduct of
self and others. More recently, Deuteronomy is understood to play a foundational role in the books of the Former Prophets within the theory of the
Deuteronomistic History. This course examines these and other critical issues in the study of Deuteronomy.

RLGN 4125 Hebrew Bible Lit-Job (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4128 Hebrew Bible Literature: Jeremiah (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4129 Hebrew Bible Literature: Jonah (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4130 Hebrew Bible Literature: Prophetic Literature (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4131 Hebrew Bible Literature: Wisdom Literature (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4135 Poetry in the Hebrew Bible (4 Credits)
In this course, we will analyze poems primarily from the books of Job, Lamentations, Psalms, 2 Isaiah, and Jeremiah. Class sessions will be divided
between studying some aspect of Hebrew prosody (e.g., metaphor, parallelism, lineation) and looking at the ways in which various poets use these
particular devices. We will be particularly interested in identifying how poets bring their messages to life, engage their audiences, challenge (or uphold)
the status quo, and revitalize the community's imagination and, in turn, its faith in YHWH. Each week, we will read about a particular aspect of poetry
and prepare specific poems with the readings in mind; the readings will provide us with a language that we might discuss specifically how the poets
impact and encode their messages.

RLGN 4141 New Testament Literature: Mark (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4143 New Testament Literature: John (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4145 New Testament Literature: Romans (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4146 New Testament Literature: Corinthians (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4147 New Testament Literature: Galatians (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4148 New Testament Literature: Hebrews (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4150 New Testament Literature: Revelation (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4151 Studies in Early Christianity (4 Credits)
A critical study of themes and selected movements within early Christianity and other religions of the Greco-Roman world. May be repeated for credit.

RLGN 4152 Identity in the Hebrew Bible (4 Credits)
This course explores diverse constructions of selfhood in the Hebrew Bible in conversation with theories of identity and the self from a range of
disciplines, including anthropology, philosophy, sociology, and psychology. In this class, we will consider how the biblical texts present different
models of selfhood through discourse, practice, and ritual. Each class session will focus on a different aspect of identity: gender, social class, ethnicity,
nationality, colonialism, the body, and kindship and family. Throughout the course, we will discuss the implications of these constructs of identity for
ethics, agency, and theology.

RLGN 4153 War, Politics, & Society in the Hebrew Bible (4 Credits)
This course examines the interrelationship between war, politics, and society in the Hebrew Bible and their interplay both in the texts and in larger
historical, social, and cultural contexts.
RLGN 4154 Migration and the Bible (4 Credits)
Migration and people on the move pervades the Bible, from Adam and Eve to Jesus. This course examines migration in the Bible and the resources it offers for responding to the current realities of migration, immigration, exile, deportation, and other aspects of migration in the world today. A range of perspectives on migration and the Bible are considered, including denominational resources, international aid agencies, and theoretical viewpoints.

RLGN 4160 Teaching the Bible (4 Credits)
Designed to integrate faith development theory, biblical interpretation and confluent education. Education instructional models for the purpose of assisting students to develop professional self-understanding and functional skills as interpreters and teachers; experience in teaching adults in a local setting.

RLGN 4201 Seminar on Pastoral Psychology (1-4 Credits)

RLGN 4202 Theological Themes in Pastoral Care (4 Credits)
Theological bases of pastoral care. Contributions of contemporary pastoral care to doctrinal theology.

RLGN 4203 Theodicy and Tragedy (4 Credits)
Study of tragic and theological literature for pastoral care in tragic circumstances.

RLGN 4204 Multi-Cultural Pastoral Care & Counseling (4 Credits)
Examines multicultural issues in pastoral care and counseling and explores the dynamics and complexities of culture, race and other socializing factors in pastoral care conversations.

RLGN 4205 Process Theology and Pastoral Care (4 Credits)
This course creates a conversation between process theology and spiritual care. Utilizing an aesthetic approach, we develop a constructive framework of care from themes found in process theology.

RLGN 4206 Post Traumatic Stress Disorder: Pastoral Psychological and Theological Responses (4 Credits)
Students are paired with veterans and provide time-limited supervised spiritual care over the course of 8 weeks. Using a case study format, students review and reflect upon the spiritual care they are providing using theological and psychological perspectives.

RLGN 4207 Moral Stress, Resilience & Spiritual Integration (4 Credits)
Moral stress arises from shame/guilt/fear of causing harm involving conflicts in values. Moral injury arises from traumatic stress that is more shame than fear based, and has been researched extensively among military personnel. Spiritual integration of moral stress and injury uses spiritual practices and theological meaning-making to compassionately identify life-limiting embedded shame-based values, beliefs, and ways of coping with moral stress and injury (lived theologies) in order to compassionately understand the origins of moral stress and injury. Relational resilience is the outcome of spiritual integration based on spiritual practices fostering compassion and more complex theological ways of understanding moral conflicts, stress and injury.

RLGN 4208 Erik Erikson: Resource for Pastoral Care (4 Credits)
This course explores Erik H. Erikson's life cycle theory as a resource for the pastoral care of children, adolescents, young adults, adults, and older adults. Attention is given to Erikson's psychoanalytic orientation and the development of his life cycle theory over the course of his career. The course encourages the use of developmental theory to deepen the student's introspective reflection and vocational orientation. By focusing on the work of a single author, this course is meant to illustrate how a pastoral theology student may use the work of a prominent psychologist in the development of a dissertation topic.

RLGN 4209 Spiritual Care in Pluralistic Contexts (4 Credits)
This course helps students learn emergent pastoral theologies of spiritual care in a pluralistic context and use them to reflect on case studies written by experienced practitioners. In this course, students will identify their personal values, attitudes, and beliefs and examine their own social identities to better understand how these dimensions of self can guide and challenge them in reflecting on spiritual care with those who are different from them.

RLGN 4301 Colloquium in Comparative Study of Religion (0-4 Credits)
Critical analysis of the literature concerning (a) methods, (b) primary problems and (c) perspectives in the comparative study of religions. Examination of historical, anthropological, psychological and phenomenological approaches to the study of religions.

RLGN 4302 Buddhist Philosophy (4 Credits)
An introduction to the Buddhist philosophical tradition that covers both the different philosophical movements within Buddhism as schools of thoughts and major philosophical issues, such as the theory of karma and determinism, the nature of mind, proofs for past and future lives, theories of knowledge, ethics, the doctrine of emptiness and the nature of enlightenment.

RLGN 4303 Sacred Space and Place in Comparative Perspective (4 Credits)
This course examines sacred spaces and sacred places from a comparative perspective. Through close reading and discussion of primary and secondary sources, students are challenged to think critically and theoretically about sacred spaces and places.

RLGN 4304 Material Divinity (4 Credits)
This course explores how religion happens in material culture- broadly defined as images, devotional and liturgical objects, architecture and sacred space, works of art, and mass-produced artifacts.

RLGN 4305 Pilgrimage in Comparative Perspective (4 Credits)
This is a comparative course that examines the dynamics of pilgrimage from a number of different angles - theoretical, doctrinal, ritual, social - and which utilizes a variety of sources - including classical, ethnographic studies of actual pilgrimages, and focused studies of particular pilgrimage places - with the goal of gaining a thorough understanding of the phenomena of pilgrimage in all of its complexity.
Through this course, students will encounter a variety of perspectives on the nature, morality, justices, and injustices of health, healing, and dying.

RLGN 4412 Health & Healing, Death & Dying: Technologies of Inspiration and Expiration (4 Credits)
This course examines contemporary theoretical and empirical issues in the sociological study of religion. Principal topics include secularization and religious revival, rational choice, politics, ethnography, and religion and racial/ethnic diversity in the United States.

This course examines issues surrounding gender and sexuality in Islam. Through a close reading of religious texts, critiques of patriarchy, and historical studies, students are challenged to think critically about the construction of gender roles and the regulation of sexual practices in Islam. By the conclusion of the class, students gain insight and understanding regarding the ways modernity has radically altered norms surrounding gender and sexual preference in Muslim-majority societies.

RLGN 4401 Race, Gender, Class: Historical & Social Analysis of Racism in the Modern World (4 Credits)
An historical survey of the role of racism, sexism and classism in shaping the oppressive institutional structures of the existing world order and of how sociological analysis of these structures can help justice and peace activists direct effective action toward the elimination of race, gender and class oppression.

RLGN 4402 American Indian Cultures and Religious Traditions (4 Credits)
A survey of the worldviews of Native American people, as these pertain to both inter-tribal beliefs and Native American ceremonial life, with an attempt to show how Native American practice proceeds from their worldview.

RLGN 4403 Sects, Cults & New Religions (4 Credits)
An exploration of non-mainstream religious groups. Topics include innovation and recruitment; "cult" controversies; sectarian Christianity, gender and sexuality; UFO religions; and religion and marginalized racial projects.

RLGN 4404 Race and Religion in the United States (4 Credits)
An exploration of the different ways in which race is understood religiously in the United States and how race impacts both white and racial minority religious institutions. Specific topics include the black church, the Nation of Islam, Native American theology, the Christian far right, Asian American religions, Latino/a religions, and multiracial congregations.

RLGN 4405 Social Construction & Selfhood (4 Credits)
This course invites us into a collection of investigations into the intersections of social structures and individual identity or selfhood. While reading in a variety of disciplines and genres, we are drawn together around the questions of how one understands the possibilities for individual or communal agency in light of the formative, systemic power of social structures and institutions. Beyond conceptual understanding of this relationship, we ask questions of how to encourage coherent religious, educational, and other forms of practice in light of the realities of social construction. These reflections are particularly important for persons who are interested in social change and the very real barriers to its generation.

RLGN 4406 Education and Social Change (4 Credits)
This course investigates the role of education in maintaining and transforming social structures, identity, and commitments. We examine how educational practices can contribute towards social change in both religious and public settings.

RLGN 4407 Ritual Studies (4 Credits)
By reading some of the most important "classic" and recent theorists of ritual, and by learning to observe and understand ritual behavior, this class will examine the important role of ritual in defining religious groups, creating religious identity, forming religious beliefs, and structuring how we view the world. Prerequisite: Masters students need permission of instructor.

RLGN 4408 Science & the Christian Right (4 Credits)
An examination of the American Christian Right’s challenges to mainstream scientific theories and practices. Specific topics include Intelligent Design movement, reparative therapy of homosexuality, denial of human-driven climate change, and opposition to stem cell research.

RLGN 4409 Social Movements from Liberationist Perspectives (4 Credits)
Liberationist thought has greatly impacted how social movements, and the theological and ethical perspective which inform them, has been implemented to bring about social and political change since the mid-twentieth century. But with the state of the new millennium, many have proclaimed the death of liberation theology, dismissing its significance as a passing fad. The purpose of this course is to explore the roots, development, and history of liberationist thought as it first manifested itself within a Latin American context then expanding to other continents and faith traditions, and how that thought has been utilized to inform social movements.

RLGN 4410 American Christianity and Indian Genocide (4 Credits)
A collaborative research seminar exploring different aspects of the history of the relationship between American Christianity and genocidal campaigns against native peoples, including the colonial period through the 20th century. Students will research particular personalities and historical events related to this topic, including the campaigns of the military on the 18th century Western frontier, sites of massacres including Sand Creek in Colorado, and other events normally obscured by accounts of US history. Students will learn the relationships of ideology and worldview to the narration of history, as well as skills in identifying and working with primary historical sources.

RLGN 4411 Contemporary Sociology of Religion (4 Credits)
This course examines contemporary theoretical and empirical issues in the sociological study of religion. Principal topics include secularization and religious revival, rational choice, politics, ethnography, and religion and racial/ethnic diversity in the United States.

RLGN 4412 Health & Healing, Death & Dying: Technologies of Inspiration and Expiration (4 Credits)
Through this course, students will encounter a variety of perspectives on the nature, morality, justices, and injustices of health, healing, and dying.
RLGN 4413 Theology and the Construction of Race (4 Credits)
Several important books have recently been published making the case that religion, and more specifically, Christian theology, have played a constitutive role in creating the ideas of race and racial hierarchies. This course is an extended argument (with which students are free to agree or disagree in part or in whole—in any case they will become familiar with the relevant literature and concepts) that 1. In significant ways religion and race are modern, not universal or permanent, constructs; that 2. Religion and race are two of the very few fundamental conceptual building blocks of the modern world, such that, no matter what one thinks of religion and race, one is unable to think or operate in the modern world without them; and that 3. Religion and race are mutually imbricated in such a way that, even when race is not explicitly a topic of discussion or observation, modern religion is always already racialized.

RLGN 4414 Atheists, Secularists & Nones (4 Credits)
An examination of non-religious and/or non-affiliated populations, with a primary focus on the United States. We will explore: 1) the variety of beliefs among those not affiliated with religious institutions; 2) different social expressions of atheism; 3) the implications of recent religious trends for debates about secularization in the modern West.

RLGN 4501 Holy Spirit: History and Traditions (4 Credits)
What have Christians believed and written about the Holy Spirit through the centuries? Why does Pentecost show up in such different ways across the pages of Christian theology and literature? In the midst of the European Enlightenment, why did John Wesley hold such special reverence for the role of experience in Christian thought and education? Why has the Pentecostal legacy functioned simultaneously as a subversive trope for critiquing dominant church paradigms while also sparking creative, re-interpretations of Christian tradition among so many reformers? These are just a few of the questions explored in this class as we discuss historical and theological works by contemporary scholars in pnumatology and church history.

RLGN 4502 Historiography (4 Credits)
This course surveys the various theories and methods developed by historians since the emergence of the historical profession from the roots of historicism and philosophy of history in the mid-1800s; and examine the relationship of history to theology, cultural theory and literary studies.

RLGN 4503 Women in Medieval Europe (4 Credits)
This class focuses on the role of medieval women, who struggled to find a voice in the political, religious, social and literary arenas of medieval Europe from about 1100 to 1600. Through primary and secondary source readings we look at everyday women’s lives in this period. The class also includes the lives and careers of some of the most famous women writers and leaders of the period, such as Hildegard of Bingen, Eleanor of Aquitaine, Marie de France, Margery Kempe, Julian of Norwich, Queen Isabel of Castile, Teresa of Ávila, and Queen Elizabeth I of England.

RLGN 4504 Muslims, Jews and Christians in Medieval Spain (4 Credits)
An exploration of the "Golden Age" of cross-cultural encounters that occurred in Medieval Spain from the Muslim conquest in 711 to the fall of Granada and the expulsion of Jews in 1492. This course offers an overview of the historical and ecumenical dimensions of Jewish, Christian, and Islamic coexistence, known as "La Convivencia," and critical reflection on the relevant lessons this era still holds in the post 9/11 period.

RLGN 4505 Spanish Mystics and Reformers (4 Credits)
Early modern Spain witnessed the emergence of Catholic and Protestant individuals whose timeless works and popular appeal in subsequent centuries rested largely upon the practice of "contemplation in action." This course examines the historical context and works of such mystics and reformers as Teresa of Ávila, John of the Cross, Ignatius of Loyola, Juan de Valdés, Constantino Ponce de la Fuente Cipriano de Valera, Casiodoro de Reina, Antonio del Corro, and others. It also explores the influence of Islam and Judaism on these sixteenth century religious movements, as well as modern Spain’s subsequent rejection of this pluralistic legacy as it sought to define the young nation-state sought to define its national identity and consolidate power across Europe and its vast colonial territories in the Western Hemisphere.

RLGN 4506 The Pursuit of Happiness: A History (4 Credits)
This course provides a historical examination of key concepts, major questions, and practices about humanity’s search for happiness from the Hellenistic-Roman period of Antiquity through the Early Christian and Medieval periods. The content centers on the role of Classical moral philosophy and Christian theology in the formulation of eudemonic theories about the problem of happiness in relation to metaphysical and religious influences as well as to socio-cultural, political, and institutional norms and practices that shaped Christian notions of human purpose and potential. The legacies of these ancient ideas on the development of modern assumptions about happiness and human flourishing are also discussed towards the end of the course.

RLGN 4507 Violence & Tolerance in Medieval Europe (4 Credits)
This course examines a wide range of texts and events from the 11th to the 16th centuries dealing with various forms of violence across the medieval European world and contrasts these with medieval European notions of tolerance in theological, literary, and political discourse. Among the topics to be covered will be the Peace of God and the Truce of God, feudal warfare and its legacy, the Crusades and their impact upon the Latin West as well as the on Arab East, anti-Semitism in the Latin West, the Inquisition, persecution of heretics and witches, Church and State struggles, and the various dialogues of mutual, theocentric edification among Islamic, Jewish, and Christian authors.

RLGN 4508 Judaism, Gender, and Religion (4 Credits)
Germans refer to the period of roughly 1770-1850 as the Sattelzeit, or “Saddle Era”—the time between the end of the early modern world and Europe and the modern world. During this era basic assumptions that we continue to make about what religion is and what gender is are constructed. This is also the era when what we think of a Judaism is re-shaped in major ways. Through a close reading of primary texts by Jewish women we will examine the intersection of gender, Judaism, and religion and examine the modern construction of these categories.
An examination of representative postmodern thinkers, how they have changed the context for theology, and how theology has responded to them.

RLGN 4611 Theology and the Challenge of Postmodernism (4 Credits)
Christian ethical values, or subvert them? Economically marginalized, and the environment. Does the new global economy signify the lifting of all boats or the race to the bottom? Does it further the unleashing of corporate greed on a scale previously unknown, with momentous and often disastrous consequences for the working poor, the environment, and the world. People of faith have responded to the triumph of the free market economy around the world in a variety of ways. To some, “neoliberalism” seems to hold the key to sustained economic growth worldwide and, eventually, to nothing less than the eradication of poverty itself. To others, it represents the unleashing of corporate greed on a scale previously unknown, with momentous and often disastrous consequences for the working poor, the economically marginalized, and the environment. Does the new global economy signify the lifting of all boats or the race to the bottom? Does it further Christian ethical values, or subvert them?

RLGN 4610 Ethics of Neoliberalism and Globalization (4 Credits)

Queer theory has transformed religious thought in extraordinary ways especially over the course of the past four decades. This course explores the nature of queer theory as a discipline within and outside of the religious academy. This course also invites students to explore the ways that queer theory intersects with theories of race and praxes of activism.

RLGN 4609 Queer Theory, Theoethics & Activism (4 Credits)

People of faith have responded to the triumph of the free market economy around the world in a variety of ways. To some, “neoliberalism” seems to hold the key to sustained economic growth worldwide and, eventually, to nothing less than the eradication of poverty itself. To others, it represents the unleashing of corporate greed on a scale previously unknown, with momentous and often disastrous consequences for the working poor, the economically marginalized, and the environment. Does the new global economy signify the lifting of all boats or the race to the bottom? Does it further Christian ethical values, or subvert them?

RLGN 4611 Theology and the Challenge of Postmodernism (4 Credits)
An examination of representative postmodern thinkers, how they have changed the context for theology, and how theology has responded to them.
RLGN 4612 African Theology and Post-Colonial Discourse (4 Credits)
This course attempts to examine the relationship between the emergence of African Theology and the historical conditions which characterize Africa's encounter with the European/American will to power. The initial hypothesis to be tested is the claim that the will to power provides the locus classicus for formulating the identity of African theological reflection. This makes the latter a part of a much larger discourse on Africanity. The course takes the student through a close reading of basic texts produced by African theologians themselves. All the major issues characteristic of the discourse of African Theology is dealt with.

RLGN 4613 Augustine and His Influence: 400 C.E. to 1000 C.E. (4 Credits)
Theological contribution of the great North African Bishop; his major writings, such as Confessions, City of God and The Trinity; and his anti-Pelagian, anti-Donatist, and anti-Manichaean writings.

RLGN 4614 Liberation Theologies (4 Credits)
Consideration of contemporary liberation movements with focus on feminist, black and Third World theologies. Special concern is with what the various perspectives of sex, race and class analysis suggest for one another and for theology and social ethics generally.

RLGN 4615 Being Human in the Modern World (4 Credits)
What does it mean to be human? After a brief survey of traditional Christian answers to this question, we focus on the theological anthropology that has become the de facto theory of human nature since the emergence of the modern western world in the early 19th century. Theological anthropology can be the driver of other doctrines in a systematic theology; it also underpins work not necessarily seen as theological, such as ethics, development, and human rights. A rich understanding of this anthropology is necessary for theological reflection in our current context.

RLGN 4616 Sin and Evil (0-4 Credits)
This course is a critical and interdisciplinary exploration of the ideas of sin and evil. Most religious traditions have some account of human brokenness, pain and suffering. Christians have traditionally used the language of sin and evil to describe these phenomena. These ideas implicate a wide range of issues such as human nature, God, the environment, ethics, the law, and society itself. In this course we examine the historical, theological, and philosophical content of the ideas of sin and evil within various strands of Christianity, and in relation to other religious traditions. The course will also critically engage secular descriptions of and reactions to sin and evil.

RLGN 4617 Forgiveness (4 Credits)
In the histories of philosophy and religions, ‘forgiveness’ emerges as a grounding concept for thinking about God, self, and community. This course examines core texts and contexts within a range of religious, philosophical, and theological discourses on forgiveness, ‘loving the enemy’, and reconciliation. The course explores a variety of spaces of forgiveness as well as the possibility that the ‘impossibility of forgiveness’ must be allowed to emerge as a valued theological, ethical, and civic principle of personal and communal identity.

RLGN 4618 Christian Theology and Disability (4 Credits)
Using the category of "disability" as a starting point, this seminar examines constructive theologies in which attention to human vulnerability, limitation, and interdependence is fundamental to religious thought and practice. It presents "ableism" as a form of social injustice, emphasizing its intersections with other forms of oppression. It names Christianity's past and present complicity in ableism, while also highlighting the tradition's resources for effective opposition. Consideration expands beyond persons with disabilities to include common phases of life like infancy and frail old age. The course's primary aim is to equip students to articulate theologies that affirm that which ableism devalues.

RLGN 4620 Fanon, Foucault and Friends (4 Credits)
This course reads the primary sources of postcolonialists (mainly Fanon) and postmodernists (mainly Foucault) to explore creating ethical approaches to globalized manifestations of race, class, and gender oppression. Special attention is given to the use of Christianity as a liberationist response to global structures of oppression in spite of its historic use in causing much of said oppression.

RLGN 4621 Kierkegaard and Existential Theology (4 Credits)
Kierkegaard and the origins of existentialism; twentieth-century forms of existentialism and recent developments; the decline of neo-orthodoxy and resurgence of phenomenology.

RLGN 4622 Schleiermacher as Resource (4 Credits)
Consideration of the theology of Friedrich Schleiermacher. Analysis of the philosophical and theological predecessors of Schleiermacher as well as the tradition of theological liberalism that followed him.

RLGN 4623 Theology of Paul Tillich (4 Credits)
This course provides an introduction to the systematic theology of Paul Johannes Tillich (1886-1965). It explores the content and form of Tillich's theological method and his unique contribution as a Christian existentialist. Key considerations of Tillich throughout the course include 1) his personal theological formation 2) the content and form of Tillich's theology and method as shaped within the historical, religious, and cultural context of Nazi Germany to the McCarthyism, and 3) the relevance of Tillich as a conversation partner for thinking theologically about the contemporary intersections of theology and culture.

RLGN 4640 Doing Christian Ethics from the Margins (4 Credits)
Many of us have been taught religion through the eyes of white, middle-class males. How then do we do ethics from the perspective of the disenfranchised? The aim of this course is to enable students to: construct ethical responses to case studies from the perspectives of those suffering from race, class and gender oppression; to investigate Biblical protest narratives as to the resistance and struggle against race, class and gender domination and oppression; and to examine various liberationist ethical interpretations as a source for overcoming dominant religious power structures.
RLGN 4641 Formative Figures in Christian Ethics: The 20th Century White Male Canon (4 Credits)
This course on formative white male figures in Christian Ethics examines the ethical canon from a historical perspective. Special attention is given to texts and traditions as living changing heritages.

RLGN 4642 Theology and the Rise of the Historical Consciousness (4 Credits)
Theological work today is done in the context of the rise of the historical consciousness, a phenomenon with its roots in the late 18th and early 19th centuries. We inherit a fundamentally different worldview from the worldviews of the ancient and medieval worlds that gave rise to many of the classical Christian practices and beliefs, and different from contemporary non-western worldviews. The historical consciousness leads to a particular set of assumptions about Biblical authority, identity and subjectivity, epistemology, the relationship of individuals to communities, etc. This class examines important texts in the development of the historical consciousness, analyzes issues raised for Christian theology, and points to some of the theological resources developed in its wake.

RLGN 4643 Women and Christian Theologies from the Global South: A Postcolonial Feminist Approach (4 Credits)
This course is a critical study of the challenges and contributions of Christian feminist theologies from the global south to theological studies in North America, particularly, Christian feminist theologies. Framed in postcolonial discourses, this course will study works of representative figures in Christian feminist theologies from Africa, Latin America, and Asia. Topics will include the impact of globalization, postcolonial discourse, religion and culture, sexuality and spirituality, and ecological concerns.

RLGN 4644 Environmental Ethics and Global Hunger (4 Credits)
The course seeks to develop a constructive conversation on the causes of global hunger by examining significant issues surrounding the present-day distribution of food and its negative impact on the environment. Furthermore, the course will examine what type of praxis can be employed to bring about social and political change.

RLGN 4701 Topics in the Study of Religion (0-4 Credits)

RLGN 4702 Topics in Biblical Studies (0-4 Credits)

RLGN 4703 Topics in Theological Studies (0-4 Credits)

RLGN 4761 Social Ethical Issues (4 Credits)
Examination of the scope of Christian social ethics and the relationship of the analytic and diagnostic task to normative and prescriptive endeavor. May be repeated.

RLGN 4762 Justice & Peace Struggles (2,4 Credits)

RLGN 4991 Independent Study (1-4 Credits)

RLGN 5000 Pedagogy and the Teaching of Religion (4 Credits)
This course looks at pedagogical methods as they relate to the teaching of religion. Students design syllabi and materials appropriate for the teaching of religion in at least two different contexts. In addition, the course covers theoretical issues related to the teaching and learning process.

RLGN 5010 Lived Religion Colloquium (4 Credits)
This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on religion as it is lived by persons and communities. The specific theme of the colloquium changes each time it is taught.

RLGN 5020 Conceptual Approaches to Religion Colloquium (4 Credits)
This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on conceptual approaches to the study of Religion. The literature may focus on specific issues, concepts, and/or social and cultural phenomena. The specific theme of the colloquium changes each time it is taught.

RLGN 5030 Religion in Text, Image, and Artifact Colloquium (4 Credits)
This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on texts, images, and/or artifacts through which religion, culture and worldview can be studied. The specific theme of the colloquium changes each time it is taught.

RLGN 5101 Methods for Interpreting Biblical Texts (4 Credits)
This seminar addresses critical study of biblical texts, the history of interpretations and hermeneutics.

RLGN 5102 Religious Identity in Antiquity (4 Credits)
An exploration of the way individuals and communities understood their religious beliefs and behaviors during the Hellenistic and Roman periods. The focus is on varieties of Jews and Christians (including how they formed their identities in relation to each other), but consideration is also given to the Greco-Roman religious context.

RLGN 5103 Coptic I (2 Credits)
The course is dedicated to introducing students to Coptic, the last phase of the Ancient Egyptian language and the only one to be recorded in an alphabetic script showing vowels. This portion of the process is designed to introduce the most frequent vocabulary as well as the acquisition of key skills for the understanding of the Coptic language and for the interpretation and understanding of Coptic texts.
RLGN 5104 Coptic II (2 Credits)
The course is dedicated to introducing students to Coptic, the last phase of the Ancient Egyptian language and the only one to be recorded in an alphabetic script showing vowels. This part of the module is designed to promote the acquisition of key skills for the understanding of the Coptic language and for the interpretation and understanding of Coptic texts. The last half of the class requires the student to demonstrate proficiency at reading Coptic.

RLGN 5105 Coptic Readings (2 Credits)
Selected readings from Coptic texts drawn from ancient canonical and noncanonical sources, including discoveries at Nag Hammadi. It includes advanced vocabulary building and advanced grammatical and syntactical constructions. May be repeated for credit.

RLGN 5201 Ph.D. Colloquium in Religion and Psychological Studies (1-4 Credits)
A review of contemporary developments in psychology and theology offered during the winter quarter each year for doctoral students in the religion and psychological studies concentration.

RLGN 5401 Colloquium: Post-Colonial Discourse and Other Myths: A Theological Critique of Dominance (4 Credits)
Selected topics in religion and social change, approached from the disciplines and perspectives of history, ethics, sociology, international studies and social transformation. Offered annually.

RLGN 5402 Religion and Social Change Colloquium: Selected Topics (1-4 Credits)
This is a topics course for the Religion and Social Change concentration colloquia.

RLGN 5750 Professional Development (0 Credits)
This course provides the "nuts and bolts" on not only surviving, but also thriving within the academy. Assuming that the student's goal is an eventual tenure-track position, the course demystifies the PhD route so that the student, through a working knowledge of the academy, can better position her/himself to succeed. Besides providing professional development, the course attempts to raise the level of involvement of PhD candidates in the profession, from presenting papers to publishing articles.

RLGN 5751 Experiential Learning (0 Credits)
This 0-credit course enables international students to acquire valuable teaching experience as teaching assistants or instructors of record, on or off campus. It will normally only be taken after completing RLGN 5000 Pedagogy & Teaching Religion. Students should consult the Office of Internationalization about their visa status and requirements. Students should work with the JDP Program Manager at least one quarter before they plan to register in order to get this course in the class schedule when it will be needed.

RLGN 5991 Independent Study (1-10 Credits)
RLGN 5992 Directed Study (1-5 Credits)

RLGN 6000 Dissertation Proposal Seminar (4 Credits)
This seminar focuses upon the range of research topics and methods in religious and theological studies by examining dissertations and dissertation proposals related to the Joint Ph.D. Program at Iliff and the University of Denver. Bibliographic and research methods and matters of style and format receive particular emphasis. Students present their own dissertation proposals for discussion.

RLGN 6010 Comprehensive Review I: Perspectives in the Study of Religion (4 Credits)
Students meet weekly for review and discussion of the bibliography for theories and methods in the study of religion. The bibliography is available online and students are encouraged to read in advance of the course. The final exam is the comprehensive exam in theories and methods in the study of religion. This course is taken in the fall quarter of the student's third year.

RLGN 6020 Comprehensive Review II: Area Theories and Methods (4 Credits)
Students meet weekly for review and discussion of the bibliography for theories and methods in one of the current areas of JDP program strength: 1) Bible, ancient Judaism and early Christianity 2) Religion, Race and Ethnicity 3) Media, Art and Religion 4) Religion and its Publics 5) Religion and Human Experience or 6) Theories of Religion. Bibliographies are available online and students are encouraged to read in advance of the course. The final exam is the comprehensive exam in the area. This review course and exam is taken in the fall quarter of the student's third year.

RLGN 6030 Comprehensive Review III: Knowledge in a Professional Field (4 Credits)
Students work individually or in small groups with their dissertation advisor and committee members or other faculty in the students' chosen field of specialization. The purpose is to synthesize coursework, fill in gaps, and expand knowledge needed as a professional in the specific field. The final exam is the comprehensive exam in the major field. This review course and exam is taken in the winter quarter of the student's third year. It must be coordinated with Comp Review IV, and between these two reviews the student must have at least 3 different faculty examiners.

RLGN 6040 Comprehensive Review IV: Knowledge in Minor Areas or Subfields (4 Credits)
Students work individually or in small groups with faculty in the students' chosen subfield or minor area of study, or with the dissertation advisor on a deeper area of specialization within the professional field. The final exam is the comprehensive exam in the subfield or minor area. This review course and exam is taken in the winter quarter of the student's third year. It must be coordinated with Comp Review III and between these two reviews the student must have at least 3 different faculty examiners.
Graduate School of Professional Psychology

The Graduate School of Professional Psychology offers five degrees, including the Doctor of Psychology in Clinical Psychology (PsyD), that all aim to prepare graduate students for professional, and especially clinical, practice. Focusing on applied professional work from a practitioner-scholar perspective, the Graduate School of Professional Psychology also offers master’s-level programs in Sport and Performance Psychology, International Disaster Psychology, Forensic Psychology, and Sport Coaching (online), along with a graduate certificate in Strength and Conditioning and Fitness Coaching (online). In addition to our degree-granting programs, we added specialty areas in the following topics: Latinx psychology, military psychology, oncology psychology, substance use disorders, and infant and early childhood mental health. Our goals are to train professionals in understanding human behavior through the integration of theory, research, and practice and to improve the human condition through competent and ethical service.

Professional Psychology

Office: Ammi Hyde Building
Mail Code: 2450 S. Vine Street, Denver, CO 80208
Phone: 303-871-3736
Email: gsppinfo@du.edu
Web Site: www.du.edu/gspp/

Doctor of Psychology in Clinical Psychology (PsyD)

The PsyD program at the University of Denver is housed in the Graduate School of Professional Psychology (GSPP). The mission of the PsyD program is to educate competent doctoral level practitioner-scholars who meet and exceed standards of the profession-wide competencies and discipline-specific knowledge to become Health Service Providers.

The PsyD program has four aims that prepare students to become Health Service Psychologists using the practitioner-scholar model. We seek to educate future Clinical Psychologists who will:

1) contribute to the common good by using communication and interpersonal skills and individual and cultural diversity competencies,
2) be grounded in the research, ethical and legal standards, professional values, attitudes, and behaviors competencies,
3) provide profession-wide services and work in the areas of assessment, intervention, supervision, consultation and interprofessional/interdisciplinary skills.
4) produce competent, entry-level graduates who can function in a variety of settings and grow with the profession and the health needs of local, national, and global communities.

Program Accreditation

The PsyD Program is accredited by the American Psychological Association. The program has been accredited since 1979, upholding a practitioner-scholar model of training.

Master of Arts in Forensic Psychology

The Master of Arts in Forensic Psychology was first offered at the GSPP in 1999 in response to the growing interest in the rapidly developing field of forensic psychology. The degree supplements fundamental master’s level clinical psychology training with course work and practicum experiences in the area of psychology and law. The Master’s Degree in Forensic Psychology concerns the application of psychological theory, knowledge, skills and competencies to the civil and criminal justice systems. It is designed to train students to become mental health professionals, able to work in a variety of clinical settings within the criminal and civil legal system, including but not limited to: adult, juvenile and child populations; victim assistance; police consultation; correctional institutions; intimate partner violence and child abuse programs; and trial consulting. The MAFP Program is unique in many respects. Our curriculum, consisting of 90 credits, is forensically and clinically based, with an emphasis on applied practice. Students complete two field placements (up to a year in duration), allowing for the exploration of different forensic interests and providing them with a solid clinical foundation. Students benefit from the expertise of core and adjunct faculty who are active practitioners and scholars in the field.

Master of Arts in International Disaster Psychology

The University of Denver’s Graduate School of Professional Psychology is proud to offer our Master’s Program in International Disaster Psychology. This degree is designed for those who wish to provide effective mental health and psychosocial services to individuals and communities in the US.
and globally who are affected by traumatic events, acute and chronic civil conflict, natural disasters, and health-related pandemics. Our program is recognized for "Innovative Graduate Training" by both the American Psychological Association & the National Council of Schools and Programs of Professional Psychology, and is the first master's program of its kind in the nation.

Through academic coursework and practical experiences, students develop a solid foundation for knowledge and skills in the mental health field and unique and specific approaches in the field of international disaster psychology. Students receive essential opportunities to integrate knowledge with practice in contextually relevant and culturally competent ways. Internship experiences domestically and abroad, disaster simulation exercises, and classroom case studies support an integrated training experience helping students bring a "best practice" model to their work in a variety of psychosocial and mental health contexts internationally and in the U.S.

Instruction is provided in diverse areas including international disaster psychology, trauma intervention, disaster mental health, gender-based violence, crisis intervention, group dynamics, loss and grief, the effects of trauma on life-span development, psychotherapeutic models, program evaluation and research, global health, and cross-cultural foundations. Faculty expertise addresses the full span of mental health and psychosocial work that is necessary for effective work in this innovative field.

Our graduates work in a variety of professional settings providing direct services to populations affected by trauma, training and consulting with community, non-governmental and government agencies to promote psychosocial wellness of affected populations, developing emergency preparedness and response plans, and monitoring and evaluating psychosocial interventions. With comprehensive and specialized training in this emerging field of international disaster psychology, our students are prepared to make a difference in the world.

**Master of Arts in Sport & Performance Psychology**

The University of Denver’s Graduate School of Professional Psychology (GSPP), with its history of pioneering innovative training in psychology, is proud to offer a Master of Arts degree in Sport and Performance Psychology. This degree is intended for individuals in the sport, performing arts, health and fitness, or mental health fields who want to develop their ability to improve the performance and lives of those with whom they work. Those applicants involved in coaching and teaching in sport and performance settings are encouraged to add to their skills and abilities through this training. Denver's passion for sports and a thriving performing arts scene make it a perfect place to master the practice of sport and performance psychology.

The field of sport and performance psychology is concerned with the psychological factors that influence human performance. Simply put, sport and performance psychology is about improving the lives of others. It involves assessment and intervention strategies that enhance an individual's performance and personal growth.

GSPP's program is unique and pioneering in many respects. There are four areas in which this program truly stands out from other educational opportunities in the field of sport and performance psychology: our applied focus, the curriculum, practicum opportunities, and the faculty. The program provides the necessary training for an individual to become a competent, proficient sport and performance psychologist with the completion of a psychology doctoral program. The Master of Arts degree in Sport and Performance Psychology will help those who coach and work with others do their job more effectively and experience more rewarding outcomes.

**Master of Arts in Sport Coaching (Online)**

The Sport Coaching program is housed in the Graduate School of Professional Psychology (GSPP), which has a rich history of innovative professional preparation. Psychologists and sport psychologists were pioneers to study coach effectiveness and coach education. In recent years, coach education at a university setting has become more popular, and more important to produce quality coaches. The Sport Coaching program is the only master’s level degree program in coaching offered in a school of psychology in the country. Our program builds upon the innovative preparation of the GSPP and the successful Master of Arts in Sport & Performance Psychology, but diverges in important ways.

The Sport Coaching curriculum was built from the ground up with student and coach success in mind. From idea to implementation, nearly two years went into planning and designing the curriculum, collaborating with leading experts in teaching, learning and student success, hiring quality instructors with experience in sport and coaching settings, and crafting our courses. Students may complete all of the degree requirements fully online. The Sport Coaching program, like all programs in GSPP, maintains the highest level of accreditation offered by The Higher Learning Commission of the North Central Association of Colleges and schools. In 2016, the Sport Coaching program was officially recognized by the National Strength and Conditioning Association (NSCA) as a Graduate Studies Applied program. The program was also designed around the standards put forth by the National Committee for Accreditation of Coach Education (NCACE). We are the only program in the world built around the standards from the NSCA and NCACE.

**Doctor of Psychology in Professional/Clinical Psychology**

**Degree and GPA Requirements**

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

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

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

**Prerequisites:**
- Applicants without a psychology background (major or minor), must meet the department’s psychology prerequisite prior to matriculation. The psychology prerequisite can be met either through psychology coursework or by obtaining a score of at least 660 or higher on the psychology subject GRE exam. Applicants should state how they plan to meet the psychology prerequisite in their application. For the psychology coursework prerequisite, applicants must complete four (4) psychology courses earning a ‘B’ or better in these classes from a regionally accredited institution. Applicants offered admission should be aware that all psychology classes must be completed before registration in September.

**Standardized Test Scores**
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

**Master of Arts in Forensic Psychology**

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

**Prerequisites:**
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**Standardized Test Scores**
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: No, this program does not offer English Conditional Admission.
Master of Arts in International Disaster Psychology

Degree and GPA Requirements

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

Prerequisites:

- Applicants without a psychology background (major or minor), must meet the department's psychology prerequisite prior to matriculation. The psychology prerequisite can be met either through psychology coursework or by obtaining a score of at least 660 or higher on the psychology subject GRE exam. Applicants should state how they plan to meet the psychology prerequisite in their application. For the psychology coursework prerequisite, applicants must complete four (4) psychology courses earning a 'B' or better in these classes from a regionally accredited institution. Applicants offered admission should be aware that all psychology classes must be completed before registration in September.

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Master of Arts in Sport & Performance Psychology

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: No, this program does not offer English Conditional Admission.
Master of Arts in Sport Coaching

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

Certificate in Strength and Conditioning and Fitness Coaching (online)

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Doctor of Psychology IN CLINICAL PSYCHOLOGY (PsyD)

The University of Denver is on a quarter system. Students attend classes as a cohort over fall, winter, spring and summer quarters for three years (minimum). The University of Denver and the American Psychological Association require that students enroll in course work for at least twelve quarters. Students are required to attend at least eight credit hours per quarter for twelve quarters unless pre-approved for part-time status.

Degree Requirements

Coursework Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>CPSY 4010</td>
<td>Introduction to Statistics</td>
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<tr>
<td>CPSY 5000</td>
<td>Rad Behav/Func Contextl Models</td>
<td>3</td>
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<tr>
<td>CPSY 5010</td>
<td>Cognitive &amp; Affective Models</td>
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<tr>
<td>CPSY 5020</td>
<td>Psychoanalytic Models (Diagnosis and Classification)</td>
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<td>CPSY 5030</td>
<td>Systems Models</td>
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<td>CPSY 5040</td>
<td>History and Systems in Psych</td>
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<td>CPSY 5050</td>
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<td>Research Methods</td>
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<td>Qualitative Research Methods</td>
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<tr>
<td>CPSY 5075</td>
<td>Program Evaluation Technique</td>
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<td>CPSY 5080</td>
<td>Diagnosis and Classification</td>
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<td>Issues in Measurement</td>
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<td>CPSY 5180</td>
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<td>Life Cycle: Late Adulthood</td>
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<td>CPSY 5230</td>
<td>Group Dynamics &amp; Interventions</td>
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<td>CPSY 5231</td>
<td>Social Psychology</td>
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<td>CPSY 5290</td>
<td>Clinical Neuropsychology</td>
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<td>CPSY 5320</td>
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<td>CPSY 5340</td>
<td>Social Psychology of Racism and Oppression</td>
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<td>CPSY 5360</td>
<td>Racial/Ethnic Identity Dvlpmnt</td>
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<td>CPSY 5370</td>
<td>Lesbian, Gay, Bisexual and Transgender Issues</td>
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<td>CPSY 5380</td>
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<td>Psychological Consultation</td>
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<td>CPSY 5690</td>
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<td>CPSY 5705</td>
<td>Self Report Assessment</td>
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<td>CPSY 5740</td>
<td>Integrative Personality Assessment</td>
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<td>CPSY 5750</td>
<td>Supervision</td>
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<td>First-Year Seminar</td>
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<td>2 credits/quarter for 4 quarters=8 credit hours total</td>
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<tr>
<td>CPSY 5385</td>
<td>First-Year Seminar (First-Year Seminar)</td>
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<td>Advanced Professional Seminar</td>
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<td>CPSY 5388</td>
<td>Pro Sem:Psychological Assesssmt</td>
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<td>CPSY 5389</td>
<td>Pro Sem: Behavior Therapy</td>
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<td>CPSY 5390</td>
<td>Pro Sem: Forensic Issues</td>
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<td>CPSY 5391</td>
<td>Professional Seminar: Psychodynamic Therapy</td>
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<td>CPSY 5392</td>
<td>Pro Sem: Couple and Family</td>
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<tr>
<td>CPSY 5393</td>
<td>Pro Sem: ACT</td>
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<tr>
<td>CPSY 5394</td>
<td>Professional Seminar: Cognitive-Behavior Relational Therapy</td>
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<td>CPSY 5404</td>
<td>Prof Sem: Integrative Therapy</td>
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<td>CPSY 5406</td>
<td>Professional Seminar: Health Psychology</td>
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<td>CPSY 5407</td>
<td>Caregiver and Child Relationships From Pregnancy Through Early Childhood</td>
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<td>Elective requirements</td>
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<td>Minimum of 25 credits from the following courses:</td>
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<tr>
<td>CPSY 4430</td>
<td>Career Counseling</td>
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<td>CPSY 4590</td>
<td>Psychology of Loss and Grief</td>
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<tr>
<td>CPSY 5108</td>
<td>Introduction to Acceptance and Commitment Therapy (ACT)</td>
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<tr>
<td>CPSY 5120</td>
<td>Introduction to Animal-Assisted Interventions</td>
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<td>CPSY 5250</td>
<td>Existential and Humanistic Theory and Therapy</td>
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<tr>
<td>CPSY 5271</td>
<td>Physiological Lab I</td>
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<tr>
<td>CPSY 5420</td>
<td>Behav-Analytic Prin 1</td>
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<td>CPSY 5421</td>
<td>Behavioral Analysis Princ La</td>
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<td>CPSY 5422</td>
<td>Behav-Analytic Prin 2</td>
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<td>CPSY 5423</td>
<td>Behav-Analytic Assess/Case Frm</td>
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<tr>
<td>CPSY 5424</td>
<td>Behavior-Analytic Intervention</td>
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<td>CPSY 5466</td>
<td>Health Psychology</td>
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<td>CPSY 5469</td>
<td>Sport and Performance Psychology Practicum in Collegiate Athletics II</td>
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<td>CPSY 5480</td>
<td>Integrated Primary Care</td>
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<tr>
<td>CPSY 5500</td>
<td>Diagnosis &amp; Treatment of Children</td>
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<td>CPSY 5505</td>
<td>Diagnosis &amp; Treatment of Adolescents</td>
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<td>CPSY 5550</td>
<td>Couples Therapy</td>
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<td>Family Therapy</td>
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<td>CPSY 5591</td>
<td>Psychodynamic Psychotherapy</td>
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<td>CPSY 5620</td>
<td>Intersubjective Systems Theory</td>
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<td>CPSY 5685</td>
<td>Introduction to Pediatric Neuropsychological Assessment</td>
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<tr>
<td>CPSY 5686</td>
<td>Suicide Prevention, Intervention and Postvention</td>
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<td>CPSY 5687</td>
<td>Contemporary Issues in Geropsychology</td>
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<td>CPSY 5692</td>
<td>Advanced Rorschach Analysis</td>
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<td>CPSY 5700</td>
<td>Adv Personality Assessment</td>
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<td>Self Report Assessment Lab</td>
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<td>CPSY 5741</td>
<td>Therapeutic Assessment</td>
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<td>CPSY 5745</td>
<td>Human Sexuality</td>
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<td>Supervision Practicum II</td>
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<td>Supervision Practicum III</td>
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<td>CPSY 5758</td>
<td>Supervision Practicum IV</td>
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<td>CPSY 5760</td>
<td>Professional Issues II</td>
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<td>CPSY 5765</td>
<td>Cognitive Behavioral Therapy</td>
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<td>CPSY 5831</td>
<td>Theory and Foundations of IECMH: Infant and Early Childhood Mental Health</td>
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<tr>
<td>CPSY 5833</td>
<td>Advanced Topics in IECMH: Infant and Early Childhood Mental Health</td>
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<td>CPSY 5834</td>
<td>Therapeutic Intensive: Interpersonal Psychotherapy in Infant and Early Childhood Mental Health</td>
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<tr>
<td>CPSY 5840</td>
<td>Psychopharmacology</td>
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<td>CPSY 5846</td>
<td>Military Psychology and the Culture of Warfighting</td>
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<td>CPSY 5847</td>
<td>Psychology and Physiology of Isolated, Confined, and Extreme Environments</td>
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<tr>
<td>CPSY 5848</td>
<td>Evidence-based Practice for Military-related Health Disparities</td>
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<tr>
<td>CPSY 5849</td>
<td>Behavioral Medicine and Interprofessional Healthcare in Military/Veterans</td>
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<td>CPSY 5852</td>
<td>Foundations in Substance Use Disorder</td>
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<td>CPSY 5853</td>
<td>Neurobiology and Physiology of Substance Use Disorders: Implications for Treatment</td>
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<td>CPSY 5854</td>
<td>Behavioral Addictions: Assessment and Treatment</td>
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<td>CPSY 5855</td>
<td>Introduction to Psychosocial Oncology</td>
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<td>CPSY 5866</td>
<td>Interprofessional Systems in Healthcare</td>
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<td>CPSY 5880</td>
<td>Business Issues in Professional Psychology</td>
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<tr>
<td>CPSY 5989</td>
<td>Doctoral Paper Development</td>
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<td>CPSY 5825</td>
<td>Introduction to Latinx Psychology and the Latinx Experience</td>
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<tr>
<td>CPSY 5826</td>
<td>Therapy and Psychological Interventions with Latinx Populations</td>
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<tr>
<td>CPSY 5827</td>
<td>Psychological Assessment with Latinx Populations</td>
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<tr>
<td>CPSY 5828</td>
<td>Latinx Psychology Practicum</td>
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</table>

**Total Credits: 135**

**Minimum number of credits required for the degree: 135**

**Specialty Focus Tool:**
Each student must select and enroll in a minimum of 15 credit hours of elective course work in their specialty area, including courses taken at the GSPP or other DU department/schools (classes taken at the College of Law, Iliff School of Theology and University College do not count towards the 135 credits). Written approval from your advisor must be attained for appropriate coursework transferred from other academic departments and
placed in the student’s file. Discuss classes taken in other departments with your advisor prior to taking the class, and have your advisor write a memo of approval for your file. Make sure the class is at the graduate level.

- The 15 credit hours cannot include required/core courses, except one advanced professional seminar.
- Students must take one advanced professional seminar appropriate to the specialty area.
- Independent study, which is relevant, may be included.
- Complementary clinical work, including a year of field placement in an appropriate setting, is recommended.
- Students are encouraged to undertake a doctoral paper that will serve as a scholarly contribution to the area of specialization.
- When completing the check-out process for internship, students and advisors should double check that courses were indeed completed. Students may need to update specialty focus tool form for their file.

Examples include behavior therapy, couples and family therapy, forensic psychology, psychological assessment, health psychology, Latinx psychology, military psychology, neuropsychology & rehabilitation psychology, oncology psychology, substance use disorders, and infant and early childhood mental health.

Non-coursework Requirements

- Professional Psychology Clinic (PPC): All PsyD students become staff members of the PPC, a community-based training clinic. Students are expected to work with clients each year prior to the internship year. The student-therapists provide psychotherapy, play therapy, group therapy, and psychological assessments and testing. Students are supervised by licensed psychologists who use video recordings, audiotapes, and one-way mirrors to view clinical work. Clients represent diverse ethnic, racial, social, religious, and individual backgrounds and cultural identities. Clients are self-referred or referrals come from private and public sources throughout the community.

- Community Field Placement: Each year prior to the internship year, students are also required to be in a community field placement for a minimum of eight hours per week. In these placements, students are involved in supervised professional experiences in mental health centers, schools, college counseling centers, the justice system, hospitals, rehabilitation centers, private practices, residential treatment homes, and businesses in the Denver metropolitan area. There is a wide choice of placements, and available paid placements are often filled by second and third-year students. Within the general field placement requirement, students are required to work a minimum of 40 contact hours with clients from at least one culturally diverse group. Opportunities for such experience are available in a variety of the community field placement settings. The 40 contact hours are a total to be achieved during the time a student is enrolled in the program.

- Each student is required to pass a clinical competency exam prior to graduation from the program.

- Doctoral Paper: The doctoral paper requirement requires students to make an original contribution to psychological scholarship. Students may choose to do a qualitative or quantitative research project, or can choose other forms of scholarship, such as developing a case study or treatment protocol. Doctoral papers should be publication quality, and students are encouraged to submit their papers for publication. The first draft of the doctoral paper is due March 1st for students anticipating graduating in August. The doctoral paper committee chair may have a different (earlier) deadline, but March 1st is the absolute last day for a first draft.

- Internship: GSPP requires an American Psychological Association (APA) approved clinical internship which is either full time for 12 months or equivalent. PsyD students participate in the national APPIC Match and are given significant support in this process from the Director of Clinical Training. GSPP offers an exclusively affiliated consortium that is APA accredited. Students may apply to sites outside the consortium, either locally or nationally. Students must pass the internship in order to receive the PsyD degree.

- Assessment: GSPP requires a minimum of 4 assessments be completed before leaving for internship. To qualify, an assessment must be done by the student alone, integrate information from an interview and at least 2 psychological tests (cognitive and personality performance-based tests, self-reported based tests, etc.), and include a report that the student has written. Note that neuropsychological screening tests alone count as half an assessment. Up to half of the requirement can be met by doing neuropsychological screening batteries, which include a written report integrating the screening results with the results of other tests and interview data. The assessments can be completed in the PPC (through seminar, assessment small groups, or individual supervision) or field placements. All assessments must be done under appropriate supervision.

Master of Arts in Professional/Clinical Psychology

To be eligible, current PsyD students must have two years of residency and successful advancement to preliminary candidacy. Students must submit an application to graduate and meet with their advisor for candidacy sign-off by the deadline.

Degree Requirements

Coursework Requirements

- Completion of 90 quarter hours of coursework earned from GSPP at the University of Denver

Non-coursework Requirements

- Two years of field placement and seminar
- Clinical Competency Exam
Students who come to GSPP with a psychology based MA, who receive blanket 45 transfer credits for the PsyD degree, are not eligible for the interim MA from GSPP.

**Master of Arts in Forensic Psychology**

Program requirements are designed to be completed in six academic quarters over two years. The University of Denver (DU) requires that a student enroll in course work for at least six quarters. Students are required to attend at least 12 credit hours per quarter for six quarters (90 hours required for graduation), unless pre-approved for part-time status. The University of Denver is on a quarter system and students complete the program as a cohort, attending fall, winter, and spring quarters of both years.

### Degree Requirements

#### Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CPSY 4000</td>
<td>Issues in Forensic Psychology I</td>
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<tr>
<td>CPSY 4010</td>
<td>Introduction to Statistics</td>
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<tr>
<td>CPSY 4020</td>
<td>Psychopathology and Diagnosis</td>
<td>3</td>
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<tr>
<td>CPSY 4030</td>
<td>Clinical Interviewing and Theories of Psychotherapy</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4040</td>
<td>Issues in Forensic Psychology II</td>
<td>3</td>
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<tr>
<td>CPSY 4050</td>
<td>Research Methods</td>
<td>3</td>
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<tr>
<td>CPSY 4060</td>
<td>Biological Bases of Criminal Behavior-Adult Psychopathology</td>
<td>3</td>
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<tr>
<td>CPSY 4070</td>
<td>Trauma &amp; Crisis Intervention</td>
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<tr>
<td>CPSY 4080</td>
<td>Issues in Forensic Psychology III</td>
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<td>CPSY 4090</td>
<td>Issues in Measurement</td>
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<tr>
<td>CPSY 4100</td>
<td>Mental Health Law</td>
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<td>CPSY 4110</td>
<td>Family Systems and Therapy</td>
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<td>CPSY 4200</td>
<td>Practicum I: Professional Orientation</td>
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<td>CPSY 4210</td>
<td>Practicum II: Introduction to Multicultural Issues</td>
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<td>CPSY 4220</td>
<td>Practicum III: Lifestyle Development</td>
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<td>CPSY 4230</td>
<td>Practicum IV: Theories of Personality</td>
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<td>CPSY 4240</td>
<td>Practicum V: Theories of Counseling and Behavioral Health Approaches</td>
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<td>Practicum VI: Professional Identity and Career Development</td>
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<td>CPSY 4300</td>
<td>Eval and Treat Juv Offender</td>
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<td>CPSY 4310</td>
<td>Ethical and Legal Issues</td>
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<td>Cognitive Assessment</td>
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<td>Cog Behavioral Interventions</td>
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<td>Psychopathology, Evaluation &amp; Treatment of the Adult Offender</td>
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<td>Sociocultural Issues in Forensic Psychology</td>
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<td>Personality Assessment: Self-Report</td>
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<td>CPSY 4370</td>
<td>Substance Abuse</td>
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<td>Group Interventions</td>
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<td>Career Counseling</td>
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<tr>
<td>CPSY 4545</td>
<td>Lifespan Development and the Cultural Context</td>
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**Elective Requirements**

Minimum of 6 credit hours

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<td>CPSY 4105</td>
<td>Psychlogy, Public Policy, and Advocacy</td>
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<td>CPSY 4106</td>
<td>Introduction to Animal Abuse Evaluation and Intervention</td>
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<td>CPSY 4107</td>
<td>Police Psychology and Violence Risk Assessment</td>
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<td>CPSY 4108</td>
<td>Topics in Forensics Psychology (Special Topics In Forensics)</td>
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<tr>
<td>CPSY 4109</td>
<td>Cold Case Review: Application of Forensic Investigative Principles</td>
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<td>CPSY 4321</td>
<td>Assessment Independent Study</td>
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<td>CPSY 4335</td>
<td>Introduction to Trial Consulting</td>
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<td>CPSY 4400</td>
<td>Personality Assessment: Projective</td>
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<td>CPSY 4410</td>
<td>Criminal Evaluations</td>
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<tr>
<td>CPSY 4420</td>
<td>Research in Forensic Psychology: Independent Study</td>
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</table>
Students are allowed to take some elective courses in other specialty areas at GSPP, including courses in Latinx psychology, military psychology, oncology psychology, substance use disorders, and infant and early childhood mental health. Students may also take electives from other traditional graduate departments at the university. Students taking elective courses outside the program should check with their advisor to be sure that the course will count toward the degree requirements.

Total Credits

90

Minimum number of credits required for the degree: 90

Non-coursework Requirements

• Field Placements: We require that students engage in direct service through their field placements, working with diverse populations and in diverse settings. A variety of field placement opportunities are available, including county probation, community health centers, correctional facilities, outpatient treatment agencies, medical examiner’s office, victim assistance/advocacy agencies, and juvenile assessment centers. Students also have the option of completing a field placement through our institute, DenverFirst (Forensic Institute for Research, Service, and Training). As an adjunct to their field placements, students are enrolled in practicum courses that provide added clinical support and foster development as professionals and practitioners.

• Clinical Competency Exam: Students will be required to pass an oral clinical competency examination in the spring of their second year. The oral exam is clinical in nature, and evaluates students on their mastery of the theoretical and conceptual underpinnings of forensic practice, as well as the technical and applied aspects of forensic practice, as captured by our MAFP competencies.

• Personal Therapy: The Master’s in Forensic Psychology program requires personal therapy for all students. Faculty believe that personal therapy is a vital component of clinical psychology training and growth, and that it is the professional responsibility of every clinician to identify, address, and work through personal issues that may have an impact on clinical interactions with clients. Students are required to complete a minimum of 10 sessions (45-50 minutes in length) with the same therapist by the end of their first year of the program. It is required that therapy be provided by a licensed psychologist, professional counselor, social worker, or other mental health worker under the supervision of a licensed professional. If you select a therapist not in this category, you must petition the Director of Forensic Studies for approval. Students will not be advanced to preliminary candidacy until the therapy requirement is met. Students must submit a therapy plan by November 1st of fall quarter. Students must complete this requirement by the summer of their first year. The student must petition the Director for an exception if therapy is not completed in this time frame.

• Work with Culturally Diverse Populations:

  • Forensic psychology practicum, Q and A training, Socio-Cultural Issues in Forensic Psychology
  • Written and oral clinical case presentation in forensic psychology practicum
  • Minimum of 40 contact hours working with a client or clients from culturally diverse population. Work must be under the supervision of a clinician who is skilled in working with the culturally diverse population and who guides the student to literature relevant to a greater understanding of the culture and the problems individuals in the group might encounter in the majority culture.

Optional Research

• Students can also enroll in a one credit elective, CPSY 4420 Research in Forensic Psychology: Independent Study, and engage in ongoing or novel research. Students have been able to present at local and national conferences and have published with faculty in law and psychology journals.

Master of Arts in International Disaster Psychology

Program requirements are designed to be completed in seven academic quarters over two years. The University of Denver is on a quarter system and students must attend fall, winter, spring, and summer quarters of their first year and fall, winter, and spring quarters of their second year.

Degree Requirements

Coursework Requirements

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<tr>
<th>Code</th>
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<td>CPSY 4500</td>
<td>International Disaster Psychology: Foundations</td>
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<td>CPSY 4501</td>
<td>Psychotherapeutic Models of Intervention</td>
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<td>Clinical Interviewing</td>
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CPSY 4505  Cross Cultural Analysis  3
CPSY 4509  Global Mental Health Systems  3
CPSY 4510  Preparation for International Internships: Intercultural Competence  3
CPSY 4512  Disaster Mental Health  3
CPSY 4515  Ethics  3
CPSY 4530  Program Evaluation  3
CPSY 4545  Lifespan Development and the Cultural Context  3
CPSY 4550  Seminar: Therapeutic Interventions (3 credits/quarter for 6 quarters=18 credit hours total)  3
CPSY 4556  Trauma Interventions from Cross-cultural Perspectives  3
CPSY 4557  Global Public Health  3
CPSY 4570  Crises Intervention  3
CPSY 4590  Psychology of Loss and Grief  3
CPSY 4595  International Disaster Psychology Internship  6
CPSY 4606  Gender-based Violence  3

Elective requirements

Students are allowed to take some elective courses in other specialty areas at GSPP, including courses in Latinx psychology, military psychology, oncology psychology, substance use disorders, and infant and early childhood mental health. Students may also take electives from other traditional graduate departments at the university. Students taking elective courses outside the program should check with their advisor to be sure that the course will count toward the degree requirements.

CPSY 4430  Career Counseling  3
CPSY 4563  Family Therapy  3
CPSY 4564  Advanced Spanish Language for Clinical Practice  2
CPSY 4566  From Triage to Justpeace  3
CPSY 4562  Public Policy and Advocacy  2
CPSY 4567  Field Placement Language Lab: Linguistic Building Blocks for Cultural Humility  1
CPSY 4569  Integrative Psychotherapy with Children, Adolescents and Parents in Crisis  3

Total Credits  90

Minimum number of credit required for the degree: 90

Non-coursework Requirements

- Community Based Field Placement: During fall, winter, and spring terms of both their first and second years, students are required to complete community field placements and supervision in the Denver area. A variety of field-placement sites are available, including local non-governmental and state agencies providing direct mental health care, case management, policy and grant writing, disaster planning and preparedness, and disaster relief services. Agencies serve diverse populations and age-groups, including refugee and low-SES individuals, many of whom have been affected by trauma and disaster. Students spend a minimum of ten hours a week at their placement.

- Trauma and Disaster Recovery Clinic (TDRC): During the fall, winter and spring terms of their first and second years, students are required to carry a client (individual, couple, family or group) in the TDRC. This clinical work is supervised in the small-group supervision seminar. Either in the first or second year of the program, students may request to participate in the small-group program evaluation seminar to fulfill this requirement.

- International Internship: During the summer between the first and second year of enrollment, students engage in an 8-week international internship, providing a rich opportunity to apply theory to practice in the global context. International internships are arranged by the program with non-governmental and governmental agencies whose missions focus on a variety of mental health and psychosocial issues relevant to the needs of individuals and communities affected by disaster and trauma. While the locations of our internships vary each summer, in recent years students have interned in Ghana, Liberia, Bosnia, Serbia, Croatia, Nepal, Egypt, Ethiopia, India, Panama and Belize.

- Each student is required to pass a competency exam prior to graduation from the program. This exam will be administered during the spring quarter of the second-year of matriculation.

Master of Arts in Sport & Performance Psychology

Program requirements are designed to be completed in six academic quarters over two years. The University of Denver (DU) requires that a student enroll in course work for at least six quarters. Students are required to attend at least 12 credit hours per quarter for six quarters (72 hours required for graduation), unless pre-approved for part-time status. The University of Denver is on a quarter system and students complete the program as a cohort, attending fall, winter, and spring quarters of both years.
# Degree Requirements

## Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CPSY 4010</td>
<td>Introduction to Statistics</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4050</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4652</td>
<td>Theoretical Aspects of Sport and Performance Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4662</td>
<td>Foundation of Counseling Theories</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4669</td>
<td>Consulting Methods &amp; Practices</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4671</td>
<td>Theories of Performance Excellence</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4672</td>
<td>Counseling Methods &amp; Practices</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4674</td>
<td>Clinical Issues: Interviewing and Diagnosis</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4680</td>
<td>Sport and Performance Psychology Practicum (3 credits/quarter for 3 quarters=9 credit hours total)</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4681</td>
<td>Multicultural Issues</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4682</td>
<td>Ethical and Legal Issues</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4683</td>
<td>Group Interventions</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4684</td>
<td>Team and Organizational Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4685</td>
<td>Human Growth &amp; Development</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4686</td>
<td>Practicum in Sport and Performance Psychology: Professional Practice (3 credits/quarter for 3 quarters=9 credit hours total)</td>
<td>3</td>
</tr>
<tr>
<td>CPSY 4690</td>
<td>Sport and Performance Psychology Interventions</td>
<td>3</td>
</tr>
</tbody>
</table>

## Elective Requirements

Students are allowed to take some elective courses in other specialty areas at GSPP, including courses in Latinx psychology, military psychology, oncology psychology, substance use disorders, and infant and early childhood mental health. Students may also take electives from other traditional graduate departments at the university. Students taking elective courses outside the program should check with their advisor to be sure that the course will count toward the degree requirements.

## Minimum number of credits required for degree: 72 hours

## Non-coursework Requirements

- Practicum: It is important to put theory into practice; therefore, the practicum experience is critical to the development of a competent sport and performance consultant. In addition to integrating theory into actual technique, the practicum affords students the opportunity to network within the field. GSPP is committed to practical training and there are many exciting opportunities and experiences available at the University of Denver as well as in the metro area. Sites include, but are not limited to: private high school academies, public high school athletic departments, club sports programs, collegiate athletic departments, the DU Lamont School of Music, private practice, coaching, local exercise and health related industries, Boys and Girls Clubs of Metro Denver, Vail Ski and Snowboard Academy, and Craig Hospital. Other practical experiences in the program are available as formal internships during the year and in the summer. Sites around the nation that current/former students have obtained internships at include: the US Olympic Training Center, Vail Ski & Snowboard Academy, Evert Tennis Academy, and IMG Academies.

- Master’s project: The Master’s Project requirement is designed to serve as a capstone achievement demonstrating students’ comprehensive knowledge of SPP theories, concepts, applications, and professional and ethical guidelines. Consistent with our practitioner-scholar model and goal of training competent SPP consultants, the Master’s Project highlights reflective practice. In conjunction with the field placements students are completing through CPEX and receiving supervision for through Practicum, students will engage in (at a minimum) weekly reflective journal writing incorporating the principles from Anderson, Knowles, and Gilbourne (2004) and Crokeley, Hanton, Miles, and Niven (2010). As part of their reflective practice, students will video (or audio when video is not an option) record their work as often as possible and review the recordings. Ongoing progress will be monitored through students’ participation in Practicum discussions, and therefore it is required that students are regularly discussing their reflective practice during Practicum and small group discussions. The final Master’s Project will be submitted and reviewed by a MASPP faculty member and an outside supervisor when available. Passing the Master’s Project will be dependent upon the thoroughness (e.g., minimum of weekly reflections, regular recording of sessions and review of recordings) and quality (e.g., depth of reflections, quality of writing) of the reflective practice.

- Diversity Immersion Project: This project is designed to be a fully immersive and consistent experience within a diverse population. The Diversity Immersion Project is self-referential, meaning that what one student considers a diverse population given their own background and experience may not be considered diverse to another student. Students are encouraged to stretch themselves outside their space of comfort and truly immerse themselves in a meaningful experience that expands their perspective.
Master of Arts in Sport Coaching

The Graduate School of Professional Psychology, along with most graduate courses at DU, use the quarter system. Courses in the online program are offered year-round in each of the four quarters: fall, winter, spring and summmer. We normally offer two required courses per quarter, along with one elective. Most courses are four credit hours, while electives are two credit hours.

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CPSY 4700</td>
<td>Organization and Administration of Sport</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4705</td>
<td>Sociocultural Aspects of Sport Coaching</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4710</td>
<td>Motor Learning and Sport Pedagogy</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4715</td>
<td>Strength, Conditioning, and Injury Prevention Program Design</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4720</td>
<td>Psychology of Athletic Performance</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4725</td>
<td>Philosophy and Ethics of Sport Coaching</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4730</td>
<td>Biomechanics of Athletic Performance</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4735</td>
<td>Understanding Sport Research</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4740</td>
<td>Practicum 1 in Sport Coaching (Course is required twice for a total of 2 credit hours to meet requirement.)</td>
<td>1</td>
</tr>
<tr>
<td>CPSY 4745</td>
<td>Practicum 2 in Sport Coaching (Course is required twice for a total of 2 credit hours to meet requirement.)</td>
<td>1</td>
</tr>
<tr>
<td>CPSY 4750</td>
<td>Sport Coaching Capstone (Minimum of 2 credit hours required, maximum of 4 credit hours count towards graduation; may be taken in 1 credit increments.)</td>
<td>2-4</td>
</tr>
<tr>
<td>CPSY 4991</td>
<td>Independent Study</td>
<td>1-5</td>
</tr>
</tbody>
</table>

Elective requirements  
Minimum of 8 credits and must be approved

Total Credits

46

1 Electives will be offered based upon student interest and program growth. We offer the following electives on a consistent basis: Athletic & Performance Nutrition, Exercise Physiology, Kinesiology, Sport Technology for Coaches, Social-Psychology of the Body, Health, and Performance, and Tactical Strength and Conditioning. We encourage K-12 teacher-coaches to identify possible electives offered by the Morgridge College of Education. Independent study and directed research may also be completed to meet the requirement for approved electives.

Full-time faculty advise all students on their coursework and degree plan. Students are encouraged to consider how to individualize their coursework to meet their personal desires and professional needs, while completing the degree in a timely manner.

Minimum number of credits required for the degree: 46

Non-Coursework Requirements

• Practicum in Coaching: The practicum in coaching course is intended to enhance and deepen students’ understanding of coaching in a real life coaching context. Students must practice coaching in the practicum, not only or mainly observing. Students must complete a minimum of four credit hours of practicum over four quarters. Therefore, students will typically enroll in one hour of practicum over four quarters to meet this requirement. Students may continue to enroll in practicum, but only four hours will be counted towards meeting the degree requirements. During the practicum, students must complete a minimum of 50 hours coaching, and will also complete additional assignments online. Students may complete the practicum in a setting of their choosing, and it is acceptable for coaches to complete the practicum in a position in which they are currently employed. That is, it is acceptable to complete the practicum in coaching for a position already being performed (i.e., high school or college level coaching or performance training center). Students may also select a site through a Sport Coaching program affiliate such as a public or private high school, club, performance training center, intercollegiate athletic department or professional sport team. All practicum sites must be approved by the Program Director.

The Sport Coaching program also offers a dual-instructor model for its Practicum course. This model is the only such of its kind in the world. A Master of Arts in Sport Coaching Professor will teach the online course components, while an additional instructor, a mental skills consultant, will advise students through the use of distance technologies, or face-to-face where possible. The mental skills consultant will be a DU alumni from our renowned Sport and Performance Psychology program. Prospective students should consult with our faculty or Program Coordinator for additional information on this unique educational opportunity.

• Capstone: Capstone literally means “a finishing stone or a structure.” Similarly, students will identify and then complete a project that demonstrates the student’s initiative and excellence. Students must wait to enroll in capstone until they have completed the Understanding Sport and Coaching Research course and 23 credits towards the Sport Coaching degree. Projects need to be approved by the Program Director by the end of the first week of the Capstone course. Students are encouraged to discuss a suitable project with course instructors early in the program. In most cases, projects will be completed individually, but a collaborative small group
• Work with Culturally Diverse Populations: Students will complete a minimum of 20 hours of coaching or coaching related duties with culturally diverse populations. Students can complete this requirement in any one practicum course or throughout the practicum courses.

GRADUATE CERTIFICATE IN STRENGTH & CONDITIONING AND FITNESS COACHING (ONLINE)

This proposed Graduate certificate program in Strength and Conditioning and Fitness Coaching (S&C) will meet students’ needs to obtain specialized education and training in strength and conditioning coaching, training, performance, and fitness settings. Building upon the success of DU’s Master of Arts in Sport Coaching program, this new graduate certificate will also be offered online and provides a shorter, focused course of study specific to S&C. To meet the growing demand for qualified practitioners in S&C-Fitness settings, this graduate certificate will meet the needs of students with varying undergraduate degrees, some likely with existing Masters degrees in non-sport/exercise related fields, and those looking to make a career change or supplement their existing knowledge and skills.

Required Curriculum (24 credits):

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSY 4710</td>
<td>Motor Learning and Sport Pedagogy</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4715</td>
<td>Strength, Conditioning, and Injury Prevention Program Design</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4720</td>
<td>Psychology of Athletic Performance</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4730</td>
<td>Biomechanics of Athletic Performance</td>
<td>4</td>
</tr>
<tr>
<td>CPSY 4801</td>
<td>Evidence-Informed Strength and Conditioning and Fitness Coaching 1</td>
<td>1</td>
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<tr>
<td>CPSY 4802</td>
<td>Evidence-Informed Strength and Conditioning and Fitness Coaching 2</td>
<td>1</td>
</tr>
<tr>
<td>CPSY 4803</td>
<td>Evidence-Informed Strength and Conditioning and Fitness Coaching 3</td>
<td>1</td>
</tr>
<tr>
<td>CPSY 4804</td>
<td>Evidence-Informed Strength and Conditioning and Fitness Coaching 4</td>
<td>1</td>
</tr>
<tr>
<td>CPSY 4736</td>
<td>Practicum in Strength and Conditioning and Fitness Coaching 1</td>
<td>2</td>
</tr>
</tbody>
</table>

Two credits of electives from below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSY 4635</td>
<td>Athletic and Performance Nutrition</td>
<td></td>
</tr>
<tr>
<td>CPSY 4610</td>
<td>Exercise Physiology</td>
<td></td>
</tr>
<tr>
<td>CPSY 4620</td>
<td>Kinesiology</td>
<td></td>
</tr>
<tr>
<td>CPSY 4722</td>
<td>Social-Psychology of the Body, Health, and Performance</td>
<td></td>
</tr>
<tr>
<td>CPSY 4712</td>
<td>Tactical Strength and Conditioning Coaching</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 24

1 CPSY 4736 Practicum in Strength and Conditioning and Fitness Coaching must be taken twice over the course of two separate quarters.

Non-Coursework Requirements

• Students must possess, or take, the National Strength and Conditioning Association’s (NSCA) Certified Strength and Conditioning Specialist or Tactical Strength and Conditioning Facilitator certification exam, or a similar certification with prior approval from the program director; students do not have to pass the certification to complete the S&C certificate requirements.

• While enrolled in the program, students must attend at least one S&C clinic, conference, or course (such as: DU sponsored S&C Clinic; NSCA’s Fundamental Lifts Course; or NSCA’s Coaches’ or National Conference), preferably through the NSCA, with prior approval from Program Director.

• Students must submit proof of CPR/First Aid certification, or complete the requirement within 3 months upon entering the program.

• Students must consult with mental skills consultant or S&C coach-mentor for two quarters, averaging about 1 hour per week for 10 weeks (consultant or mentor provided by the program).

• Students must maintain professional standards for strength and conditioning coaches such as those set forth by the NSCA Standards and Guidelines for Strength and Conditioning Professionals document.

Courses

CPSY 4000 Issues in Forensic Psychology I (2 Credits)

Overview of psychological theory, research and practice as used within the legal and criminal justice system; differences between forensic and clinical assessments and interventions; special topic areas (e.g. trauma, abuse, domestic violence, etc.); ethical issues.

CPSY 4010 Introduction to Statistics (3 Credits)

General statistical principles and techniques and their application to psychological and psycho-legal issues. Students will develop computer analytic skills to assist in answering professionally relevant questions.
CPSY 4020 Psychopathology and Diagnosis (3 Credits)
An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

CPSY 4030 Clinical Interviewing and Theories of Psychotherapy (3 Credits)
Theoretical and practical issues related to clinical interviewing within forensic and non-forensic settings; exploration of the process of psychotherapy from various theoretical perspectives.

CPSY 4040 Issues in Forensic Psychology II (3 Credits)
Further exploration of the relationship between the legal system and psychological theory in areas of criminal law (e.g. standards of legal competency, insanity defense, prediction of dangerousness), civil law (civil commitment, personal injury) and family law (e.g. child custody determinations, juvenile issues).

CPSY 4050 Research Methods (3 Credits)
Examination of the research process, including the formulation of questions and utilization of various methodologies to answer hypotheses.

CPSY 4060 Biological Bases of Criminal Behavior: Adult Psychopathology (3 Credits)
Students will develop an understanding of the biopsychosocial vulnerabilities to crime. This course will emphasize the biological, psychological, social, and environmental causes and correlates of violent and criminal behavior. Violence and criminal behavior will be viewed as an evolving construct that may begin in childhood and endure through adolescence and into adulthood. Contemporary issues including terrorism, racial profiling, and gender debates will also be highlighted. Students will be provided with the tools necessary to determine future directions for policy, prevention, and treatment that may help ameliorate the causes and outcomes of crime and violence.

CPSY 4070 Trauma & Crisis Intervention (3 Credits)
Theory, techniques and research relating to various types of trauma (e.g. childhood abuse, combat veterans, natural disaster survivors); crisis intervention techniques as a system of managing trauma related difficulties.

CPSY 4080 Issues in Forensic Psychology III (3 Credits)
Relationship and application of psychological principles and practice to varied law enforcement and correctional functions; assessment of violence in the workplace, trauma debriefing, hostage negotiation. Students will become prepared to assume the role of an expert witness in a variety of psycho-legal settings.

CPSY 4090 Issues in Measurement (3 Credits)
Critical assessment of various psychological tests, with an emphasis on validity, reliability and issues of standardization.

CPSY 4100 Mental Health Law (3 Credits)
The goal of this introductory Mental Health Law course is to provide students with a general understanding of the laws impacting the field of mental health, including those involving professional responsibility and ethics; competency issues; court-ordered evaluations and testimony; family law issues; the rights of differently-abled and historically marginalized persons; and defenses based on mental state. Course objectives include assisting students in locating, understanding, and interpreting laws relevant to the mental health practitioner; recognizing potential legal and ethical dilemmas faced in forensic practice; and applying the principles of mental health law to offer the highest standard of care in their clinical practices.

CPSY 4105 Psychology, Public Policy, and Advocacy (2,3 Credits)
This course is designed to provide students in clinical training with an overview of the political advocacy process in the United States, its potential impact on the practice of mental health, and opportunities for involvement in public policy discourse.

CPSY 4106 Introduction to Animal Abuse Evaluation and Intervention (2 Credits)
This graduate-level course will introduce the student to the concepts of animal abuse at the individual, clinical, and societal levels. The course covers animal welfare and cruelty issues; the assessment of abused animals; the populations (individuals and groups of all ages) and settings where animal abuse is most prevalent; the evaluation, sentencing, and treatment of perpetrators of violence toward animals; and the link between cruelty to animals and humans. Students will have the opportunity to tailor some assignments to their specific interest areas. The instructor will invite guest lecturers, such as judges and probation officers, with expertise in topics such as sentencing, misdemeanors vs. felonies related to animal abuse, etc.

CPSY 4107 Police Psychology and Violence Risk Assessment (2 Credits)
This course is designed to give students an introduction to the field of police psychology and an overview of violence risk assessment principles.

CPSY 4108 Topics in Forensics Psychology (1 Credit)
This course is designed to address specialized topics in forensic psychology that are not adequately covered in existing required and elective courses. Topics are likely to center around professional development, such as professional identity, presentation, and communication. Topics may also be more specialized, depending on the expertise of the postdoctoral fellow or special topics of interest within MAFP. Such topics might include psychology and law enforcement, psychology and race, immigration and refugee populations, neuropsychology in corrections, juvenile justice issues, outpatient competency restoration, and other topics.
CPSY 4109 Cold Case Review: Application of Forensic Investigative Principles (2 Credits)
This course was developed for mental health trainees so they can apply established investigative technique and methodology in cold case investigations. When investigators no longer have new leads on a case, the investigation is said to have gone “cold.” Some of these cases can benefit from the review of the forensic case files and evidence with a new perspective. This is the goal of the cold case course. This course will aid the activity of a recognized cold case team. Topics to be discussed in lecture and applied in the on-site experience include critical forensic evidence review and case reconstruction. This course is intended to provide our collaborators with information that could assist in organizing, investigating, prosecuting, and bringing these cases to a successful resolution. The course features one of the nation’s leading experts in cold case investigation. Topics will include behavior analysis of the crime scenes and how to conduct interviews in a cold case investigation. Contemporary issues including wrongful conviction, DNA testing, and emerging forensic technologies will also be highlighted.

CPSY 4110 Family Systems and Therapy (3 Credits)
This course examines various approaches to family systems, including an overview of systems theory, plus ideas that have been labelled structural, strategic, and Bowenian. Goffman’s performance theory will also be emphasized, especially as it applies to clinical work. Students will practice rethinking interpersonal conflicts, and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

CPSY 4120 Psychology of Performing Arts (3 Credits)
Students gain an understanding of the psychological factors involved in the performing arts, including theatre, acting, dancing, music, and circus arts. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

CPSY 4130 Organizational Leadership: Center for Performance Excellence (3 Credits)
This course is designed to familiarize CPEX Officers with approaches to effective leadership while engaging in leadership roles within the Center for Performance Excellence (CPEX). Students are exposed to successful leadership strategies from the business world and have the opportunity to implement these strategies into their roles as leaders within CPEX. This course is intended for CPEX Officers only.

CPSY 4140 Exercise Psychology (3 Credits)
In this course, students explore the theory, research, and practice related to psychological aspects of exercise behavior. Students explore research and intervention models in exercise psychology and be able to integrate this knowledge in their practice. Major topics include health behavior change, the impact of exercise on mental health, and exercise motivation and adherence.

CPSY 4150 Psychology of Performance in Business (3 Credits)
Students gain an understanding of the psychological factors involved in the business world. Factors are examined at the individual, team, and organizational level. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

CPSY 4160 Psychology of High Risk Occupations (3 Credits)
In this course, students gain an understanding of the psychological factors involved in high risk occupations. High risk occupations include individuals whose profession directly involves saving lives or placing their own life at risk. Students learn about appropriate psychological interventions for these populations to enhance performance and resilience in the high stress situations required by their jobs. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

CPSY 4200 Practicum I: Professional Orientation (2 Credits)
In this first quarter, of a three quarter practicum series, we will discuss issues that have bearing on your work with forensic populations, the central features of which include adapting to the culture of professional psychology by exploring relationships and by engaging in conflict resolution. By the end of the quarter, you will be well versed in the ethical guidelines, standards, and dilemmas facing you as forensic trainees. Also, you will be knowledgeable about issues related to stress and burnout in this field, including topics such as suicide and physical assault risks, and working within a system. Importantly, you will develop the skills needed to best utilize feedback and provide constructive feedback to others.

CPSY 4210 Practicum II: Introduction to Multicultural Issues (1-6 Credits)

CPSY 4220 Practicum III: Lifestyle Development (3 Credits)

CPSY 4230 Practicum IV: Theories of Personality (3 Credits)

CPSY 4240 Practicum V: Theories of Counseling and Behavioral Health Approaches (2-3 Credits)

CPSY 4250 Practicum VI: Professional Identity and Career Development (3 Credits)

CPSY 4260 Psychophysiology and Biofeedback Lab (2 Credits)
This course is designed to be both an introduction to psychophysiology and biofeedback and to its applications, particularly to sport and performance. The principles of psychophysiology, the biofeedback instruments used, the areas of application, the techniques commonly used in conjunction with biofeedback, the diverse field of biofeedback and applied psychophysiology, and the latest uses for optimal self-regulation are covered. The course involves use of biofeedback instrumentation as well as classroom participation and readings and a self-regulation project.

CPSY 4300 Eval and Treat Juv Offender (3 Credits)
Theories of juvenile delinquency and studies concerned with the etiology, development and prediction of such; review of the various psychological treatment options utilization with juvenile offenders; consideration of the legal responses to juvenile crime and the role of the psychologist within the juvenile justice system.
CPSY 4310 Ethical and Legal Issues (3 Credits)
Discussion of ethical and legal conflicts and dilemmas as a psychologist within the legal system, and consideration of ways to resolve such conflicts, including standards applicable to the science and practice of forensic psychology and the role of the expert witness.

CPSY 4320 Cognitive Assessment (3 Credits)
Students learn to administer, score, and interpret the WAIS. There is some exposure to other intelligence tests as well. Students understand diagnostic validity (Bayes' Theorem), how to identify interpretive material, and how to think ideographically about nomothetic data. Through discussions of legal cases, students learn numerous forensic issues to which cognitive assessment is applicable, including for example testamentary capacity, competence to waive Miranda rights, and ability to enter a contract.

CPSY 4321 Assessment Independent Study (1 Credit)

CPSY 4330 Cog Behavioral Interventions (3 Credits)
Theory, techniques and research relating to cognitive-behavioral therapy, focusing on assessment, case conceptualization and intervention approaches within a forensic setting.

CPSY 4335 Introduction to Trial Consulting (3 Credits)
The art of trial consulting is the skill to meld multiple theories, methodologies, and concepts into a working and research-based strategy. This skill is very reminiscent to the art and practice of therapy. As with any practice, be it law, psychology or trial consulting, a solid base is necessary. This course is an introduction into the theory and application of trial consulting techniques in the criminal and civil arena. This overview addresses the key elements in the trial consulting including and introduction into the psycho-legal perspective, the application of research methodologies utilized by trial consultants, and specific interdisciplinary topics within trial consulting. These specific topics include concepts like the theory of persuasion, jury selection, expert testimony, and neuropsychology.

CPSY 4340 Psychopathology, Evaluation & Treatment of the Adult Offender (3 Credits)
Psychological theories related to etiology, development and prediction of violent crime; types of intervention possible within in the criminal justice setting. Topic areas may include special offender populations (e.g. sexual offender, offenders with developmental disabilities or those classified as mentally retarded).

CPSY 4350 Sociocultural Issues in Forensic Psychology (3 Credits)
Explores the impact of identity dynamics, including privilege and oppression, in clinical forensic practice.

CPSY 4360 Personality Assessment: Self-Report (3 Credits)
Administration and interpretation of objective personality instruments and discussion of their utilization within a forensic setting; use of the MMPI-2 and MCMI.

CPSY 4370 Substance Abuse (3 Credits)
Substance use and abuse, with focus on symptom formation, classification, causes socio-cultural factors and treatment modalities; various theoretical approaches to the etiology and treatment of substance abuse; resultant psychological and physiological effects of various drugs.

CPSY 4380 Group Interventions (3 Credits)
Interpersonal dynamics of small groups and larger organizational settings; understanding of group processes (such as group formulations and development, group conflict, and group resistance); skills enabling positive group intervention.

CPSY 4400 Personality Assessment: Projective (3 Credits)
Students learn to administer and interpret the Thematic Apperception Test and Early Memories. These are construed as behavior samples under conditions where the occasioning environment is reproducible, so that the functional relationship between the behavior and the stimulus can be understood carefully. Students learn to write reports that integrate several sources of information to answer referral questions.

CPSY 4410 Criminal Evaluations (3 Credits)
Incidence and prevalence of criminal violence; risk assessment within the context of prediction, supervision and intervention in both a correctional and mental health setting. Special topics will include assessment of various legal competencies, the insanity of defense and assessment of dangerousness.

CPSY 4420 Research in Forensic Psychology: Independent Study (1 Credit)

CPSY 4430 Career Counseling (3 Credits)
This course is designed to teach the theoretical framework of career counseling, and introduce the basic counseling tools used in the career counseling process. The course presents major theories of career development, introduce sources of occupational information, and introduce principles of assessment in career counseling. The impact of diversity and difference on career development and choices, as well as the career counseling process, is also explored. Topics include: the role of interests, skills, values and personality in the career development process; social, cultural and family influences on the career development process; and career development across the lifespan.

CPSY 4500 International Disaster Psychology: Foundations (3 Credits)
This is the first course in a three course sequence designed to provide the entering M.A. student with a fluent understanding of the area of International Disaster Psychology. The course will cover the evolution of IDP from its beginnings to its present status. It will review the different innovations in the area. Potential subject areas include the treatment of refugees, torture victims, child soldiers, internally displaced persons and complex Post Traumatic Stress Disorder.
CPSY 4501 Psychotherapeutic Models of Intervention (3 Credits)
Major psychological models of intervention are the focus of this course. The major theoretical models of personality development, psychopathology and theories of intervention are explored including psychodynamic, family systems, behaviorism, cognitive-behavioral approaches and others.

CPSY 4502 Psychotherapy with Children and Families (3 Credits)
This course provides an understanding of various psychotherapeutic approaches to children and families. The perspectives and techniques of play therapy, behavioral interventions, cognitive-behavioral therapy and integrative work with parents and families are explored.

CPSY 4503 Clinical Interviewing (3 Credits)
Theoretical and practical issues related to clinical interviewing in international and national disaster settings.

CPSY 4505 Cross Cultural Analysis (3 Credits)
The first course in a two part series designed to provide students with an understanding of cross cultural analysis. The course will provide an understanding of diverse cultures. Students will review historical literature in the area of cross cultural understanding. Students will also be taught methodologies for conceptualizing and understanding diverse cultures and cross cultural practices in psychology.

CPSY 4509 Global Mental Health Systems (3 Credits)
This course will focus on the dynamics of mental health systems in developing countries.

CPSY 4510 Preparation for International Internships: Intercultural Competence (3 Credits)
This is the second course in the three part introductory sequence. Students will continue to learn about the field of IDP and future trends for the field. The course will address specific subject areas within the field in order to provide students with the working knowledge needed to continue to pursue advanced training in the area. Potential subject areas will include treatment of refugees, torture victims and working in post conflict areas across the globe.

CPSY 4511 Humanitarian and International Refugee Law (3 Credits)
This course surveys the central rules, complexities and debates of international refugee law, which is both a specialized field of its own and also an intersection of human rights law, migration law, and humanitarian policy. We focus extensively on how courts and the United Nations have attempted to interpret the various refugee definitions found in human rights treaties, and introduce rules of international law governing how refugees should be treated. We also examine the obstacles refugees face today in enjoying their rights.

CPSY 4512 Disaster Mental Health (3 Credits)
This course will explore disaster response systems and their mental health components.

CPSY 4513 International Disaster Psychology Case Conference (2 Credits)
This class meets to discuss case theory, formulation and psychotherapy practice with persons affected by disaster and/or trauma.

CPSY 4515 Ethics (3 Credits)
The course is designed to educate students about the ethical guidelines in psychology applicable to the field of IDP. Students will learn the APA Ethics Code as well as other more specialized ethics guidelines applicable to the field of IDP. Students will be expected to identify, address and resolve potential ethical conflicts. Potential future trends in the development of ethics in the area of IDP will be addressed.

CPSY 4530 Program Evaluation (3 Credits)
Theory and techniques for developing management information and assessment systems for human service programs. Organization evaluation of international organizations will be discussed. Psychosocial interventions will be highlighted.

CPSY 4545 Lifespan Development and the Cultural Context (3 Credits)

CPSY 4550 Seminar: Therapeutic Interventions (3 Credits)
Small group seminar is a small group class designed to provide students a discussion forum to share and integrate their experiences in the IDP Master’s Program. Students are expected to address and share their field placement experiences with other students in their seminar. The seminar will also provide instruction on the implementation of theory in IDP to practice in multiple settings. Faculty will provide supervision for the students’ field placements.

CPSY 4555 Trauma & Child Development (3 Credits)
The course reviews the literature regarding childhood trauma and its implications for child and adult development. Models for the conceptualization of trauma and for treatment of childhood trauma are discussed. Cross-cultural theories of childhood development and trauma are emphasized.

CPSY 4556 Trauma Interventions from Cross-cultural Perspectives (3 Credits)
This course, taught by a different visiting professor each year, will take an in-depth look at trauma and the development of mental health systems and interventions internationally.

CPSY 4557 Global Public Health (3 Credits)
This course will provide an overview to the many issues concerning international public health today. Topics include basic epidemiology, malaria, tuberculosis, HIV/AIDS, diarrheal diseases, injury prevention, and environmental health. Specific attention will be given to examining the intersection between disease prevention and disaster mitigation.

CPSY 4558 Practical Apps Clinical Theory (1 Credit)
This course enables first year Master of Arts in International Disaster Psychology (MAIDP) students to explore the application of coursework in clinical psychology to practice in the field. Articles and case examples that apply ethics, developmental theory, psychotherapeutic models, cross cultural analysis and group interventions are discussed.
CPSY 4560 Humanitarian Law of Armed Conf (3,5 Credits)
This course is a theoretical and practical introduction to international humanitarian law (IHL). IHL is known by many other names such as “humanitarian law,” “law of conflict,” and “laws of war.” All these terms refer to the rules regarding the treatment of civilians and non-combatants. These “rules” are especially important to know if you eventually work for an IO or NGO that finds itself in areas of armed conflict. Cross listed with INTS 4935.

CPSY 4562 Public Policy and Advocacy (2 Credits)
This course focuses on mental health policy and advocacy in the United States and in countries around the world. Students will learn about the World Health Organization policies on mental health and substance abuse and issues of mental-health stigma globally.

CPSY 4563 Family Therapy (3 Credits)
This course examines various approaches to family systems, including an overview of systems theory, plus ideas that have been labelled structural, strategic, and Bowenian. Goffman’s performance theory will also be emphasized, especially as it applies to clinical work. Students will practice rethinking interpersonal conflicts, and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

CPSY 4564 Advanced Spanish Language for Clinical Practice (2 Credits)
The purpose of this course is to help students with intermediate to advanced competency in Spanish to develop their clinical linguistic skills in order to better meet the mental health needs of the Latinx population in the United States, and, in the case of those doing international work, in Latin America. Students will be required to take a Spanish proficiency exam, prior to taking the course. The course will focus on developing Spanish abilities in the following areas: 1) building rapport and demonstrating basic helping skills, 2) explaining the purpose and process of therapy/evaluation, 3) conducting diagnostic interviews and intakes, 4) providing psychoeducation about different diagnoses and mental health problems, 5) conducting crisis assessments, and 6) providing skills-based treatments.

CPSY 4565 Group Dynamics of Organizations (3 Credits)
A comprehensive review of the literature regarding the understanding of systems and organizational structure and dynamics. Methods of assessment and interventions in organizational structure will be presented. Cross-cultural implications will also be addressed.

CPSY 4566 From Triage to Justpeace (3 Credits)
This course examines the inter-disciplinary continuum of integrated work that responds initially to natural and human-made disaster, but then leads to coordinated relief and development projects, and eventually seeks longer-term justpeace. Students learn how normative "regimes" or changed behavior are built and sustained by societal, state, and global actors. Students apply critical interview skills among professionals of diverse disciplines, and in particular, meet the range of development organizations headquartered in Colorado.

CPSY 4567 Field Placement Language Lab: Linguistic Building Blocks for Cultural Humility (1 Credit)
The purpose of this course is to provide IDP students who are preparing for their summer placement with the basic building blocks of the language they will be working in. It is not expected that students would be able to develop proficiency in the language, but rather through directed study, would develop the ability to greet individuals, follow behavioral norms, ask questions, and show cultural humility through a respect for the linguistic foundations of their host country. Students are provided with guidance in setting language development goals, finding learning materials, connecting with a native speaker in the community, and managing their learning process.

CPSY 4569 Integrative Psychotherapy with Children, Adolescents and Parents in Crisis (2 Credits)

CPSY 4570 Crises Intervention (3 Credits)
This course will deal with the clinical approaches to handling psycho-social crises.

CPSY 4580 Psychodynamic Theory (3 Credits)
Traditional and modern theories of psychodynamic concepts will be presented. Students are instructed on the use of such theories as a tool to structure interventions in their field work.

CPSY 4585 Family Systems (3 Credits)
A comprehensive review of family therapy concepts and treatment theories. A review of the applicable literature of family therapy is provided with an emphasis on cross-cultural models and interventions.

CPSY 4590 Psychology of Loss and Grief (3 Credits)
A review of the theory of loss and grief. The course reviews cultural understandings of loss and grief as seen following disaster and conflict. Treatment modalities of loss and grief are also presented.

CPSY 4591 Supervision Group - IDP (1 Credit)
This class is an opportunity for students in field-placements to receive additional supervision for their field-placement work. Students present and receive supervisory consultation about their work in these settings.

CPSY 4595 International Disaster Psychology Internship (6 Credits)
Students will spend one quarter in various international locations working in full time internships with international nonprofit organizations applying the principles and knowledge obtained during their study in the IDP program. Students will work under faculty and professional supervision.
CPSY 4600 Community Psychology in an International Setting: South Africa (5 Credits)
Community Psychology in an International Setting: South Africa combines pre-departure academic study at the University of Denver (DU) with service learning field placements in the Republic of South Africa (RSA). The course requires attendance at four classroom sessions prior to departure, full participation in a field placement while in RSA, and a re-entry meeting upon our return. Overall, the fundamental focus will be on community psychology in RSA - salient issues, challenges, resources, and success in post-Apartheid South Africa. Community psychology both shapes and reflects change. Students will learn about how various historical and current policies in RSA have shaped (and disenfranchised) various communities throughout the country. Field placements will prioritize community psychology issues inherent in the organizations, people, and settings of historically disadvantaged black communities in South Africa. Secondarily, academic topics will include the history of RSA (emphasizing pre- and post-Apartheid time periods), current challenges in RSA (ethnicity, immigration, HIV/AIDS, increased crime rate), and cultural aspects of RSA. Pre-departure classes will also focus on the pragmatics of the trip, team-building, and exploring the goals of international service learning.

CPSY 4601 Psychology and Race in an International Setting: South Africa (5 Credits)
Psychology and Race in an International Setting: South Africa combines pre-departure academic study at the University of Denver (DU) with service learning field placements in the Republic of South Africa (RSA). The course requires attendance at four classroom sessions prior to departure, full participation in a field placement while in RSA, and a re-entry meeting upon our return. Overall, the fundamental focus will be on race and psychology in RSA – salient issues, challenges, resources, and successes in post-Apartheid South Africa. Race both shapes and reflects change. Students will learn about how various racially-based historical and current policies in RSA have shaped (and disenfranchised) various communities throughout the country. Field placements will prioritize community psychology issues inherent in the organizations, people, and settings of historically disadvantaged black communities in South Africa. Secondarily, academic topics will include the history of RSA (emphasizing pre- and post-Apartheid time periods), current challenges in RSA (ethnicity, immigration, HIV/AIDS, increased crime rate), and cultural aspects of RSA. Pre-departure classes will also focus on the pragmatics of the trip, team-building, and exploring the goals of international service learning.

CPSY 4605 Psychotherapy Interventions (3 Credits)
This course will survey different theoretical models of psychotherapy with an emphasis on specific intervention approaches.

CPSY 4606 Gender-based Violence (3 Credits)
Gender-based Violence will cover issues as they relate cross-culturally. Special attention will be directed towards descriptions of programs approaching these issues and the challenges of designing and implementing such programs in various cultural environments.

CPSY 4610 Exercise Physiology (2 Credits)
This course offers an advanced study of selected areas in physiology of sport and exercise. The applied perspective emphasizes understanding the principles in designing effective conditioning programs for performance, fitness, and health. Empirically valid principles of training for muscular fitness (e.g., strength, power, speed) and energy fitness (i.e., aerobic and anaerobic) are explored. Additionally, environmental influences (e.g., altitude), lifestyle choices (e.g., nutrition), and selected developmental considerations (e.g., as related to gender differences) are discussed. Applications to sport and performance psychology consulting in sport, performing arts, and high-risk professions complement the course content.

CPSY 4615 The Elite Athlete Brain (3 Credits)
The primary goal of this course is to provide students with an understanding of the expert’s brain from sport and performance literature. The course will review landmark and recent publications examining expert-novice contrasts, and those of athlete-non athlete comparisons. Students will review literature on training interventions to accelerate the development of expertise and learn to evaluate the validity of scientific claims of related consumer products. Students will gain a basic understanding of where of state in science in understanding sport related concussions, including diagnostic tools, recovery, and prevention.

CPSY 4620 Kinesiology (2 Credits)
This course is an in-depth exploration of selected areas of kinesiology as a discipline and a profession focusing on human movement. Based on interdisciplinary theoretical and empirical perspectives, the explored areas include: (a) functional anatomy as related to adaptations to training; (b) biomechanics; (c) neurophysiological processes involved in motor learning and motor control; and (d) other relevant biophysical processes (as related to talent selection and development, physiological adaptations to training, etc.). In addition, this course surveys career opportunities in academic study and clinical practice in various areas of sport, fitness, exercise, and physical education.

CPSY 4630 Adept, Professional, Supervisor and Leader (2 Credits)
This course addresses the multiple roles of sport and performance psychology (SPP) consultants from a developmental perspective (i.e., education and training, early years in the profession, and full professional maturity). In-depth examinations of the consultant as an expert, person, performer, and self-regulator are grounded in the SPP literature and theoretical accomplishments in related fields (e.g., counseling psychology). Additionally, the acquisition of fundamental knowledge, skills, and abilities involved in supervision (mentorship) and further socialization to the field of SPP with an emphasis on positive leadership for local, national, and global progress complement the course content.

CPSY 4635 Athletic and Performance Nutrition (2 Credits)
Graduate level course educating student-coaches and administrators and performance specialists to use research and best practices in performance nutrition to achieve athletic and performance enhancement, and general wellbeing. The course will help facilitate students’ ability to influence sporting and general environments to use nutrition as a means to enhance performance, with a secondary examination of preparing students to understand and manage individual differences, needs, and motivations for food choices. Course content will include modeling nutrition, encouraging a sense of family at team meals, leveraging media to internalize nutrition behaviors, and impacting availability of positive nutrition choices.
CPSY 4650 Sport Psychology (3 Credits)
A comprehensive view of the field of sport psychology will be covered. Through participation in this course, students will develop a better understanding of the field of sport and exercise psychology and develop skills that will assist in enhancing their career opportunities. Varied psychology topics (e.g., individual differences/personality, motivational orientations and strategies, applied psychological skills, social influence and group dynamics) with an emphasis on understanding major theories and research and applying those theories and research findings to diverse sport, exercise, and performance settings. Additionally, the psychological effect that participation in a sport or a physical activity has on a performer including anxiety reduction, aggressive behavior, and personality development will be explored.

CPSY 4652 Theoretical Aspects of Sport and Performance Psychology (3 Credits)
This course is an in-depth exploration of selected aspects of the theories of sport psychology along with applications of these theories to other performance domains. An advanced understanding of the field of sport and performance psychology is pursued in relation to psychosocial aspects involved in both the preparation and performance processes among adults, youth, and children who represent all skill levels. The explored areas include: (a) motivation, confidence, and anxiety in sport and performance, (b) selected topics in social psychology and psychobiology, (c) psychological skills training, and (d) special topics (e.g., personality, flow, injuries, burnout).

CPSY 4653 Sport in American Society (3 Credits)
This course examines the influence of the social context on sport. Attention is given to the influence of society on sport as an institution and the role of sport as an agent of social change. This course examines how sport affects the social world we live in. Topics explored include the intersection of sport and: gender, race/ethnicity/culture, socioeconomic class, media relations, violence, deviance, and sexuality.

CPSY 4654 Coaching & Leadership (3 Credits)
This course is a survey of the intersection of coaching, leadership, organizational behavior, organization dynamics, and change management. It examines the definitions, history, theories, and research in the sport and management leadership literature. Students will gain an understanding of how planning, motivation, team building, and leadership impact a team's or organization's effectiveness. Students are expected to learn and personally develop the analytical and leadership skills that affect individual and group performance.

CPSY 4655 Social Psychology of Sport (3 Credits)
This course will address the relationship between sport and cultural dynamics, sociological factors underlying competitive physical activity, and behavioral responses of sport participants and supporters to various socio-cultural motivations. This course will be a serious study of organized professional, amateur, and youth sports in North America. Emphasis will be placed on social forces that both impinge on and enhance athletic activities and organizations, and the influence sport has on society.

CPSY 4656 Psychology of Injury (3 Credits)
In this course, students will explore psychological theory, research, and practice in relation to the prevention, occurrence, and rehabilitation of sport injuries. Major topics will include: psychological risk factors for injury, psychological responses to injury, and psychological interventions to prevent sport injuries and enhance sport injury rehabilitation.

CPSY 4657 Motivational Interviewing (2 Credits)
This is an advanced course reviewing the theories and research findings related to motivational interviewing with the goal to apply them to performance (athletic, non-athletic) and exercise contexts. Topics include motivation for behavior change, transtheoretical model of behavior change, self-determination theory as applied to behavior modification, and the relationship between and the influences of emotion and motivation on counseling and sport and performance consultation. This course will place an emphasis on relating current leading theories and research evidence to consulting work. Equally in importance, there will be in-class hands-on activities (e.g., role playing), experiences (e.g., self-reflective tasks) and assignments (e.g., role playing tasks) that will add to the student competence in motivational interviewing.

CPSY 4660 Sport Psychology Interventions and Techniques (3 Credits)
Students will acquire knowledge and increase their comprehension of cognitive-behavioral intervention strategies (e.g., mental skills training) and how they can be applied to achieve optimal performance of athletes and others. The complex interaction between the sport psychology consultant and performer will be explored.

CPSY 4662 Foundation of Counseling Theories (3 Credits)
This course will review major contemporary counseling models, theories, procedures, and the helping relationship. Advanced study of techniques and research findings. Survey of principles underlying individual, family systems, and multicultural approaches to counseling.

CPSY 4663 Applied Motor Learning (2 Credits)
This course is an advanced examination of applied motor behavior theories and research. Emphasis is given to understanding of the processes involved in controlling skilled movement and the principles of skill acquisition to guide designing effective learning environments, practice schedules, and practice units. The examined areas include: (a) the field of study of motor control and learning; (b) performance and learning variables as impacting retention and transfer; (c) information processing model; (d) sensory and central contributions to motor control; (e) individual differences; and (g) instruction, demonstration, and feedback across different stages in motor learning.

CPSY 4664 Practicum in Sport and Performance Psychology III: Business Principles (3 Credits)
This is the third course in a year long, three-part sequence. This course serves the purpose of (a) providing an opportunity for students to learn about sport and performance psychology through observation and experiential opportunities; (b) providing an intimate forum for discussing the practice of sport and performance psychology; and (c) providing information on professional development and conduct. The course requires didactic and experiential activities. Business, consultation, and professional development issues in sport and performance psychology will be addressed. Prerequisite: CPSY 4673.
CPSY 4665 Beh Kinesiology & Physiology (3 Credits)
A study of human movement. Topics will include but are not limited to structural anatomy, biomechanics, and neurophysiology. The biomechanical etiology of various injuries will be studied.

CPSY 4666 Movement Principles for Performance (3 Credits)
This course is an exploration of selected areas of the exercise and sport sciences. The explored areas include: functional anatomy, biomechanics, and exercise physiology.

CPSY 4668 Psychology of Excellence (3 Credits)
The purpose of this course is to examine the theories, research, and intervention strategies related to the pursuit of excellence. This course explores the deliberate interventions necessary to support the development of excellence and expertise. Students will learn the nature of expertise development, the necessary steps to achieve excellence, and common roadblocks. The concept of excellence will be investigated in many contexts, such as sport and performance, intrapersonal, relationships, and life in general. Topics to be explored include: happiness, contentment, life satisfaction, values, character strengths, emotional intelligence, optimism, hope, flow, and resiliency.

CPSY 4669 Consulting Methods & Practices (3 Credits)
This course is an advanced exploration of theories, research findings, and skills related to the practice of consultation in performance settings. Specific topics include: (a) the consultant roles; (b) the major theoretical approaches to consultation (e.g., mental health, systemic); (c) the processes and stages of consultation (e.g., developing interpersonal relationships; design, implementation, and evaluation of service delivery); (d) ethical and multicultural issues; and (e) students’ personal strengths and concerns in the role of a consultant (e.g., values interpersonal style, and consultant variables that impact the effectiveness of their role as an agent of behavior change).

CPSY 4670 Psych of Coaching & Leadership (3 Credits)
Examination of psychological components of coaching and talent development. Explores coaching development, coaching models, as well as strategies for dealing with athletes and different coaching contexts. Discussion of talent development theories including influence of genetic and environmental factors.

CPSY 4671 Theories of Performance Excellence (3 Credits)
This course is designed to familiarize students with theories of performance excellence developed by leading practitioners. Each week, students are exposed to a different practitioner’s approach, which often includes an opportunity to observe the practitioner’s style through video. Emphasis is placed on the role of theory in practice, theory-based conceptualizations utilizing a case study format, and comparing and contrasting the different theories.

CPSY 4672 Counseling Methods & Practices (3 Credits)
This course is an introduction to counseling microskills and techniques needed in helping relationships, with attention to building the therapeutic alliance. Emphasis placed on learning skills in small group format. Laboratory experience in demonstrating skills and the ability to form an effective counseling relationship is required. Pre-practicum experience to prepare students to work with clients.

CPSY 4673 Practicum in Sport and Performance Psychology 2 (3 Credits)
This course serves the purpose of (a) providing an opportunity for students to learn about sport & performance psychology through observation and experiential opportunities; (b) providing an intimate forum for discussing the practice of sport and performance psychology; and (c) providing information on professional development and conduct. The course requires didactic and experiential activities. Psychological consultation, best practices, and professional development issues in sport and performance psychology will be addressed. Prerequisite: Practicum in Sport and Performance Psychology I.

CPSY 4674 Clinical Issues: Interviewing and Diagnosis (3 Credits)
This course examines adult psychopathology as classified in the DSM. Special emphasis will be placed on the intersection of performance with more traditional psychopathology. Students learn about etiology, symptomology, epidemiology, and treatment issues. Possible causes and contributory factors are examined, as well as theoretical and multicultural considerations. Prerequisites: Theoretical Aspects of SPP, Applied SPP, and Ethical Issues in SPP.

CPSY 4676 Assessment and Measurement (3 Credits)
This course covers the selection, use, and proper interpretation of common sport and performance psychology assessments. Basic principles of educational and psychological measurement, including test construction, validity, and reliability are addressed. The assessments taught include those used for individual assessment, individual selection, and organizational assessment (360 degree feedback, surveys, etc.). Prerequisites: CPSY 4652, CPSY 4690, and CPSY 4682.

CPSY 4677 Motivation, Emotion & Learning (3 Credits)
This is an in-depth course reviewing the theories and research related to motivation, emotion, and learning in performance contexts. Topics include the relationships between motivation, emotion, and learning; and the influences of emotion and motivation on counseling and consultation. The course provides basic information about the human cognitive system. Students are taught the basic principles of learning, with a focus on the principles of learning which are most applicable in sport and performance settings. This course places an emphasis on relating current research to practice.

CPSY 4678 Scholarly Writing Methods and Practices (1-3 Credits)
The primary goal of this course is to familiarize students with the methods and practices of scholarly writing. The course focuses on writing a scholarly review of literature, methodology, results, and conclusions according to APA style. Within the course, students are also asked to review one another’s work while developing editing skills and methodological complexity.
CPSY 4679 Field Placement Practicum in Sport and Performance Psychology (3 Credits)
Supervised practice sport & performance psychology in an approved sport or performance setting under licensed practitioners.

CPSY 4680 Sport and Performance Psychology Practicum (3 Credits)
This course will familiarize students with professional issues relevant to the practice of sport and performance psychology. Students will be presenting and analyzing their current applied experiences as coaches and leaders in sport and performance settings in the community. This is a participation-intensive course and the students will receive feedback and suggestions from both the instructor and peers in a group supervision format. Importantly, the ongoing feedback and readings will provide an opportunity for students to understand and apply theories and practice systems of behavior change in sport and performance psychology in the context of their own clients/cases. Students will learn the roles and responsibilities inherent in professional and ethical consultation, with a special emphasis given to the dilemmas of serving as an embedded consultant.

CPSY 4681 Multicultural Issues (3 Credits)
This course covers the research and theories of counseling the culturally different client. Students are expected to develop multicultural skills, including culturally-based conceptualization, assessment, and selection of culturally appropriate intervention strategies. This course will examine these issues in general, with a special emphasis on those in sport and performance cultures. This is both an experimental and seminar-based course, aimed at developing student’s personal awareness, knowledge, and skills.

CPSY 4682 Ethical and Legal Issues (3 Credits)
This course introduces the students to the ethical principles, codes, and standards related to the profession of sport and performance psychology. This includes an overview of the regulation of the practice of psychology, the relationships between ethical codes and legal statutes, and the development of a personal model for ethical decision-making.

CPSY 4683 Group Interventions (3 Credits)
This course is a survey of group counseling methods and techniques from a theoretical and applied perspective. The course will include practical application of group counseling interventions. Prerequisites: demonstrated knowledge of ethical principles and departmental consent.

CPSY 4684 Team and Organizational Dynamics (3 Credits)
This course examines the principles, theories, and research of human functioning in performance related teams and organizations. It explores the social and psychological factors influencing behavior in organizations, along with individual differences, dyadic relations and small group behavior. Students learn about the dynamics of team and organizational diagnosis, feedback and learning, intervention, and planned change.

CPSY 4685 Human Growth & Development (3 Credits)
This course is a comprehensive analysis of theories and research relating to human psychological development and learning across the lifespan. It explores the cognitive, affective, academic, physiological, moral, and social/cultural/racial domains. An emphasis is placed on a) the theoretical models underlying character and moral development, and b) adolescent and college student development theories.

CPSY 4686 Practicum in Sport and Performance Psychology: Professional Practice (3 Credits)
This course provides an examination of the critical components of successful and ethical professional practice and career building in sport and performance psychology in conjunction with intensive provision of sport and performance psychology services. The entire body of sport and performance psychology theoretical and applied knowledge as well as the skills that the students have acquired will be utilized. Additionally, vigorous self-reflective activities and ethical decision-making will increase the student professional and personal growth as directly related to effectiveness in the sport and performance psychology practice. Emphasis will be placed on diversifying and integrating theoretical knowledge and applied strategies and skills while simultaneously engaging in supervised independent work in real life sport and performance settings.

CPSY 4687 Psychology of Injury (3 Credits)
This course examines the psychological factors involved in injury, rehabilitation, and return to performance. The effects upon social, personal, and performance adjustment are addressed. The course covers how relevant theory and research can be used to inform practical applications to help the injured performer's rehabilitation and return. It presents the major medical aspects of injury and the rehabilitation process.

CPSY 4688 Seminar in Sport and Performance Psychology (3 Credits)
Advanced seminars offered by sport and performance psychology faculty on topics relevant to the practice and science of sport and performance psychology area.

CPSY 4689 Psychophysiology and Biofeedback (2 Credits)
This course explores the underlying mechanisms and psychophysical determinants of behavior in sport and performance settings. Students learn the use of biofeedback in achieving voluntary self-regulation and control of stress related behaviors.

CPSY 4690 Sport and Performance Psychology Interventions (3 Credits)
This course is designed to familiarize students with the application of sport and performance psychology interventions. Students experience the building of a sport and performance psychology program. This program includes the cardinal skills of relaxation, concentration, imagery, self-talk, and mental routine; followed by broader topics such as goal setting, motivation, confidence, cohesion, engagement, and mastery. The instructor briefly reviews relevant theory and research followed by demonstrations of techniques and strategies, after which students learn by doing. Specific attention is given to blending the science of peak performance with the art of applying science.
CPSY 4691 Practice Development in Sport and Performance Psychology (3 Credits)
The primary goal is to acquaint students with the skills needed to develop and implement a private practice in the profession of sport or performance psychology. The course takes students through the process of business development by using the traditional business plan model, from the necessary startup expenses to the executive summary. Throughout the course, students learn the What, When, Where, and How of starting their own consulting practice, while learning the basic components of branding, marketing, and operations. Prerequisite: Must be enrolled in the MASPP program or instructor approval.

CPSY 4692 Entrepreneurship in Sport and Performance Psychology (2 Credits)
The primary goal of this course is to provide students with an overview of skills necessary to succeed in the entrepreneurial profession of sport and performance psychology. The course is flexibly designed to accommodate the students’ desired career paths. Topics covered may include: sales and marketing, developing a practice, job search and interviewing skills, and understanding the job market.

CPSY 4700 Organization and Administration of Sport (4 Credits)
Graduate level course to educate students on the organization and administration of sport and sport coaching. Course content includes emergency action planning, facility management, human resource management, evaluation and development, legal responsibilities, record keeping, finance, and public relations. Students will learn how to lead organizations and coaching staffs to develop fair and safe participation.

CPSY 4705 Sociocultural Aspects of Sport Coaching (4 Credits)
Graduate level course to educate students on the sociocultural and social-psychological aspects of sport coaching and athletic performance. Students will understand how to analyze and apply social, sociological and social-psychological theory to sport coaching and athletic performance. Consideration will be given to developing a critical understanding of sport coaches’ knowledge development, and how to implement multiple, effective and ethical strategies to enhance coach and athletic performance.

CPSY 4710 Motor Learning and Sport Pedagogy (4 Credits)
Graduate level course to educate students on the science and practice of how athletes learn motor skills and how coaches can facilitate skill acquisition. Course content includes the scientific and theoretical frameworks of motor learning, with a secondary examination of motor control and development. Applied course content will focus on how coaches can use learning strategies such as demonstration, instruction, feedback, and practice planning to improve athletic performance.

CPSY 4712 Tactical Strength and Conditioning Coaching (2 Credits)
The purpose of this course is to educate students on the scientific, theoretical and practical aspects of tactical strength and conditioning. Students will learn how to design tactical strength and conditioning programs to enhance performance and reduce and lessen the severity of injury. This course is also intended to help students begin to prepare to pass the National Strength and Conditioning Association’s (NSCA) Tactical Strength and Conditioning Facilitator (TSAC-F) certification, and related professional development opportunities.

CPSY 4715 Strength, Conditioning, and Injury Prevention Program Design (4 Credits)
Graduate level course to educate students on the scientific, theoretical and practical foundations of strength, conditioning and injury prevention. Students will learn how to design strength and conditioning programs to enhance athletic performance and reduce and lessen the severity of injury. This course is also intended to help students become familiar with the National Strength and Conditioning Association’s (NSCA) Certified Strength and Conditioning Specialist (CSCS) exam, and position statements from several national governing bodies on athlete safety and physical performance.

CPSY 4720 Psychology of Athletic Performance (4 Credits)
Graduate level course to educate students on the psychological aspects of athletic performance, and secondarily coach performance. Course content includes the theoretical and practical application of established mental skills (e.g., motivation, efficacy, arousal, anxiety, focus, self-awareness, goal-setting, imagery, team cohesion). Concepts will be applied to the evaluation and creation of practice and training plans to enhance athletic performance.

CPSY 4722 Social-Psychology of the Body, Health, and Performance (2 Credits)
The purpose of this course is to understand the ways in which people in society understand the body in sport, physical activity and health and wellness. Or in more simple terms, answer the question: why society thinks about the sporting, healthy and physically active body in the ways that it does? In order to acquire this understanding we will explore the complex and powerful historical, social and cultural forces that have shaped the assumptions underpinning the sporting, physically active and healthy body. No prerequisites exist for this course.

CPSY 4723 Applied Sports Technology for Coaches (2 Credits)
This elective graduate level course is designed to educate students on the uses, effects, and ethics of technologies on athletic performance. Students will learn about the breadth of research and uses of technologies in attempts to enhance athletic performance. Course content includes surveying the sports technology field, technology ethics, positive and negative effects of technology, evaluating knowledge claims (i.e., reliability, validity, measurement issues), and common uses of technology to enhance performance (e.g., team communication, athlete monitoring and tracking, instruction and feedback, apps).

CPSY 4725 Philosophy and Ethics of Sport Coaching (4 Credits)
Graduate level course to educate students on the philosophical, social, and ethical foundations of sport and sport coaching. Course content includes the history and formation of sport and sport coaching, social issues (e.g., race, class, gender, inclusivity, etc.), how sport is used for (un)desirable ends and the public good, the coach’s role in demonstrating and encouraging ethical behavior, and promoting a healthy and safe environment for numerous stakeholders. Leadership theory (e.g., transformational and servant leadership, emotional intelligence, athlete-centered coaching) is also touched upon and discussed in relation to the ethics and norms of sport, and the relationship between educational institutions and sport/athletics. There are no prerequisites for this course.
CPSY 4730 Biomechanics of Athletic Performance (4 Credits)
Graduate level course to educate students on the biomechanics of athletic performance. Students will learn quantitative and qualitative methods of biomechanics to analyze and enhance athletic performance and prevent injury. Course content includes knowledge of the musculoskeletal system, force development and how additional factors such as body composition and joint structures influence athletic performance and injuries.

CPSY 4735 Understanding Sport Research (4 Credits)
Graduate level course to educate students on understanding and doing sport research. The primary focus of this course is on facilitating student's understanding of research methods commonly used in sport research. Secondarily, the course will examine how research is actually done, including reviewing the literature and writing and referencing scholarly work. Course content will cover topics such as paradigms and philosophy of science, epistemology and the creation of knowledge, and numerous research designs, methodologies and methods. Content will also include understanding statistics and qualitative methods.

CPSY 4736 Practicum in Strength and Conditioning and Fitness Coaching (1 Credit)
The purpose of the Practicum in Strength, Conditioning, and Fitness Coaching course is to help students gain the knowledge, skills and attitudes to become a quality coach and a reflective practitioner through experiential learning. Students will be provided with a variety of strategies and methods to solve real-world strength, conditioning, and fitness coaching problems in real life settings. Students will draw upon other coursework, research, and practical insights to exercise professional judgement. Students must complete at least 50 hours of coaching throughout the quarter.

CPSY 4740 Practicum 1 in Sport Coaching (1 Credit)
Practicum 1 in Sport Coaching helps students to gain the knowledge, skills and attitudes to become a quality coach and reflective practitioner through experiential learning. Students will draw upon MASC course content and their coaching experiences to reflect upon the complexities of sport coaching to integrate their knowledge and skills to identify and solve problems. Students must complete at least 50 hours of coaching for every one hour of credit enrolled. This course provides basic to intermediate level content and prepares students for Practicum 2. Prerequisites: Passed background check, submitted current CPR/First Aid certificate at level in which student is coaching and valid for the full quarter while enrolled. Student must be enrolled in the MASC program.

CPSY 4745 Practicum 2 in Sport Coaching (1 Credit)
Practicum 2 in Sport Coaching helps students to gain an advanced understanding of the knowledge, skills and attitudes to become a quality coach and reflective practitioner through experiential learning. Students will draw upon MASC course content and their coaching experiences to reflect upon the complexities of coaching to solve real life problems. Students must complete at least 50 hours of coaching for every one hour of credit enrolled. Prerequisites--one earned credit of Practicum 1, passed background check, submitted current CPR/First Aid certificate at level in which student is coaching and valid for the full quarter while enrolled. Student must be enrolled in the MASC program.

CPSY 4750 Sport Coaching Capstone (1–4 Credits)
Capstone literally means "a finishing stone or a structure." Similarly, students will complete a project that demonstrates the student's initiative and excellence. To help explore the student's interest and refine a suitable topic, students are encouraged to discuss the capstone project with course instructors early and throughout their time in the MASC program. Students may build off a previous course activity or assignment, but the Capstone Project must reflect new and substantive work appropriate to the number of hours enrolled. While students have the autonomy to negotiate new project ideas, sample projects could include: thesis or original research, review of literature paper, presentation at conference, leading a service-learning event, writing a book chapter, authoring a novel or other creative writing, or a webinar. Prerequisites: Students must have completed at least 16 credit hours towards the MASC degree and have completed or been enrolled concurrently in Understanding Sport Research.

CPSY 4801 Evidence-Informed Strength and Conditioning and Fitness Coaching 1 (1 Credit)
The purpose of this course is to expose students to the scientific literature in strength, conditioning, and fitness. Course content will cover historical, pioneering, and contemporary research trends in the field. Students will come to appreciate how scientific knowledge is created, disseminated, and influences human behavior and society. Research topics for this course focus on applied aspects of biology, genetics, physiology, and nutrition in relation to strength, conditioning, and fitness.

CPSY 4802 Evidence-Informed Strength and Conditioning and Fitness Coaching 2 (1 Credit)
The purpose of this course is to expose students to the scientific literature in strength, conditioning, and fitness. Course content will cover historical, pioneering, and contemporary research trends in the field. Students will come to appreciate how scientific knowledge is created, disseminated, and influences human behavior and society. Research topics for this course focus on applied aspects of biology, genetics, physiology, and nutrition in relation to strength, conditioning, and fitness.

CPSY 4803 Evidence-Informed Strength and Conditioning and Fitness Coaching 3 (1 Credit)
The purpose of this course is to expose students to the scientific literature in strength, conditioning, and fitness. Course content will cover historical, pioneering, and contemporary research trends in the field. Students will come to appreciate how scientific knowledge is created, disseminated, and influences human behavior and society. Research topics for this course focus on applied aspects of the psychology of strength, conditioning, and fitness.

CPSY 4804 Evidence-Informed Strength and Conditioning and Fitness Coaching 4 (1 Credit)
The purpose of this course is to expose students to the scientific literature in strength, conditioning, and fitness. Course content will cover historical, pioneering, and contemporary research trends in the field. Students will come to appreciate how scientific knowledge is created, disseminated, and influences human behavior and society. Research topics for this course focus on applied sociocultural aspects of strength, conditioning, and fitness.
CPSY 4991 Independent Study (1-17 Credits)
CPSY 4992 Directed Study (1-10 Credits)
CPSY 4995 Independent Research (1-17 Credits)

CPSY 5000 Rad Behav/Func Contextl Models (3 Credits)
CPSY 4000 is designed to provide a historical, philosophical and conceptual background to better understand and appreciate Behaviorist views of "being-in-the-world". The course lays the foundation for the sophisticated application of a science of behavior-its theories and methods-to the assessment of clinical problems and the art of doing psychotherapy. The course will invite a little discomfort, disturb some preconceptions, and compel students to address some difficult questions and thorny issues. Among the goals of this course are to see students commit to being more than a psychologist technician, to encourage them to develop a guiding philosophical core in their practice as a psychologist; to assist them in clarifying or deepening whatever philosophical worldview they may hold; and that they will have achieved an informed understanding of radical behaviorism/functional contextualism - whether or not they choose to further pursue these models.

CPSY 5010 Cognitive & Affective Models (3 Credits)
This is the first in a three part sequence that includes Psychophysiology and Clinical Neuropsychology and is designed to introduce students to the current research in cognitive neuroscience and consciousness. This first course focuses on sensation/perception, learning, memory, emotion, language and other higher cognitive functions. Lectures will emphasize current technologies and historical inquiry and the unique contributions made by psychosocial and cultural variables.

CPSY 5020 Psychoanalytic Models (3 Credits)
Psychoanalytic theories, including Freud's topographic and structural theories, ego psychology, object relations theory and modern relational theories, including self-psychology and intersubjectivity.

CPSY 5030 Systems Models (3 Credits)
Basic concepts of general systems theory and their applications in psychology, focusing on family systems, groups and organizations.

CPSY 5040 History and Systems in Psych (2 Credits)
Basic psychological concepts surveyed from a historical point of view, tracing development of psychological bases of professional practice.

CPSY 5050 Advanced Statistics (3 Credits)
CPSY 5051 Statistics I Lab (1 Credit)

CPSY 5070 Research Methods (2 Credits)
Sequential course that cover fundamentals of structuring, analyzing and critiquing research reports and proposals; strategies to guide and facilitate the writing process; attitude and thinking skills necessary for function as a local clinical scientist; research design tools, methods and strategies for answering different types of questions.

CPSY 5071 Research Methods II (2 Credits)
Sequential courses that cover fundamentals of structuring, analyzing and critiquing research reports and proposals; strategies to guide and facilitate the writing process; attitudinal and thinking skills necessary for function as a local clinical scientists; research design tools, methods and strategies for answering different types of questions.

CPSY 5073 Qualitative Research Methods (2 Credits)
Qualitative research involves obtaining in-depth information about the behaviors and beliefs of people in naturally occurring social settings. This course introduces students to the philosophical underpinnings, history, and key elements of five qualitative approaches: narrative research, phenomenology, grounded theory, ethnography, and case study. We compare theoretical frameworks and methodologies, experience the use of data, and discuss writing strategies. In addition, we read articles that are exemplars or each approach.

CPSY 5075 Program Evaluation Technique (3 Credits)
Theory and techniques for developing management information and assessment systems for human service programs.

CPSY 5080 Diagnosis and Classification (2 Credits)
An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

CPSY 5108 Introduction to Acceptance and Commitment Therapy (ACT) (2 Credits)
Acceptance and Commitment Therapy (ACT) belongs to the movement in clinical psychological science that sees acceptance and openness to experience as an essential addition to change-focused psychotherapeutic treatment strategies. Although consciously based on behavior-analytic thinking, ACT is a hybrid in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist-existential though. The paradox upon which ACT is founded is that only radical acceptance of what cannot be changed empowers people to recognize and change the things that they can. The ACT approach is about embracing necessary suffering in order to make more committed, life-affirming choices and live in accordance with personal values. ACT emphasizes that in a very deep sense all human beings are in the same boat. The technical and theoretical bases of ACT are through normal didactics, but the heart and art of the approach occurs through experiential exercises, group process, and from observation and modeling. Prerequisite: CPSY 5000.
CPSY 5120 Introduction to Animal-Assisted Interventions (3 Credits)
This course serves as an introduction to animal-assisted interventions (AAI) as they are commonly used by mental health care professionals. It is designed to provide students with an overview of the foundations of AAI, the variety of ways in which this modality is used, international perspectives on AAI, various perspectives on ethics and animal welfare, and researchers’ current understanding of the role of the human-animal bond in facilitating AAI treatment efficacy. General topics to be addressed include the characteristics of the species used in AAI, the basic principles of AAI, the use of AAI with a variety of populations, and animal abuse issues. A number of guest lecturers will share their knowledge and experiences with students throughout the quarter.

CPSY 5130 Issues in Measurement (3 Credits)
Validity, reliability and standardization issues in psychological testing; statistical properties of commonly used tests.

CPSY 5131 Issues in Measurement Lab (1 Credit)
Optional. Focused assistance with basic math skills; review and clarification of class topics.

CPSY 5170 Life Cycle: Inf to Mid Childhd (3 Credits)
Understanding normal development of children (0-12 years), integrating theory, research and a phenomenological perspective.

CPSY 5180 Life Cycle: Adolescent - Adult (2 Credits)

CPSY 5200 Life Cycle: Late Adulthood (3 Credits)
Theories of aging; social, psychological and biological changes; assessment and intervention methods, emphasizing issues impacting older adults (65 years and above).

CPSY 5230 Group Dynamics & Interventions (3 Credits)
Provides psychologists in training with multiple learning experiences highlighting that groups and organizations are intensely psychological environments in which most psychologists function professionally and personally and have the potential to impact positively.

CPSY 5231 Social Psychology (3 Credits)

CPSY 5250 Existential and Humanistic Theory and Therapy (2 Credits)
Historical roots and basic assumption of existential and humanistic views. Students encouraged to integrate materials with their personal values and assumptions about human nature and their interaction with clients.

CPSY 5270 Physiological Psychology I (3 Credits)
Terminology and principles of and research in physiological psychology. Where possible, application made to content and practice of clinical psychology.

CPSY 5271 Physiological Lab I (1 Credit)
Optional. Assistance with material covered in CPSY 4170.

CPSY 5273 Physiological Lab II (1 Credit)

CPSY 5290 Clinical Neuropsychology (3 Credits)
Historical, conceptual and clinical foundation for, as well as current developments related to, the field of clinical neuropsychology. Includes exposure to: developmental neuropsychology and neuroanatomy; higher cognitive functions; neuropsychologically informed interviews and standard neuropsychological test batteries; neuropsychological profiles associated with a variety of acquired disorders (both classical neuropsychological and psychological in nature); ethnic, cultural, age and gender considerations; and current status of a variety of professional/ethical issues. Prerequisite: CPSY 5270.

CPSY 5310 Ethical Issues in Psychology (3 Credits)
In-depth consideration of ethical standards applicable to the science and practice of psychology; pertinent laws and legal standards governing the practice of psychology, areas in which legal and ethical standards suggest contradictory actions on the part of the clinical psychologist.

CPSY 5320 Professional Issues in Psych (2 Credits)
Issues, concerns and controversies impacting current practice of professional psychology at the state and national levels; preparation for future alternative systems of service delivery. Emphasis is on professional life after the PsyD. Required for first year students.

CPSY 5340 Social Psychology of Racism and Oppression (3 Credits)
Theoretical and experimental nature of racism and oppression, primarily in the United States, definition of such terms as stereotypes, prejudice, racism, white supremacy and privilege; exploration of various theories regarding these terms and how they manifest themselves historically and contemporarily.

CPSY 5360 Racial/Ethnic Identity Dvlpmt (3 Credits)
This course will explicate the concept of ethnic identification, and the process by which this central aspect of a person’s overall identity develops. Accordingly, the two central questions that this course will address are: a. who are they? and b. how did they get that way? These questions will be examined utilizing a Descriptive Psychology perspective.

CPSY 5370 Lesbian, Gay, Bisexual and Transgender Issues (3 Credits)
Various aspects of gay, lesbian life explored cross-culturally; nature of homosexuality, including the controversy of heredity vs. choice. Issues of oppression and discrimination will also be explored. The role of psychology and the politics of homosexuality will be studied. Students will also be asked to explore their personal awareness regarding homosexuality in their everyday lives and in a therapeutic context.
CPSY 5380 Culturally Competent Psychotx (3 Credits)
As the final class in the year-long multicultural course sequence, this class will integrate the theoretical content of the preceding classes and focus on their psychotherapeutic implications. This course will address psychotherapy with the following groups - African Americans, Asian Americans, Latinos, Native Americans, and the GLBT community.

CPSY 5385 First-Year Seminar (2 Credits)
This is a clinical and didactic seminar on beginning psychotherapy. The focus will be on case formulation and developing a therapeutic relationship with the client.

CPSY 5386 Assessment and Treatment of Children and Adolescents Seminar (2 Credits)
This seminar involves the evaluation and treatment of children and adolescents (i.e., ages 6 through 18) in the Professional Psychology Center. Supervision is provided from an integrative and relationship-based perspective, and topics relevant child and adolescent assessment and treatment are discussed.

CPSY 5388 Pro Sem: Psychological Assessmt (2 Credits)
Assessment is a central feature of the work of the clinical psychologist. This seminar is an opportunity to hone your knowledge and skills in personality and cognitive assessment. It will involve some lecture, but mainly focus on supervision of assessment cases obtained through the Professional Psychology Clinic. You will be expected to complete four assessments during the year - you certainly can do more if you wish. You also will have the opportunity to present a case you have completed to the seminar during the Spring quarter.

CPSY 5389 Pro Sem: Behavior Therapy (2 Credits)
This advanced professional seminar draws upon pragmatic philosophy and contextualistic worldview as it informs and guides contemporary behavior analytic theory and practice. Students gain experiences using functional analysis as a method for describing and integrating clinical observations and learn to implement a variety of evidence based, acceptance inspired interventions designed to facilitate psychological flexibility and values-congruent living in clients from diverse backgrounds. Therapeutic work is conducted in an atmosphere of care, respect, compassion, and commitment, and challenges the client (and therapist) to be more open, aware, vulnerable, and present in their lives.

CPSY 5390 Pro Sem: Forensic Issues (2 Credits)
This seminar will introduce students to the various areas and ways in which psychology interacts with the legal and criminal justice systems. Students will develop their capacity to perform evaluations relating to psychological questions, dilemmas, and disputes that are most frequently requested of forensic psychologists. Focus of the seminar will be on assisting students in clarifying their role as an evaluator and consultant to attorneys, judges, and criminal justice personnel; exploring the ethical responsibilities therein; learning to compose reports for a legal rather than a clinical audience; and preparing to testify as an expert witness. Students will formulate and deliver case presentations, participate in a "mock" testimony experience, and submit reports. Students in past seminars have conducted child custody evaluations, mental status at time of offense evaluations, Social Security disability evaluations, asylum, T-visa, and U-visa evaluations, animal abuse, competency and juvenile placement evaluations; these evaluations allow students the opportunity to conduct full battery psychological assessments, and learn how to apply findings to a legal context. In addition, we have been getting more court mandated therapy clients. Thus, students will get assessment experience as well as individual therapy experience with adults and children. Assessment experience required. If you have not completed all assessment courses, please speak to Lavita. Students are required to complete a combination of 4 assessments/therapy clients during the course of the year. Please note that the forensic seminar requires a substantial time commitment because assessments requires longer sessions with clients to administer tests, time to score and interpret tests, and report writing.

CPSY 5391 Professional Seminar: Psychodynamic Therapy (2 Credits)
This seminar focuses on psychodynamic psychotherapy - that is, individual adult psychotherapy with the aim of bringing about meaningful and lasting psychological concepts as they apply to your patients, with a practical, "hands on" focus - for example, what to do and say when your patient shuts down, threatens suicide, act out, comes on to you, misses appointments, gets worse, throws up in your office, and all the other troubling and fascinating things people do from time to time in psychotherapy. Prior or current personal psychotherapy is highly desirable and strongly recommended. Students should be prepared to discuss their clinical work candidly - and help foster an environment of mutual trust, compassion, and respect, in which candid discussion can take place.

CPSY 5392 Pro Sem: Couple and Family (2 Credits)
This seminar allows students more in-depth training in working with systems including couples and families. Students should take Couples Therapy and Family Therapy either before or concurrent with the seminar. Special topics covered include divorce, step families parenting, sex therapy, multicultural issues, and ethics, as well as more general couple and family therapy work.

CPSY 5393 Pro Sem: ACT (2 Credits)
Acceptance and Commitment Therapy (ACT) is a pragmatically based, relatively new and highly experiential form of therapy whose overarching goals are to a) assist clients (and therapists) in accepting what cannot be changed (i.e., the form or frequency of certain private events), while b) helping them fully commit to behaving in accordance with idiosyncratic values. Although consciously based on behavior-analytic thinking, ACT is a hybrid therapy in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist-existential thought. In the seminar, students will learn the technical and theoretical bases of ACT through group process, individual and small group supervision, as well as from observation and modeling. Prerequisite: Behavioral Models course.

CPSY 5394 Professional Seminar: Cognitive-Behavior Relational Therapy (2 Credits)
This is a year-long seminar on integrating cognitive-behavior (CBT) and relational therapy. Trainees learn the theory and practice of CBT and relational therapy through readings, didactic presentations, discussion, and especially case presentations of their clients and themselves. Small-group supervision is also required.
CPSY 5396 Pro Sem: Adv. Psychotherapy (2 Credits)
Seminar will focus on the individual therapy treatment of adult cases. Particular emphasis will be placed on conceptualizing cases from a developmental perspective with no particular emphasis on object relations and the psychology of self. We will evaluate culture, role of trauma, issues of sexual orientation, and developmental history. Students will be encouraged to look at their own and other’s responses in a supportive environment that will foster discussion on counter-transference responses. An in depth exploration of client’s needs will be assessed and model the treatment to those needs, rather than applying the same treatment model to all patients. Previous exposure and readings on the psychology of self and object relations is helpful. Readings to deepen our understanding of the above will be assigned. Must have taken or be currently enrolled in Adult Psychopathology sequence. Prerequisite: Psychoanalytic Models course.

CPSY 5399 Professional Seminar: Gender Issues (2 Credits)
This seminar will focus on gender issues from developmental and psychodynamic perspectives. Topics will include issues relevant to women, men, and trans/gendered/intersexed individuals. Clients may include adolescents and adults with a variety of presenting concerns including relationship problems, identity issues, eating disorders, pregnancy and postpartum work, parenthood, mood and anxiety disorders, and aging.

CPSY 5404 Prof Sem: Integrative Therapy (2 Credits)
This advanced seminar examines various integrative models of psychotherapy, and students will have the opportunity to develop their own therapeutic “voice” by integrating the major theories already learned at the GSPP. While the seminar will be theoretical in nature, one goal is to help students prepare for practice in the real world by exploring the common factors of therapy, and how to work collaboratively in a client-directed fashion. Clients may include adults, adolescents, and children with a variety of presenting concerns, in individual, couples, family, or group therapy. Students will be expected to present their work regularly on DVD and (in Dr Cornish’s supervision), occasionally behind the two-way mirror. Competency areas covered include: professionalism, reflective practice, scientific knowledge and methods, relationships, individual and cultural diversity, ethical/legal standard and policy, assessment, and intervention. In addition to supervision on psychotherapy, there may be an option for students to be supervised on their supervision of a first year student in the PPC.

CPSY 5405 Advanced Relational Psychodynamic Seminar (2 Credits)
This seminar focuses on relational psychotherapy from the perspectives of self-psychology and intersubjective systems theory in working with adults. We examine the co-creation of the therapeutic relationship, the making of meaning, emphatic listening, attuning to the other’s affective experience and putting the other’s subjective experience into words. We develop treatment plans and case formulations that are consistent with this perspective.

CPSY 5406 Professional Seminar: Health Psychology (2 Credits)
This advanced seminar focuses on the ways that clients’ physical health concerns affect psychosocial and emotional well-being. We focus on the relationship between the mind and the body and take a holistic and contextual approach to understanding work with clients, keeping in mind relational and cultural variables throughout the seminar. Clients in the PPC that have been in this seminar have had cancer, Multiple sclerosis, diabetes, heart failure, chronic pain, autoimmune diseases, etc. As relevant to our work with clients, we discuss pain management, mindfulness, differential diagnosis of depression and anxiety, sleep hygiene, psychosocial oncology, grief and loss, and other empirically supported treatments for issues that clients present. The overarching theoretical framework of the course is relationship-focused, client-centered, and strengths-based. We draw on rehabilitation psychology and medical psychology, and explore diversity issues in a variety of ways, including examining disability as a multicultural issue. We use readings from interpersonal psychotherapy, feminist and multicultural therapy, positive psychology, meaning-centered psychotherapy, humanistic/existential therapy, client-centered therapy and post-traumatic growth to guide discussions. Particular attention is paid to helping clients enhance their strengths and find meaning in their lives during times of transition. Since many health settings are focused on a short-term model of treatment, students in seminar have the option of taking on shorter-term cases and we explore the use of time-limited psychotherapy in a health setting. It is expected that most students take on new cases in this seminar.

CPSY 5407 Caregiver and Child Relationships From Pregnancy Through Early Childhood (2 Credits)
This seminar involves the evaluation and treatment of infants, young children, and their caregivers in the Professional Psychology Center. Supervision is provided from an integrative and relationship-based perspective, and topics relevant to perinatal, infant, and early childhood assessment and treatment are discussed. Prerequisite: CPSY 5385.

CPSY 5420 Behav-Analytic Prin 1 (2 Credits)
This course covers philosophical foundations, assumptions, and principles underlying major systems and models of behaviorism. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic tradition. Course I specifically targets contingency-shaping selection processes based upon Pavlovian and operant conditioning paradigms. Recommended prerequisite: CPSY 5000.

CPSY 5421 Behavioral Analysis Princ Ia (1 Credit)

CPSY 5422 Behav-Analytic Prin 2 (2 Credits)
This course covers philosophical foundations, assumptions, and principles relevant to cultural-linguistic practices. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. Course 2 specifically addresses verbal relational contingency selection processes based upon cultural and its verbal community. Prerequisite: CPSY 5420.

CPSY 5423 Behav-Analytic Assess/Case Frm (2 Credits)
This course covers the philosophical foundations, assumptions, and principles relevant to behavioral assessment and case formulation tactics. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets an empirical data-driven approach to idiothetic assessment for purposes of developing conceptual analyses from the contextual-functional analytic perspective. Prerequisites: CPSY 5420, CPSY 5422.
CPSY 5424 Behavior-Analytic Intervention (2 Credits)
This course provides an overview of issues, principles and methods basic to clinical practice and intervention. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets a range of commonly used methods of intervention (e.g., counter-conditioning and exposure-based treatments, guided action strategies, acceptance-commitment approaches, Eastern interventions). Issues relevant to the structuring of therapy sessions, the therapeutic relationship, behavioral nonadherence, empirical research, and other topics of therapeutic interest will be reviewed. This course will incorporate the use of experiential exercises, modeled demonstration, and behavior rehearsal methods for training purposes. Prerequisites: CPSY 5420, CPSY 5422, CPSY 5423.

CPSY 5466 Health Psychology (2 Credits)
This course is designed to provide students with a broad overview of the salient empirical and theoretical aspects of health psychology and behavioral medicine. The course will emphasize the role that psychological variables play in the development, exacerbation, treatment and prognosis of both acute and chronic illness. We will also highlight sociopolitical and cultural discourse surrounding end-of-life decision making, healthcare accessibility and the phenomenology of a disabled population.

CPSY 5467 Health Psychology Service Learning Seminar (1 Credit)
The Health Psychology Service Learning Seminar provides the opportunity for students to gain clinical experience with the underserved/underrepresented populations covered in the Health Psychology course (CPSY 5466). Students who enroll in the Seminar must agree to complete 20 hours of supervised clinical service with an agency and supervisor of their choice.

CPSY 5468 Sport and Performance Psychology Practicum in Collegiate Athletics I (2 Credits)
This is the first course in a year long, three-part sequence. This course serves the purpose of providing: a) practice in sport and performance psychology in a NCAA Collegiate Athletic Department under the supervision of licensed practitioners; b) an opportunity for students to learn about sport and performance psychology through observation and experiential opportunities; and c) information on professional development and conduct. The course requires didactic and experiential activities. The didactic component covers the practice of sport and performance consulting, focusing on gaining entry and building working relationships. Current research is integrated with theory, emphasizing empirically validated approaches to best practice.

CPSY 5469 Sport and Performance Psychology Practicum in Collegiate Athletics II (1 Credit)
This is the second course in a year long, three-part sequence. This course serves the purpose of providing: a) practice in sport and performance psychology in a NCAA Collegiate Athletic Department under the supervision of licensed practitioners; b) an opportunity for students to learn about sport and performance psychology through observation and experiential opportunities; and c) information on professional development and conduct. The course requires didactic and experiential activities. Psychological consultation, best practices, and professional development issues in sport and performance psychology are addressed.

CPSY 5470 Sport and Performance Psychology Practicum in Collegiate Athletics III (2 Credits)
This is the third course in a year long, three-part sequence. This course serves the purpose of providing: a) practice in sport and performance psychology in a NCAA Collegiate Athletic Department under the supervision of licensed practitioners; b) an opportunity for students to learn about sport and performance psychology through observation and experiential opportunities; and c) information on professional development and conduct. The course requires didactic and experiential activities. Psychological consultation, best practices, and professional development issues in sport and performance psychology are addressed.

CPSY 5480 Integrated Primary Care (2 Credits)
This course is designed to provide an introduction to the field of Integrated Primary Care (IPC). Primary health care physicians currently serve as the de-facto mental health care providers for approximately 50-80% of the patients they serve. Psychologists are desperately needed to support primary care, yet traditional clinical training does not adequately prepare them to work in this field. Students in this course can expect to acquire a solid knowledge in IPC that will enable them to function effectively in the primary care culture. A clinical exposure component are required so students can experience the pace and problem range seen in the primary care office. Class size is limited. Students not enrolled in the PsyD program must petition the instructor for approval to register.

CPSY 5482 Health Psychology Service-Learning: Clinical Practice in Integrated Primary Care (1 Credit)
This course will be a clinical and didactic seminar for students who are involved in service-learning projects in integrated primary care clinics in the community. Students will participate in service-learning, clinical rotations, and administrative and consultation duties outside of the course time. The course format will include time for clinical supervision of community cases, didactic training on topics of relevance to integrated primary care settings, and lectures from interprofessional community preceptors from the clinics. Prerequisite: Health Psychology CPSY 5466 or permission or the instructor.

CPSY 5500 Diagnosis & Treatment of Children (2 Credits)

CPSY 5505 Diagnosis & Treatment of Adolescents (2 Credits)

CPSY 5550 Couples Therapy (2 Credits)
Theory, techniques and research relating to couples therapy, including theoretical perspectives: behavioral couples therapy, emotionally-focused couples therapy and object relations couples therapy. The course also addresses specific problem areas, including domestic violence, infidelity, depression, anxiety, substance abuse and personality disorders. Prerequisite: CPSY 5030.
CPSY 5560 Family Therapy (2 Credits)
Theory, techniques and research relating to family therapy, including several theoretical perspectives: behavioral, experiential, psychodynamic, multigenerational approaches. Special topics covered include working with community resources, addressing developmental issues of children, working with medical and school systems, utilizing cultural factors in planning programs and interventions and adults in family therapy. Prerequisite: CPSY 5030.

CPSY 5562 Psychological Consultation (2 Credits)
This course provides an overview of the practice of psychological consultation. Theories and models of consultation in various settings including businesses, organizations, health care, and schools are covered. The process and stages of consultation from entry to termination are analyzed. This class differentiates consultation from other types of psychological interventions. Important legal, ethical and multicultural issues in consultation are addressed throughout the course. Students develop their own model for conducting consultation and refine that model through work with local organizations. Students increase their awareness of their strengths and weaknesses in the practice of consultation. Methods of instruction include lecture, discussion, experiential exercises, and interactions with local organizations and professional consultants.

CPSY 5583 Advanced Topics in IECMH (2 Credits)

CPSY 5590 Adult Psychopathology I (2 Credits)
Theoretical understanding and treatment of adults within a developmental, ego analytic framework. First quarter - differences between the neuroses, borderline, and psychoses. Prerequisite: CPSY 5020.

CPSY 5591 Psychodynamic Psychotherapy (2 Credits)
Theoretical understanding and treatment of adults within a developmental, ego analytic framework. Second quarter - the neuroses. Prerequisite: CPSY 5020.

CPSY 5592 Adult Psychopathology III (2 Credits)
This course is a continuation of Adult Psychopathology I and II with an emphasis on complex trauma and the psychotic disorders. Diagnostic understanding, differential diagnosis, and treatment implications are emphasized within a psychoanalytic orientation. Prerequisites: CPSY 5590 and CPSY 5591 or instructor approval.

CPSY 5620 Intersubjective Systems Theory (2 Credits)
This course focuses on psychotherapy from the perspectives of intersubjective systems theory in working with adults. We examine the co-creation of the therapeutic relationship, the making of meaning, empathic listening, attuning to the other’s affective experience and putting the other’s subjective experience into words. We develop treatment plans and case formulations that are consistent with this perspective.

CPSY 5680 Cognitive Assessment (4 Credits)
Theoretical, professional and clinical issues involving intelligence and its measurement; assessment of cognitive functioning and clinical interpretation of test results, focusing on the WAIS-III ( and child equivalents). Prerequisite: CPSY 5130.

CPSY 5685 Introduction to Pediatric Neuropsychological Assessment (2 Credits)
Pediatric neuropsychology integrates many basic sciences including behavioral Neurology, developmental psychology, neuropsychology, and psychological assessment. The role of pediatric neuropsychologist is to provide comprehensive assessment, consultation, and intervention in the context of a developing child. The course will review important concepts, theories, and empirical research in the field of pediatric neuropsychology. Students will learn the basic rationale in conducting a pediatric neuropsychological evaluation, including a brief review of many common pediatric assessment measures. In addition, many common pediatric disorders will be reviewed from a neuropsychological perspective including: Dyslexia, Attention Deficit hyperactivity Disorder, Pervasive Development Disorders, Traumatic Brain Injury, Seizure Disorders, and Mental Retardation. Upon completion of the course the student will have a greater appreciation of a neuropsychological conceptual framework and have a better understanding of specific pediatric disorders.

CPSY 5686 Suicide Prevention, Intervention and Postvention (2 Credits)
Suicide is a serious public health issue and challenge for the nation, Colorado, and our local communities. In 2009, suicide claimed the lives of almost 34,000 people in the United States and is the second leading cause of death for college students and men ages 25-34. In Colorado, there are many more suicides than motor vehicle deaths. While most clinicians are focused on the assessment and treatment of people at high risk for suicide, a more comprehensive approach is needed to prevent people from becoming suicidal in the first place. This course covers best practices in suicide prevention, intervention and “postvention” (suicide crisis response) and will explore the particular issues of several vulnerable populations.

CPSY 5687 Contemporary Issues in Geropsychology (2 Credits)
This course addresses issues in aging. Topics include healthy aging, aging issues in diverse populations, contemporary options for care, challenges in service delivery, the interplay of medical and mental health needs, mental health treatment approaches and issues, and end-of-life issues.

CPSY 5690 Introduction to the Rorschach (4 Credits)
Exner’s Comprehensive System for administering, scoring and development hypotheses with the Rorschach Test. Prerequisite: CPSY 5130.

CPSY 5692 Advanced Rorschach Analysis (2 Credits)
This course is an exploration of advanced topics in Rorschach interpretation. Topics will include: conceptual understanding of the Comprehensive System; content and sequence analysis; differential diagnosis; integrating alternative systems of interpretation with the Comprehensive System; development and use of special scales; appropriate use of computerized interpretation; and integration of Rorschach analysis with personality theory. Prerequisites include course work in Rorschach administration, scoring and basic interpretation; and in personality theory. Students will be expected to score, analyze, and present Rorschach protocols.
CPSY 5700 Adv Personality Assessment (3 Credits)
Projective techniques including Rorschach, storytelling tasks and projective drawings, with a focus both on test content and the patient-examiner relationship in the context of the diagnostic consultant. Prerequisites: CPSY 5130, CPSY 5680, CPSY 5690.

CPSY 5705 Self Report Assessment (3 Credits)
Construction and application of objective instruments, emphasizing the MMPI and MCMI. Students are required to submit test reposts. Prerequisite: CPSY 5130.

CPSY 5706 Self Report Assessment Lab (1 Credit)
Optional. For students anticipating a need for extra help with repost writing.

CPSY 5710 Intro to the Crisi Wartegg System for the WDCT: Administration, Scoring, and Basic Interpretation (2 Credits)
This course introduces the Crisi Wartegg System (CWS), a new methodology for the clinical use of the Wartegg Drawing Completion Test (WDCT). The WDCT is a projective drawing technique that can be completed in 5-10 minutes and is appropriate for children, adolescents, and adults. It is easy to administer and not overwhelming for clients to complete. The WDCT is not well known in the United States; however, a recent meta-analysis (Gronnerod & Gronnerod, 2011) attests to its validity in assessing personality and psychopathology. The course will review the history and theory of the WDCT, teach its administration, introduce the major features of the scoring system, and discuss basic interpretation. Prerequisites: CPSY 5680 Cognitive Assessment, CPSY 5705 Self Report Assessment, and CPSY 5690 Introduction to Rorschach.

CPSY 5711 Introduction to the Crisi Wartegg System for the WDCT: Lab (1 Credit)
This lab accompanies the Crisi Wartegg System course (CWS). It supplements material presented in the class and provides an experiential component to training in the CWS. It will include applied practice of administration, scoring and calculations, as well as basic clinical case interpretation. Concurrent enrollment in the Crisi Wartegg System course is required. Prerequisites: CPSY 5680 Cognitive Assessment, CPSY 5705 Self Report Assessment, and CPSY 5690 Introduction to Rorschach.

CPSY 5740 Integrative Personality Assessment (2 Credits)
This course is the culmination of the assessment sequence, and integrates techniques, approaches and concepts covered in issues in Measurement, Cognitive Assessment, Objective Personality Assessment, and Rorschach. Aspects of the other core courses in the curriculum will also be brought to bear on the question of how to obtain and how to interpret information within various theoretical models for the purposes of answering referral questions and planning interventions. Projective testing will be introduced as a source of behavior samples for which the occasioning environment is known to the psychologist. There will be focus on distinguishing interpretable from irrelevant information, and on integrating interpretable information into meaningful patterns. The goal of using assessment to answer referral question and plan treatments will generate a special focus on report writing.

CPSY 5741 Therapeutic Assessment (2 Credits)
This course explores the advances made in understanding and enhancing the therapeutic impact that assessment can have on clients. We read broadly in the area: from the genesis of collaborative assessment fueled by Fischer to the empirical foundations and structure of Therapeutic Assessment provided by Finn to novel applications of the approach highlighted by Handler. This important movement in assessment is applicable to personality, cognitive, and neuropsychological assessment as well as any professional endeavor that aims to help clients understand themselves in life-changing ways. The course is designed for those with a solid foundation in assessment who wish to develop greater facility in helping their clients.

CPSY 5745 Human Sexuality (2 Credits)
The psychology of human sexuality is a survey of historical and contemporary psychological views on a wide variety of sexual behaviors; theory and research bearing on the relationship between life span, psychological development, psychological functioning, interpersonal processes, and sexual behaviors; political and social issues involved in current sexual norms and practices. Specific implications for clinical psychology will be discussed.

CPSY 5750 Supervision (2 Credits)
This course is designed to familiarize students with theories of supervision; provide practical, guided experience in peer supervision/consultation; help students understand and critically discuss the supervisory process; aid in gaining awareness of how multicultural issues may affect supervision; and familiarize students with ethical and legal issues in supervision.

CPSY 5755 Supervision Practicum I (1 Credit)
This is a four quarter sequence, 1 quarter credit hour/ quarter, in which advanced students will have the opportunity to supervise on beginning student under the overall supervision of a faculty member. Each quarter practicum will include appropriate level readings, group discussions and report writing. Admission to the course with instructor’s approval.

CPSY 5756 Supervision Practicum II (1 Credit)
This is a four quarter sequence, 1 quarter credit hour/ quarter, in which advanced students will have the opportunity to supervise one beginning student under the overall supervision of a faculty member. Each quarter practicum will include appropriate level readings, group discussions and report writing. Admission to the course with instructor’s approval.

CPSY 5757 Supervision Practicum III (1 Credit)
This is a four quarter sequence, 1 quarter credit hour/ quarter, in which advanced students will have the opportunity to supervise one beginning student under the overall supervision on a faculty member. Each quarter practicum will include appropriate level readings, group discussions and report writing. Admission to the course with instructor’s approval.
CPSY 5758 Supervision Practicum IV (1 Credit)
This is a four quarter sequence, 1 quarter credit hour/quarter, in which advanced students will have the opportunity to supervise one beginning student under the overall supervision of a faculty member. Each quarter practicum will include appropriate level readings, group discussions and report writing. Admission to the course with instructor’s approval.

CPSY 5760 Professional Issues II (2 Credits)
This class provides an organized and comprehensive approach to pre-doctoral psychology internship selection, emphasizing an understanding of "fit." Topics covered include choosing sites; writing cover letters, CVs, and AAPI essays; preparing application materials; interviewing techniques; rank ordering sites; and dealing with emotions related to the process. The course syllabus includes important readings from the current literature. Lectures are balanced with guest appearances by DU Writing Center staff and others. Opportunities are given for role play among the students.

CPSY 5762 Qualitative Data Analysis (3 Credits)
This course, designed for psychology students who are completing their doctoral or masters’ projects, focuses on qualitative data analysis. Throughout the course, we explore different research traditions including phenomenology, grounded theory, ethnography, case study and critical theory. In doing so, we discuss their differing philosophical assumptions, procedures for research, and methods for data collection and analyses. Emphasis is placed on developing skills in qualitative data analysis techniques such as indexing, coding and memo writing. Students also gain experience using qualitative data software (NVIVO 7) and exploring its utility for visual representations and other analytic approaches to understanding their data.

CPSY 5765 Cognitive Behavioral Therapy (2 Credits)
This course focuses on clinical applications of cognitive-behavioral theory. Major theorists in the area are reviewed, including Ellis, Beck, Lazarus, and Meichenbaum. Research utilizing cognitive-behavioral therapy as an evidence-based practice are reviewed. In addition, key cognitive behavioral techniques are demonstrated and practiced.

CPSY 5770 Doctoral Paper Preparation (2 Credits)

CPSY 5775 Clinical Psychology Internsh (8 Credits)

CPSY 5815 Trauma and its Aftermath (2 Credits)
Conceptual model for treating trauma; incidence and specific treatment techniques for various types of trauma (e.g. combat vets, survivors of natural disaster and victims of childhood abuse); professional issues relating to trauma (e.g. secondary PTSD and ethical issues). Students exposed to a variety of reading and expected to integrate current research into clinical application. For advanced students who have both a clinical and conceptual background.

CPSY 5816 Int'l Psychology Externship (5 Credits)
International externship is one component of a yearlong advanced seminar. The five credit course offers students the opportunity to work with victims of disasters in an international setting.

CPSY 5825 Introduction to Latinx Psychology and the Latinx Experience (2 Credits)
This course will highlight the current psycho-social research and literature relevant to the mental health of Latinx populations including influences of culture, acculturation, immigration, and language on utilization of psychological services. The course will explore the variables that can affect how different Latinx groups respond in a unique way to the various services offered in the community. This course will familiarize the student with the personal, social, cultural and institutional forces that affect the psychology of Latinx groups, to include history, religion, gender roles, emotional processing, violence, bilingualism, and stigmatization and oppression.

CPSY 5826 Therapy and Psychological Interventions with Latinx Populations (3 Credits)
As the second course in GSPP’s Latinx Psychology sequence, this course examines the theories and models of research on psychotherapy with Latinx populations to prepare future therapists to engage in culturally responsive services with the growing U.S. Latinx population. This course focuses on clinical interventions that address that particular mental health needs of Latinx populations in the United States. A particular emphasis is placed on the skills that are necessary in order to attain clinical competence treating members of the various Latinx groups, by both Latinx and non-Latinx clinicians. Empirically-based psychological treatments for Latinx patients will be examined. Creative ways will be discussed for adapting these interventions with Latinx groups. Discussion of clinical cases will be integrated into the course. Prerequisite: CPSY 5825.

CPSY 5827 Psychological Assessment with Latinx Populations (3 Credits)
As the third course in GSPP’s Latinx Psychology sequence, the Psychological Assessment with Latinx Populations addresses the cultural considerations needed for interviewing and conducting psychological evaluations of Latinx groups. Clinical interviewing techniques and measures across all psychological assessment domains, including diagnosis, personality, and cognition, as well as more specialty-focused areas such as neuropsychological assessment, forensic assessment, and school-based assessment will be covered. The class will explore the strengths and limitations of each assessment measure with a particular focus on language, research and norming issues, and administration. Prerequisite: CPSY 5825 and CPSY 5826.
CPSY 5828 Latinx Psychology Practicum (2 Credits)
This course is designed to sharpen your clinical skills by examining current cases and analyzing appropriate intervention and assessment techniques as a class. Students will formally present cases from their current caseload, in traditional case presentation format. We will base our following discussions in Latinx psychological theory and orientations, and apply didactic material learned in the previous three courses of the Latinx sequence. Case discussions will be sustained by students and will be positive, constructive, and ethical. It will be important for students to remain open to feedback, new approaches, constructive criticism, and exploring their strengths and weaknesses as early clinicians among their peers and professor. This course is also designed to assist students in the management of their complete caseload and seek advisement from the class on professional issues encountered as a Latinx psychologist, in order to maintain both an ethical and realistic professional perspective.

CPSY 5829 Spanish Clinical Language Lab: Reinforcing the Therapeutic Alliance with Latinx Clients (1 Credit)
This course will be offered as a lab for students in the Latinx Practicum CPSY 5828 class. It is developed to enhance students’ linguistic and cultural clinical competence in Spanish. The lab will focus on learning and using mental health terminology, cultural and linguistic metaphors, practicing clinical interviewing skills in Spanish and how to work with interpreters/translationists. The lab will be delivered in Spanish and will be divided into 2 sections of Spanish Proficiency Levels. The lab aims to provide students with hands on clinical skills in Spanish to reinforce the therapeutic alliance with Latinx clients. Students will be required to take a Spanish Language Proficiency Exam.

CPSY 5831 Theory and Foundations of IECMH: Infant and Early Childhood Mental Health (2 Credits)
This course will provide an in-depth historical, theoretical, and empirical foundation for students interested in engaging in ongoing research and practice in Infant Early Childhood Mental Health (IECMH). Formative readings from the IECMH literature, including groundbreaking articles and textbooks will be reviewed and discussed. We will examine methods of applied IECMH work, including promotion of well-being and the spectrum of prevention, early intervention, assessment, and treatment with young children and their caregivers. The multidisciplinary nature of IECMH will be explored, along with a focus on how psychologists and infant mental health specialists fit into these teams in various contexts. We will also examine different “ports of entry” or means into treating caregivers, young children, and their relationships from an IECMH framework. Empirical studies establishing the efficacy, effectiveness, and cultural sensitivity (or lack thereof) of various assessments, therapeutic approaches, and practices in the IECMH field will be examined. We will spend the most time examining critical theories of social development including attachment and temperament and will consider their applicability to IECMH work, cultural responsive across several cultures, strengths, and limitations. Throughout the course, will explore the IECMH Diversity tenets created by leaders in the field and will apply the tenets in discussions and coursework.

CPSY 5832 Caregiver-Child Assessment in IECMH: The Process of Assessment, Diagnosis, Report Writing, & Feedback (2 Credits)
Intensive training will be offered in the process of assessing a caregiver and child relationship in a manner designed to inform dyadic treatment planning. All students will be trained in conducting a multi-modal, relationship-based assessment with a caregiver and child under the age of six. Assessment tools used will include the Infant Toddler Mental Status Exam (ITMSE), the Crowell Procedure and the Working Model of the Child Interview (WMCI). Students will also be introduced to the Interpersonal Inventory and paper and pencil means of assessing the individuals and their relationship. Students will be introduced to diagnosis in IECMH using the Diagnostic & Statistical Manual of Mental Disorders – fifth edition (DSM-V) and the Diagnostic Classification of Mental Health & Developmental Disorders of Infancy and Early Childhood (DC:0-5) classification systems, as well as crossover considerations between the two systems. Students will conduct a thorough and multi-modal assessment of a caregiver-child relationship and will integrate the information learned into a professional report. Students will practice treatment planning as well as providing feedback to the dyad.

CPSY 5833 Advanced Topics in IECMH: Infant and Early Childhood Mental Health (2 Credits)
This advanced topics course will continue fostering the student’s understanding of Infant and Early Childhood Mental Health (IECMH). Throughout the course, in-class discussion centers on developing clinical relationships with families and on how these relationships can support growth and change in both child and caregiver. Of particular importance is the student’s continued exploration of use of self, and integrating IECMH practice principles into their field placement and CUB Clinic work. Topics include infant regulatory concerns, attachment difficulties, caregiver mental illness and impact on the child and relationship, parenting self-efficacy, child maltreatment and trauma, and application of IECMH treatment practices in the community. Prerequisite: CPSY 5831 or equivalent with instructor’s permission.

CPSY 5834 Therapeutic Intensive: Interpersonal Psychotherapy in Infant and Early Childhood Mental Health (2 Credits)
This intensive therapeutic course will continue fostering the student’s understanding of Infant and Early Childhood Mental Health (IECMH) practice via working knowledge of a psychotherapeutic model used during the perinatal through age five (p-5) period. This quarter we will focus on Interpersonal Psychotherapy (IPT), an evidenced based approach, with a focus on its use with clients experiencing depression during the perinatal (pregnancy and postpartum) period. Students will also be introduced to using IPT with adolescents as well as Group-IPT. Students will gain knowledge of IPT assessment and practice via readings, in-class discussions, video, role plays, and case presentations. Of particular emphasis is the student’s continued exploration of use of self and integrating IECMH practice principles when learning about and practicing IPT. Prerequisite: CPSY 5831 or equivalent with instructor’s permission.
CPSY 5840 Psychopharmacology (2 Credits)

CPSY 5846 Military Psychology and the Culture of Warfighting (2 Credits)
This course is intended to provide an introduction to military and veteran culture as well as military psychology and behavioral health. This course is designed as the first of a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with military members, veterans, and the families of servicemembers. The principal focus will be on training students to utilize culturally competent attitudes and knowledge as clinicians when providing services to servicemembers of the military branches, veterans of the military, and the families of servicemembers. American historical context, military history, and military structure will be covered in this course. Additionally, multiple types of behavioral health services within the United States government will be covered including the Department of Defense, the Public Health Service, and the Department of Veterans Affairs. A survey of world affairs as they currently stand, the U.S. national defense strategy, and current military posture will be covered. Salient health care issues within the military and veteran population will be covered. Legal and ethical issues that are pertinent and complex within military psychology and combat will be examined.

CPSY 5847 Psychology and Physiology of Isolated, Confined, and Extreme Environments (2 Credits)
This course is intended to survey and examine human psychological and physiological performance in extreme, austere, and challenging environments and the secondary effects of these environments after deployment. This course is designed as the second in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. This course will examine issues, literature, and critical arguments surrounding team makeup and cohesion in austere environments as well as physiological and cognitive/behavioral effects of operating within these environments. Operational behavioral health will be covered in addition to the physical and psychological after-effects of these deployments. Psychological casualties, forensic issues, and post-deployment transition will also be covered. Prerequisite: CPSY 5846.

CPSY 5848 Evidence-based Practice for Military-related Health Disparities (2 Credits)
This course is intended to survey and examine current evidence-based assessment tools utilized to diagnose certain psychiatric and neurological conditions within military servicemembers and Military Veterans. The course will also focus on the understanding and utility of the best available evidence for the treatment of these psychiatric conditions. Prevalence rates, comorbid conditions, differential diagnosis, and complicating treatment factors within these particular psychiatric conditions will be the primary focus of the course. This course is designed as the third in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity.

CPSY 5849 Behavioral Medicine and Interprofessional Healthcare in Military/Veterans (2 Credits)
This course is intended to build upon academic and clinical knowledge gained throughout the entirety of the Graduate School of Professional Psychology curriculum and integrate this knowledge with the understanding of clinical and operational psychology within Military and Veteran settings gained through courses in the Sturm Specialty in Military Psychology. This course is focused on the acquisition of knowledge of the unique aspects of Military behavioral medicine and its role within the medical center environment. A second focus of the course is on interprofessional work within healthcare settings and how behavioral science professionals play a role on interprofessional teams within family medicine, primary care, and medical/surgical units within the medical center environment. Additionally, special considerations for behavioral medicine and interprofessional work with Military and Veteran populations will be covered. This course is designed as the fourth in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. Enforced Prerequisites: CPSY 5846.

CPSY 5852 Foundations in Substance Use Disorder (2 Credits)
The course examines the major theories addressing substance use disorder and addiction. Students will explore these disorders as understood from a variety of theoretical frameworks (including psychoanalytic, behavioral, humanistic and social learning theory), as well as findings from neuroscience. The course emphasizes a developmental perspective in the understanding of these issues. Further, the course will emphasize current treatment models based on empirically based information and research. Students will gain skills in using their generalist training to conceptualize, diagnose, and treat these difficult disorders.

CPSY 5853 Neurobiology and Physiology of Substance Use Disorders: Implications for Treatment (2 Credits)
The course will examine research and practice findings from the fields of neuropsychology and biology with regard to substance use disorders. Major findings and theories related to brain and nervous system functioning as they relate to substance use will be discussed, and used to further inform treatment considerations and clinical conceptualization. Additionally, students will be engage in a more in-depth review of treatment modalities available. Students will build on their knowledge of empirically supported treatments in the first course. Students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course.

CPSY 5854 Behavioral Addictions: Assessment and Treatment (2 Credits)
The course will examine research and practice findings regarding behavioral addictions such as sex, pornography, gambling, food, and others. Discussion of brain and nervous system functioning as they relate to behavioral addiction will be discussed, and used to further inform treatment considerations and clinical conceptualization. Prerequisites: students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course, and completion of CPSY 5853 Neurobiology of Addiction and Advanced Treatment is strongly recommended.
CPSY 5865 Introduction to Psychosocial Oncology (3 Credits)
In this course, students will be introduced to the field of Psychosocial Oncology. This course will include an overview of the physiological processes involved in cancer prevention, etiology, and treatment. Students will develop a better knowledge of the different types of cancer, staging, and treatment options. A brief history of the field of psychosocial oncology will also be presented. The psychological sequelae of cancer diagnosis, treatment, metastases and recurrence, and survivorship will be included in this course. Special topics will also include working with caregivers and family members of cancer patients, sexuality and cancer, and working with patients and families at the end of life. Common psychotherapeutic interventions and assessments for oncology settings will be explored. In addition, the variety of roles of a psychologist in oncology settings will be discussed. Themes that will be included throughout the course are ethical and reflective practice, working with cancer patients from a multicultural perspective, and reducing compassion fatigue.

CPSY 5866 Interprofessional Systems in Healthcare (2 Credits)
This course will provide an overview of an working in an interprofessional system as a psychologist. An introduction to systems theory and its application to a healthcare system will be discussed. Collaborating with other professionals, leading a team, and understanding the roles of a psychologist on an interprofessional team will also be covered. This course is best taken as the final course in the oncology psychology specialty, though it is open to other students with special consideration.

CPSY 5880 Business Issues in Professional Psychology (2 Credits)
This course introduces students to business principles as they apply to professional psychology. Students think through various business practice decisions, such as starting, managing, marketing, and diversifying a psychology practice and consider the related legal, ethical, and financial issues.

CPSY 5989 Doctoral Paper Development (1 Credit)
This course is designed to facilitate the development and writing of the doctoral paper. Students are expected to adhere to the GSPP Doctoral Paper Guidelines and the APA style guidelines. A major feature of the class is student-to-student sharing and critiquing of doctoral project ideas and plans. Students are expected to take advantage of this opportunity to hone their writing skills and develop their doctoral paper proposal. Students have complete the proposal phase of their project further develop their research methodology.

CPSY 5991 Independent Study (1-17 Credits)

CPSY 5992 Directed Study (1-10 Credits)

CPSY 5993 Advanced Field Placement Experience (1-8 Credits)
All PsyD students are required to work as a Psychology Trainee in an outside agency each year prior to the internship year. The minimum total is 384 hours per year. Students are expected to arrange with a field placement to receive psychological clinical training, which could include the following types of experiences: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc.

CPSY 5994 PsyD Internship (4,8 Credits)
The Graduate School of Professional Psychology (GSPP) requires that all students attend a yearlong or two half-time years of clinical internship. Internship is the clinical experience after the student has completed all courses, the clinical competency examination, and at least three years of residency at GSPP. Students typically apply through APPIC and are offered formal internships. Occasionally students create internships, but they must be approved formally through GSPP prior to the start of the internship. The basic experiences may include training in: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc.
To register, student must have departmental approval. Students can register half-time for 4 credit hours or full-time for 8 credit hours.

CPSY 5995 Independent Research (1-17 Credits)

Graduate School of Social Work
The Graduate School of Social Work (GSSW) at the University of Denver is internationally recognized as a leader in educating practitioners, scholars, educators and researchers. GSSW’s vision aims for the achievement of thriving sustainable communities, actualized human potential, and embodiment of equity across all communities. GSSW’s mission promotes social justice by advancing scholarship, education, and community engagement that leads, connects, mobilizes, and transforms. This mission is carried out in a rich educational environment featuring excellent teaching by award-winning faculty and path-breaking research.

The Master of Social Work (MSW) program is ranked in the top seven percent of all accredited MSW programs in the country by the U.S. News and World Report (https://www.usnews.com/best-graduate-schools/top-health-schools/university-of-denver-127060). GSSW offers four program locations to fit diverse learning needs. Although concentration options differ between locations, all MSW programs provide small class sizes, field internships and an individualized learning experience. MSW program locations span across Colorado and beyond:

- Denver Campus MSW Program – eight specialized concentrations, three unique certificates and international courses and internships
- MSW@Denver - Online MSW Program – course work is 100% online, concentration in Mental Health and Trauma
- Four Corners MSW Program (located in Durango, Colorado) - concentration in Advanced Social Work Practice with a particular focus on rural and tribal communities
- Western Colorado MSW Program (located in Glenwood Springs, Colorado) - concentration in Advanced Social Work Practice with an emphasis on rural social work practice, integrated health and sustainability
Throughout the MSW program, students gain fundamental skills to make a significant impact on individuals, communities, systems and policy.

GSSW’s Denver-based Doctor of Philosophy in Social Work was one of the first in the United States. During the program, students work alongside distinguished faculty to conduct research, write publications and gain substantive knowledge in the field of social work.

Graduate School of Social Work

Doctor of Philosophy in Social Work

The doctoral program at the Graduate School of Social Work trains master’s level human service professionals from across the country and around the world to become social work researchers, educators and policy experts.

Founded in 1968, our PhD program is among the oldest social work doctoral programs in the nation. Students work alongside distinguished faculty members (http://www.du.edu/socialwork/facultyandstaff/facultydirectory) to conduct research, write publications and gain substantive and methodological knowledge in the field of social work.

As a doctoral student, you are encouraged to develop a solid understanding of the theories, social interventions and policies that guide research in your individual substantive areas.

The program emphasizes the following:

- knowledge development through advanced coursework in theory, policy and research methodology;
- research competencies through required and elective courses, graduate research assistantships and dissertation research;
- collaboration with faculty working in diverse, substantive areas including youth, child welfare, gerontology, mental health, substance abuse and poverty; and
- teaching skills through a pedagogy coursework teaching practicum, elective courses and faculty mentoring.

Watch our PhD video to learn more. (https://www.youtube.com/watch?v=By-28nhKXPk&t=10s&index=1&list=PLf4Wfa1INglKRjtjLW4X12auqoHShxVK6y)

Denver Campus Master of Social Work (MSW) Program

Most students attend our Denver campus MSW program, where they can customize their career preparation by choosing from eight specialized concentrations and three unique certificate programs. Students can also pursue a dual degree with another graduate degree or take courses at other graduate programs on the University of Denver campus. The Denver MSW program attracts students from across the country and around the world. GSSW recently launched a partnership degree with the University of Colorado Denver which allows students to receive a Master of Social Work and a Master of Public Health simultaneously.

Concentrations

- Aging Services and Policy
- Child Welfare
- Children and Youth: Risks and Positive Development
- Family Systems Practice
- Health and Wellness
- Mental Health
- Organizational Leadership and Policy Practice
- Sustainable Development and Global Practice

Master of Social Work with a Concentration in Aging Services and Policy

The Aging Services and Policy concentration prepares social workers to practice across the continuum of services that promote quality of life and independence for older adults and their families. Social workers interested in aging provide clinical care in health, behavioral health, memory care, community and residential settings. Additionally, social workers intervene in social justice issues impacting older adults through educational, management, program development, advocacy and policy work. This concentration emphasizes culturally responsive practice needed for the increasing diversity among older adults locally, nationally and internationally.

Students engage in field education in a variety of settings such as community service agencies and government agencies, home health and hospice agencies, outpatient and inpatient medical care settings, residential facilities across the continuum of care, gero-psychiatry services, and advocacy agencies. Clients are predominately older adults and their families, but may include clients of all ages. These placements can offer opportunities to gain skills in clinical interventions, care management, group work, program and policy development, advocacy, and administration.
Master of Social Work with a Concentration in Children and Youth: Risks and Positive Development
This concentration provides students with knowledge and skills to work from a resilience perspective with adolescents and children in a wide variety of settings: mental health, family services agencies, schools, treatment centers, youth correctional facilities, and community agencies.

The concentration gives students expertise in the theories and practices for prevention, early intervention and clinical treatment with children and youth. The overarching frameworks for the concentration are positive youth development and resilience. Students learn clinical strategies that are particularly effective for working with children and youth.

Master of Social Work with a Concentration in Child Welfare & Child Maltreatment
The Child Welfare & Child Maltreatment concentration prepares social workers for work with children, youth, and families across the continuum of care within the child welfare system from entry to exit in both public and private child welfare agencies. Using a multi-systemic lens, this concentration focuses on the use of culturally responsive, evidence-based approaches to interventions with children and families who have experience child maltreatment, poverty, domestic violence, mental illness, and substance abuse. Intervention is focused on engaging families, building upon individual and family strengths, preventing and alleviating the consequences of child maltreatment, as well as promoting the safety, permanence and well-being of children who have suffered, or are at risk of, child maltreatment.

Master of Social Work with a Concentration in Family Systems Practice
The Family Systems Practice concentration provides students with knowledge and skills to use multi-systemic assessments and interventions to ameliorate client and family distress in a wide variety of settings including but not limited to: mental health and family service agencies, child welfare, legal systems, schools, treatment centers, private practice, and community social service agencies. This concentration prepares students to work in a variety of direct service, practice and family policy settings with diverse clients, individuals, couples, families, organizations, constituencies, and communities.

Through coursework and specialized field placements offering the opportunity to work at the individual family, agency, community or family policy level, students will:

- Develop an understanding of the needs of children, youth, and multigenerational families seeking social work services
- Select interventions for best practices,
- Understand the differences between public funded, nonprofit, and private social work settings,
- Assess legal and associated ethical issues given complex systems,
- Evaluate social systems for issues of bias and cultural responsiveness in client engagements and service utilization.

Master of Social Work with a Concentration in Health and Wellness
The Health and Wellness concentration prepares students to be practitioners in diverse health, integrated health and wellness settings. Students study a variety of practice skills, theories and evidence-based modalities to prepare for social work in comprehensive and specialized health care facilities, public health clinics and programs and/or wellness and preventative healthcare programs.

The Health and Wellness concentration allows students to practice specific skill sets that incorporate problem-solving, integrative and strengths-based approaches to care. Students gain exposure to classical Western medical social work settings (such as hospitals), to integrative health settings (where mental health, drug and alcohol intervention, and medical care are connected) and to organizations primarily focused on promoting mental, emotional, physical, spiritual, community, social and/or environmental wellness. Students can choose to experience a range of options from learning medical terminology to studying complementary and alternative medicine techniques focused on the mind-body connection.

Course work also illuminates the history of health and health disparities in the United States and globally, preparing students for culturally competent clinical practice, as well as leadership and advocacy in health and wellness administrative and policy practice.

Master of Social Work with a Concentration in Mental Health
The Mental Health concentration focuses on clinical interventions, advanced theory, and research related to mental health, substance use and trauma. Core topics include the assessment of mental health and substance use, skills in suicide risk-assessment, policy related to mental health and substance use intervention and key clinical interventions and skills.

Courses include mental health and substance use interventions from several theoretical perspectives: solution-focused, cognitive behavioral, trauma-informed, existential, interpersonal/psychodynamic and strengths/empowerment. Populations include children, adults, and older adults.

Field education placements are offered in agencies that provide psychotherapy, crisis intervention, case management and other clinical interventions related to mental health, substance use and trauma.
Master of Social Work with a Concentration in Organizational Leadership and Policy Practice

The Organizational Leadership and Policy Practice concentration prepares social work practitioners to work at community, organizational and societal levels. Practitioners work to build the capacity of communities, organizations and policy-makers to advance human rights, social justice and the well-being of all peoples. Community social workers use leadership skills to develop programs, administer organizations, build community coalitions, craft and analyze social policy, advocate for policy and program change, and implement program and policy research to support best practices for social services delivery. Students complete field work in community based settings and organizations that address a range of social problems and policy issues such as poverty, women’s rights, health care, homelessness and education.

Master of Social Work with a Concentration in Sustainable Development and Global Practice

Humans need an ecological understanding of their place in the natural environment to promote personal health and well-being, environmental awareness, sense of belonging in a community, sustainability, resilience and advocacy. Students will develop practice behaviors in assessment, community engagement, education, health promotion, mobilization, organizing, poverty reduction, environmental preservation and capacity building strategies. Students in the Sustainable Development and Global Practice concentration will learn about local and global policies and laws relevant to humane treatment of human and animals, human security, sustainable development strategies in countries emerging from conflict, conservation of nature, biodiversity and sustainability, land use, and water use.

Courses and field internships will be guided by the principles of human rights, global justice, and sustainability and will address complex social and economic development, reconciliation and restorative justice, implementation of sustainable development strategies in countries emerging from conflict, conservation of nature, and biodiversity issues to support the systemic interconnections of human-animal and ecosystem health using practice-informed environmental health and capacity-building strategies.

Students learn to partner effectively with families, communities, non-governmental organizations (NGOs) and institutions by developing competencies in assessment, community engagement, education, health promotion, mobilization, environmental preservation, organizing and developing strategies to reduce poverty and build capacity.

Master of Social Work with a Concentration in Mental Health and Trauma: MSW@Denver

The Mental Health and Trauma concentration focuses on clinical and community based interventions, advanced theory and research related to mental health, substance use and trauma. Core topics include the assessment of mental health and substance use, skills in suicide risk-assessment, policy related to mental health and health care and key interventions and skills. Students will learn to apply a critical lens, cultural responsiveness, and empowerment theory to actualize social work’s value of social justice.

Courses include mental health interventions emphasizing cognitive approaches, trauma informed care, prevention and interventions related to substance use, integrated health, interpersonal, relational, and strengths approaches in community mental health.

Field education internships are offered in settings that provide clinical and community interventions related to mental health, substance use and trauma. Internships may include individual, group and family therapy, crisis intervention, case management and other clinical and community based interventions.

MASTER OF SOCIAL WORK WITH A CONCENTRATION IN Health and Wellness: MSW@DENVER

The Health and Wellness concentration prepares students to be practitioners in diverse health, integrated health and wellness settings. Students study a variety of practice skills, theories and evidence-based modalities to prepare for social work in comprehensive and specialized health care facilities, public health clinics and programs and/or wellness and preventative healthcare programs.

The Health and Wellness concentration allows students to practice specific skill sets that incorporate problem-solving, integrative and strengths-based approaches to care. Students gain exposure to classical Western medical social work settings (such as hospitals), to integrative health settings (where mental health, drug and alcohol intervention, and medical care are connected) and to organizations primarily focused on promoting mental, emotional, physical, spiritual, community, social and/or environmental wellness. Students can choose to experience a range of options from learning medical terminology to studying complementary and alternative medicine techniques focused on the mind-body connection.

Course work also illuminates the history of health and health disparities in the United States and globally, preparing students for culturally competent clinical practice, as well as leadership and advocacy in health and wellness administrative and policy practice.

Master of Social Work with a Concentration in Advanced Social Work Practice: Four Corners Program

The Advanced Social Work Practice Concentration prepares social workers to practice across the continuum of services at micro, mezzo and macro levels with a wide range of populations and settings to meet the needs of their community. Additionally, social workers intervene in social
justice issues impacting local populations through educational, management, program development, advocacy and policy work. This concentration
emphasizes culturally responsive practice needed for the increasing diversity in communities locally and nationally.

Students engage in field education in a variety of settings such as community service and government agencies, health and hospice agencies,
residential facilities, schools, child welfare settings and more. Clients include individuals, families, groups and communities. These placements
can offer opportunities to gain skills in clinical interventions, care management, group work, program and policy development, advocacy, and
administration.

Master of Social Work with a Concentration in Advanced Social Work Practice:
Western Colorado Program

The Advanced Social Work Practice concentration prepares social workers to practice across the continuum of services that are provided in rural
areas. Social workers interested in advanced social work practice are prepared to provide social work services at a micro, mezzo or macro level
across a wide range of populations and settings to meet the needs of their community. Additionally, social workers intervene in social justice issues
impacting local populations through educational, management, program development, advocacy and policy work. This concentration emphasizes
culturally responsive practice needed for the increasing diversity in communities locally and nationally.

Students engage in field education in a variety of settings such as community service and government agencies, health and hospice agencies,
residential facilities, schools, child welfare settings and more. Clients include individuals, families, groups and communities. These placements
can offer opportunities to gain skills in clinical interventions, care management, group work, program and policy development, advocacy, and
administration.

Certificate in Animal-Assisted Social Work

Students enrolled in this certificate program are required to complete 15 hours of concentration year field internship (five in each of three quarters) in
a program or agency that either offers animal-assisted social work or is interested in developing it. Students must include a plan for integrating the
specific requirements of the certificate into those of the internship on the Individualized Field Education Plan (IFEP). The internship must fulfill the
requirements of the concentration practice track, as well as those of the certificate.

LatinX Social Work Certificate

Students enrolled in this certificate program are required to complete 15 hours of concentration year field internship (five in each of three quarters)
in a program or agency offering the opportunity to work with Latino/a clients and use Spanish at least 30% of the time. Students must include a plan
for integrating the specific requirements of the certificate into those of the internship on the Individualized Field Education Plan (IFEP). The internship
must fulfill the requirements of the concentration practice track, as well as those of the certificate.

Certificate of Specialization in School Social Work

Students enrolled in this certificate program are required to complete 15 hours of concentration year field internship (five in each of three quarters)
in a school setting in the State of Colorado and with supervision by a school social worker. Students must include a plan for integrating specific
requirements of the certificate into those of the internship on the Individualized Field Education Plan (IFEP). The internship must fulfill the
requirements of the concentration practice track, as well as those of the certificate.

Accreditation

Since 1933, our MSW program has been accredited by the Council on Social Work Education (CSWE) (https://www.cswe.org), a specialized accrediting
body recognized by the Council on Post-Secondary Accreditation.

CSWE accreditation signifies that our MSW program meets nationally accepted standards in eight areas:

- mission, goals and objectives
- curriculum
- governance, structure and resources
- faculty
- student professional development
- non-discrimination and human diversity
- program renewal
- program assessment and continuous improvement

All CSWE programs measure and report student learning outcomes. Students are assessed on their mastery of the competencies that comprise
the accreditation standards of the Council on Social Work Education. These competencies are dimensions of social work practice that all social
workers are expected to master during their professional training. A measurement benchmark is set by the social work programs for each
competency. An assessment score at or above that benchmark is considered by the program to represent mastery of that particular competency. Read GSSW’s Student Learning Outcomes. (http://www.du.edu/socialwork/media/documents/cswe-studentlearningoutcomes.pdf)

Doctor of Philosophy in Social Work

Degree and GPA Requirements

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

Prerequisites:

• Doctoral students are expected to enter the program with a basic proficiency in descriptive and inferential statistics. This knowledge is necessary for several of the required doctoral courses. If you lack this required statistical proficiency, you should plan to take a basic statistics course before enrolling at GSSW.

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 95
• Minimum TOEFL Score (Paper-based test): 587
• Minimum IELTS Score: 8
• Minimum CAE Score: 200

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

Master of Social Work

Degree and GPA Requirements

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

Prerequisites:

• A minimum of 20 semester hours or 30 quarter hours in undergraduate course work in the arts and humanities, social/behavioral sciences and biological sciences. For each liberal arts course taken to fulfill this requirement, students must earn a grade of "C" (2.0 on a 4.0 scale) or better. In addition, you must have completed at least one course in English composition or present evidence of testing out of the English composition requirement.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 95
• Minimum TOEFL Score (Paper-based test): 587
• Minimum IELTS Score: 7
• Minimum CAE Score: 185
Master of Social Work Advanced Standing (Main Campus and Four Corners programs)

Degree and GPA Requirements

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

Prerequisites:

- A minimum of 20 semester hours or 30 quarter hours in undergraduate course work in the arts and humanities, social/behavioral sciences and biological sciences. For each liberal arts course taken to fulfill this requirement, students must earn a grade of "C" (2.0 on a 4.0 scale) or better. In addition, you must have completed at least one course in English composition or present evidence of testing out of the English composition requirement.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

Master of Social Work (Four Corners)
The Western Colorado MSW program is unavailable for admission beginning in the 2019-20 academic year. The next cohort of two-year students will begin in the fall of 2020.

Degree and GPA Requirements

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

Prerequisites:

- A minimum of 20 semester hours or 30 quarter hours in undergraduate course work in the arts and humanities, social/behavioral sciences and biological sciences. For each liberal arts course taken to fulfill this requirement, students must earn a grade of "C" (2.0 on a 4.0 scale) or better. In addition, you must have completed at least one course in English composition or present evidence of testing out of the English composition requirement.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

English Conditional Admission: No, this program does not offer English Conditional Admission.
Master of Social Work (Western Colorado Program)

Degree and GPA Requirements

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

Prerequisites:

- A minimum of 20 semester hours or 30 quarter hours in undergraduate course work in the arts and humanities, social/behavioral sciences and biological sciences. For each liberal arts course taken to fulfill this requirement, students must earn a grade of

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

Master of Social Work (Online)

Degree and GPA Requirements

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

Prerequisites:

- A minimum of 20 semester hours or 30 quarter hours in undergraduate course work in the arts and humanities, social/behavioral sciences and biological sciences. For each liberal arts course taken to fulfill this requirement, students must earn a grade of "C" (2.0 on a 4.0 scale) or better. In addition, you must have completed at least one course in English composition or present evidence of testing out of the English composition requirement.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

Certificates

Overall Requirements for Admission to Certificate Programs

Students who wish to be considered for admission to any one of the two academic certificate programs must:

- successfully complete the foundation curriculum at GSSW or be admitted to the MSW program as an advanced standing student.
- be in good standing in both academics and field.
• declare intention to complete certificate on Course Planning Worksheet according to established deadlines.
• be willing and able to attend all classes required for the certificate at the time these classes are offered.
• be willing and able to meet all academic requirements for their concentration and practice track, as well as for the certificate program.
• meet any additional eligibility requirements listed within the individual certificate descriptions below.

Animal-Assisted Social Work Certificate
Students who wish to be considered for admission to the Animal-Assisted Social Work Certificate program (AASW) may be in any concentration at GSSW and are required to:

• meet the general requirements for admission to certificate programs listed in the introductory section.
• complete the introductory course (SOWK 4795) prior to taking SOWK 4796 and SOWK 4797.
• be willing to attend extracurricular, experiential AASW activities offered by the Institute for Human-Animal Connection (IHAC).
• integrate AASW concepts into their concentration year field placement. It is not required to have a therapy animal or therapy animal-in-training to fulfill this requirement and the field site does not need to be a traditional AASW site.

Latinx Social Work Certificate
Students who wish to be considered for admission to the Latinx Social Work Certificate program should contact the certificate coordinator for more information. Students are also required to:

• complete the Latinx Social Work Certificate application.
• submit a copy of their current Resume/Curriculum Vitae.
• schedule a meeting with the certificate coordinator.
• demonstrate, at minimum, an Intermediate-Mid Level of proficiency in Spanish. An online proficiency test is offered at GSSW for applicants.

Doctor of Philosophy in Social Work
University policy requires a minimum of 135 quarter hours beyond a baccalaureate for the doctor of philosophy degree in social work. Up to 60 quarter hours toward this requirement may be credited for “A” or “B” work completed as part of a master’s degree conferred through an accredited school of social work.

Minimum number of credits required beyond the MSW: 75
Minimum number of credits required beyond MA in related field: 90

Coursework Requirements

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<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>SOWK 5000</td>
<td>Seminar in Professional Social Work Issues</td>
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<tr>
<td>SOWK 5110</td>
<td>Introduction to Advanced Quantitative Research Methods</td>
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<tr>
<td>SOWK 5120</td>
<td>Introduction to Advanced Qualitative Research Methods</td>
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<td>SOWK 5201</td>
<td>Statistical Methods</td>
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<tr>
<td>SOWK 5300</td>
<td>Social Science Theory and the Philosophy of Science</td>
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Fall

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<td>SOWK 5121</td>
<td>Qualitative Data Analysis</td>
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<tr>
<td>SOWK 5202</td>
<td>Correlation and Regression</td>
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Winter

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<td>Seminar in Professional Social Work Issues</td>
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<tr>
<td>SOWK 5130</td>
<td>Mixed Methods Research in Social Work</td>
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<tr>
<td>SOWK 5203</td>
<td>Multivariate Analysis</td>
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Spring

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<tr>
<td>SOWK 5101</td>
<td>Social Welfare Policy Analysis and Development</td>
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SECOND YEAR

Fall

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<tr>
<td>SOWK 5101</td>
<td>Social Welfare Policy Analysis and Development</td>
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</tbody>
</table>
SOWK 5301  Social Work Theory in Research and Practice
SOWK 5500  Pedagogy in Social Work Education

Elective (3-6 credits)  

**Winter**

SOWK 5111  Quantitative Methods for Assessing Social Interventions
SOWK 5450  Preparing for the Comprehensive Exam: Integration from a Social Justice Perspective
SOWK 5700  Teaching Practicum

Elective/s (3-6 credits)  

**Spring**

Elective/s (3-6 credits)  

1. Students may elect to waive SOWK 5201 if they have a graduate level statistics course in which they made an A or B, or Pass (in the case of Pass/Fail courses). A course on research methods does not qualify for the waiver as methods courses frequently do not have in-depth coverage of statistical analysis and inference. The credit hours waived must be replaced with credit hours of advanced statistical training.

2. Electives must include:
   - One 3-credit theory course
   - Six credits of advanced methodology and statistics

Students work with their advisor and other faculty to develop an Educational Plan that identifies appropriate electives.

**Non-Coursework Requirements**

1. **Research Methods and Statistics Qualifying Exam:** To ensure that students have the necessary foundation in research methodology and statistical analysis to support their successful completion of their doctoral program and to meet skill set expectations of new faculty members, the Ph.D. program requires successful completion of a Research Methods and Statistics Qualifying Exam at the end of the first year of study. Typically the exam will be scheduled approximately one to two weeks after the end of the spring quarter of the first year. The exam is taken by all students on the same date as established by the Associate Dean for Doctoral Education. The exam covers content from required research methods and statistics courses taken during the first year of study in the doctoral program. The exam is taken using an identifier code rather than the student name so that faculty grading the exam is unable to discern which student’s tests are being graded. Each exam consists of three sections: Methods Part 1 (mixed methods research), Methods Part 2 (intervention research methods) and Statistics. Each section is graded by at least two members of the Ph.D. Program Committee as either Pass or Fail. Should a student fail any section of the research methods and statistics qualifying exam, they may elect to take the failed section(s) of the exam one more time during the summer preceding the fall quarter of the second year. Should the student fail the section(s) of the exam a second time, they will be terminated from the program. The exam may include multiple-choice, brief answer, essay or other types of questions common in graduate examinations.

2. **Comprehensive Examination:** The comprehensive examination in the Ph.D. Program in the Graduate School of Social Work consists of a written paper that focuses on a selected problem of importance for social work. An oral examination is also required. During the oral exam, the student’s written paper will be reviewed by a three person faculty committee (the advisor and two readers). The student will submit a comprehensive examination proposal by August 15th of the second year of study and complete the examination process by the end of their third year of study to be eligible for program funding. All students are expected to have successfully passed their comprehensive exam by the end of their fourth year in the program. Failure to have done so will result in termination from the program.

3. **Dissertation**

4. **Oral Defense**

**Master of Social Work with A Concentration in Aging Services and Policy**

The minimum credits required for the MSW degree is 90 (60 for advanced standing students).

**Foundation Curriculum**

Foundation curriculum plans refer to full time students; part time students should consult with their advisors about course planning.

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<tr>
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<tr>
<td>SOWK 4000</td>
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<td>SOWK 4001</td>
<td>Clinical Social Work Skills</td>
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<tr>
<td>SOWK 4006</td>
<td>Human Behavior and the Social Environment: Theory and Practice</td>
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</tr>
<tr>
<td>SOWK 4020</td>
<td>Integrated Social Work Practice for Social Justice</td>
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</table>
SOWK 4132  Power, Privilege and Oppression from a Critical Multicultural Perspective
SOWK 4950  Foundation Field Internship

Winter
SOWK 4003  Clinical Social Work Theory and Practice
SOWK 4007  Community and Macro Social Work Theory and Practice
SOWK 4120  Social Policy Analysis, Advocacy, and Practice
SOWK 4201  Evidence for Practice
SOWK 4950  Foundation Field Internship

Spring
SOWK 4950  Foundation Field Internship

Begin elective & concentration classes; see concentration curriculum below

TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 39

Advanced Standing Program
SOWK 4299  Advanced Standing Seminar
SOWK 4132  Power, Privilege and Oppression from a Critical Multicultural Perspective
SOWK 4201  Evidence for Practice

TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9

Aging Services and Policy Concentration Curriculum

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SOWK 4350</td>
<td>Evolving Perspectives and Trends in Aging</td>
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</table>

THEORY FOR PRACTICE (3 credits required)

METHODS/SKILLS (9 credits required)

AND AT LEAST TWO OF THE FOLLOWING COURSES REQUIRED:

SOWK 4330  Assessment of Mental Health in Adults
SOWK 4340  Leadership and Supervision Skills
SOWK 4401  Integrated Health Care: Models and Practice
SOWK 4445  Social Work Assessment and Intervention in Aging
SOWK 4501  Wellness Promotion and Intervention Across the Lifespan
SOWK 4721  Existential Social Work Practice
SOWK 4723  Social Work Practice in Health
SOWK 4725  Mind-Body Connections and Social Work Practice
SOWK 4741  Grief and Loss Across the Lifespan

POLICY & PROGRAM ADVOCACY (3 credits required)
SOWK 4650  Aging Policy

RESEARCH (6 credits required)

SOWK 4900 & SOWK 4901  Methods for Evaluating Practice and Programs and Applied Practice Evaluation Research (must be taken in sequence; research conducted in student’s field placement)

VALUES FOR PRACTICE (3 credits required)

AT LEAST ONE OF THE FOLLOWING COURSES REQUIRED:

SOWK 4232  Critical Race Theory Praxis and Social Work
SOWK 4235  Disproportionality and Disparities Across Systems: The Impact on Children and Youth
SOWK 4240  Intergenerational Justice
SOWK 4245  Restorative Approaches in Social Work Practice
SOWK 4545  Social Work Practice with LGBTQIA Communities
SOWK 4555  Spirituality and Social Work
SOWK 4732  Disrupting Privilege through Anti-Oppressive Practice
SOWK 4742  Disability Studies
SOWK 4749  Culturally Responsive Practice with LatinX
SOWK 4751  Global Relations and Poverty in Mexico
SOWK 4753  Social Development in Latin America
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<th>Code</th>
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<tbody>
<tr>
<td>SOWK 4758</td>
<td>Social Work in Kenya: Context, Conservation, Empowerment, Sustainability</td>
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<td>SOWK 4759</td>
<td>Global Cultural Perspectives: Consensus and Conundrums</td>
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<td>Feminisms in Social Work Practice</td>
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<tr>
<td>SOWK 4790</td>
<td>Human Sexuality</td>
</tr>
<tr>
<td>SOWK 4890</td>
<td>Contemporary Global Issues</td>
</tr>
<tr>
<td>SOWK 4971</td>
<td>Experimental Class (as approved, titles vary)</td>
</tr>
<tr>
<td>SOWK 4990</td>
<td>Topics in Social Work (as approved, titles vary)</td>
</tr>
</tbody>
</table>

INTERNSHIP (15 credit minimum required)

- SOWK 4970: Concentration Field Internship (appropriate internships are chosen in consultation with the Field Team)

CAPSTONE (0 credits required)

- SOWK 4999: Capstone (required in final quarter of program)

ELECTIVES (12 credits required)

FACULTY RECOMMENDATIONS

Theory for Practice courses

- SOWK 4325: Evolving Perspectives and Trends in Health and Wellness
- SOWK 4370: Community and Organizational Change: Theory for Practice

Policy and Program Advocacy courses

- SOWK 4645: Health Care Policy

ADDITIONAL ELECTIVES OF PARTICULAR RELEVANCE

- SOWK 4521: Advanced Skills for Working with Military Families
- SOWK 4700: Solution Focused Brief Therapy
- SOWK 4730: Cognitive Behavioral Therapies
- SOWK 4735: Interpersonal Approaches to Counseling
- SOWK 4752: Trauma Informed Assessment and Interventions
- SOWK 4754: Trauma and Recovery in Social Work Practice (not offered after spring 2017)
- SOWK 4755: Interventions for Responses to Trauma (not offered after fall 2017)
- SOWK 4784: Suicide Assessment and Interventions

In addition to electives above, students may take courses from other concentration areas OR up to 10 credits of coursework from other DU graduate programs with the approval of the advisor and Associate Dean for Academic Affairs

TOTAL CREDITS REQUIRED FOR CONCENTRATION CURRICULUM: 51-52

---

**Master of Social Work With a Concentration in Children and Youth: Risks and Positive Development**

The minimum credits required for the MSW degree is 90 (60 for advanced standing students).

**Foundation Curriculum**

Foundation curriculum plans refer to full time students; part time students should consult with their advisors about course planning.
### Winter

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>SOWK 4003</td>
<td>Clinical Social Work Theory and Practice</td>
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<td>SOWK 4007</td>
<td>Community and Macro Social Work Theory and Practice</td>
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<td>SOWK 4120</td>
<td>Social Policy Analysis, Advocacy, and Practice</td>
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<td>SOWK 4201</td>
<td>Evidence for Practice</td>
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<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
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### Spring

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Begin elective & concentration classes; see concentration curriculum below

**TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 39**

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### Advanced Standing Program

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<th>Course</th>
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<tr>
<td>SOWK 4299</td>
<td>Advanced Standing Seminar</td>
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<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
</tr>
<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
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**TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9**

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### Children and Youth: Risks and Positive Development Concentration Curriculum

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<th>Code</th>
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<tbody>
<tr>
<td><strong>THEORY FOR PRACTICE (3 credits required)</strong></td>
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</tr>
<tr>
<td>SOWK 4315</td>
<td>Building Resilience: Healthy Development in Childhood and Adolescence</td>
</tr>
<tr>
<td><strong>METHODS/SKILLS (9 credits required)</strong></td>
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</tr>
<tr>
<td>SOWK 4412</td>
<td>Practice Elements in Interventions with Children and Youth</td>
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<tr>
<td>or SOWK 4425</td>
<td>Positive and Community Youth Development</td>
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<td><strong>AND AT LEAST TWO COURSES FROM EITHER OF THE FOLLOWING LISTS:</strong></td>
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<tr>
<td>Promotion and Prevention Focus</td>
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<tr>
<td>SOWK 4713</td>
<td>Preventing Behavioral Health Problems in Children and Youth</td>
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<tr>
<td>Treatment Focus</td>
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<tr>
<td>SOWK 4334</td>
<td>Assessment of Mental Health in Children and Adolescents</td>
</tr>
<tr>
<td>SOWK 4410</td>
<td>Prevention &amp; Treatment of Adolescent Substance Abuse</td>
</tr>
<tr>
<td>SOWK 4454</td>
<td>Child and Adolescent Trauma</td>
</tr>
<tr>
<td>SOWK 4500</td>
<td>Foundations of Play Therapy with Young Children</td>
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<tr>
<td>SOWK 4715</td>
<td>School Social Work Interventions</td>
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<td>SOWK 4720</td>
<td>Prevention and Treatment of Juvenile Delinquency and Youth Violence</td>
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<td>SOWK 4726</td>
<td>Experiential Therapy</td>
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<td>SOWK 4727</td>
<td>Experiential Therapy in Nature</td>
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<tr>
<td>SOWK 4971</td>
<td>Experimental Class (Groups for Children and Adolescents)</td>
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<tr>
<td><strong>POLICY &amp; PROGRAM ADVOCACY (3 credits required)</strong></td>
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<tr>
<td>SOWK 4610</td>
<td>Policies and Programs for Children and Youth</td>
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<tr>
<td><strong>RESEARCH (6 credits required)</strong></td>
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<tr>
<td>SOWK 4900</td>
<td>Methods for Evaluating Practice and Programs</td>
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<td>&amp; SOWK 4901</td>
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<td>SOWK 4232</td>
<td>Critical Race Theory Praxis and Social Work</td>
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<tr>
<td>SOWK 4235</td>
<td>Disproportionality and Disparities Across Systems: The Impact on Children and Youth</td>
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<td>Intergenerational Justice</td>
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<td>SOWK 4245</td>
<td>Restorative Approaches in Social Work Practice</td>
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<tr>
<td>SOWK 4742</td>
<td>Disability Studies</td>
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<td>Code</td>
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<tr>
<td>SOWK 4749</td>
<td>Culturally Responsive Practice with LatinX</td>
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<td>SOWK 4990</td>
<td>Topics in Social Work (as approved, titles vary)</td>
</tr>
</tbody>
</table>

**INTERNSHIP (15 credit minimum required)**
- SOWK 4970 Concentration Field Internship (appropriate internships are chosen in consultation with the Field Team)

**CAPSTONE (0 credits)**
- SOWK 4999 Capstone (required in final quarter of program)

**ELECTIVES (12 credits required)**

**FACULTY RECOMMENDATIONS**
- **Theory for Practice courses**
  - SOWK 4305 Child Maltreatment: Causes and Developmental Consequences

**Policy and Program Advocacy courses**
- SOWK 4630 Family Policies and Services
- SOWK 4712 Social Work & the Law

**ADDITIONAL ELECTIVES OF PARTICULAR RELEVANCE**
- SOWK 4521 Advanced Skills for Working with Military Families
- SOWK 4700 Solution Focused Brief Therapy
- SOWK 4710 Intimate Partner Violence
- SOWK 4721 Existential Social Work Practice
- SOWK 4725 Mind-Body Connections and Social Work Practice
- SOWK 4730 Cognitive Behavioral Therapies
- SOWK 4784 Suicide Assessment and Interventions

In addition to electives above, students may take courses from other concentration areas OR up to 10 credits of coursework from other DU graduate programs with the approval of the advisor and Associate Dean for Academic Affairs.

**TOTAL CREDITS REQUIRED FOR CONCENTRATION CURRICULUM: 51-52**

---

**Master of Social Work with a Concentration in Child Welfare & CHILD MALTREATMENT**
The minimum credits required for the MSW degree is 90 (60 for advanced standing students).

**Foundation Curriculum**
Foundation curriculum plans refer to full time students; part time students should consult with their advisors about course planning.

<table>
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<tr>
<th>Code</th>
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<td><strong>Fall</strong></td>
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<tr>
<td>SOWK 4000</td>
<td>Professional Development Seminar</td>
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<tr>
<td>SOWK 4001</td>
<td>Clinical Social Work Skills</td>
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<tr>
<td>SOWK 4006</td>
<td>Human Behavior and the Social Environment: Theory and Practice</td>
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<tr>
<td>SOWK 4020</td>
<td>Integrated Social Work Practice for Social Justice</td>
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<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
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</table>
SOWK 4950  Foundation Field Internship

**Winter**

- SOWK 4003  Clinical Social Work Theory and Practice
- SOWK 4007  Community and Macro Social Work Theory and Practice
- SOWK 4120  Social Policy Analysis, Advocacy, and Practice
- SOWK 4201  Evidence for Practice
- SOWK 4950  Foundation Field Internship

**Spring**

- SOWK 4950  Foundation Field Internship

Begin elective & concentration classes; see concentration curriculum below

**TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 39**

**Advanced Standing Program**

- SOWK 4299  Advanced Standing Seminar
- SOWK 4132  Power, Privilege and Oppression from a Critical Multicultural Perspective
- SOWK 4201  Evidence for Practice

**TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9**

### Child Welfare & Child Maltreatment Concentration Curriculum

<table>
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<tr>
<td></td>
<td><strong>THEORY FOR PRACTICE (3 credits required)</strong></td>
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<tr>
<td>SOWK 4305</td>
<td>Child Maltreatment: Causes and Developmental Consequences</td>
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<td><strong>METHODS/SKILLS (9 credits required)</strong></td>
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<tr>
<td>SOWK 4418</td>
<td>Child Welfare Practice: Assessment &amp; Intervention</td>
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<td>AND AT LEAST TWO OF THE FOLLOWING COURSES REQUIRED:</td>
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<tr>
<td>SOWK 4334</td>
<td>Assessment of Mental Health in Children and Adolescents</td>
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<tr>
<td>SOWK 4340</td>
<td>Leadership and Supervision Skills</td>
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<td>Practice Elements in Interventions with Children and Youth</td>
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<td>SOWK 4430</td>
<td>Substance Use Interventions</td>
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<td>SOWK 4454</td>
<td>Child and Adolescent Trauma</td>
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<td>SOWK 4500</td>
<td>Foundations of Play Therapy with Young Children</td>
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<td>SOWK 4700</td>
<td>Solution Focused Brief Therapy</td>
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<td>SOWK 4705</td>
<td>Forensic Orientation in Social Work Practice: Assessment and Interventions with High-Risk Offenders</td>
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<td>SOWK 4710</td>
<td>Intimate Partner Violence</td>
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<td>SOWK 4600</td>
<td>Child Welfare Policies and Services</td>
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<td>SOWK 4900 &amp; SOWK 4901</td>
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<td>SOWK 4742</td>
<td>Disability Studies</td>
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<td>Global Relations and Poverty in Mexico</td>
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<td>Contemporary Global Issues</td>
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<td>SOWK 4971</td>
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<td>SOWK 4990</td>
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**INTERNSHIP** (15 credit minimum required)

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<tr>
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<tbody>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship (appropriate internships are chosen in consultation with the Field Team)</td>
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**CAPSTONE** (0 credits)

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<tr>
<td>SOWK 4999</td>
<td>Capstone (required in final quarter of program)</td>
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**ELECTIVES** (12 credits required)

**FACULTY RECOMMENDATIONS**

**Theory for Practice Courses**

<table>
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<tbody>
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<td>SOWK 4315</td>
<td>Building Resilience: Healthy Development in Childhood and Adolescence</td>
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<td>SOWK 4320</td>
<td>Family Systems Theories for Social Work Practices</td>
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<tr>
<td>SOWK 4345</td>
<td>Intersections of Mental Health, Substance Use and, Trauma</td>
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**Policy and Program Advocacy Courses**

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<td>SOWK 4610</td>
<td>Policies and Programs for Children and Youth</td>
</tr>
<tr>
<td>SOWK 4635</td>
<td>Immigration Policies and Services</td>
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<tr>
<td>SOWK 4640</td>
<td>Mental Health and Substance Use Policies</td>
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<td>Health Care Policy</td>
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<td>SOWK 4712</td>
<td>Social Work &amp; the Law</td>
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**ADDITIONAL ELECTIVES OF PARTICULAR RELEVANCE**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SOWK 4330</td>
<td>Assessment of Mental Health in Adults</td>
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<tr>
<td>SOWK 4425</td>
<td>Positive and Community Youth Development</td>
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<tr>
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<td>Existential Social Work Practice</td>
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<td>Interpersonal Approaches to Counseling</td>
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In addition to electives above, students may take courses from other concentration areas OR up to 10 credits of coursework from other DU graduate programs with the approval of the advisor and Associate Dean for Academic Affairs

**TOTAL CREDITS REQUIRED FOR CONCENTRATION CURRICULUM: 51-52**

---

**Master of Social Work with a Concentration in Family Systems**

The minimum credits required for the MSW degree is 90 (60 for advanced standing students).

**Foundation Curriculum**

Foundation curriculum plans refer to full time students; part time students should consult with their advisors about course planning.
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
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<td>SOWK 4001</td>
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<td>Human Behavior and the Social Environment: Theory and Practice</td>
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<td>SOWK 4020</td>
<td>Integrated Social Work Practice for Social Justice</td>
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<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
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<tr>
<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
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<tr>
<td>Winter</td>
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<tr>
<td>SOWK 4003</td>
<td>Clinical Social Work Theory and Practice</td>
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<td>Community and Macro Social Work Theory and Practice</td>
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<td>SOWK 4120</td>
<td>Social Policy Analysis, Advocacy, and Practice</td>
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<td>SOWK 4201</td>
<td>Evidence for Practice</td>
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<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
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<td></td>
<td>Begin elective &amp; concentration classes; see concentration curriculum below</td>
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<td><strong>TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 39</strong></td>
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<td>SOWK 4201</td>
<td>Evidence for Practice</td>
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<td><strong>TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9</strong></td>
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<td>Family Systems Practice Concentration Curriculum</td>
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<td>Code</td>
<td>Title</td>
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<td>Family Systems Theories for Social Work Practices</td>
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<td>METHODS/SKILLS (9 credits required)</td>
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<td>Multisystemic Social Work Practice and Advocacy with Families</td>
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<td><strong>AND AT LEAST TWO COURSES FROM THE FOLLOWING LIST REQUIRED:</strong></td>
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</tr>
<tr>
<td>SOWK 4330</td>
<td>Assessment of Mental Health in Adults</td>
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<td>SOWK 4334</td>
<td>Assessment of Mental Health in Children and Adolescents</td>
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<td>SOWK 4401</td>
<td>Integrated Health Care: Models and Practice</td>
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<tr>
<td>SOWK 4410</td>
<td>Prevention &amp; Treatment of Adolescent Substance Abuse</td>
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<td>SOWK 4418</td>
<td>Child Welfare Practice: Assessment &amp; Intervention</td>
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<td>SOWK 4430</td>
<td>Substance Use Interventions</td>
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<td>SOWK 4454</td>
<td>Child and Adolescent Trauma</td>
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<td>SOWK 4500</td>
<td>Foundations of Play Therapy with Young Children</td>
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<tr>
<td>SOWK 4505</td>
<td>Relationship Therapy (highly recommended)</td>
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<tr>
<td>SOWK 4520</td>
<td>Advanced Clinical Social Work Practice with Families (highly recommended)</td>
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<td>SOWK 4521</td>
<td>Advanced Skills for Working with Military Families</td>
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<td>SOWK 4700</td>
<td>Solution Focused Brief Therapy</td>
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<td>SOWK 4705</td>
<td>Forensic Orientation in Social Work Practice: Assessment and Interventions with High-Risk Offenders</td>
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<tr>
<td>SOWK 4710</td>
<td>Intimate Partner Violence</td>
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<tr>
<td>SOWK 4741</td>
<td>Grief and Loss Across the Lifespan</td>
<td></td>
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<tr>
<td>SOWK 4784</td>
<td>Suicide Assessment and Interventions</td>
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</tr>
<tr>
<td>POLICY &amp; PROGRAM ADVOCACY (3 credits required)</td>
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<td></td>
</tr>
<tr>
<td>SOWK 4630</td>
<td>Family Policies and Services</td>
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<td>RESEARCH (6 credits required)</td>
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and Applied Practice Evaluation Research (must be taken in sequence; research conducted in student’s field placement)

VALUES FOR PRACTICE (3 credits required)

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>SOWK 4232</td>
<td>Critical Race Theory Praxis and Social Work</td>
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<tr>
<td>SOWK 4235</td>
<td>Disproportionality and Disparities Across Systems: The Impact on Children and Youth</td>
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<td>Intergenerational Justice</td>
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<td>Spirituality and Social Work</td>
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<tr>
<td>SOWK 4732</td>
<td>Disrupting Privilege through Anti-Oppressive Practice</td>
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<td>SOWK 4742</td>
<td>Disability Studies</td>
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<td>SOWK 4749</td>
<td>Culturally Responsive Practice with LatinX</td>
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<tr>
<td>SOWK 4751</td>
<td>Global Relations and Poverty in Mexico</td>
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<td>Social Development in Latin America</td>
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<td>Social Work in Kenya: Context, Conservation, Empowerment, Sustainability</td>
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<td>Bosnia in Transition: The Social Work Response</td>
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<td>SOWK 4763</td>
<td>Social Work and Social Justice in South Africa</td>
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<td>SOWK 4764</td>
<td>Historical Trauma and Healing</td>
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<td>SOWK 4782</td>
<td>Feminisms in Social Work Practice</td>
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<td>SOWK 4786</td>
<td>Human Trafficking: Prevention, Intervention, and Support of Its Victims</td>
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<td>SOWK 4790</td>
<td>Human Sexuality</td>
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<td>SOWK 4890</td>
<td>Contemporary Global Issues</td>
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<tr>
<td>SOWK 4971</td>
<td>Experimental Class (as approved, titles vary)</td>
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<tr>
<td>SOWK 4990</td>
<td>Topics in Social Work (as approved, titles vary)</td>
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INTERNSHIP (15 credit minimum required)

SOWK 4970  Concentration Field Internship (appropriate internships are chosen in consultation with the Field Team)

CAPSTONE (0 credits)

SOWK 4999  Capstone (required in final quarter of program)

ELECTIVES (12 credits required)

FACULTY RECOMMENDATIONS

Theory for Practice courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SOWK 4305</td>
<td>Child Maltreatment: Causes and Developmental Consequences</td>
</tr>
<tr>
<td>SOWK 4315</td>
<td>Building Resilience: Healthy Development in Childhood and Adolescence</td>
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<tr>
<td>SOWK 4325</td>
<td>Evolving Perspectives and Trends in Health and Wellness</td>
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<tr>
<td>SOWK 4345</td>
<td>Intersections of Mental Health, Substance Use and, Trauma</td>
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<tr>
<td>SOWK 4370</td>
<td>Community and Organizational Change: Theory for Practice</td>
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Policy and Programs Advocacy courses

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SOWK 4600</td>
<td>Child Welfare Policies and Services</td>
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<td>SOWK 4610</td>
<td>Policies and Programs for Children and Youth</td>
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<td>SOWK 4635</td>
<td>Immigration Policies and Services</td>
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<td>SOWK 4640</td>
<td>Mental Health and Substance Use Policies</td>
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<tr>
<td>SOWK 4645</td>
<td>Health Care Policy</td>
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<td>SOWK 4650</td>
<td>Aging Policy</td>
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<td>SOWK 4712</td>
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<table>
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<tr>
<th>Course Code</th>
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<tr>
<td>SOWK 4340</td>
<td>Leadership and Supervision Skills</td>
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<td>SOWK 4412</td>
<td>Practice Elements in Interventions with Children and Youth</td>
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<td>SOWK 4445</td>
<td>Social Work Assessment and Intervention in Aging</td>
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<tr>
<td>SOWK 4525</td>
<td>Administration and Management Practice and Skills</td>
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</table>
SOWK 4713  Preventing Behavioral Health Problems in Children and Youth
SOWK 4715  School Social Work Interventions
SOWK 4721  Existential Social Work Practice
SOWK 4730  Cognitive Behavioral Therapies
SOWK 4735  Interpersonal Approaches to Counseling
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<td>Professional Development Seminar</td>
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<td>SOWK 4001</td>
<td>Clinical Social Work Skills</td>
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<td>SOWK 4003</td>
<td>Clinical Social Work Theory and Practice</td>
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Begin elective & concentration classes; see concentration curriculum below

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Advanced Standing Program

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<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
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<td>SOWK 4201</td>
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TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9

Health and Wellness Concentration Curriculum

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<tr>
<td>SOWK 4325</td>
<td>Evolving Perspectives and Trends in Health and Wellness</td>
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<td>METHODS/SKILLS (9 credits required)</td>
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<tr>
<td>SOWK 4723</td>
<td>Social Work Practice in Health</td>
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AND AT LEAST TWO OF THE FOLLOWING COURSES REQUIRED:

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<td>Assessment of Mental Health in Adults</td>
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<td>SOWK 4334</td>
<td>Assessment of Mental Health in Children and Adolescents</td>
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<td>SOWK 4401</td>
<td>Integrated Health Care: Models and Practice</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<td>SOWK 4425</td>
<td>Positive and Community Youth Development</td>
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<td>SOWK 4430</td>
<td>Substance Use Interventions</td>
<td></td>
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<tr>
<td>SOWK 4445</td>
<td>Social Work Assessment and Intervention in Aging</td>
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<td>SOWK 4501</td>
<td>Wellness Promotion and Intervention Across the Lifespan</td>
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<td>Care Management Skills and Resources to Promote Community Living</td>
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<td>Solution Focused Brief Therapy</td>
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<td>Mind-Body Connections and Social Work Practice</td>
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<td>SOWK 4726</td>
<td>Experiential Therapy</td>
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<td>Grief and Loss Across the Lifespan</td>
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**POLICY & PROGRAM ADVOCACY (3 credits required)**

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<td>Health Care Policy</td>
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**RESEARCH (6 credits required)**

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<td>Methods for Evaluating Practice and Programs</td>
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<tr>
<td>&amp; SOWK 4901</td>
<td>and Applied Practice Evaluation Research (must be taken in sequence; research conducted in student's field placement)</td>
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**VALUES FOR PRACTICE (3 credits required)**

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<td>SOWK 4235</td>
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<td>SOWK 4742</td>
<td>Disability Studies</td>
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<td>SOWK 4749</td>
<td>Culturally Responsive Practice with LatinX</td>
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<td>SOWK 4751</td>
<td>Global Relations and Poverty in Mexico</td>
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<td>SOWK 4764</td>
<td>Historical Trauma and Healing</td>
</tr>
<tr>
<td>SOWK 4782</td>
<td>Feminisms in Social Work Practice</td>
</tr>
<tr>
<td>SOWK 4786</td>
<td>Human Trafficking: Prevention, Intervention, and Support of Its Victims</td>
</tr>
<tr>
<td>SOWK 4790</td>
<td>Human Sexuality</td>
</tr>
<tr>
<td>SOWK 4890</td>
<td>Contemporary Global Issues</td>
</tr>
<tr>
<td>SOWK 4971</td>
<td>Experimental Class (as approved, titles vary)</td>
</tr>
<tr>
<td>SOWK 4990</td>
<td>Topics in Social Work (as approved, titles vary)</td>
</tr>
</tbody>
</table>

**INTERNSHIP (15 credit minimum required)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship (appropriate internships are chosen in consultation with the Field Team)</td>
</tr>
</tbody>
</table>

**CAPSTONE (0 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOWK 4999</td>
<td>Capstone (required in final quarter of program)</td>
</tr>
</tbody>
</table>

**ELECTIVES (12 credits required)**

FACULTY RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOWK 4350</td>
<td>Evolving Perspectives and Trends in Aging</td>
</tr>
<tr>
<td>SOWK 4360</td>
<td>Social-Ecological Resilience: Connecting Human and Environmental Wellbeing</td>
</tr>
<tr>
<td>SOWK 4370</td>
<td>Community and Organizational Change: Theory for Practice</td>
</tr>
</tbody>
</table>

Policy and Program Advocacy courses
SOWK 4640  Mental Health and Substance Use Policies
SOWK 4650  Aging Policy

ADDITIONAL ELECTIVES OF PARTICULAR RELEVANCE

SOWK 4430  Substance Use Interventions
SOWK 4721  Existential Social Work Practice
SOWK 4730  Cognitive Behavioral Therapies
SOWK 4735  Interpersonal Approaches to Counseling
SOWK 4784  Suicide Assessment and Interventions

In addition to electives above, students may take courses from other concentration areas OR up to 10 credits of coursework from other DU graduate programs with the approval of the advisor and Associate Dean for Academic Affairs

TOTAL CREDITS REQUIRED FOR CONCENTRATION CURRICULUM: 51-52

Master of Social Work with a Concentration in Mental Health

The minimum credits required for the MSW degree is 90 (60 for advanced standing students).

Foundation Curriculum

Foundation curriculum plans refer to full time students; part time students should consult with their advisors about course planning.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-Year Program</td>
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<tr>
<td>Fall</td>
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<tr>
<td>SOWK 4000</td>
<td>Professional Development Seminar</td>
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<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
<td></td>
</tr>
<tr>
<td>SOWK 4950</td>
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<td></td>
</tr>
<tr>
<td>Winter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOWK 4003</td>
<td>Clinical Social Work Theory and Practice</td>
<td></td>
</tr>
<tr>
<td>SOWK 4007</td>
<td>Community and Macro Social Work Theory and Practice</td>
<td></td>
</tr>
<tr>
<td>SOWK 4120</td>
<td>Social Policy Analysis, Advocacy, and Practice</td>
<td></td>
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<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
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</tr>
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<td></td>
</tr>
<tr>
<td>Spring</td>
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<td></td>
</tr>
<tr>
<td>SOWK 4950</td>
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Begin elective & concentration classes; see concentration curriculum below

TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 39

Advanced Standing Program

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SOWK 4299</td>
<td>Advanced Standing Seminar</td>
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<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
<td></td>
</tr>
<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9

Mental Health Concentration Curriculum

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEOREY FOR PRACTICE (3 credits required)</td>
<td></td>
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<tr>
<td>SOWK 4345</td>
<td>Intersections of Mental Health, Substance Use and, Trauma</td>
<td></td>
</tr>
<tr>
<td>METHODS/SKILLS (9 credits required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOWK 4330</td>
<td>Assessment of Mental Health in Adults</td>
<td></td>
</tr>
<tr>
<td>or SOWK 4334</td>
<td>Assessment of Mental Health in Children and Adolescents</td>
<td></td>
</tr>
<tr>
<td>SOWK 4784</td>
<td>Suicide Assessment and Interventions</td>
<td></td>
</tr>
</tbody>
</table>
AND AT LEAST ONE OF THE FOLLOWING COURSES REQUIRED:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SOWK 4401</td>
<td>Integrated Health Care: Models and Practice</td>
</tr>
<tr>
<td>SOWK 4412</td>
<td>Practice Elements in Interventions with Children and Youth</td>
</tr>
<tr>
<td>SOWK 4430</td>
<td>Substance Use Interventions</td>
</tr>
<tr>
<td>SOWK 4454</td>
<td>Child and Adolescent Trauma</td>
</tr>
<tr>
<td>SOWK 4500</td>
<td>Foundations of Play Therapy with Young Children</td>
</tr>
<tr>
<td>SOWK 4700</td>
<td>Solution Focused Brief Therapy</td>
</tr>
<tr>
<td>SOWK 4730</td>
<td>Cognitive Behavioral Therapies</td>
</tr>
<tr>
<td>SOWK 4735</td>
<td>Interpersonal Approaches to Counseling</td>
</tr>
<tr>
<td>SOWK 4752</td>
<td>Trauma Informed Assessment and Interventions</td>
</tr>
<tr>
<td>SOWK 4971</td>
<td>Experimental Class (Groups for Children and Adolescents)</td>
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</table>

POLICY & PROGRAM ADVOCACY (3 credits required)

<table>
<thead>
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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SOWK 4640</td>
<td>Mental Health and Substance Use Policies</td>
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RESEARCH (6 credits required)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SOWK 4900</td>
<td>Methods for Evaluating Practice and Programs</td>
</tr>
<tr>
<td>SOWK 4901</td>
<td>Applied Practice Evaluation Research (must be taken in sequence; research conducted in student's field placement)</td>
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</table>

VALUES FOR PRACTICE (3 credits required)

AT LEAST ONE OF THE FOLLOWING COURSES REQUIRED:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SOWK 4232</td>
<td>Critical Race Theory Praxis and Social Work</td>
</tr>
<tr>
<td>SOWK 4235</td>
<td>Disproportionality and Disparities Across Systems: The Impact on Children and Youth</td>
</tr>
<tr>
<td>SOWK 4240</td>
<td>Intergenerational Justice</td>
</tr>
<tr>
<td>SOWK 4245</td>
<td>Restorative Approaches in Social Work Practice</td>
</tr>
<tr>
<td>SOWK 4545</td>
<td>Social Work Practice with LGBTQIA Communities</td>
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<tr>
<td>SOWK 4735</td>
<td>Spirituality and Social Work</td>
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<tr>
<td>SOWK 4732</td>
<td>Disrupting Privilege through Anti-Oppressive Practice</td>
</tr>
<tr>
<td>SOWK 4742</td>
<td>Disability Studies</td>
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<tr>
<td>SOWK 4749</td>
<td>Culturally Responsive Practice with LatinX</td>
</tr>
<tr>
<td>SOWK 4751</td>
<td>Global Relations and Poverty in Mexico</td>
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<tr>
<td>SOWK 4753</td>
<td>Social Development in Latin America</td>
</tr>
<tr>
<td>SOWK 4758</td>
<td>Social Work in Kenya: Context, Conservation, Empowerment, Sustainability</td>
</tr>
<tr>
<td>SOWK 4759</td>
<td>Global Cultural Perspectives: Consensus and Conundrums</td>
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<tr>
<td>SOWK 4762</td>
<td>Bosnia in Transition: The Social Work Response</td>
</tr>
<tr>
<td>SOWK 4763</td>
<td>Social Work and Social Justice in South Africa</td>
</tr>
<tr>
<td>SOWK 4764</td>
<td>Historical Trauma and Healing</td>
</tr>
<tr>
<td>SOWK 4782</td>
<td>Feminisms in Social Work Practice</td>
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<td>Contemporary Global Issues</td>
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<td>SOWK 4971</td>
<td>Experimental Class (as approved, titles vary)</td>
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<td>Topics in Social Work (as approved, titles vary)</td>
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INTERNSHIP (15 credit minimum required)

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship (appropriate internships are chosen in consultation with the Field Team)</td>
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</table>

CAPSTONE (0 credits)

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<th>Course Code</th>
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<tbody>
<tr>
<td>SOWK 4999</td>
<td>Capstone (required in final quarter of program)</td>
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ELECTIVES (12 credits required)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SOWK 4320</td>
<td>Family Systems Theories for Social Work Practices</td>
</tr>
<tr>
<td>SOWK 4325</td>
<td>Evolving Perspectives and Trends in Health and Wellness</td>
</tr>
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</table>

FACULTY RECOMMENDATIONS

Theory for Practice courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SOWK 4645</td>
<td>Health Care Policy</td>
</tr>
</tbody>
</table>
ADDITIONAL ELECTIVES OF PARTICULAR RELEVANCE

SOWK 4523  Care Management Skills and Resources to Promote Community Living
SOWK 4721  Existential Social Work Practice
SOWK 4725  Mind-Body Connections and Social Work Practice
SOWK 4741  Grief and Loss Across the Lifespan

In addition to electives above, students may take courses from other concentration areas OR up to 10 credits of coursework from other DU graduate programs with the approval of the advisor and Associate Dean for Academic Affairs

TOTAL CREDITS REQUIRED FOR CONCENTRATION CURRICULUM: 51-52

Master of Social Work with a Concentration in Organizational Leadership and Policy Practice

The minimum credits required for the MSW degree is 90 (60 for advanced standing students).

Foundation Curriculum

Foundation curriculum plans refer to full time students; part time students should consult with their advisors about course planning.

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<tr>
<td>SOWK 4000</td>
<td>Professional Development Seminar</td>
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<td>Clinical Social Work Skills</td>
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<td>Human Behavior and the Social Environment: Theory and Practice</td>
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<td>Winter</td>
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<tr>
<td>SOWK 4003</td>
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<td></td>
<td>Begin elective &amp; concentration classes; see concentration curriculum below</td>
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TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 39

- Advanced Standing Program

<table>
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<tr>
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<tbody>
<tr>
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<td>SOWK 4201</td>
<td>Evidence for Practice</td>
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</table>

TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9

Organizational Leadership and Policy Concentration Curriculum

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td></td>
<td>THEORY FOR PRACTICE (3 credits required)</td>
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<tr>
<td>SOWK 4370</td>
<td>Community and Organizational Change: Theory for Practice</td>
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<tr>
<td></td>
<td>METHODS/SKILLS (9 credits required)</td>
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<tr>
<td>SOWK 4340</td>
<td>Leadership and Supervision Skills</td>
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</tr>
<tr>
<td></td>
<td>AND AT LEAST TWO OF THE FOLLOWING COURSES REQUIRED:</td>
<td></td>
</tr>
<tr>
<td>SOWK 4425</td>
<td>Positive and Community Youth Development</td>
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<tr>
<td>SOWK 4435</td>
<td>Grassroots Organizing for Social Justice</td>
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</tr>
<tr>
<td>SOWK 4525</td>
<td>Administration and Management Practice and Skills</td>
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</table>
SOWK 4530 Poverty and Community Economic Development
SOWK 4535 Planning and Program Development
SOWK 4660 Social Policy Advocacy
SOWK 4760 Resource Development and Fundraising
SOWK 4765 International Social Development

POLICY & PROGRAM ADVOCACY (3 credits required)
SOWK 4670 Policy Development & Analysis

RESEARCH (6 credits required)
SOWK 4900 & SOWK 4901 Methods for Evaluating Practice and Programs
and Applied Practice Evaluation Research (must be taken in sequence; research conducted in student’s field placement)

VALUES FOR PRACTICE (3 credits required)
AT LEAST ONE OF THE FOLLOWING COURSES REQUIRED:
SOWK 4232 Critical Race Theory Praxis and Social Work
SOWK 4235 Disproportionality and Disparities Across Systems: The Impact on Children and Youth
SOWK 4240 Intergenerational Justice
SOWK 4245 Restorative Approaches in Social Work Practice
SOWK 4545 Social Work Practice with LGBTQIA Communities
SOWK 4555 Spirituality and Social Work
SOWK 4732 Disrupting Privilege through Anti-Oppressive Practice
SOWK 4742 Disability Studies
SOWK 4749 Culturally Responsive Practice with LatinX
SOWK 4751 Global Relations and Poverty in Mexico
SOWK 4753 Social Development in Latin America
SOWK 4758 Social Work in Kenya: Context, Conservation, Empowerment, Sustainability
SOWK 4759 Global Cultural Perspectives: Consensus and Conundrums
SOWK 4762 Bosnia in Transition: The Social Work Response
SOWK 4763 Social Work and Social Justice in South Africa
SOWK 4764 Historical Trauma and Healing
SOWK 4782 Feminisms in Social Work Practice
SOWK 4786 Human Trafficking: Prevention, Intervention, and Support of Its Victims
SOWK 4790 Human Sexuality
SOWK 4890 Contemporary Global Issues
SOWK 4971 Experimental Class (as approved, titles vary)
SOWK 4990 Topics in Social Work (as approved, titles vary)

INTERNSHIP (15 credit minimum required)
SOWK 4970 Concentration Field Internship (appropriate internships are chosen in consultation with the Field Team)

CAPSTONE (0 credits)
SOWK 4999 Capstone (required in final quarter of program)

ELECTIVES (12 credits required)

FACULTY RECOMMENDATIONS

Theory for Practice courses
SOWK 4360 Social-Ecological Resilience: Connecting Human and Environmental Wellbeing
SOWK 4375 Economic Theory and Social Work

Policy and Program Advocacy courses
SOWK 4600 Child Welfare Policies and Services
SOWK 4610 Policies and Programs for Children and Youth
SOWK 4630 Family Policies and Services
SOWK 4635 Immigration Policies and Services
SOWK 4640 Mental Health and Substance Use Policies
SOWK 4645 Health Care Policy
SOWK 4650 Aging Policy
ADDITIONAL ELECTIVES OF PARTICULAR RELEVANCE

SOWK 4465 Human Security
SOWK 4780 Conflict Resolution in Social Work Practice

In addition to electives above, students may take courses from other concentration areas OR up to 10 credits of coursework from other DU graduate programs with the approval of the advisor and Associate Dean for Academic Affairs

TOTAL CREDITS REQUIRED FOR CONCENTRATION CURRICULUM: 51-52

Master of Social Work with a Concentration in Sustainable Development and Global Practice

The minimum credits required for the MSW degree is 90 (60 for advanced standing students).

Foundation Curriculum

Foundation curriculum plans refer to full time students; part time students should consult with their advisors about course planning.

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<td><strong>Spring</strong></td>
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</tr>
<tr>
<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
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</tbody>
</table>

Begin elective & concentration classes; see concentration curriculum below

TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 39

- Advanced Standing Program

SOWK 4299 Advanced Standing Seminar
SOWK 4132 Power, Privilege and Oppression from a Critical Multicultural Perspective
SOWK 4201 Evidence for Practice

TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9

Sustainable Development and Global Practice Concentration Curriculum

<table>
<thead>
<tr>
<th>Code</th>
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</tr>
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<tbody>
<tr>
<td><strong>THEORY FOR PRACTICE (3 credits required)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOWK 4360</td>
<td>Social-Ecological Resilience: Connecting Human and Environmental Wellbeing</td>
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<tr>
<td><strong>METHODS/SKILLS (9 credits required)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOWK 4465</td>
<td>Human Security</td>
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</tr>
<tr>
<td>SOWK 4565</td>
<td>Social and Environmental Impact Assessments</td>
<td></td>
</tr>
<tr>
<td><strong>AND AT LEAST ONE OF THE FOLLOWING COURSES REQUIRED:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOWK 4530</td>
<td>Poverty and Community Economic Development</td>
<td></td>
</tr>
<tr>
<td>SOWK 4535</td>
<td>Planning and Program Development</td>
<td></td>
</tr>
<tr>
<td>SOWK 4760</td>
<td>Resource Development and Fundraising</td>
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<tr>
<td>SOWK 4765</td>
<td>International Social Development</td>
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</table>
POLICY & PROGRAM ADVOCACY (3 credits required)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SOWK 4635</td>
<td>Immigration Policies and Services</td>
</tr>
<tr>
<td>or SOWK 4665</td>
<td>Global Policies and Programs for Sustainable Development</td>
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</tbody>
</table>

RESEARCH (6 credits required)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Additional Info</th>
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<tbody>
<tr>
<td>SOWK 4900</td>
<td>Methods for Evaluating Practice and Programs</td>
<td></td>
</tr>
<tr>
<td>&amp; SOWK 4901</td>
<td>and Applied Practice Evaluation Research (must be taken in sequence; research conducted in student’s field placement)</td>
<td></td>
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VALUES FOR PRACTICE (3 credits required)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SOWK 4759</td>
<td>Global Cultural Perspectives: Consensus and Conundrums</td>
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</table>

INTERNSHIP (15 credit minimum required)

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship (appropriate internships are chosen in consultation with the Field Team)</td>
</tr>
</tbody>
</table>

CAPSTONE (0 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>SOWK 4999</td>
<td>Capstone (required in final quarter of program)</td>
</tr>
</tbody>
</table>

ELECTIVES (12 credits required)

- **FACULTY RECOMMENDATIONS**
  - **Theory for Practice courses**
    | Course Code | Course Title                                      |
    |-------------|--------------------------------------------------|
    | SOWK 4370   | Community and Organizational Change: Theory for Practice |
    | SOWK 4375   | Economic Theory and Social Work                   |
  - **Policy and Program Advocacy courses**
    | Course Code | Course Title                                      |
    |-------------|--------------------------------------------------|
    | SOWK 4670   | Policy Development & Analysis                     |
  - **Values for Practice courses**
    | Course Code | Course Title                                      |
    |-------------|--------------------------------------------------|
    | SOWK 4222   | Critical Race Theory Praxis and Social Work       |
    | SOWK 4235   | Disproportionality and Disparities Across Systems: The Impact on Children and Youth |
    | SOWK 4240   | Intergenerational Justice                         |
    | SOWK 4245   | Restorative Approaches in Social Work Practice    |
    | SOWK 4545   | Social Work Practice with LGBTQIA Communities     |
    | SOWK 4555   | Spirituality and Social Work                      |
    | SOWK 4732   | Disrupting Privilege through Anti-Oppressive Practice |
    | SOWK 4742   | Disability Studies                                |
    | SOWK 4749   | Culturally Responsive Practice with LatinX        |
    | SOWK 4751   | Global Relations and Poverty in Mexico            |
    | SOWK 4753   | Social Development in Latin America               |
    | SOWK 4758   | Social Work in Kenya: Context, Conservation, Empowerment, Sustainability |
    | SOWK 4762   | Bosnia in Transition: The Social Work Response    |
    | SOWK 4763   | Social Work and Social Justice in South Africa     |
    | SOWK 4764   | Historical Trauma and Healing                     |
    | SOWK 4782   | Feminisms in Social Work Practice                 |
    | SOWK 4786   | Human Trafficking: Prevention, Intervention, and Support of Its Victims |
    | SOWK 4790   | Human Sexuality                                   |
    | SOWK 4890   | Contemporary Global Issues                        |
    | SOWK 4971   | Experimental Class (as approved, titles vary)     |
    | SOWK 4990   | Topics in Social Work (as approved, titles vary)  |

Students may take courses from other concentration areas and/or up to 10 credits of coursework from other DU graduate programs with the approval of the advisor and Associate Dean for Academic Affairs

**TOTAL CREDITS REQUIRED FOR CONCENTRATION CURRICULUM: 51-52**

Master of Social Work with a Concentration in Mental Health and Trauma: MSW@Denver

The minimum credits required for the MSW degree is 90 (60 for advanced standing students).
## Mental Health and Trauma Curriculum

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td></td>
<td><strong>Quarter 1 (8 credits)</strong></td>
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<tr>
<td>SOWK 4001</td>
<td>Clinical Social Work Skills</td>
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<tr>
<td>SOWK 4020</td>
<td>Integrated Social Work Practice for Social Justice</td>
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</tr>
<tr>
<td>SOWK 4050</td>
<td>Introduction to the Graduate Internship</td>
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</tr>
<tr>
<td></td>
<td><strong>Quarter 2 (10 credits)</strong></td>
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</tr>
<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
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<tr>
<td>SOWK 4006</td>
<td>Human Behavior and the Social Environment: Theory and Practice</td>
<td></td>
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<tr>
<td>SOWK 4150</td>
<td>Foundation Seminar</td>
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<tr>
<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
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<tr>
<td></td>
<td><strong>Quarter 3 (10 credits)</strong></td>
<td></td>
</tr>
<tr>
<td>SOWK 4003</td>
<td>Clinical Social Work Theory and Practice</td>
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</tr>
<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
<td></td>
</tr>
<tr>
<td>SOWK 4150</td>
<td>Foundation Seminar</td>
<td></td>
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<tr>
<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
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<td></td>
<td><strong>Quarter 4 (11 credits)</strong></td>
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<tr>
<td>SOWK 4007</td>
<td>Community and Macro Social Work Theory and Practice</td>
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<tr>
<td>SOWK 4120</td>
<td>Social Policy Analysis, Advocacy, and Practice</td>
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<td>SOWK 4950</td>
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<td></td>
<td><strong>Quarter 5 (9 credits)</strong></td>
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<tr>
<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
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<tr>
<td></td>
<td><strong>BEGIN ELECTIVE &amp; CONCENTRATION COURSES</strong></td>
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</tr>
<tr>
<td>SOWK 4338</td>
<td>Assessment of Mental Health Across the Lifespan</td>
<td></td>
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<tr>
<td>SOWK 4345</td>
<td>Intersections of Mental Health, Substance Use and, Trauma</td>
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<tr>
<td></td>
<td><strong>Quarter 6 (11 credits)</strong></td>
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<tr>
<td>SOWK 4250</td>
<td>Concentration Seminar</td>
<td></td>
</tr>
<tr>
<td>SOWK 4655</td>
<td>Mental Health and Health Care Policy</td>
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<tr>
<td>SOWK 4730</td>
<td>Cognitive Behavioral Therapies</td>
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<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship</td>
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<tr>
<td></td>
<td><strong>Quarter 7 (11 credits)</strong></td>
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<tr>
<td>SOWK 4250</td>
<td>Concentration Seminar</td>
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</tr>
<tr>
<td>SOWK 4340</td>
<td>Leadership and Supervision Skills</td>
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</tr>
<tr>
<td>SOWK 4900</td>
<td>Methods for Evaluating Practice and Programs</td>
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<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Quarter 8 (10 credits)</strong></td>
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<tr>
<td>SOWK 4250</td>
<td>Concentration Seminar</td>
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</tr>
<tr>
<td>SOWK 4752</td>
<td>Trauma Informed Assessment and Interventions</td>
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<tr>
<td>SOWK 4901</td>
<td>Applied Practice Evaluation Research</td>
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<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship</td>
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</tr>
<tr>
<td></td>
<td><strong>Quarter 9 (10 credits)</strong></td>
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<tr>
<td>SOWK 4235</td>
<td>Disproportionality and Disparities Across Systems: The Impact on Children and Youth</td>
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<tr>
<td>SOWK 4401</td>
<td>Integrated Health Care: Models and Practice</td>
<td></td>
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<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship</td>
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</tr>
<tr>
<td>SOWK 4999</td>
<td>Capstone</td>
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**Minimum Number of Credits Required**: 90

## Mental Health and Trauma Curriculum (Advanced Standing)

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Quarter 1 (9 credits)</strong></td>
<td></td>
</tr>
<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
<td></td>
</tr>
<tr>
<td>Quarter 2 (11 credits)</td>
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</tr>
<tr>
<td>SOWK 4250</td>
<td>Concentration Seminar</td>
<td></td>
</tr>
<tr>
<td>SOWK 4338</td>
<td>Assessment of Mental Health Across the Lifespan</td>
<td></td>
</tr>
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<td>SOWK 4345</td>
<td>Intersections of Mental Health, Substance Use and, Trauma</td>
<td></td>
</tr>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship</td>
<td></td>
</tr>
</tbody>
</table>

| Quarter 3 (11 credits) | | |
|------------------------|-----------------|
| SOWK 4250 | Concentration Seminar |
| SOWK 4655 | Mental Health and Health Care Policy |
| SOWK 4730 | Cognitive Behavioral Therapies |
| SOWK 4970 | Concentration Field Internship |

| Quarter 4 (10 credits) | | |
|------------------------|-----------------|
| SOWK 4250 | Concentration Seminar |
| SOWK 4340 | Leadership and Supervision Skills |
| SOWK 4900 | Methods for Evaluating Practice and Programs |
| SOWK 4970 | Concentration Field Internship |

| Quarter 5 (10 credits) | | |
|------------------------|-----------------|
| SOWK 4752 | Trauma Informed Assessment and Interventions |
| SOWK 4901 | Applied Practice Evaluation Research |
| SOWK 4970 | Concentration Field Internship |

| Quarter 6 (9 credits) | | |
|------------------------|-----------------|
| SOWK 4235 | Disproportionality and Disparities Across Systems: The Impact on Children and Youth |
| SOWK 4401 | Integrated Health Care: Models and Practice |
| SOWK 4700 | Solution Focused Brief Therapy |
| SOWK 4999 | Capstone |

**Minimum Number of Credits Required**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
</tr>
<tr>
<td>SOWK 4299</td>
<td>Advanced Standing Seminar</td>
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</table>

**MASTER OF SOCIAL WORK WITH A CONCENTRATION IN HEALTH AND WELLNESS: MSW@DENVER**

The minimum credits required for the MSW degree is 90 (60 for advanced standing students).

**Health and Wellness Curriculum**

<table>
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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<td>SOWK 4001</td>
<td>Clinical Social Work Skills</td>
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<td>SOWK 4020</td>
<td>Integrated Social Work Practice for Social Justice</td>
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<td>SOWK 4050</td>
<td>Introduction to the Graduate Internship</td>
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<tr>
<td>SOWK 4006</td>
<td>Human Behavior and the Social Environment: Theory and Practice</td>
<td></td>
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<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
<td></td>
</tr>
<tr>
<td>SOWK 4150</td>
<td>Foundation Seminar</td>
<td></td>
</tr>
<tr>
<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
<td></td>
</tr>
<tr>
<td>SOWK 4003</td>
<td>Clinical Social Work Theory and Practice</td>
<td></td>
</tr>
<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
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</tr>
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</tr>
<tr>
<td>SOWK 4120</td>
<td>Social Policy Analysis, Advocacy, and Practice</td>
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</table>
### Quarter 1 (9 credits)
- **SOWK 4132**: Power, Privilege and Oppression from a Critical Multicultural Perspective
- **SOWK 4201**: Evidence for Practice
- **SOWK 4299**: Advanced Standing Seminar

### Quarter 2 (11 credits)
- **SOWK 4250**: Concentration Seminar
- **SOWK 4338**: Assessment of Mental Health Across the Lifespan
- **SOWK 4970**: Concentration Field Internship

### Quarter 3 (11 credits)
- **SOWK 4250**: Concentration Seminar
- **SOWK 4655**: Mental Health and Health Care Policy
- **SOWK 4730**: Cognitive Behavioral Therapies
- **SOWK 4970**: Concentration Field Internship
- **SOWK 4325**: Evolving Perspectives and Trends in Health and Wellness

### Quarter 4 (10 credits)
- **SOWK 4250**: Concentration Seminar
- **SOWK 4732**: Disrupting Privilege through Anti-Oppressive Practice
- **SOWK 4900**: Methods for Evaluating Practice and Programs
- **SOWK 4970**: Concentration Field Internship

### Quarter 5 (10 credits)
- **SOWK 4970**: Concentration Field Internship

### Quarter 6 (11 credits)
- **SOWK 4250**: Concentration Seminar
- **SOWK 4655**: Mental Health and Health Care Policy
- **SOWK 4730**: Cognitive Behavioral Therapies
- **SOWK 4970**: Concentration Field Internship

### Quarter 7 (11 credits)
- **SOWK 4250**: Concentration Seminar
- **SOWK 4723**: Social Work Practice in Health
- **SOWK 4900**: Methods for Evaluating Practice and Programs
- **SOWK 4970**: Concentration Field Internship

### Quarter 8 (10 credits)
- **SOWK 4250**: Concentration Seminar
- **SOWK 4752**: Trauma Informed Assessment and Interventions
- **SOWK 4901**: Applied Practice Evaluation Research
- **SOWK 4970**: Concentration Field Internship

### Quarter 9 (10 credits)
- **SOWK 4235**: Disproportionality and Disparities Across Systems: The Impact on Children and Youth
- **SOWK 4401**: Integrated Health Care: Models and Practice
- **SOWK 4970**: Concentration Field Internship
- **SOWK 4999**: Capstone

### Health and Wellness Curriculum Curriculum (Advanced Standing)

<table>
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<tr>
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<th>Credits</th>
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<tr>
<td>SOWK 4132</td>
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<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
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</tr>
<tr>
<td>SOWK 4299</td>
<td>Advanced Standing Seminar</td>
<td></td>
</tr>
<tr>
<td><strong>Quarter 2 (11 credits)</strong></td>
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<td></td>
</tr>
<tr>
<td>SOWK 4250</td>
<td>Concentration Seminar</td>
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</tr>
<tr>
<td>SOWK 4338</td>
<td>Assessment of Mental Health Across the Lifespan</td>
<td></td>
</tr>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship</td>
<td></td>
</tr>
<tr>
<td>SOWK 4325</td>
<td>Evolving Perspectives and Trends in Health and Wellness</td>
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<tr>
<td><strong>Quarter 3 (11 credits)</strong></td>
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<tr>
<td>SOWK 4250</td>
<td>Concentration Seminar</td>
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<tr>
<td><strong>Quarter 4 (10 credits)</strong></td>
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<td>SOWK 4250</td>
<td>Concentration Seminar</td>
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<td>Concentration Field Internship</td>
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<tr>
<td><strong>Quarter 5 (10 credits)</strong></td>
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<tr>
<td>SOWK 4752</td>
<td>Trauma Informed Assessment and Interventions</td>
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</table>
Master of Social Work with a Concentration in Advanced Social Work Practice (Four Corners Program)

The minimum credits required for the MSW degree is 90 (60 for advanced standing students). Not all elective courses will be offered to every cohort of students.

Foundation Curriculum

Foundation curriculum plans refer to full time students; part time students should consult with their advisors about course planning.

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<th>Code</th>
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<td>Clinical Social Work Skills</td>
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<tr>
<td>SOWK 4006</td>
<td>Human Behavior and the Social Environment: Theory and Practice</td>
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<td>SOWK 4150</td>
<td>Foundation Seminar</td>
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<tr>
<td></td>
<td><strong>Winter</strong></td>
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<td>SOWK 4003</td>
<td>Clinical Social Work Theory and Practice</td>
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<td>Foundation Field Internship</td>
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<td></td>
<td>Begin elective &amp; concentration classes; see concentration curriculum below</td>
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<td><strong>TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 42</strong></td>
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</tr>
<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
<td></td>
</tr>
<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
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<td></td>
<td><strong>TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9</strong></td>
<td></td>
</tr>
</tbody>
</table>

Advanced Social Work Practice Concentration Curriculum (Four Corners Program)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>THEORY FOR PRACTICE (3 credits required)</strong></td>
<td></td>
</tr>
<tr>
<td>SOWK 4320</td>
<td>Family Systems Theories for Social Work Practices</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>METHODS/SKILLS (9 credits required)</strong></td>
<td></td>
</tr>
<tr>
<td>SOWK 4330</td>
<td>Assessment of Mental Health in Adults</td>
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<tr>
<td>SOWK 4401</td>
<td>Integrated Health Care: Models and Practice</td>
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<tr>
<td>Course Code</td>
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<tr>
<td>SOWK 4535</td>
<td>Planning and Program Development</td>
<td></td>
</tr>
<tr>
<td>SOWK 4680</td>
<td>Native Peoples Practice: History and Policy</td>
<td></td>
</tr>
<tr>
<td>SOWK 4900</td>
<td>Methods for Evaluating Practice and Programs and Applied Practice Evaluation Research (must be taken in sequence; research conducted in student’s field placement)</td>
<td></td>
</tr>
<tr>
<td>SOWK 4680</td>
<td>Native Peoples Practice: History and Policy</td>
<td></td>
</tr>
<tr>
<td>SOWK 4900</td>
<td>Methods for Evaluating Practice and Programs and Applied Practice Evaluation Research (must be taken in sequence; research conducted in student’s field placement)</td>
<td></td>
</tr>
<tr>
<td>SOWK 4901</td>
<td>Methods for Evaluating Practice and Programs and Applied Practice Evaluation Research (must be taken in sequence; research conducted in student’s field placement)</td>
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</tr>
</tbody>
</table>

VALUES FOR PRACTICE (3 credits required)

**AT LEAST ONE OF THE FOLLOWING COURSES REQUIRED:**

- SOWK 4232 Critical Race Theory Praxis and Social Work
- SOWK 4235 Disproportionality and Disparities Across Systems: The Impact on Children and Youth
- SOWK 4240 Intergenerational Justice
- SOWK 4245 Restorative Approaches in Social Work Practice
- SOWK 4545 Social Work Practice with LGBTQIA Communities
- SOWK 4555 Spirituality and Social Work
- SOWK 4732 Disrupting Privilege through Anti-Oppressive Practice
- SOWK 4742 Disability Studies
- SOWK 4763 Social Work and Social Justice in South Africa
- SOWK 4749 Culturally Responsive Practice with LatinX
- SOWK 4751 Global Relations and Poverty in Mexico
- SOWK 4753 Social Development in Latin America
- SOWK 4758 Social Work in Kenya: Context, Conservation, Empowerment, Sustainability
- SOWK 4759 Global Cultural Perspectives: Consensus and Conundrums
- SOWK 4762 Bosnia in Transition: The Social Work Response
- SOWK 4764 Historical Trauma and Healing
- SOWK 4782 Feminisms in Social Work Practice
- SOWK 4786 Human Trafficking: Prevention, Intervention, and Support of Its Victims
- SOWK 4790 Human Sexuality
- SOWK 4890 Contemporary Global Issues
- SOWK 4971 Experimental Class (as approved, titles vary)
- SOWK 4990 Topics in Social Work (as approved, titles vary)

**INTERNSHIP (15 credit minimum required)**

- SOWK 4970 Concentration Field Internship

**CONCENTRATION SEMINAR (3 credits required)**

- SOWK 4250 Concentration Seminar (offered as 1 credit course each quarter for fall, winter and spring)

**CAPSTONE (0 credits required)**

- SOWK 4999 Capstone (required final quarter of program)

**ELECTIVES (6-9* credits required)**

Students may take any other offered course not counting for the areas listed above. Elective options vary based on availability.

Students may take up to 10 elective credits from other DU graduate programs with approval of advisor & Associate Dean for Academic Affairs.

Students must take sufficient electives to meet minimum requirements for the degree (90 credits for the two year program; 60 for advanced standing).

**TOTAL CREDITS REQUIRED FOR CONCENTRATION CURRICULUM:** 49/52*

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**Master of Social Work with a Concentration in Advanced Social Work Practice (Western Colorado Program)**

The minimum credits required for the MSW degree is 90 (60 for advanced standing students). Not all elective courses will be offered to every cohort of students.

**Foundation Curriculum**

Foundation curriculum plans refer to full time students; part time students should consult with their advisors about course planning.
### Two-Year Program

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
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<td></td>
</tr>
<tr>
<td>SOWK 4001</td>
<td>Clinical Social Work Skills</td>
<td></td>
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<tr>
<td>SOWK 4006</td>
<td>Human Behavior and the Social Environment: Theory and Practice</td>
<td></td>
</tr>
<tr>
<td>SOWK 4020</td>
<td>Integrated Social Work Practice for Social Justice</td>
<td></td>
</tr>
<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
<td></td>
</tr>
<tr>
<td>SOWK 4150</td>
<td>Foundation Seminar</td>
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<tr>
<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
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<tr>
<td><strong>Winter</strong></td>
<td></td>
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<tr>
<td>SOWK 4003</td>
<td>Clinical Social Work Theory and Practice</td>
<td></td>
</tr>
<tr>
<td>SOWK 4007</td>
<td>Community and Macro Social Work Theory and Practice</td>
<td></td>
</tr>
<tr>
<td>SOWK 4120</td>
<td>Social Policy Analysis, Advocacy, and Practice</td>
<td></td>
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<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
<td></td>
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<tr>
<td>SOWK 4150</td>
<td>Foundation Seminar</td>
<td></td>
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<tr>
<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
<td></td>
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<tr>
<td><strong>Spring</strong></td>
<td></td>
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<tr>
<td>SOWK 4150</td>
<td>Foundation Seminar</td>
<td></td>
</tr>
<tr>
<td>SOWK 4950</td>
<td>Foundation Field Internship</td>
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</tbody>
</table>

Begin elective & concentration classes; see concentration curriculum below

**TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 42**

### Advanced Standing Program

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOWK 4299</td>
<td>Advanced Standing Seminar</td>
<td></td>
</tr>
<tr>
<td>SOWK 4132</td>
<td>Power, Privilege and Oppression from a Critical Multicultural Perspective</td>
<td></td>
</tr>
<tr>
<td>SOWK 4201</td>
<td>Evidence for Practice</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS REQUIRED FOR ADVANCED STANDING FOUNDATION CURRICULUM: 9**

### Advanced Social Work Practice Concentration Curriculum (Western Colorado)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>THEORY FOR PRACTICE</strong> (3 credits required)</td>
<td></td>
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<tr>
<td>SOWK 4320</td>
<td>Family Systems Theories for Social Work Practices</td>
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<td><strong>METHODS/SKILLS</strong> (9 credits required)</td>
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<td>SOWK 4330</td>
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<tr>
<td>SOWK 4401</td>
<td>Integrated Health Care: Models and Practice</td>
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<tr>
<td>SOWK 4535</td>
<td>Planning and Program Development</td>
<td></td>
</tr>
<tr>
<td><strong>POLICY &amp; PROGRAM ADVOCACY</strong> (3 credits required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOWK 4635</td>
<td>Immigration Policies and Services</td>
<td></td>
</tr>
<tr>
<td><strong>RESEARCH</strong> (6 credits required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOWK 4900 &amp; SOWK 4901</td>
<td>Methods for Evaluating Practice and Programs and Applied Practice Evaluation Research (must be taken in sequence; research conducted in student's field placement)</td>
<td></td>
</tr>
<tr>
<td><strong>VALUES FOR PRACTICE</strong> (3 credits required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOWK 4260</td>
<td>Contemporary Social Work Issues in Western Colorado</td>
<td></td>
</tr>
<tr>
<td><strong>INTERNSHIP</strong> (15 credit minimum required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship (appropriate internships are chosen in consultation with the Field Team &amp; on-site Coordinator)</td>
<td></td>
</tr>
<tr>
<td><strong>CONCENTRATION SEMINAR</strong> (3 credits required)</td>
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</tr>
<tr>
<td>SOWK 4250</td>
<td>Concentration Seminar (offered as 1 credit course each quarter for fall, winter and spring)</td>
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</tr>
<tr>
<td><strong>CAPSTONE</strong> (0 credits required)</td>
<td></td>
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</tr>
<tr>
<td>SOWK 4999</td>
<td>Capstone (required in final quarter of program)</td>
<td></td>
</tr>
<tr>
<td><strong>ELECTIVES</strong> (6-9 credit minimum required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students may take any other offered course not counting for the areas listed above. Elective options vary based on availability.</td>
<td></td>
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</tr>
</tbody>
</table>
Students may take up to 10 elective credits from other DU graduate programs with approval of advisor & Associate Dean for Academic Affairs.

Students must take sufficient electives to meet minimum requirements for degree (90 credits for two year program; 60 credits for advanced standing).

**FACULTY RECOMMENDATIONS**

**Values for Practice Courses**

<table>
<thead>
<tr>
<th>Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SOWK 4232</td>
<td>Critical Race Theory Praxis and Social Work</td>
</tr>
<tr>
<td>SOWK 4235</td>
<td>Disproportionality and Disparities Across Systems: The Impact on Children and Youth</td>
</tr>
<tr>
<td>SOWK 4240</td>
<td>Intergenerational Justice</td>
</tr>
<tr>
<td>SOWK 4245</td>
<td>Restorative Approaches in Social Work Practice</td>
</tr>
<tr>
<td>SOWK 4545</td>
<td>Social Work Practice with LGBTQIA Communities</td>
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<tr>
<td>SOWK 4555</td>
<td>Spirituality and Social Work</td>
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<tr>
<td>SOWK 4732</td>
<td>Disrupting Privilege through Anti-Oppressive Practice</td>
</tr>
<tr>
<td>SOWK 4742</td>
<td>Disability Studies</td>
</tr>
<tr>
<td>SOWK 4749</td>
<td>Culturally Responsive Practice with LatinX</td>
</tr>
<tr>
<td>SOWK 4751</td>
<td>Global Relations and Poverty in Mexico</td>
</tr>
<tr>
<td>SOWK 4753</td>
<td>Social Development in Latin America</td>
</tr>
<tr>
<td>SOWK 4758</td>
<td>Social Work in Kenya: Context, Conservation, Empowerment, Sustainability</td>
</tr>
<tr>
<td>SOWK 4762</td>
<td>Bosnia in Transition: The Social Work Response</td>
</tr>
<tr>
<td>SOWK 4763</td>
<td>Social Work and Social Justice in South Africa</td>
</tr>
<tr>
<td>SOWK 4764</td>
<td>Historical Trauma and Healing</td>
</tr>
<tr>
<td>SOWK 4782</td>
<td>Feminisms in Social Work Practice</td>
</tr>
<tr>
<td>SOWK 4786</td>
<td>Human Trafficking: Prevention, Intervention, and Support of Its Victims</td>
</tr>
<tr>
<td>SOWK 4790</td>
<td>Human Sexuality</td>
</tr>
<tr>
<td>SOWK 4890</td>
<td>Contemporary Global Issues</td>
</tr>
<tr>
<td>SOWK 4971</td>
<td>Experimental Class (as approved, titles vary)</td>
</tr>
<tr>
<td>SOWK 4990</td>
<td>Topics in Social Work (as approved, titles vary)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS REQUIRED FOR FOUNDATION CURRICULUM: 49/52**

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**Certificate in Social Work with a Concentration in Animal-Assisted Social Work**

**Field Internship Requirements**

Students enrolled in this certificate program are required to complete 15 hours of concentration year field internship (five in each of three quarters) in a program or agency that either offers animal-assisted social work or is interested in developing it. Students must include a plan for integrating the specific requirements of the certificate into those of the internship on the Individualized Field Education Plan (IFEP). The internship must fulfill the requirements of the concentration practice track, as well as those of the certificate.

**Coursework Requirements**

Within their course of study, AASW Certificate program students must include the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOWK 4795</td>
<td>Integration of Animals Into Therapeutic Settings</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 4796</td>
<td>Animal Assisted Social Work Practice</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 4797</td>
<td>Issues for Evidence-Supported Animal Assisted Social Work</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship</td>
<td>15</td>
</tr>
</tbody>
</table>

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**LatinX Social Work Certificate**

**Program Requirements**

Students enrolled in this certificate program are required to complete fifteen hours of concentration year field internship (five in each of three quarters) in a program or agency offering the opportunity to work with Latinx clients and use Spanish at least 30% of the time. Students must include a plan for integrating the specific requirements of the certificate into those of the internship on the Individualized Field Education Plan (IFEP). The internship must fulfill the requirements of the concentration practice track, as well as those of the certificate.
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOWK 4749</td>
<td>Culturally Responsive Practice with LatinX</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 4750</td>
<td>Critical Perspectives on the Latinx Context</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 4757</td>
<td>Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 4753</td>
<td>Social Development in Latin America</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship</td>
<td>15</td>
</tr>
</tbody>
</table>

Certificate of Specialization in School Social Work

The school microsystem is a unique work environment for the social worker. It is a venue that is dynamic and continually changing. Because of the school's central location in the lives of students, the school social worker has the ability to access and to bridge to the peer network, family network, teachers, school administration, neighborhood network, community resources, and the legal system. For some students, the school can be an oasis or a refuge from problems that they are facing outside of school. Other students may keenly feel that the school is a place of humiliation, frustration, or isolation. For both these groups of students—those that adore or loathe school— their relationship with their school social worker can have a pivotal role in their lives and their families.

The School Social Work certificate discusses the many roles that the School Social Worker may have, and effective techniques for being successful in those many roles. It examines the laws that impact service delivery in the school system. Additionally, it gives students an advanced understanding of school-based assessment and how these assessments fit into the fabric of the school, and by extension, the life of the student and family.

This certificate also addresses the need for students who wish to be School Social Workers to learn and demonstrate culturally responsive interpersonal skills, techniques, and strategies to effectively work with linguistically and culturally diverse students, families, and communities. It helps students apply social work ethics and values within the framework of a school microsystem.

School settings are one of the largest providers of employment to GSSW alumni. As many school districts in Colorado move to a mental health provider model—where the mental health provider can be a school psychologist or school social worker—the School Social Work Certificate provides the advanced training that social workers need to be competitive in this field.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOWK 4712</td>
<td>Social Work &amp; the Law</td>
<td>9</td>
</tr>
<tr>
<td>SOWK 4715</td>
<td>School Social Work Interventions</td>
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</tr>
<tr>
<td>SOWK 4718</td>
<td>School Social Work Assessment and Realities</td>
<td></td>
</tr>
<tr>
<td>SOWK 4970</td>
<td>Concentration Field Internship (All students must be in a school placement in the State of Colorado. All school placements must be supervised by a school social worker.)</td>
<td>15</td>
</tr>
</tbody>
</table>

Total Credits 24

Courses

**SOWK 4000 Professional Development Seminar (1 Credit)**

The Professional Development Seminar prepares students to develop a reflective practice and to make connections between applicable lived experience and the learning process, emphasizing professional social work identity. The course provides a supplement to the foundation curriculum and an opportunity for students to discuss their professional growth as social workers. The seminar provides opportunities to reflect on social work values and ethics, populations served, and the many fields and career pathways of social work practice. In conjunction with the foundation curriculum, key ethical issues and requirements are discussed so that students can deepen their understanding of ethics in practice with consideration of local, national, and global contexts. The course also gives an opportunity to reflect on their learning styles, participation in group work and the developmental process of practice. The ideas of conscious use of self and self-care concepts will be explored through a variety of learning modalities.

**SOWK 4001 Clinical Social Work Skills (3 Credits)**

This foundation course focuses on basic skills for micro social work practice with individuals and small groups. The framework of intentional interviewing teaches students to think critically about applying the skills for engagement, assessment and intervention. Attention focuses on use of these skills with clients from multiple social identities (e.g. ethnic, racial, sexual orientation, gender affiliation) and the pitfalls of practitioner micro-aggressions. An active learning approach requires students to participate in role-play exercises both in and outside of class. Students digitally record some of those exercises and share them with the class and instructor.
SOWK 4003 Clinical Social Work Theory and Practice (3 Credits)
This foundation course helps students develop a multi-dimensional assessment and intervention framework for clinical social work practice. This course builds upon knowledge of human behavior in the social environment and adds a focus on theories of change - at the individual and family level. The course is grounded in empirical information about the importance of relationship skills, across a variety of classic and modern approaches to intervention. We use a social work lens to emphasize the importance of context in client lives, including their socioeconomic status, cultural history, and experiences of oppression. Since no single theory captures the totality of human experiences, we integrate a variety of intervention techniques from multiple human behavior theories and ground them in a social work framework for ethical and effective clinical practice.

SOWK 4006 Human Behavior and the Social Environment: Theory and Practice (3 Credits)
This foundation course provides an overview of theoretical frameworks for understanding human behavior from a social work perspective. Theories reviewed include the developmental stages across the life cycle in terms of psychological, cognitive, moral, spiritual, identity and social development. Students apply a biopsychological assessment across the life span. The course emphasizes a social work perspective and key frameworks for social work, with an emphasis on the person in environment and systems theory as they describe diverse individual behavior in relation to social class, race and ethnicity, age, gender orientation, sexual orientation, and other multicultural backgrounds. The course aims to develop students' foundational understanding of how theories are used to promote relationship development with diverse individuals and to guide interventions across all system levels. Students may test out of this course and substitute an advanced course in human development, with advisor approval, if they have already successfully completed an equivalent course in human development.

SOWK 4007 Community and Macro Social Work Theory and Practice (4 Credits)
This foundation course provides students with a foundational level understanding of macro social work practice and roles. The course builds upon knowledge of human behavior in the social environment, and adds theories of change to understand diverse communities and social service networks and the relationship of local, national and global interventions. The course introduces students to empirically supported models and emerging interventions that address macro level social issues. Students complete community/organizational assessments and also participate in work groups to learn how to engage, assess, and intervene in communities and organizations.

SOWK 4020 Integrated Social Work Practice for Social Justice (4 Credits)
This foundation course focuses on professional development and identity for social work practice. The course emphasizes values, ethics and ethical decision making in the context of the history of the profession. Students are introduced to person-in-environment, critical theory and empowerment perspectives and apply these concepts to current field of practice and social work roles. Through integration of field placement experiences, students analyze and apply social work frameworks and generalist practice theories to current social justice challenges and diverse contexts that social workers face.

SOWK 4050 Introduction to the Graduate Internship (1 Credit)
The Introduction to the Graduate Internship seminar prepares students to enter the profession of social work at a graduate level. The course provides an overview of social work values and ethics, populations served, and issues that concern social workers. Through engagement in the course content, students will complete a readiness for field assessment, including their personal and professional motivations to join the profession and serve diverse communities. Students will be exposed to the social work profession's signature pedagogy, field education, and the stages of experiential learning. The course will also help students develop learning goals for field education and identify potential internship sites.

SOWK 4102 Social Policy Analysis, Advocacy, and Practice (3 Credits)
This foundation course analyzes contemporary societal needs and problems, as well as the historical and current context of U.S. social welfare programs and policies. It presents frameworks used to define social problems and analyze social problems, and introduces students to the policy-making process and the role of policy in service delivery with special emphasis on programs designed to aid the poor and the policies that shape them. The course is designed to help social workers advocate for policies within the social welfare system that advance social well-being and fulfill their ethical obligations to improve social conditions and promote social justice.

SOWK 4120 Social Policy Analysis, Advocacy, and Practice (3 Credits)
This foundation course analyzes contemporary societal needs and problems, as well as the historical and current context of U.S. social welfare programs and policies. It presents frameworks used to define social problems and analyze social problems, and introduces students to the policy-making process and the role of policy in service delivery with special emphasis on programs designed to aid the poor and the policies that shape them. The course is designed to help social workers advocate for policies within the social welfare system that advance social well-being and fulfill their ethical obligations to improve social conditions and promote social justice.

SOWK 4120 Power, Privilege and Oppression from a Critical Multicultural Perspective (3 Credits)
This foundation course examines the phenomena of power, privilege and oppression and their effect on individuals, families and communities in the context of the values of social and economic justice and the social work profession. The course is intended to increase awareness of the intersectionality of multiple oppressions with a focus on race/ethnicity, gender, socioeconomic status and sexual orientation. Students will gain a beginning self-awareness to identify the influence of personal biases and values that impact practice with diverse groups.

SOWK 4150 Foundation Seminar (1-2 Credits)
Required seminar format used to facilitate the integration of the foundation field practicum and the professional foundation course content; emphasis on linking classroom learning with practice in the field, integrating theory with professional practice; field practicum situations and issues used for discussion and deliberation. Co-requisite: SOWK 4950. Prerequisite: SOWK 4050.

SOWK 4201 Evidence for Practice (3 Credits)
This foundation course focuses on developing student skills in identifying, analyzing, and applying empirical evidence in order to inform their social work practice. The course introduces students to studies designed to examine the effectiveness of interventions. The course aids students in developing a familiarity with basic research concepts such as research design, internal validity and external validity, so that they may critique the utility of evidence for practice. Students also engage in critically examining available evidence for biases and relevance for the diverse array of clients, populations, and contexts with which they work.
SOWK 4232 Critical Race Theory Praxis and Social Work (3 Credits)
An advanced multicultural social work practice course, this uses the fundamentals of Critical Race Theory (CRT) as a framework for contextualizing and intervening with client systems at the micro, mezzo, and macro levels. This course is a values elective for all concentrations. CRT is used as a framework to examine, critique, and challenge the way that race and racism is unwittingly sustained and perpetuated by traditional social work approaches to the amelioration of personal and social ills. Through this course, students learn the central tenets of CRT, how to evaluate traditional social work practice using these tenets, and begin to design to design a professional social work practice that uses CRT tenets as a foundation for micro-, mezzo-, and macro-level interventions. This course is offered within the concentration curriculum as a Values for Practice course to assist in the training and preparation of social workers practicing with historical underrepresented and marginalized clients and communities of color. Students develop skills and techniques grounded in anti-oppressive culturally grounded social work practice.

SOWK 4235 Disproportionality and Disparities Across Systems: The Impact on Children and Youth (3 Credits)
This course will explore the interrelatedness of institutional racism and discrimination across major social systems within the U.S., focusing on the historical context of current racial disproportionalities and disparities in youth service systems such as child welfare, juvenile justice, mental health, education, and health. Using a critical lens, the course is designed to help students analyze how policy decisions have long-range impact on generations; specifically for children and youth of color. Students will have the opportunity to apply this critical lens to their current field placement and the youth populations they serve. As an elective course, the class is open to all GSSW students; however, students concentrating in child welfare, children and youth, and families are especially encouraged to take the course.

SOWK 4240 Intergenerational Justice (3 Credits)
This course engages students in the conversation, scholarship, and social work practice issues related to how social justice is promoted across age groups and generational cohorts (i.e., baby boomers, generation X, millennial generation). While looking at debates for how families, local communities, states, and nations link age to power, decision-making, funding, and access to resources, the course also examines what within age group issues of injustice and inequality persist. Topics include: generational equity in terms of government budgets and debt, intergenerational issues related to sustainability and ecological justice, age-based versus need-based service delivery models, interventions to address intergenerational conflicts within families, and best practices in intergenerational social service models. This course is designed as a seminar course for social work students from any concentration to explore values related to social justice as they play out across all levels of practice.

SOWK 4245 Restorative Approaches in Social Work Practice (3 Credits)
This course applies the conceptual framework, strategies, and benefits of restorative approaches to social worker roles and responsibilities. This course is designed to help students develop a historical and theoretical understanding of restorative approaches, build restorative-based skills that can be used in a variety of roles, and apply restorative approaches to a variety of client population systems, settings, and needs. Ethical dilemmas, cultural competence, and decision-making in restorative approaches, and the impact this has on oppressed populations, will be discussed. This course fulfills the Values for Practice requirement, and is a general elective with relevance to all social work concentrations. Prerequisite: SOWK 4132.

SOWK 4250 Concentration Seminar (1 Credit)
This course is taken (by distance education students only) concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. This is also an evolving seminar co-created between faculty and students. Clinical issues and skill development at a more advanced clinical level is integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first year learning. Prerequisite: SOWK 4150.

SOWK 4260 Contemporary Social Work Issues in Western Colorado (3 Credits)
In this hybrid seminar course, students will learn about the disproportionate burdens of environmental injustices in communities across the Western Slope of Colorado. From a social justice and human rights perspective, students will critically explore, analyze and discuss current environmental health disparities and relevant social work interventions. Students will review environmental health and environmental justice theories and perspectives as they bear on place-based case studies from the region. Students will use contemporary media and relevant web 2.0 platforms, including social media to demonstrate understanding of applied e-advocacy social work practice while exploring such case studies.

SOWK 4299 Advanced Standing Seminar (3 Credits)
The seminar reviews knowledge, skills and values that form the basis of GSSW concentration year curricula in clinical practice, community practice and policy practice. The seminar combines content planned by instructors with individualized guided study and planning for field instruction based on student self-assessments. Prerequisite: Admission to advanced standing program.

SOWK 4301 Advanced Social Work Practice Skills (3 Credits)
This advanced social work practice skills course focuses on the importance of language and social identities and their influence on social work practice across client systems. A social justice, empowerment and reflexive framework challenges students to think critically about applying the skills for engagement, assessment, intervention, and evaluation in micro, mezzo, and macro practice settings. Attention focuses on use of these skills with individuals, groups, and communities from multiple social identities (e.g., ethnic, racial, sexual orientation, gender identity and expression, rural/urban) and the repercussions of practitioner micro-aggressions. An active learning approach requires students to: 1) participate in role-play exercises, 2) digitally record demonstration of advanced skills and share them with the class and instructor, 3) use the supervisory relationship to engage in reflexive self-assessment and practice skill adjustments based on that assessment. Prerequisite: SOWK 4001 Clinical Social Work Skills Lab or SOWK 4299 Advanced Standing Seminar.

SOWK 4305 Child Maltreatment: Causes and Developmental Consequences (3 Credits)
This course examines theory and research concerning causes and developmental consequences of child maltreatment, as well as theory and research concerning attachment and the developmental consequences of separation and loss that often follow intervention in child maltreatment.
SOWK 4315 Building Resilience: Healthy Development in Childhood and Adolescence (3 Credits)
This course provides students with knowledge of child and adolescent development with a particular focus on resilience. At each stage of development, risk factors that are deleterious to development, and protective factors that promote healthy development, will be discussed. Along with basic information about theories of resiliency, students will also gain a good working knowledge of cognitive behavior theory.

SOWK 4320 Family Systems Theories for Social Work Practices (3 Credits)
This course introduces systems theory as it is applied to family contexts which may include traditional therapeutic settings, home-based practices, parenting approaches, family religious/spiritual strength and conflict, and transgenerational family processes. Emphasis is given to the integration of theory, practice, and skill development. Students will also explore family organization and development and family subsystems, as they apply to assessment, case conceptualization, and intervention from a family systems perspective with clients, individuals, couples, families, organizations, constituencies, and communities. This course analyzes intersecting issues of power, privilege, and oppression, and requires that students examine their own personal characteristics, preferences, experiences, biases, predispositions, and affective reactions that influence the professional relationship.

SOWK 4325 Evolving Perspectives and Trends in Health and Wellness (3 Credits)
This course provides an overview of the theories that inform social work practice in the field of health and wellness. Health as a concept is examined for its understanding and meaning in multiple practice settings, communities and cultures. While addressing evolving trends and ethics in health care practice settings, a range or topics are covered including systems perspectives and thinking, the intersection of health and mental health, wellness and prevention, social ecology of health promotion, client and person centered care, care management and health care disparities.

SOWK 4330 Assessment of Mental Health and Drug Use in Adults (3 Credits)
Focuses on the assessment of psychological, social and biological contributors to mental health disorders in adults and the use of this assessment as a guide for treatment/clinical interventions. Examines the strengths and weaknesses of the DSM-IV classification system in terms of social work values and ethics. Examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category, and reviews a variety of assessment tools in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged populations.

SOWK 4334 Assessment of Mental Health in Children and Adolescents (3 Credits)
This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children and adolescents and the use of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as a guide for mental health assessment. The course examines the strengths and weaknesses of the DSM-5 classification system for children and adolescents, especially in the context of culture and social work values. It examines symptoms, theories of etiology, and prognosis within each diagnostic category and reviews diagnostic challenges in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged children and adolescents.

SOWK 4338 Assessment of Mental Health Across the Lifespan (3 Credits)
This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children, youth, adults, and older adults and the use of this assessment as a guide for treatment/clinical interventions. It examines the strengths and weaknesses of the DSM-5 classification system in the context of social work values and ethics. It examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category and reviews a variety of assessment tools in the context of gender identity and expression, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged population.

SOWK 4340 Leadership and Supervision Skills (3 Credits)
This course examines the application of leadership and supervision theories to practice settings in communities, organizations and policy contexts. A focus is placed on leadership roles and an examination of leadership styles, with an emphasis on the skills of transformational leadership and supervision. Topics covered include team leadership and supervision, one to one supervision skills, managing conflict, personnel management, and cross cultural work.

SOWK 4345 Intersections of Mental Health, Substance Use and, Trauma (3 Credits)
This course is an advanced theory for practice course with builds upon foundation courses in HUman Behavior in the Social Environment (HBSE) and clinical theories, and covers conceptualization, dynamics of, and interventions in mental health, substance use, and trauma. The course examines the independent and intersecting theory bases of mental health, trauma and substance use approaches. It also explores recent evidence about individual and environmental risks associated with these conditions and evidence about both specific therapeutic interventions and the importance of common relational factors. Social workers make up one of the largest professional groups working with clients living with mental health concerns, and bring a unique person-in-environment and strengths perspective to that work, which fits well with a recovery philosophy. Clinical frameworks and interventions common across these fields, such as harm reduction, motivational interviewing, self-determination theory, and the transtheoretical model of changes are presented, and students are introduced to integrative approaches that show promise in responding to client conditions.

SOWK 4350 Evolving Perspectives and Trends in Aging (3 Credits)
This course provides an overview of how theories of aging inform the role of social workers with older adults and their families across a range of service settings, including emerging fields of practice. The course examines multiple perspectives on the late life adult years, spanning the period from middle adulthood and on into late life, including: historical, biological, psychological, social, cross-cultural, and spiritual theories and related empirical evidence. While addressing evolving trends, the importance of difference, and ethical implications the topical issues include: work and retirement; economic status; residence and housing location; education and learning styles; interpersonal relationships with partners, families, and peers; creativity, spirituality, and religiosity; political beliefs and ideologies (including the formation, maintenance and alteration of prejudice and racism); the experience of chronic illness, disability, and death; and wisdom attained during adulthood and aging.
SOWK 4360 Social-Ecological Resilience and One Health: Connecting Human and Environmental Wellbeing (3 Credits)
Social-Ecological Resilience and One Health: Connecting Human and Environmental Wellbeing is a required theory for practice course in the Sustainable Development and Global Practice Concentration. This course builds on an innovative social ecology perspective that emphasizes coupled social-ecological systems and the integrated model of One Health as necessary theoretical frameworks for understanding the inter-connectedness of human health, wellbeing and resilience with that of other species and the natural environment. This course reviews and analyzes theoretical concepts and models for contextualizing the important social and ecological issues impacting our global environment as well as the societal implications of global environmental change. Using an integrated social science approach that highlights sustainable development as a paradigm that acknowledges the interdependence and interconnection between humans and the more-than-human world, social workers practicing in local and global communities will be prepared to implement effective, strengths-based solutions to support sustainable development and capacity-building efforts at various scales. This course will promote critical thinking and develop a knowledge base for sustainability and resilience oriented prevention and intervention strategies, environmental awareness, sense of belonging in a social-ecological community, adaptation and advocacy.

SOWK 4370 Community and Organizational Change: Theory for Practice (3 Credits)
This course presents key theoretical frameworks for students to be informed and innovative in responding to changing community, organizational and societal contexts. Theories of social change are presented that can assist social work leaders in promoting positive social change in the lives of vulnerable populations through the development of policy, community interventions and human services organizations. Students apply theories to understanding organizational change and innovation and the promotion of social and economic justice through community and policy practice.

SOWK 4375 Economic Theory and Social Work (3 Credits)
Human rights, urbanization, poverty, housing, gender inequality, care of children, poverty, indebtedness, racial and/or ethnic discrimination, and cultural conflicts are challenging the United States and nations throughout the world. This course introduces students to economic theories to develop broader conceptualization of local, national, and global social problems and possible intervention strategies. An understanding of economic theory provides a foundation for studying the emergence and maintenance of diverse social policies to address these problems. The course explores Neoclassical, Behavioral, and Microeconomic concepts of economic efficiency and the corresponding consequences to marginalized and oppressed populations.

SOWK 4401 Integrated Health Care: Models and Practice (3 Credits)
This course provides an overview of the knowledge, skills and theory of integrated health care social work practice, where physical and behavioral health services are most often provided in a primary care medical environment. Students will learn roles/functions of the behavioral health professional and their effectiveness as a member of the collaborative care team. Incorporating knowledge of evidence-based practice models of care and behavior change theory, they will increase their practice abilities to effectively work at an advanced level of skill as an integrated care behavioral health provider. Strategies and skills in patient engagement, motivational enhancement and advocacy will be taught through case studies and group activities. Cultural competency and effective care planning in an integrated healthcare environment will be emphasized.

SOWK 4410 Prevention & Treatment of Adolescent Substance Abuse (3 Credits)
This course examines causal factors and theories that seek to explain why some adolescents develop problems with alcohol and other drugs. Effective substance abuse prevention and treatment approaches are identified at the individual, family, school and community level.

SOWK 4412 Practice Elements in Interventions with Children and Youth (3 Credits)
This course offers an integrative theoretical framework of research and theory to intervene with children and adolescents in school, family, and community-based agencies. Interventions include both direct work with children and collaborative/conjoint work with parents. Techniques include common elements across empirically-supported interventions such as cognitive-behavioral therapy, behavioral treatment, client centered treatment, social skills training, and parent management training. Intervention strategies are described across four primary problem areas common among children/adolescents: anxiety, depression, disruptive behavior, and attention deficit disorder. For each of these problem areas, intervention techniques are demonstrated, practiced in class, implemented in field placements, and monitored for client progress. The use of empirically-supported interventions is discussed from a multidimensional perspective with consideration for cultural context and adaptations necessary for particular client groups.

SOWK 4416 Foster Care and Permanency Planning (3 Credits)
This course presents strategies for culturally competent assessment and intervention with children who are in foster care, adoption, or with their families. It focuses on permanency planning, involving extended families in making case decisions and caring for children, family reunification, relinquishment of children for adoption, termination of parental rights, preparing children and parents for adoption or guardianship, working with young adults nearing emancipation, and providing post-adoption/guardianship services. Prerequisites: SOWK 4305 and SOWK 4600 or permission of the instructor.

SOWK 4418 Child Welfare Practice: Assessment & Intervention (3 Credits)
This course provides an overview of the continuum of care of child welfare practice from entry to exit. The course uses an evidence-based approach taking a comprehensive look at child welfare services through a culturally responsive and multi-systemic lens. It presents strategies for culturally competent assessment and intervention with children, youth, and families involved with the child welfare system focusing on engaging families in assessment, service, and permanency planning. The course is required for students in the child welfare track. The prerequisites are SOWK 4305 (Child Maltreatment: Causes and Developmental Consequences) and SOWK 4600 (Child Welfare Policy and Services, or permission from the instructor.)
SOWK 4420 Multisystemic Social Work Practice and Advocacy with Families (3 Credits)
This course facilitates the development of family systems practice skills with clients, individuals, couples, families, organizations, constituencies, and communities. This course focuses on the development of multisystemic strategies and techniques utilizing family systems theory as part of the ongoing process of engagement, assessment, and preliminary interventions. It emphasizes the integration of research, theory, and practice through experiential learning and skill building. Students will learn strategies and techniques through role play demonstrations practicing intake/assessment/goal setting, preliminary intervention development, and professional documentation. Students will be asked to discuss their own “use of self” development throughout the class and reflect on personal bias, cultural bias, assumptions, values and affective reactions that may influence the relationship with client systems or constituencies. Prerequisite: SOWK 4320.

SOWK 4425 Positive and Community Youth Development (3 Credits)
This course provides an overview of the "community and positive youth development" approach to providing social services to children and adolescents. Many services for young people focus on negative outcomes such as behavior problems, pregnancy, violence, drug abuse, and truancy. These services are supposed to “fix” the small minority of kids who are “broken” in some way. The community and positive youth development perspective stresses that all youth need a variety of supports and opportunities to develop into healthy, contributing adults. This course considers how such an approach to social service delivery can be applied across different organizational settings (e.g., schools, government agencies, and non-profits) to promote the well-being of American youth from diverse cultural backgrounds.

SOWK 4430 Substance Use Interventions (3 Credits)
There is widespread recognition that substance use is one of America's most pressing social problems. Social workers increasingly find themselves attempting to help individuals and families resolve substance use problems, as well as directly or indirectly related issues. This course introduces students to current and emerging substance use treatment approaches so they can conduct their practices from an informed perspective.

SOWK 4435 Grassroots Organizing for Social Justice (3 Credits)
This course examines grassroots approaches to community organizing and social change for social justice. Topics include: power and empowerment theory, insider/outside considerations, development of critical consciousness and popular education techniques for organizing, history and genealogy of community organizing and social movements related to social work, direct action tactics and strategies, arts-based organizing, campaign development, and ethics and skills for working with diverse communities.

SOWK 4445 Social Work Assessment and Intervention in Aging (3 Credits)
This course focuses on biological, neurological, psychological, social, spiritual, and environmental aspects of late life as a foundation for the delivery of assessments and interventions to older adults. This course presents information on demographic projections, population trends, and theoretical perspectives that inform gerontological social work practice. This class additionally focuses on the unique nature of social work with this diverse population including a continuum of care services for older adults, interdisciplinary nature of helping services, dynamic nature of aging for multiple vulnerable older adults such as those facing institutionalized oppression, and specific attention to elder wellness.

SOWK 4454 Child and Adolescent Trauma (3 Credits)
This course introduces students to the common concepts (general theory and foundational knowledge), components (intervention and treatment elements) and skills (practitioner skills) underlying evidence-based treatment for children and adolescents who have experienced trauma. Trauma is broadly defined, and includes children and adolescents exposed to traumatic events including, but not limited to natural disasters, war, abuse and neglect, medical trauma, witnessing interpersonal crime (e.g. intimate partner violence), and other traumatic events. The course highlights the role of development, culture, and empirical evidence in trauma-specific interventions with children, adolescents, and their families. It addresses the level of functioning of primary care giving environments and assesses the capacity of the community to facilitate restorative processes. The course focuses on assessment and intervention as a foundation for subsequent learning about treatment. This course incorporates the new National Child Traumatic Stress Network (NCTSN) core curriculum on child trauma (CCCT). The course conveys the crucial evidence-based concepts, components, and skills designed by NCTSN to strengthen competency in assessment, referral, and treatment.

SOWK 4465 Human Security: Intervention Strategies for Economic & Social Development (3 Credits)
Human security is a new paradigm for understanding complex global vulnerabilities. Human security goes way beyond traditional notions of national security and highlights the security of the individual rather than that of the nation state. Human security uses a person, entitlement and human rights centered view of security. It is essential for national, regional and global stability and sustainability. In defining human security, the United Nations stressed "the right of all people to live in freedom and dignity, free from poverty and despair," and recognized that "all individuals, in particular vulnerable people, are entitled to freedom from fear and freedom from want, with an equal opportunity to enjoy all their rights and fully develop their human potential" (A/RES/60/1). "Human security aims at ensuring the survival, livelihood and dignity of people in response to current and emerging threats - threats that are widespread and cross cutting. Such threats are not limited to those living in absolute poverty or conflict" (UN-OCHA). Today, the impacts of natural disasters, climate change and other forms of environmental change, and global economic crises, among others, are considered to threaten human security in as well as developed countries. The increasing numbers of internal violent conflicts, forced migration, natural disasters and environmental degradation have resulted in national and international security failings that reflect the challenges of the post-Cold War security environment. The failure of mainstream development models to generate growth, particularly in Least Developed Countries (LDCs), or to deal with the consequences of complex new threats (e.g., HIV/AIDS, climate change, social and economic inequality) reinforced the sense that international institutions and states are not organized to address such problems in an integrated way. Social workers focusing on human, social and economic issues in global settings will use various human development strategies and other capacity-building approaches in practice. This course develops students’ skills in human and social development strategies, sustainable livelihood and conflict management strategies, and other capacity-building community strategies, and fosters a solid understanding of the programmatic and practical requirements for human security in a global context.
SOWK 4500 Mental Health Interventions with Children (3 Credits)
This course offers an integrative framework of theory and research to understand and intervene in the major mental health problems experienced by children. Interventions include both direct work with children and collaborative/conjoint work with parents. Techniques include play therapy, cognitive-behavioral interventions, psychopharmacology, and crisis intervention for suicide. Children's development is considered from a multidimensional perspective, including cultural context, risk and protective factors, and the development of psychopathology.

SOWK 4501 Wellness Promotion and Intervention Across the Lifespan (3 Credits)
This course prepares students to critically analyze the determinants of wellness across the life span, across socio-economic boundaries and across cultures in order to promote wellness in the everyday lives we lead both personally and as social workers in a community. An emphasis will be placed on the research and application of knowledge and skills to increase social worker awareness of the distinctions between health and wellness and to promote wellness in the quality of life in a community. This course builds students' skills and strategies to enhance wellness needs within a community. Strategies include using developmental models, researching current policies, and implementing wellness assessment tools in order to create interventions for communities.

SOWK 4505 Relationship Therapy (3 Credits)
This course focuses on assessment, problem/solution path identification, intervention strategies and outcome evaluation in counseling heterosexual, gay and lesbian couples. Identifies common relationship patterns and explores intervention strategies including behavioral, strategic, structural, narrative, transpersonal and feminist. Also covered are issues such as conflict management, relationship enhancement, intimacy, power and control, domestic abuse, infidelity and divorce. Students will analyze the intersecting issues of oppression: sexism, racism, classism, heterosexism and ageism.

SOWK 4520 Advanced Clinical Social Work Practice with Families (3 Credits)
This course is an advanced skill-based course that extends students' knowledge and application of family systems therapy. The course engages the active participation of students in role-play scenarios and the discussion and deconstruction of actual cases enhancing their developing skills as family therapists-in-training. In this course, students have the opportunity to plan and implement an entire course of treatment for a family. This allows the development of a conceptual understanding of family therapy practice, treatment skills and interventions, and utilization of self-as-therapist that influences the therapeutic system. Students have multiple opportunities to practice family interventions and receive feedback from both classmates and the instructor through the use of the clinical family therapy methods of ‘live supervision’ and ‘reflecting teams’. Students will experience the connection between theory and practice and learn to integrate multiple theories. Issues related to transference, culture based countertransference, resistance, and working with involuntary clients are discussed. Advanced Clinical Social Work Skills with Families builds on the family systems theory and practice applications learned in the required family systems concentration courses and expands students' opportunity to apply theory to cases in diverse practice and client situations. An emphasis is placed on the development of personal theory, professional development, and therapeutic change/outcome as it relates to common factors in family therapy. This course also builds upon SOWK 4505: Relationship Therapy and aspects unique to couple's therapy. Required prerequisites: SOWK 4320 and SOWK 4420.

SOWK 4521 Advanced Skills for Working with Military Families (3 Credits)
The class is designed to give students an understanding of the issues military families face and how to apply that understanding to clinical interventions with military families. It also investigates individual service member concerns, spousal/partner relationships, and family dynamics surrounding deployment, active duty, and returning home permanently or between deployments.

SOWK 4523 Care Management Skills and Resources to Promote Community Living (3 Credits)
Many individuals and their families of all ages cope with physical and mental health conditions that impede their ability to live in the community. A vast array of formal and informal resources, public programs, and privately funded services can promote community living. Social workers often provide care management to enhance access, coordinate care, and ensure equality of these long-term services and supports. This course will develop students' skill at care management and knowledge of resources, including resources for persons with developmental disabilities, chronic mental health conditions, physical disabilities, and age-related functional impairments.

SOWK 4525 Administration and Management Practice and Skills (3 Credits)
This course examines the application of leadership and supervision theories to practice settings in communities, organizations and policy contexts. A focus is placed on leadership roles and an examination of leadership styles, with an emphasis on the skills of transformational leadership and supervision. Topics covered include team leadership and supervision, one to one supervision skills, managing conflict, personnel management, and cross cultural work.

SOWK 4530 Poverty and Community Economic Development (3 Credits)
This is an advanced community practice class focused on poverty, low-income neighborhoods and local economic development. The class begins with a thorough review of the scholarly literature related to poverty, sustainability, and the concentration of poverty in low-income neighborhoods. Then, public and private responses to poverty are examined. The class focuses on both governmental policies and programs supported by the private sector. Next, the class turns to local responses to the concentration of poverty in low-income neighborhoods. The class focuses on the interdisciplinary nature of programs and interventions aimed at community economic development in low-income neighborhoods.
SOWK 4535 Planning and Program Development (3 Credits)
This course prepares students to engage in strategic planning and program development roles and practice within a social work community, organizational, or policy practice setting. Students in this course gain knowledge in the principles of planning, social enterprise, the engagement of stakeholders in planning processes, community collaboration and the elements of designing and implementing programs. Students have the opportunity to put this knowledge base into practice by developing a comprehensive program proposal applying the skills of strategic thinking, planning, critically evaluating research informed practice and practice informed research. In addition, students engage in communicating professional judgment in both written and oral formats.

SOWK 4540 Advanced Skills for Working with Military Families (3 Credits)
This course is designed to give students an understanding of the issues military families face and how to apply that understanding to clinical interventions with military families. It also investigates individual service member concerns, spousal/partner relationships, and family dynamics surrounding deployment, active duty, and returning home permanently or between deployments.

SOWK 4545 Social Work Practice with LGBTQIA Communities (3 Credits)
This course examines contemporary U.S. child welfare policies in historical perspective, focusing on prevention, report and investigation of child abuse and neglect, as well as family preservation, out-of-home care, adoption and services for troubled adolescents. Also evaluated are the impact of multiculturalism, human development, and identity development while exploring how individuals view spirituality and religion as they move through the life cycle. Drawing on the work of Edward Canda, Ken Pargament and Froma Walsh, the course will explore definitions of spirituality and religion, survey methods of approaching spiritually sensitive bio-psycho-social assessments, and examine culturally and spiritually sensitive social work interventions. Class activities will emphasize dialogue, reflection, exploration and experiential learning in order to develop a balanced framework for navigating spiritually and religion in practice settings with individuals, groups, families, communities and organizations. In this course, students will gain self-awareness and learn how their own cultural and spiritual perspectives have shaped their worldview and professional sense of self. It is assumed that students enrolling in this course will bring an interest in learning about the many facets of spirituality. As such, students will be asked to explore their own ideology of spirituality as it relates to their professional identity and practice effectiveness. Prerequisite: SOWK 4132.

SOWK 4555 Spirituality and Social Work (3 Credits)
The purpose of this course is to provide students with a nondiscriminatory framework of knowledge to respond competently and ethically to populations with diverse spiritual perspectives and religious cultures in social work practice. This social justice-informed course underlines and respects the diversity of all spiritualities with special attention to spiritual populations historically marginalized and neglected by Eurocentric assumptions common to social work. This course builds on the generalist approach of our foundation curriculum and integrates theories of multiculturalism, human development, and identity concepts while exploring how individuals view spirituality and religion as they move through the life cycle. Drawing on the work of Edward Canda, Ken Pargament and Froma Walsh, the course will explore definitions of spirituality and religion, survey methods of approaching spiritually sensitive bio-psycho-social assessments, and examine culturally and spiritually sensitive social work interventions. Class activities will emphasize dialogue, reflection, exploration and experiential learning in order to develop a balanced framework for navigating spiritually and religion in practice settings with individuals, groups, families, communities and organizations. In this course, students will gain self-awareness and learn how their own cultural and spiritual perspectives have shaped their worldview and professional sense of self. It is assumed that students enrolling in this course will bring an interest in learning about the many facets of spirituality. As such, students will be asked to explore their own ideology of spirituality as it relates to their professional identity and practice effectiveness. Prerequisite: SOWK 4132.

SOWK 4565 Social and Environmental Impact Assessments (3 Credits)
Social and environmental impact assessments are important tools for analyzing and managing both the intended and unintended consequences of development projects on human and ecological systems in order to bring about a more equitable and sustainable social ecological system. This class incorporates an understanding of the history and concepts of the three levels of impact assessments (micro, mezzo, and macro) into the research process that is the core of social impact assessments. Students prepare and evaluate social ecological impact assessments through learning to identify and define problems, select theoretical frameworks appropriate to the problem, identify research questions, design a study appropriate for the identified questions, gather and analyze data, and write the final assessment. Particular attention is paid to assessing the effects of interventions on vulnerable populations. Other topics will focus on the practical aspects of project team selection and management, timelines, and the communication of findings to stakeholders.

SOWK 4600 Child Welfare Policies and Services (3 Credits)
This course examines contemporary U.S. child welfare policies in historical perspective, focusing on prevention, report and investigation of child abuse and neglect, as well as family preservation, out-of-home care, adoption and services for troubled adolescents. Also evaluated are the impact of policies and proposals for change in policies, considering empirical evidence, values and ethics. Provides a framework to analyze policy choices and encourages students to advocate for needed policy changes. Prerequisite: SOWK 4120 or SOWK 4299.

SOWK 4605 Poverty: Policies and Services (3 Credits)
The United States poverty rate declined steadily from the 1950s through the 1970s, decreasing from 22% of the population in the late 1950s to 12% in the late 1970s. Poverty rates have fluctuated since then with current rates standing at approximately 15% or 46 million people. More than 16 million children, 22% of all children, live in families with incomes below the federal poverty line. The course begins by considering the federal poverty measure and competing definitions of poverty. Key programs and policies meant to alleviate poverty, such as government transfer programs (including cash and noncash welfare, earnings supplements, and social insurance programs), education and training programs, and support services are examined. Course content is applied to practice scenarios to enhance student knowledge of poverty programs, eligibility criteria and application processes. Critical discussions of these programs will inform analysis of alternative approaches to poverty reduction and economic self-sufficiency.
SOWK 4610 Policies and Programs for Children and Youth (3 Credits)
This course examines the history and evolution of social policies and programs targeting high-risk youth. Students will seek to critically analyze the effects of current and recent policies in the context of youth offending and other adolescent problem behaviors. Prerequisite: SOWK 4120 or SOWK 4299.

SOWK 4630 Family Policies and Services (3 Credits)
Identifies challenges contemporary American families are experiencing and presents strategies for developing policies and services to meet these challenges. Examines specific policies and services that most affect families, as well as broader questions concerning power and its distribution, allocation of resources and the role of government in promoting individual and family well-being. Prerequisite: SOWK 4120 or SOWK 4299.

SOWK 4635 Immigration Policies and Services (3 Credits)
This course identifies challenges for immigrants and presents strategies for developing policies and services to meet these challenges. It not only examines specific policies and services that most affect immigrants but also considers broader questions concerning power and its distribution, allocation of resources, and the role of government in promoting individual and family well-being. This is a concentration policy course for all concentrations.

SOWK 4640 Mental Health and Substance Use Policies (3 Credits)
This course provides a comprehensive understanding of policies related to mental health and/or substance use, their historical antecedents, and the socio-political forces that influence their development. This course also introduces students to emerging controversies concerning these policies.

SOWK 4645 Health Care Policy (3 Credits)
This policy course provides an overview of health care policy as it is relevant to social work practice in multiple health and behavioral care settings. With the advent of health care reform and the implementation and operationalization of the Patient Protection and Affordable Care Act (PPACA), there are rapidly changing policy issues related to this innovative integration and delivery of health care services. Students in this course critically analyze the practice of policy in this new and quickly evolving service arena. This course explores key health policy strategies to foster integrated delivery system development and sustainability in line with health policy goals to reduce cost of care, improve population health and improve quality of integrated care services, with special emphasis on the integration of primary care, behavioral health services and wellness/health promotion initiatives. Strategies for students to influence policies and promote change in the interest of the individual/family/community, agency/organization and the communities they serve are presented. Critical thinking skills in developing and analyzing proposals to improve integrated health policy are encouraged. The course builds on policy content offered in the professional foundation year and links policy to practice and research skills.

SOWK 4650 Aging Policy (3 Credits)
This course provides an overview of social policy and service delivery issues in gerontology. It includes a critical review of rapidly developing policy issues, as well as an overview of U.S. health care and social service delivery systems serving older adults. The course encourages students to participate in critical analysis of issues and to develop and analyze innovative proposals to improve policy and programs for older adults. This course fulfills the policy requirement for the Aging Services and Policy concentration.

SOWK 4655 Mental Health and Health Care Policy (3 Credits)
This course provides an overview of social policy and service delivery issues in mental health and health care, with emphasis on achieving quality and addressing disparities. It includes a critical review of United States’ historic and developing policy issues, as well as mental health and health care financing and delivery systems and other key issues in the field. Students will participate in critical analysis of issues and will examine various proposals to improve mental health and health care policy and programs. Prerequisite: SOWK 4120 Social Policy Analysis, Advocacy and Practice, or SOWK 4299 Advanced Standing Seminar.

SOWK 4660 Social Policy Advocacy (3 Credits)
Facilitates student learning within policy-making arenas. Students are paired with health and social service agencies and coalitions to assist in agenda-setting, legislative research, and issue-advocacy development and implementation in the state legislature and bureaucracy.

SOWK 4665 Global Policies and Programs for Sustainable Development (3 Credits)
In the 21st century, more international cooperation will be required to confront transnational problems, many of which arise from globalization. From infectious diseases to civil conflicts that spill across borders, from global financial crises to protecting the world’s natural systems and resources, there are many modern issues that require enhanced global cooperation and collective solutions. Global Policies and Programs for Sustainable Development considers transnational problems that cannot be solved by national governments alone, and examines policy systems (or “regimes”) and global governance approaches that have emerged to manage global issues, such as: finance, trade, human rights, migration, health, environmental change, national and human security, and disaster reduction and response. Overall, this course focuses on understanding and connecting global policy trends, and examines their inter-relatedness with globalization and their impact on human and social development. Global Policies and Programs for Sustainable Development gives students the opportunity to study, analyze, and understand specific global policy initiatives, their development, and implementation. Devising effective strategies to address global problems is necessary because these problems can impede social and economic development, tear at the fabric of societies, and even undermine regional and international stability. The goal of this course is to train students to understand the essential components of global policies in both the public and private sectors and to prepare them to initiate policy reforms to accomplish innovative and effective outcomes. This course also will address the development of policy in the context of social work values and ethics. Global policy regimes will be analyzed from multiple viewpoints. Readings, case studies, and discussion will address policies within international organizations (e.g., United Nations, World Bank, International Monetary Fund, and specialized agencies such as the World Health Organization) with applications for developed, transitional, and developing countries. The course will emphasize an analytical approach for understanding the impact of global policies on programs, services, and development at large.
SOWK 4670 Policy Development & Analysis (3 Credits)
Focuses on the development and analysis of social welfare policy. Reviews the structure of the policy-making and implementation process, and examines perspectives on the definition of social problems and approaches to the development and analysis of social welfare policies. Students apply the perspectives and frameworks as they analyze a specific social problem and policy directed toward it, identify needed change in policy, select place and strategy for change in policy, and communicate knowledge to central actors in the policy-making and implementation process. Prerequisite: SOWK 4120 or SOWK 4299.

SOWK 4680 Native Peoples Practice: History and Policy (3 Credits)
This course is designed as the background to practice with Native Peoples. It will explore the relationship between theory and practice, socio-economic, political, and health issues, and the dynamics of changes in reservation and urban Native communities. Historical trauma, federal policies, impacting Native people, and laws and regulations that impact social service delivery will be reviewed. Social services delivery systems will be analyzed with the uniqueness of the cultural parameters of tribal communities. Guest lecturers from tribal communities may partner with faculty to teach the course. Prerequisites: SOWK 4299 and SOWK 4132.

SOWK 4700 Solution Focused Brief Therapy (3 Credits)
This course is a methods/skills course that provides students with the opportunity to gain knowledge and skills in the contextual stance and core interventions of the evidence-based approach, Solution-Focused Brief Therapy (SFBT). Students gain an understanding of how this approach works, and the ability to use this approach in a variety of settings including with clients struggling with chronic mental illness, trauma, and substance misuse, as well as with children and adolescents, couples and families, in community development, and supervision. This course addresses competencies and practice behaviors in advanced clinical settings including Families, Child Welfare, Children and Youth, Mental Health and Health.

SOWK 4705 Forensic Orientation in Social Work Practice: Assessment and Interventions with High-Risk Offenders (3 Credits)
Presents and applies a framework for assessing and intervening with offender populations. This risk and containment framework takes a community safety and victim-centered perspective and focuses on assessing and intervening with multiple systems surrounding offenders. The framework is then applied to specific interventions with domestic violence abuse offenders and with adult and adolescent sexual offenders.

SOWK 4710 Domestic Violence (3 Credits)
This is a concentration year practice elective focusing on understanding, assessing, and intervening with domestic violence, understood as violence occurring in the context of intimate relationships. The purpose of this course is to provide students with the theoretical understanding and practice skills necessary to establish a beginning competence in assessing and intervening with domestic violence and in developing community, systemic, and policy responses.

SOWK 4712 Law of Family and Child (3 Credits)
Examines legal principles and procedures relevant to social work practice with families and children: structure and operation of the American legal system, principles to follow in conducting legal research, basic principles of constitutional law and law related to juvenile delinquency, child protection, adoption, education and domestic relations. Covers legal aspects of social work practice including licensing, confidentiality and professional liability.

SOWK 4713 Preventing Behavioral Health Problems in Children and Youth (3 Credits)
Behavioral health problems in childhood and adolescence take a heavy toll on millions of lives. These problems range widely – from anxiety and depression to alcohol, tobacco, and drug abuse; delinquent and violent behavior; dropping out of school; and risky sexual activity and unwanted pregnancies. SOWK 4713 presents an overview of practices and policies aimed at preventing behavioral health problems in young people. Emphasis is placed on developing the practice and policy skills that are necessary to deliver preventive interventions and programs in schools, families, and communities. Students will select an effective program, learn the skills necessary to deliver the program, and then implement the program in a classroom setting. Class content will emphasize the importance of increasing the role of social work practitioners and social work values in the interdisciplinary field of prevention practice.

SOWK 4715 School Social Work Interventions (3 Credits)
Designed to give students the ability to identify, understand and apply the varied roles of school social worker. Examines politics of education, the educational organizational structure, special education law and process, collaborative teamwork with school and community professionals and inter-system case coordination. Emphasis placed on meeting the needs of special education populations through assessment, intervention and evaluation and on preventive programs for children and youth at risk for school failure, truancy and dropping out.

SOWK 4718 School Social Work Assessment and Realities (3 Credits)
This concentration course is the third in the School Social Work Certification. Both SOWK 4715 (School Social Work Interventions) and SOWK 4712 (Social Work and the Law) are prerequisites for this class. The class provides advanced skills in assessment pertinent to the school ecosystem. It also juxtaposes these skills with field trips to several schools to interact with School Social Workers in a variety of settings and work roles to understand how these assessments are used in the school setting. The course emphasizes the written tasks and social work skills that School Social Workers need to perform on a regular basis, as well as how these skills are used to help the student, family, and school environment. Prerequisites: SOWK 4712 and SOWK 4715.

SOWK 4720 Prevention and Treatment of Juvenile Delinquency and Youth Violence (3 Credits)
Examines causal factors and theories that seek to explain why some adolescents engage in delinquent conduct and/or violent behavior. Effective delinquency and violence prevention and treatment approaches are identified at the individual, family, school and community levels.
SOWK 4721 Existential Social Work Practice (3 Credits)
The problems facing people can be understood in the context of situations and meanings they give to them. This course seeks to identify useful ways to clarify and validate the client’s unique “world view”, bypassing the many dangers and misuses of diagnostic categorization and empowering clients in relation to themselves and problem definition.

SOWK 4723 Social Work Practice in Health Care (3 Credits)
This course is designed to explore and develop advanced social work knowledge and skills in order to practice social work in diverse health care settings. It includes examination of the social work role on interdisciplinary teams, health care terminology, setting-specific assessment and interventions and comprehensive social work services for acute and chronically ill patients. It emphasizes social work values and ethics in relation to health care practice.

SOWK 4725 Mind-Body Connections and Social Work Practice (3 Credits)
This course teaches skills for implementing mind-body techniques, models for wellness assessments, and evidence-based mind-body strategies for intervention in client and community problems. An evidence-based approach creates a foundation for: 1) understanding the mind-body connection that influences an individual’s and community’s physical, emotional, and social well-being and 2) the most efficacious methods for mind-body social work practice skills. Research evidence demonstrates that mind-body strategies are helpful for an array of concerns such as, military personnel with PTSD, adults with emotional regulation issues, academic concerns of stressed-urban youth, community mobilization, and emancipatory practice.

SOWK 4726 Experiential Therapy (3 Credits)
This course provides students with knowledge and skills to facilitate experiential-based therapy with children, youth, families and couples with a focus on environmentally sound practices. This is considered a service learning class since we are partnering with nature. Please wear comfortable clothes and comfortable closed toed shoes for all classes and bring a water bottle.

SOWK 4727 Experiential Therapy in Nature (3 Credits)
SOWK 4727 is a methods/skills course which provides students with knowledge and skills to facilitate experiential therapy with groups with a focus on environmentally sound practices in the outdoors.

SOWK 4730 Cognitive Behavioral Therapies (3 Credits)
This course examines major cognitive behavioral therapies (CBT) suggesting methods focusing on clients’ problem-solving abilities, building on client strengths, targeting specific thought patterns that impede clients from reaching goals, and assessing outcomes in terms of changes in thinking and behavior. Theory is applies to individuals, dyads, families, and groups. Additionally, this course examines relevant research suggesting both indication and counter-indications of approaches.

SOWK 4732 Disrupting Privilege through Anti-Oppressive Practice (3 Credits)
This course, building on the theoretical foundation in SOWK 4132 Multicultural Social Work Practice, examines the barriers to the professional use of self as an ally to historically disenfranchised groups, both in the context of day-to-day relationships with clients as well as in the context of community and macro-level interventions. The course is intended to assist in understanding the personal, situational, structural, and cultural influences that impede justice-oriented social work practice. The course supports students in developing strategies, skills, and approaches to anti-oppressive practice. Anti-oppressive social work practice is a range of practice approaches that adopt a critical and structural perspective on issues of social inequality, oppression, power, privilege, and domination. It encompasses approaches such as feminist, anti-racist, Afrocentric, disability practice, and critical social work frameworks to name a few (Campbell, 2003). It attends to both process and outcome (Dominelli, 1998), and links the provision of individual assistance to people from marginalized groups with involvement in social movements corresponding to the marginalization (Carniol, 2000). "The [anti-oppressive] framework enables links to be made between individual action and social structures. It informs practice by enabling the worker to evaluate differences that exist at an individual level and within society and how these impact on each other. It provides the means of making accurate assessments by taking into account the inequalities that texture the lives of those denied access to society’s resources because of their defined social status and the exclusionary practices of the dominant system. It demands that we consistently engage in the process of critical self examination, which in turn enables us to engage in the process of change." (Dalrymple and Burke, 1995, p. 18).

SOWK 4735 Interpersonal Approaches to Counseling (3 Credits)
This course is an elective course which utilizes the interpersonal models of psychotherapy and neurobiology, drawing upon psychodynamic theories and techniques. The course examines traditional and contemporary psychotherapy theories and techniques. Interpersonal interventions are grounded within the values, ethics and standards of practice for clinical social work.

SOWK 4737 Assmnt & Interven w/Adolescent (3 Credits)
Examines adolescence as a major developmental life cycle stage and the reciprocal relationships between gender, race, ethnicity, family development, peer group, neighborhood and the adolescent’s physical, intellectual, social and sexual development, as they contribute to identity formation. Presents individual, group, family and program-based intervention approaches, ranging from least to most intensive and restrictive. Prerequisite: completion of foundation year course work or permission of adviser and instructor.

SOWK 4741 Grief and Loss Across the Lifespan (3 Credits)
This course is designed to prepare students to understand social work roles and practice (engagement, assessment, intervention and evaluation) in working with those experiencing loss across the life span. Whether the loss is related to health or functioning, family system, developmental stage or an actual death, this course prepares students to be culturally responsive to diverse perspectives and bereavement needs. Students will learn theoretical models of grief and loss and how to effectively evaluate the needs of grieving individuals, families, communities and their support systems.
SOWK 4742 Disability Studies (3 Credits)
This values course will facilitate students’ exploration of their own perceptions, biases, and belief systems with regards to the broad topic of disability. A values perspective encourages students to reflect on their personal, professional, cultural and political perceptions of the epistemology of the notion of disability. This course will explore the social construction of concepts of ableism and identity, engage in historical analysis of disability (both domestically and internationally), and familiarize students with pertinent legislation/policies that impact persons with disability (PWD). Students will learn definitions of disability, come to know more about the spectrum of disability and utilize critical theoretical perspectives. The study of disability includes persons with disability (PWD), including the broad range of categorizations related to mental health, physical health, and cognitive ability. Students will engage in critical dialogue around the representation of PWD in our culture. Utilizing a person-in-environment perspective, students will look at the Social Work Code of Ethics as it relates to PWD and explore various facets of self-determination, independent living, relationships and sexuality, and the role of family, power and privilege in the lives of persons with disabilities. Prerequisite: SOWK 4132.

SOWK 4749 Culturally Responsive Practice with LatinX (3 Credits)
Addresses immigration issues, as well as intervention and theoretical approaches for Latinx populations. Covers the selection of interventions and strategies for cross-cultural use in adequately addressing the needs of Latinx. A required course for the Latinx Social Work Certificate.

SOWK 4750 Critical Perspectives on the Latinx Context (3 Credits)
This course provides a framework for culturally relevant social work services designed to meet the needs of the Latinx community. This is a social work content course taught in Spanish. Students acquire core principles grounded in an understanding of social justice, privilege, and oppression including the interconnection between human and civil rights, globalization, immigration and poverty. Students will expand their oral and written Spanish expression as they learn about cultural, social and political theory. Students learn aspects of Mexican culture, community development, historical patterns of oppression, spirituality, and the role of indigenous movements. As a result of this course, students understand how to advocate for nondiscriminatory cultural, social and economic practices within a Latinx context and experience. It is designed for students in all concentrations who have an interest in understanding issues facing the Latinx community. Prerequisite: Initial placement is based on minimum language proficiency test results at the intermediate-advanced level. Further placement determination will consist of a comprehensive evaluation to ascertain oral and written proficiency. Enrollment in this course may be limited to Latinx Certificate students.

SOWK 4751 Global Relations and Poverty in Mexico (3 Credits)
Provides a mixture of experiential and academic learning based on the community-learning model of Paulo Friere. Taught in Cuernavaca, Mexico, the course covers Mexican culture, community development, historical patterns of oppression, spirituality and liberation theology, global economics and policy, and the role of indigenous movements. Includes discussion on the relationship between poverty in Mexico and the US, and implication for social workers. A required course for the Social Work with Latinos/as Certificate.

SOWK 4752 Trauma Informed Assessment and Interventions (3 Credits)
This course provides an overview of multi-system level definitions of traumatic experience—historical, individual, interpersonal, family, organizational, and community. The emphasis is on social work practice that is culturally responsive, growth-oriented, and strengths based, in which the study of trauma is approached from a theoretical base that perceives the trauma response as a “response” rather than a “disorder.” Trauma informed assessment and interventions are examined, incorporating a social justice perspective on historical trauma, poverty, and interpersonal violence. This course promotes the unique contribution social workers offer through the lenses of strength, resilience, and coping as well as commitments to cultural responsiveness and ecological/systems factors. Students will identify how secondary trauma impacts social workers and the importance of professional accountability to self-care and ongoing growth and development.

SOWK 4753 Social Development in Latin America (3 Credits)
Covers social development in South and Central America, with special emphasis on Mexico. Practice-oriented, it is geared towards a knowledge of policy-making in Latin America and on the skills required for local social development. A required course for the Social Work with Latinos/as Certificate.

SOWK 4754 Trauma and Recovery in Social Work Practice (3 Credits)
Provides an overview of multi-system level definitions of trauma experience - historical, individual, interpersonal, family, organizational, community, and global. Also examines various approaches to trauma response theory. Promotes the unique contribution social workers have to offer through lenses of strength, resiliency, and coping as well as commitments to multicultural and systems factors.

SOWK 4755 Interventions for Responses to Trauma (3 Credits)
This course is designed from a strengths perspective in which the study of trauma is approached from a theoretical base that perceives psychological adjustments after trauma as primarily a “response” rather than a “disorder.” Includes information on the integration of cognitive, emotional, and somatic approaches to trauma treatment, as well as consideration of when to use a trauma-informed versus a trauma-focused paradigm. At the community level, the course also includes an introduction to mental health reactions and responses to disaster. Prerequisite: SOWK 4754.

SOWK 4756 Social Work from a Chinese Perspective (3 Credits)
This course provides students with a unique opportunity to learn first in the classroom the social, cultural, historical, political, and economic characteristics of China and how these characteristics shape social work in China. Then students learn by experiencing social work in China. In Beijing, students participate in lectures given by faculty at China Youth University, discussions with social work students, visits to social work organizations, visits to important cultural landmarks and nightly synthesis of new knowledge and experiences. An elective course.
SOWK 4757 Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course (3 Credits)
This required course for the Social Work with Latinos/as certificate combines academic classroom instruction and experiential and conversational learning. The goal of the course is to enhance the student's Spanish communication and cultural responsibly skills through dialogue practice and service in Latin America. Country location for this study abroad course is determined based on yearly certificate objectives and travel advisories. Based on the student's individual skills and interests, and the needs of local field agencies and communities, students become involved in volunteer and service learning opportunities preparing them for their concentration field placement back in the United States where they are expected to demonstrate competency in Spanish. Students will learn to identify cultural differences and similarities in attitudes towards community organizing and mental health care, and social service delivery in order to better address these cultural differences and similarities in the United States. This experience also allows students to learn Spanish within a cultural and professional context. This course is conducted entirely in Spanish.

SOWK 4758 Social Work in Kenya: Context, Conservation, Empowerment, Sustainability (3 Credits)
This course is designed to introduce students to the social, cultural and conservation issues of Kenya and East Africa. This course is field-based with strong emphasis on service learning and direct experiences. Course readings, lectures, classroom discussions, service learning projects and field work in rural Kenya provide participants firsthand experience in the social, cultural, historical, political, environmental, ecological and economic realities that exist in Kenya. This course is open to qualified concentration and advanced standing Graduate School of Social Work students. The course meets on campus for four sessions before traveling to Nairobi, Voi, and Kasigau, Kenya. Due to the intensive nature, remote travel logistics and costs for this course, direct communication with the professors is required. Qualifications include: willingness to sign International Travel Agreement, willingness to receive required medical authorization and immunization, academic good standing, and readiness for the physical and emotional demands of traveling in rural and remote Africa.

SOWK 4759 Global Cultural Perspectives: Consensus and Conundrums (3 Credits)
Social workers increasingly practice in global communities both nationally and internationally. Changes in practice environments demand that social work practitioners are informed citizens of comparative cultures and societies. This course examines the values and ethics of social work practice in a global context of power, privilege and oppression. Course materials and educational experiences are used to challenge students to examine ethical and value-based conundrums when practicing in global settings and to develop practice skills to enhance the health, well-being and sustainability of communities. Through the use of case studies, critical thinking, cultural inventories and reflexivity the course supports and challenges students' personal growth and professional practice.

SOWK 4760 Resource Development and Fundraising (3 Credits)
This course examines strategies and tactics around skill building in fundraising, resource-development strategies, grant-proposal writing, budgeting, and fiscal processes common to not-for-profit or governmental organizations. Topics include resource development and acquisition (fundraising) and discussions on the budget process required resource management for nonprofit organizations.

SOWK 4762 Bosnia in Transition: The Social Work Response (3 Credits)
This course provides students with the unique opportunity to learn firsthand about the social work response in post-war Bosnia through a social justice lens. The social, cultural, historical, political, economic, religious, legal and ethnic characteristics of the former Yugoslavia will be explored as context for studying the genocide that occurred in the 1990s. Learning will occur in the classroom at GSSW, followed by travel to Bosnia. Students will be exposed firsthand to the local, national and international efforts toward rebuilding and healing, through lectures provided by faculty at the University of Sarajevo School of Social Work, interaction with Bosnian social work students, visits to NGOs focused on the post-war efforts, visits to sites important during the war, visits to war tribunal sites, and exposure to current legal, economic and human service processes.

SOWK 4763 Social Work and Social Justice in South Africa (3 Credits)
This three-credit course will be conducted in partnership with Educo Africa in Cape Town, South Africa. The course will provide experiential and service learning social work experiences. Course activities will encourage cross cultural learning experiences and increase knowledge pertinent to South Africa's social, cultural, environmental, political and historical reality. It will expose students to Community Development challenges as well as environmental and social justice issues in a South African context. The goal of the course is to increase personal, community and global leadership potential of social work and social development professionals. This course in partnership to Educo Africa will use a community-based context to increase the effectiveness and expertise of students and will support student's engagement in program development and building international networks and partnerships.

SOWK 4764 Historical Trauma and Healing (3 Credits)
This course is designed to provide students with a context for practice with communities experiencing historical trauma. We learn about the conceptualization of historical trauma, its impact on communities as well as community responses to it. We also discuss the importance of cultural protective factors, strengths, and culturally relevant models of healing around multigenerational, collective experiences of trauma. A number of practice approaches found useful with communities experiencing historical trauma are presented and discussed. Class format includes presentations, small group discussions, films, poetry, movement, and experiential learning in the community. This course is built upon the concepts of empowerment practice, indigenous models of social work, and narrative theory and practice. We use these perspectives as we explore work around historical trauma in communities. This class provides social work direct practice skills on individual, family, community and policy levels.

SOWK 4765 International Social Development (3 Credits)
Social development is a process of planned instructional change to bring about a better correspondence between human needs and social policies and programs. This class focuses primarily on the developing work with particular emphasis on transitional economies. Practice-oriented, the class is geared toward a knowledge of policy-making for human security and the skills required for local social development.
SOWK 4775 Social Work with Adult Groups (3 Credits)
The course teaches students advanced clinical group work methods and skills with vulnerable and resilient adult clients who are experiencing an array of bio-psycho-social-spiritual problems, and who are seen in mental health, health, and gerontology practice settings. The purpose of group work is to meet the socio-emotional needs of members through mutual aid and support, education, therapy, growth, and socialization. The impact of gender, age, race/ethnicity, sexual orientation, social class, ability/disability, and spirituality on group formation and dynamics is addressed. Evidence of practice effectiveness of group methods is examined. Ethical conflicts and dilemmas involved in group work are considered within the framework of social work values and ethics.

SOWK 4780 Conflict Resolution in Social Work Practice (3 Credits)
Covers methods of conflict resolution including negotiation, bargaining and mediation. Applies social work role of mediator to families, divorces and child custody, elder care issues, groups and organizations. Examines frameworks and helps students build skills for conflict resolution in practice. An elective course.

SOWK 4782 Feminisms in Social Work Practice (3 Credits)
This course engages students in the conversation of scholarship and social work practice issues related to social justice and the oppression of women. The course is designed to expand the knowledge of theory, research, policy and practice for working with diverse groups of women in multiple settings. Feminist social work perspectives for social work practice at micro, meso and macro practice levels will be critically examined. Topics include feminist theories, or feminisms, including eco-feminism and womanism, clinical and community feminist practice models, globalization and women, and the value of feminist research. These topics will be informed by knowledge and awareness of intersectionality, oppression and privilege. Prerequisite: SOWK 4132.

SOWK 4784 Suicide Assessments and Interventions (3 Credits)
This course builds students’ competencies in assessing suicide risk, planning for safety, and providing counseling to individuals who are thinking about suicide or have made a suicide attempt. This class examines theories of suicide causation, methods of suicide risk assessment, and models of techniques for intervention. Students will learn practices for eliciting sensitive information about troubling thoughts, assessing and documenting a client's level of suicide risk, and using cognitive-behavioral and other methods to help reduce suicide risk.

SOWK 4786 Human Trafficking: Prevention, Intervention, and Support of Its Victims (3 Credits)
This course meets the values for practice requirement and is relevant for students who are interested in trauma, human rights, international issues, prevention of child abuse, intervention with victims of violence, interventions with child abuse, interventions with high-risk youth, and PTSD. This class investigates human trafficking from a social work perspective: prevention, intervention, and support of victims. Additionally, this course investigates regional differences in both labor and sex trafficking. The class also studies how prevention, intervention, and giving support to victims change from different regional (Asian, African, European, and Latin American) perspectives. The course also investigates human trafficking in the US, both with domestic and international victims. Prerequisite: SOWK 4132.

SOWK 4790 Human Sexuality (3 Credits)
Integrates human sexuality in the thinking and practice of social workers. By viewing sexual behavior from the social work perspective, the student is prepared to assume a significant role in helping clients deal with issues of human sexuality. Focuses on clients experiencing sexual dysfunction and on sexually oppressed client groups including the elderly, the homosexually or bisexually oriented, the physically or developmentally challenged and the sexually abused. An elective course.

SOWK 4795 Integration of Animals Into Therapeutic Settings (3 Credits)
Explores the human-animal bond and potential for therapeutic intervention with the animal as teacher, therapist, facilitator and companion in a number of therapeutic settings. Focuses on core skills for social workers seeking to integrate this clinical approach into their practice. A required course for the Animal Assisted Social Work Certificate.

SOWK 4796 Animal Assisted Social Work Practice (3 Credits)
This course provides a comprehensive examination of approaches to Animal Assisted Social Work (AASW) and emphasizes clinical application skills utilized with a broad array of persons and in a number of therapeutic settings. Students will learn to design, implement and analyze the efficacy of AASW approaches within their chosen area of specialization, providing an opportunity to practice these approaches in their field internships. Students will learn to clearly articulate, assess, and intervene in "link" violence as it relates to social work practices and AASW implications. A required course for the Animal-Assisted Social Work Certificate. Prerequisite: SOWK 4795 or permission of instructor.

SOWK 4797 Issues for Evidence-Supported Animal Assisted Social Work (3 Credits)
This course is designed to take students into an evidence-supported exploration and understanding of methods for incorporating specific animals and animal assisted interventions in the context of current social work practice. The course examines the capacities of different species for work with diverse goals and populations in animal interactions and introduces components critical to animals' well-being. Emphasis is placed on case formulation and experiential learning methods that link goal-specific human-animal interactions that impact measureable client behavioral changes. The course focuses on the explicit identification of how the animal will move clients toward goals and identifying outcomes and indicators of such change. Special attention is given to the development of animal selection, handling, evaluation, and management skills necessary for development as a social worker with competency in the incorporation of animals in evidence-based practice. Prerequisite: SOWK 4795.
SOWK 4890 Contemporary Global Issues (1-3 Credits)
The complexities of sustainable development and global practice require an understanding of current developments and events at a global scale. This course is designed to support student learning by providing a dynamic review and exploration of contemporary global issues with a focus on approaches and competencies for global social work practice. This course encourages students to understand the myriad geo-cultural, political, socio-economic, and environmental dimensions involved in current global developments and events. Examining issues of governance, local and regional laws, as well as human rights and social justice issues to include those of race, religion and ethnic influence can expand understanding of the unique considerations of various countries and world regions. Particular emphasis is laid on human security, poverty alleviation and humanitarian concerns, conflict/post conflict response, human rights, human and social development, migration and refugee activity, civil society and environmental sustainability. In this course, efforts are made to incorporate historical understanding, research-driven knowledge, expert experience-based insight, and field-tested skills and resources to examine possible solutions, policy, and response. Social workers focusing on human, social, economic and ecological issues in global settings must be equipped to evaluate, analyze and respond to current global issues with a coherent understanding of major value and policy frameworks such as the new Sustainable Development Goals (SDGs). This course develops students’ global reach and readiness as global citizens and social workers by engaging students in a year-long in-depth exploration of current events shaping issues and unfolding events globally.

SOWK 4900 Methods for Evaluating Practice and Programs (1-3 Credits)
Provides students with strategies for evaluating social work practice at multiple system levels. Prerequisite: SOWK 4201 or admission to advanced standing program.

SOWK 4901 Applied Practice Evaluation Research (3 Credits)
Provides students with the opportunity to conduct a practice evaluation project in their field setting. Prerequisite: SOWK 4900.

SOWK 4950 Foundation Field Internship (1-15 Credits)
This required practicum provides foundation students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels. Prerequisite or Corequisites: SOWK 4020, SOWK 4001, SOWK 4132.

SOWK 4960 Concentration Field Internship: Clinical (1-18 Credits)
Concentration students participate in planned clinical practice experience that integrates classroom theory, the learning of practice skills and the continued development of social work attitudes, ethics and values in the clinical practice setting. Prerequisite: completion of foundation year course work and field practicum.

SOWK 4961 Concentration Field Internship: Community (1-18 Credits)
Concentration students participate in planned community practice experience that integrates classroom theory, the learning of practice skills and the continued development of social work attitudes, ethics and values in the community practice setting. Prerequisite: completion of foundation year course work and field practicum.

SOWK 4965 International Field Practicum (0-18 Credits)
This international course fulfills partial requirement for a student’s concentration year practicum. In an international social work setting, the practicum provides students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels.

SOWK 4970 Concentration Field Internship (0-18 Credits)
Concentration students participate in planned practice experience that integrates classroom theory, the learning of practice skills and the continued development of social work attitudes, ethics, and values. Prerequisite for 2-year students: successful completion of foundation-year course work and field internship. Prerequisite for students with advanced standing: successful completion of advanced standing prerequisite courses and BSW-year internship. Field must be taken concurrently with concentration-year course work, or after core concentration course work. Concentration-year field requires a minimum of 20 hours a week experience at the assigned field agency. Any deviation from this standard requirement must be approved by the Director of Field Education. Prerequisite: SOWK 4950.

SOWK 4971 Experimental Class (3 Credits)
Experimental courses allow GSSW to provide a wide variety of course offerings that respond to current issues and themes in the profession as they arise, as well as providing specialized courses that relate to the interests and areas of expertise of our faculty. All experimental courses are offered as electives open to all students. Prerequisite: determined by each instructor.

SOWK 4990 Topics in Social Work (1-4 Credits)
This topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard MSW curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year that have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to social work practice, theory, or research. Topics vary from term to term and may be limited by program administrators, faculty, or by student interest.

SOWK 4992 Directed Study (1-10 Credits)
A permanent catalog course delivered on an individual basis when the course is not offered that term. Directed studies are approved under extenuating circumstances to provide an opportunity to complete a required course. Prerequisite: approval of instructor and MSW Director. Credit hours vary according to the catalog course taken.
SOWK 4999 Capstone (0-1 Credits)
This course is a 0-1 credit (Pass-Fail) required course in which students document their work through the development of an individual portfolio. Students are asked to upload artifacts (papers, presentations and field accomplishments) from both classroom and field internship that demonstrate how they have met the CSWE foundation and concentration specific EPAS competencies and practice behaviors. Students complete a reflection statement on their learning as it relates to the EPAS competencies.

SOWK 5000 Seminar in Professional Social Work Issues (2 Credits)
Examines the dilemmas and challenges confronting the social work profession and social work education. Examines the nature of professional education, the nature of the profession itself and the forces internal and external to the profession that have an impact upon practice and education. Required.

SOWK 5101 Social Welfare Policy Analysis and Development (3 Credits)
Applies analytical techniques to development of social welfare policy stressing the ability to formulate a policy hypothesis (i.e., a statement, in testable form, of a basic premise underlying a policy position) and to reach conclusions based on analysis of empirical evidence related to the policy hypothesis. Required.

SOWK 5110 Introduction to Advanced Quantitative Research Methods (3 Credits)
This required doctoral course introduces students to quantitative approaches to conducting social research. The course includes material related to measurement, sampling, research design, data collection, and data analysis. While each of these topics encompasses technical issues to be mastered by doctoral students, the logic and underlying rationale of these research methods is of prime importance in this course. A second component of the course requires students to define and begin to develop a substantive area of intended study and research during their enrollment in the doctoral program. Elements of articulating a substantive research area and steps toward defining key research questions in a topical area are reviewed. Aspects of conducting literature reviews leading to the articulation of a substantive research area are discussed in class sessions.

SOWK 5111 Quantitative Methods for Assessing Social Interventions (3 Credits)
Social work researchers are in a unique position to contribute to knowledge about the causes of individual and societal problems and to test interventions that seek to prevent or ameliorate such problems. A variety of qualitative and quantitative research methods are used to advance knowledge about etiological factors contributing to individual and social problems and to assess the outcomes of specific social policies and practice strategies. This course presents a detailed examination of quantitative methods and designs that are useful in assessing the effects of social interventions. Measurement, sampling and design issues in generating and testing research questions and hypothesis are explored. Experimental, quasi-experimental, and survey research designs are assessed and applied to practice and policy issues and problems. Special emphasis is placed on developing skills necessary to conduct intervention research. Cognate students may be permitted on a case by case basis, space permitting.

SOWK 5120 Introduction to Advanced Qualitative Research Methods (3 Credits)
This course provides a substantive doctoral-level review of content on qualitative research methods and strategies. It is developed for students from social science disciplines. The content includes the nature of the method, the epistemological implications and assumptions, and appropriate applications. Student learning and evaluation includes the experience of developing a research proposal based on qualitative methodology and conducting data collection for a mini-research project. This class a prerequisite for SOWK 5121, Qualitative Data Analysis. This course is required for social work doctoral students. Students from other departments may register with permission from the professor.

SOWK 5121 Qualitative Data Analysis (3 Credits)
The focus of this course is on data analysis and interpretation, demonstration of the science of the analysis, and presentation of findings in oral and written forms. Students are expected to conduct qualitative analyses on textual data they collected as part of SOWK 5120 or as a result of some other qualitative data collection experience. Over the course of the term students learn to code and analyze their data, interpret findings, orally present those findings, and write a final paper in which they demonstrate a rigorous engagement with qualitative data analysis and the literature relevant to their topic. This course is for SOWK PhD students only. Cognate students may be permitted on a case by case basis, space permitting.

SOWK 5130 Mixed Methods Research in Social Work (3 Credits)
This course introduces doctoral students to mixed methods research in social work and the social sciences. Students explore mixed methods as a third research paradigm that strategically combines both quantitative and qualitative methods within a single inquiry. The course encourages students to actively reflect on previous quantitative and qualitative research training. Specific topics for the course include: history and language of mixed methods research; relevant paradigms and epistemological debates; mixed methods design and research questions; and analysis and dissemination consideration. SOWK PhD students only. Cognate Students will be allowed to register on a case by case basis, space permitting.

SOWK 5201 Statistical Methods (5 Credits)
Examines the use and interpretation of statistics in educational and human services research, including descriptive and inferential statistics. Required.

SOWK 5202 Correlation and Regression (4 Credits)
Examines correlational and multiple regression research designs and their application to social work and social science problems. This course is for SOWK PhD students only. Cross-listed with RMS 4911, SOWK 5952. Prerequisite: SWOK 5201.

SOWK 5203 Multivariate Analysis (5 Credits)
Provides a conceptual understanding of common multivariate statistical techniques as applied to research in social work and the social sciences. Prerequisite: SOWK 5201.
SOWK 5300 Social Science Theory and the Philosophy of Science (3 Credits)
This foundation doctoral level course introduces traditional issues and recent developments in the philosophy of science, and provides an overview of social science theory and theoretical frameworks. It examines philosophical questions on scientific inquiry and the consequences modern science imposes on our basic understanding of knowledge and nature. The course analyzes and critiques the social-and-behavioral-science foundations that undergird the social work knowledge base and current social work theories. There are no prerequisites for this course. This course is required to social work doctoral students.

SOWK 5301 Social Work Theory in Research and Practice (3 Credits)
This course builds on SOWK 5300, Philosophy of Science and Social Work Theory, to examine how theories, conceptual frameworks, perspectives, and models are used specifically within social work research, education, and practice. This course explores how theories are used in research and in social work interventions on individual, family, group, organizational, community, and policy levels. The course analyzes and critiques the social work knowledge base and the current state of social work theories. This course is required for social work doctoral students. Prerequisite: SOWK 5300.

SOWK 5401 Quantitative Research Methods (4 Credits)
Focuses on basic elements of quantitative social research methods: measurement, sampling, research designs, data collection and data analysis. Emphasizes logic and underlying rationale, as well as technical issues. Prior understanding of computer-based statistical analysis is helpful. Required.

SOWK 5403 Advanced Social Welfare Policy Analysis (3 Credits)
Applies analytical techniques to development of social welfare policy stressing the ability to formulate a policy hypothesis (i.e., a statement, in testable form, of a basic premise undergirding a policy position) and to reach conclusions based on analysis of empirical evidence related to the policy hypothesis. This course is for SOWK PhD students only.

SOWK 5405 Qualitative Data Analysis (4 Credits)
Provides an understanding of analysis methods used to draw meaning from qualitative data, methods that must be practical, applicable and understandable to other observers. Prepares students to use a systematic, scientific process of analysis that captures the meaning of data while avoiding research self-delusion and unreliable or invalid conclusions. Topics include data collection, data reduction, data display, and conclusion drawing and verification. Methods include application of computer software. Prerequisite: SOWK 5402. Required.

SOWK 5450 Social Work Knowledge Integration and Publication (3 Credits)
This required doctoral course introduces students to integrating knowledge for social work scholarship through the use of tools that support academic argumentation and exposition. It provides students with the skills, expertise, and readiness necessary to compose a number of scholarly documents, including academic publications and the dissertation proposal. The course focuses on the preparation and writing of the comprehensive examination proposal as an example of such documents. The major product of the class is a paper designed to meet the requirements of the comprehensive examination proposal. Advisors and mentors participate in class presentations and critiques as a part of preparing the student for their ongoing scholarship.

SOWK 5452 Correlation and Regression (4 Credits)
Examines correlation and multiple regression research designs and their application to educational and social science problems. Cross listed with RMS 4911. Prerequisite: SOWK 5930. Required.

SOWK 5500 Pedagogy in Social Work Education (3 Credits)
This foundation course examines philosophies, theories, and pedagogical models that are utilized in social work education. It explores how various perspectives shape the approaches and techniques used and how these in turn impact classroom effectiveness and issues of classroom management. The course incorporates concepts and develops skills based on evidence-based teaching. This course is a required course for social work students and has no prerequisite. This course is for SOWK PhD students only.

SOWK 5501 Teaching Practicum (3 Credits)
This 3-hour required course provides classroom instruction and teaching opportunities designed to prepare doctoral students for faculty positions in undergraduate and graduate level social work education. Students work with a faculty mentor to pursue practicum placements that match their substantive interests. Students are expected to devote approximately 8 hours to the practicum per week. Restricted to Ph.D. students only.

SOWK 5505 Multivariate Analysis (5 Credits)
This course is designed to provide students with an introduction to common multivariate statistical analyses. Provides a conceptual understanding of common multivariate statistical techniques as applied to research in education and the social sciences. Cross listed with RMS 4913. Prerequisite: SOWK 5930.

SOWK 5590 Special Topics (1-3 Credits)
This special topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard PhD curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year which have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to advanced social work theory, pedagogy, or research. Topics vary from term to term and may be initiated by program administrators, faculty, or by student interest.

SOWK 5991 Independent Study (1-10 Credits)
This is an opportunity for students to undertake special study in a defined area of interest with faculty consultation.

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SOWK 5999 Independent Study (1-10 Credits)
This is an opportunity for students to undertake special study in a defined area of interest with faculty consultation.
SOWK 5995 Independent Research-Thesis (1-10 Credits)

SOWK 6991 Independent Study (1-10 Credits)

Students undertake special study in a defined area of interest with faculty consultation. By arrangement.

SOWK 6995 Dissertation Research (1-18 Credits)

The formal mechanism for undertaking the dissertation, providing for faculty support through the appointment of a dissertation committee. By arrangement.

**Graduate Tax Program**

The Graduate Tax Program was created at the University of Denver in 1975 in response to the demand for trained tax specialists in both the legal and accounting professions. Initially an evening program catering to the needs of practicing attorneys and accountants employed in the Denver area, it has evolved into one of the few such programs to offer a curriculum designed for both the full- and part-time student. The Graduate Tax Program also offers its degrees in an online format for working professionals who live more than 50 miles from Denver. The Program, accredited by the Association to Advance Collegiate Schools of Business (AACSB) and subject to acquiescence by the American Bar Association, is offered to highly qualified students who are graduates in law, accounting, or business.

The Graduate Tax Program prepares students for entry into professional tax practice in both the public and private sectors. Through the interdisciplinary nature of the program, the law graduate learns the accounting aspects of tax practice, and the accounting graduate acquires a thorough understanding of the legal process.

**Graduate Tax Program**

Office: Sturm College of Law
Mail Code: 2255 E. Evans Ave. Ste 390, Denver, CO 80208
Phone: 303-871-6249
Email: gradlegalstudies@law.du.edu
Web Site: http://www.du.edu/tax

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The Graduate Tax Program prepares students for entry into professional tax practice in both the public and private sectors. Through the interdisciplinary nature of the program, the law graduate learns the accounting aspects of tax practice, and the accounting graduate acquires a thorough understanding of the legal process. To be competitive in the marketplace, non-lawyers should plan to earn the CPA designation.

The educational standards of the Program are rigorous; students are expected to be prepared for class each day, and grading is usually based on one final examination. The environment, however, is one of cooperation rather than competition, and the teaching attitude is both helpful and challenging. The Program is dedicated to the pursuit of superior professional competence, and students with similar aspirations find their studies in the Graduate Tax Program entirely rewarding.

Graduates of accredited law schools successfully completing the Program receive a Master of Laws (LLM) in Taxation. All other candidates receive a Master of Taxation (MT) degree. Both degrees are awarded upon the joint recommendation of the faculties of the Sturm College of Law and Daniels College of Business. A dual degree program is available, where a University of Denver Sturm College of Law student may pursue the JD and LLM in taxation concurrently graduating with a JD/Tax LLM; flexible dual degree options with other DU graduate programs are available.

**Master of Laws in Taxation**

**Degree and GPA Requirements**

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

• The JD degree or its equivalent (such as an LLB) from a college of law approved by the American Bar Association (no GMAT or LSAT score submission) is required. Those pursuing a JD at the Sturm College of Law at the University of Denver may apply to pursue a formal dual JD/LLM in Taxation option. Please see the dual degree policy here.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Graduate Tax Program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Taxation

Degree and GPA Requirements

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

Standardized Test Scores

• The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number is MZR-GT-68. The GRE code number is 4842. We will consider you waived from the GRE/GMAT if you have one or more of th

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Master of Laws in Taxation

Degree Requirements

All students must complete 45 quarter hours within the approved GTP curriculum. Curriculum is applicable to both online and onsite degree options (with the exception of the Low Income Tax Payer Clinic).

Coursework Requirements

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Students must earn and maintain a cumulative GPA of at least 2.7 to remain in good standing.

A full-time student is expected to earn the degree in one year or over four quarters; a part-time student can earn the degree in 2-3 years. Program time limit is 5 years from the time of matriculation.

Dual J.D./LL.M. in Taxation degree available to those pursuing a J.D. at the Sturm College of Law

Master of Taxation

Degree Requirements
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**Courses**

**TAX 4010 Tax Principles, Research and Writing (2 Credits)**
Research sources, techniques, and practice; in-depth research of selected areas. Emphasis on argument and communication of conclusions; evaluation of legislative history and administrative authorities.

**TAX 4020 Individual Tax Problems (4 Credits)**
Using the Internal Revenue Code and the Federal Income Tax Regulations as a basis, substantive issues relating to individual taxation are covered. Areas are included are general concepts of gross income, individual employee benefits and deductions, charitable deductions, alternative minimum tax, deductibility and classes of interest, office in home and vacation homes, and a general overview of the interrelationships of various statutory and non-statutory principles. Cross listed with LAWS 4292.

**TAX 4100 Tax Accounting (4 Credits)**
Adoption of and change in accounting periods; income recognition and deduction allowance under the cash and accrual methods; prepaid and contested income and expenses; long-term contracts; capitalization and expensing; interest, original issue discount, and the time value of money; deferred payment transactions; income and deduction reversals; accounting method and practice changes.

**TAX 4110 Property Transactions (4 Credits)**
Basis of property; expenditures and current expense comparison; depreciable status; amortization of intangible property; depreciation methods; property casualties and losses; profit or loss computation and characterization for taxable property dispositions; limitations on passive losses; lessor and lessee reporting; tax-deferred dispositions.

**TAX 4120 Qualified Pension and Profit Sharing Plans (4 Credits)**
An in-depth study of ERISA, labor department rules, and Internal Revenue Code provisions relating to qualified deferred compensation. The course is geared toward an understanding of all the pension and profit sharing rules required for plan qualification, with emphasis on qualified plan planning for both incorporated and unincorporated forms of business.

**TAX 4200 Corporate Taxation I (4 Credits)**
The federal income taxation of corporations and their shareholders with emphasis on the creation of the corporation, establishment of its capital structure, operational alternatives, distributions to shareholders, stock dividends and redemptions, personal holding companies, and accumulated earnings tax.

**TAX 4210 Estate & Gift Taxation (4 Credits)**
Taxation of gratuitous transfers under the federal estate and gift tax codes, including taxable inter vivos gifts, annual exclusion, gift-splitting, gift tax charitable deduction, gift tax on powers of appointment, estate tax on owned interests, property transferred inter vivos with retained interests and powers, property subject to powers of appointment or transferred in contemplation of death, jointly owned property, life insurance proceeds, annuities and employee death benefits, marital deduction, charitable deduction, estate tax credits, estate tax deductions, valuation problems.

**TAX 4220 Fiduciary Income Taxation (4 Credits)**
Federal income taxation of estates and trusts. Included is a discussion of the concept of an estate or trust; trust accounting income for a simple and complex trust; calculation of taxable income, including special rules on the calculation of distributable net income, capital gains, personal exemptions, and charitable contributions; the separate share rule and trapping distributions; income in respect of a decedent; the grantor trust rules under Sections 671-678; and the calculation of the alternative minimum tax.
TAX 4230 Estate Planning (3 Credits)
Estate analysis, including fact gathering and the analysis of data; the psychological aspects of "role playing" in estate planning; the members of the
team (the attorney, the CPA, the life underwriter, the trust officer); life insurance in an estate and business planning context; planning with trusts,
including revocable, short-term, and irrevocable; the transfer of a closely held business interest from one generation to the next, including full and
partial stock redemptions, cross purchase agreements, private annuity, installment sale, retirement, recapitalization, qualified and nonqualified plans of
delayed compensation; special estate planning considerations for the professional corporation, the highly paid executive, and the farmer and rancher;
specific cases analyzed. Prerequisite: TAX 4210.

TAX 4240 Tax and Financial Planning (3 Credits)
This is an introductory, integrated course focusing on personal financial planning. Topics covered include cash flow projections and budgeting, annual
and multiple period income tax planning, an introduction to taxation of investments, an insurance and liability coverage survey, retirement planning,
and estate and succession planning.

TAX 4250 Ethics in Tax Practice (3 Credits)
An examination of the ethical rules and considerations affecting lawyers and accountants in tax practice, including transactional, compliance and
dispute resolution issues.

TAX 4300 Corporate Taxation II (4 Credits)
A continuation of Corporate Taxation I with emphasis on corporate reorganizations, operation, liquidation of subsidiary corporations and corporate
division, and carryover of tax attributes. Prerequisite: TAX 4200.

TAX 4310 Civil & Criminal Tax Procedure (4 Credits)
Statute of limitations on assessment/collection of deficiencies, definition of deficiency, restrictions on assessment and collection; statute of
limitations on overpayments, claims and suits for refund, and limitations for criminal prosecutions; regulations and rulings– retroactive revocation;
administrative settlements, closing agreements and compromises; civil penalties; tax return preparer penalties; civil litigation–injunctions, jurisdiction
of Tax Court, District Court and Court of Claims, small claims procedure, authority to increase deficiencies, choice of forum; jeopardy assessments
and termination of taxable years; criminal tax investigations– administrative summons, document production (taxpayer and third party), constitutional
protections, common law privileges, strategies; professional responsibilities and ethics for the tax practitioner.

TAX 4315 Low Income Taxpayer Clinic (2-4 Credits)

TAX 4320 Partnership Taxation (4 Credits)
Tax treatment of partnerships and partners; aggregate and entity principles; problems associated with the formation, operation, and dissolution of
partnerships; transactions between partnerships and partners; compensation of service partners; sales of partnership interests; withdrawal and
retirement of partners; basis adjustments; treatment of unrealized receivables and substantially appreciated inventory.

TAX 4330 Corporate Taxation III (4 Credits)
Advanced corporate taxation problems with emphasis on liquidations; detailed study of sections 305, 306, 307; loss carryovers and Subchapter S
corporations. Prerequisite: TAX 4300.

TAX 4386 Graduate Tax Program Externship (2-4 Credits)
The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation.
Externships are supervised by faculty and GLS department who interact with the eligible student and the employer or organization that provides the
externship. The externship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of
the externship will result in a passing grade for the externship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for
the externship.

TAX 4410 Taxation-Natural Resources (3 Credits)
Tax problems encountered in the acquisition, operation, and disposition of natural resource properties; pre-production expenditures, depletion,
depreciation, and ad valorem taxes; emphasis on overall tax planning for natural resource ventures.

TAX 4420 International Taxation (4 Credits)
Introduction to U.S. international taxation with an equal emphasis on inbound and outbound transactions. Resident and nonresident alien taxation,
withholding taxes, effectively connected (business) income, foreign investment in U.S. real estate, tax treaties, branch taxes, earnings stripping,
conduit financing rules, foreign earned income exclusion, foreign tax credit, controlled foreign corporations, passive foreign investment companies,
export transactions, Subpart F manufacturing rules, outbound property transfers, and transfer pricing. Cross listed with LAWS 4344.

TAX 4430 Exempt Organizations (3 Credits)
An examination of the statutory exemptions for "charities," social welfare organizations, social clubs, homeowners' associations, fraternal orders,
employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, property title companies, federally
organized or chartered organizations, political organizations, and other exempt organizations; rules on electioneering and lobbying activities; taxation
of private foundations; prohibited transaction rules; the tax on unrelated business income, including debt-financed income; excise tax exemptions;
administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions.

TAX 4470 Employment Tax (2 Credits)
Explore existing employment tax risks, recognize employment tax planning opportunities through appropriate compensation and entity structuring
techniques, analyze proper worker classification, and highlight preventative techniques to avoid personal liability.
TAX 4490 State & Local Taxation (3 Credits)
Taxable incidents, privilege tax, discrimination, and multiple taxation under the Commerce Clause of the United States Constitution; taxation based on class legislation and the Equal Protection Clause; nexus or jurisdictional due process; allocation and apportionment formulas; business versus nonbusiness income; multi-state tax compact; unitary concept; residence definitions; nonresident income sources; tax credits and short period returns for individual income taxpayers; sales of tangible personal property; retail and wholesale sales; taxable and nontaxable leases; contractors rule, exemptions, and resale certificates under sales and use tax statutes; valuation techniques for real personal property; and administrative and judicial appeal of property tax valuations and assessments.

TAX 4500 Consolidated Returns (3 Credits)
Methods used by related corporations to report income and losses; affiliation and consolidation; computation of consolidated taxable income; allocation of consolidated tax liability; deferred intercompany transactions; treatment of investments in affiliates; earnings and profits; impact of corporate combination and separation.

TAX 4600 Seminar: Selected Topics (2-4 Credits)
Recognition of tax problems and opportunities for a broad range of transactions encountered by individuals. Areas include family income splitting and other tax reduction and avoidance techniques; portfolio transactions, including short sales, puts and calls, and commodity futures; structuring agreements in contemplation of marriage or arising out of separation or divorce; personal insurance; charitable contributions; net operating losses; alternative minimum tax; various year-end planning techniques.

TAX 4620 Accounting for Income Taxes (ASC 740) (2 Credits)
Examines the financial accounting and reporting of income taxes under Statement of Financial Accounting Standards Codification Topic 740 (FASB ASC 740), formerly known as FAS 109, and related accounting literature. Topics include the calculation of current and deferred income taxes, an overview of book-tax differences, the calculation of interim period tax provisions and the presentation and disclosure of income taxes in financial statements. Students will learn the basics of accounting for income taxes related to advanced topics such as stock compensation expense, foreign operations, state income taxes, accounting for uncertain tax positions (formerly known as FIN 48), business combinations, inter-company transactions and valuation allowances.

TAX 4980 Internship (0 Credits)
The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Internships are supervised by faculty who interact with the eligible student and the employer or organization that provides the internship. The internship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the internship results in a passing grade for the internship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP interns. Students must obtain approval from the GTP Director or a full-time GTP faculty member.

TAX 4991 Independent Study (1-4 Credits)
Opportunity to study and write in any area agreed upon between the student and a member of the faculty. The student is required to produce a written work of publishable quality to receive a final grade for the course. The 4 quarter-hour maximum may be applied toward graduation requirements with no more than 2 quarter hours in any one quarter. Must obtain pre-approval from the Graduate Tax Program.

Josef Korbel School of International Studies

The Josef Korbel School of International Studies is one of the world's leading schools for the study of international relations. Our interdisciplinary programs prepare tomorrow's global leaders for careers in commerce, government, diplomacy, security, sustainable development, global health and humanitarian relief. Coming together from over 20 different countries, our students provide diverse perspectives that supplement the experience and research of our renowned faculty.

Conflict Resolution

Office: Sie Complex Room 4008
Mail Code: 2201 S. Gaylord St., Denver, CO 80208
Phone: 303.871.6477
Email: cri@du.edu
Web Site: http://www.du.edu/conflictresolution

Master of Arts in Conflict Resolution

The interdisciplinary program in Conflict Resolution focuses on the study and application of alternative theories, various types of bargaining and negotiation techniques, and related ethical issues. These topics are examined through selected cases of conflict to understand how to manage and improve social patterns and policy choices between individuals, within organizations, and across cultures.

The program combines a scholarly and vocational approach—theory with practice—in exploring a range of environments where conflict arises, including the personal, business and political arenas, from international diplomacy to national and local government policy discussion.
Master of Arts in Conflict Resolution

Degree and GPA Requirements

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

Standardized Test Scores

- Applicants must take either the GRE General Test or the GMAT and submit the scores to the University of Denver. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 484.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

Master of Arts in Conflict Resolution

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>INTS 4920</td>
<td>Conflict Resolution</td>
<td>4</td>
</tr>
<tr>
<td>CRES 4221</td>
<td>Negotiation Theory and Practice</td>
<td>4</td>
</tr>
<tr>
<td>CRES 3951</td>
<td>Mediation Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>CRES 4225</td>
<td>Conciliation and Reconciliation</td>
<td>4</td>
</tr>
<tr>
<td>COMN 4310</td>
<td>Communication and Collaboration (or another graduate COMN course approved by Degree Director)</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4342</td>
<td>Project Management (or ORL XXXX Organization Leadership course (through University College; Degree Director approval required))</td>
<td>4</td>
</tr>
</tbody>
</table>

Specialization (Special Topics) requirements

Select four of the following (or other substitutions approved by Degree Director), for a minimum of 12 credits total: ¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRES 4333</td>
<td>Resolving Contentious Public Issues</td>
</tr>
<tr>
<td>CRES 4400</td>
<td>Restorative Justice</td>
</tr>
<tr>
<td>CRES 4410</td>
<td>Intractable Conflict</td>
</tr>
<tr>
<td>CRES 4420</td>
<td>Negotiate Difficult Situations</td>
</tr>
<tr>
<td>CRES 4840</td>
<td>Managing Organizational Conflict in the Workplace</td>
</tr>
<tr>
<td>CRES 4850</td>
<td>Creating Agreement</td>
</tr>
<tr>
<td>CRES 4860</td>
<td>Public Forum Facilitation</td>
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<tr>
<td>CRES 4870</td>
<td>Conflict Vulnerability Assessment</td>
</tr>
<tr>
<td>CRES 4880</td>
<td>Grant Writing: The Research Proposal and Conflict Analysis</td>
</tr>
</tbody>
</table>

Skills/Methodology requirement

Select the following course (or another research methods course approved by the Degree Director), for a minimum of 4 credits total: ¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRES 4111</td>
<td>Reflective Practice and Evaluation</td>
<td>4</td>
</tr>
</tbody>
</table>

Practical and Professional Techniques

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRES 4961</td>
<td>Professional Development (three quarters of registration)</td>
</tr>
</tbody>
</table>
Internship (required)
CRES 4981 Internship 0-4

Practicum
CRES 4971 Practicum 4

Thesis (optional) (up to 4 credits)
CRES 4995 Thesis Research 1-4

Elective requirements

All remaining courses to total minimum of 60 credits

Total Credits

60

CRES 4222 Theories of Conflict Practice and Third Party Roles 4

1 Students may also select courses from any of the affiliated academic units (International Studies, Management, Law, Social Work, Professional Psychology, Communication, Religious Studies, University College) by permission of the graduate director.

Minimum number of credits required for degree: 60

Non-coursework Requirements

• Internship
• Practicum
• Professional Development

Courses

CRES 3951 Mediation Fundamentals (4 Credits)
This course provides 40-hour mediation training following the model standards for Mediator Certification programs established by the Association for Conflict Resolution. It covers the mediation process and mediator skills including preparation, opening statement, information gathering, movement and solution seeking, negotiation, confidentiality, ethics, power balancing and diversity issues. Students engage in video-recorded role-play scenarios to develop mediation skills.

CRES 4111 Reflective Practice and Evaluation (4 Credits)
Course is designed for practitioners who would like to become more reflective and theory oriented in their practice, and for researchers who wish to work with actual data and questions from practice. The goals are to learn techniques for making theories of practice explicit, to examine ways practice and research may modify theory, and to explore how to introduce and expand reflective practice into conflict resolution.

CRES 4221 Negotiation Theory and Practice (4 Credits)
An overview of negotiation theories, strategy and tactics to understand the role of power perceptions, communications, and ethics affect bargaining processes and outcomes.

CRES 4222 Theories of Conflict Practice and Third Party Roles (4 Credits)
An analysis and critique of the nature and role of third parties in conflict intervention including conciliator, arbitrator, facilitator, monitor, trainer. Theoretical perspectives and case studies are used to understand the situations in which third parties operate, what values and resources they bring to their roles, and how power issues affect mediator functioning. Ethical guidelines are also considered.

CRES 4225 Conciliation and Reconciliation (4 Credits)
Societies are often divided along ethnic, racial, or religious lines. Without work at the grassroots level, international peace agreements regularly fail within five years of ratification. How do we create sustainable post-conflict relationships? How does justice factor into peace, or into the sustainability of peace agreements? This course explores these questions by building on concepts and themes introduced in Mediation Theory (CRES 4222), and analyzing topics such as multilevel interventions and their challenges, second track diplomacy, and citizen dialogue. Reconciliation is a key factor in peace building – Voice, Acknowledgement, and Repair are specifically considered within this realm. Focus is also on the challenges presented by deep-rooted, protracted conflicts, allowing for more complete understanding of the situations in which third parties must operate.

CRES 4333 Resolving Contentious Public Issues (4 Credits)
The course covers collaborative governance work, including identity politics of contentious public issues. Natural resources disputes and the range of processes used to address these conflicts, including theories and concepts useful for understanding environmental and policy disputes, case studies, and world views that premise these disputes, provide insight into constructing interventions best suited to the characteristics and context of each contentious issue.

CRES 4400 Restorative Justice (2 Credits)
This course explores four leading Restorative Justice practices - Victim-Offender Mediation, Conferencing, Talking Circles, and Truth Commissions - to understand how needs of victims are addressed, and embracing notions of forgiveness, reconciliation and social healing within a set of principles based on social justice.

CRES 4410 Intractable Conflict (2 Credits)
This course is focused on factors that lead to intractability, along with strategies for violence prevention and conflict transformation. Conflict mapping and analysis, sources of intractability, and social, psychological, economic and political dimensions of intractable conflicts are examined.
CRES 4420 Negotiate Difficult Situations (2 Credits)
What should a negotiator do when the win-win approach fails and important interests are at stake? This course addresses a variety of tactics and ploys of unethical behavior and dirty tricks used in persuasion and bargaining. Students learn how to recognize and counter such techniques and practice in simulated and real world settings. Prerequisite: CRES 4221.

CRES 4810 Conflict Resolution Topics (2,4 Credits)
Fields of interest to Conflict Resolution Students such as negotiation, international conflict resolution case studies, restorative justice, conflict transformation, methods for conflict resolution research.

CRES 4820 Topics in Conflict Resolution (2,4 Credits)
Fields of interest to Conflict Resolution Students such as negotiation, international conflict resolution case studies, restorative justice, conflict transformations, methods for conflict resolution research.

CRES 4830 Topics in Conflict Resolution (2-4 Credits)
Fields of interest to Conflict Resolution Students such as negotiation, international conflict resolution case studies, restorative justice, conflict transformation, methods for conflict resolution research.

CRES 4840 Managing Organizational Conflict in the Workplace (2,4 Credits)
A broad study of conflict in organizations that may involve gender, race, age, disability and other issues, using lecture, case studies, group dialogue, and team projects to develop systems of management and evaluation.

CRES 4850 Creating Agreement (2 Credits)
Multilateral agreements are as complex as they are difficult to create. What are the key elements in this process? The history of such negotiations is one of both successes and failures. This course examines the development of criteria necessary for creating satisfactory and acceptable agreements involving multiple parties through a series of case studies that link negotiation theory and praxis.

CRES 4860 Public Forum Facilitation (2 Credits)
Diverse democracies require high quality communication and coordination to function well. In the current era, however, polarization, cynicism and apathy have become the norm, they obstructing possibilities for collaborative problem-solving. What are the best processes for making public decisions in a democracy? This course examines the tools of advocacy, debate, dialogue and deliberation through the lens of facilitation in public forums.

CRES 4870 Conflict Vulnerability Assessment (2 Credits)
This course guides students seeking to specialize in early warning and conflict prevention approaches at the community, societal, or country level through the contemporary scholarly literature, policy-related instruments and models that seek to define and measure “conflict vulnerability.

CRES 4880 Grant Writing: The Research Proposal and Conflict Analysis (2 Credits)
This course is designed to cover key elements of social research methods that are important principles of evidence-based policy, known for its rigor and precision in careful data collection - including quantitative and qualitative methodology analysis and expert opinion to build facts and findings from context-free, context rich and colloquial environments into a coherent whole - to support informed decision-making capability.

CRES 4961 Professional Development (0 Credits)
To develop the specialized knowledge, skills, attitudes, values, norms, and interest needed to perform professional roles in the Conflict Resolution practitioner community. It involves informal socialization including lessons learned incidentally through association with mentors, networking with practitioners, and observations of conflict resolution processes in all areas of life. Students gain an awareness of how self-image and activities play an active part in professional socialization.

CRES 4971 Practicum (4 Credits)
Students design, execute, and evaluate conflict resolution interventions. Student involvement in planning, implementation, reflection, and evaluation may look different in different contexts, but all elements are present in some form. Students are supervised by faculty with relevant theoretical expertise and practice experience.

CRES 4981 Internship (0-4 Credits)
CRES 4985 Internship (4-8 Credits)
CRES 4991 Independent Study (1-4 Credits)
CRES 4995 Thesis Research (1-4 Credits)

Public Policy
Office: Sie International Relations Complex
Mail Code: 2201 South Gaylord Street, Denver, CO 80208
Phone: 303-871-2468
Email: ipps@du.edu
Web Site: http://www.du.edu/ipps
The Institute for Public Policy Studies (IPPS) at the Josef Korbel School of International Studies offers a highly disciplined, evidence-based approach to the analysis and solution of contemporary issues, such as fiscal policy, entitlement reform, health care, national security, regulation, education and immigration via a two-year Master of Public Policy (MPP) degree program.

The study of Public Policy at the University of Denver is dynamic, personalized and focused on creating the core skill set required of a 21st-Century decision leader.

Professional schools at the University of Denver, such as the Sturm College of Law, the Daniels College of Business, the Morgridge College of Education, and the Daniel Felix Ritchie School of Engineering and Computer Science are deeply interconnected with IPPS.

The Public Policy degree focuses on issue definition, analytics, data, and problem solving. MPP students graduate with a job-ready skill set, equally applicable to decision-making and leadership positions in the public, private, and non-profit sectors. The curriculum is issue-based and strategic. The MPP graduate knows how to define policy problems across disciplinary boundaries and learns methodologies to evaluate and implement alternative courses of action within corporations, regulatory agencies, and governmental organizations.

Sophisticated study of history, law, empirical techniques, and strategy makes degrees in Public Policy both valuable and versatile, in a time a momentous societal, political, and technological change. Studying Public Policy at the Institute for Public Policy Studies, at the Josef Korbel School of International Studies, will provide a significant “return on investment” that will last a lifetime and qualify the MPP graduate to compete for advanced positions in government, legislative staffing, consulting, corporate relations, strategic planning, crisis management, urban development, non-profit management, and lobbying.

Career Advancement
MPP graduates enjoy exciting careers as public policy professionals — running government agencies, leading nonprofit organizations, serving as consultants to corporations or political campaigns, or developing a perspective for a client with a legislative or regulatory agenda. The MPP program provides students with the analytical and critical thinking skills needed, as well as the experience that will open the door to professional success.

Faculty Expertise
Faculty members in the MPP program are academics, policy experts, legal scholars, and former and current elected officials. Instructors represent a wide range of policy expertise, including political history, economics, health policy, regulatory policy, lobbying, education policy, constitutional law and quantitative analysis.

Flexibility
Most MPP classes are offered in the evenings, allowing students to gain real-life public policy experience during the day through full-time employment or policy internships. In addition, our flexible dual-degree program offers students the opportunity to enhance their future careers by combining the MPP with several other relevant graduate degrees.

Opportunity
The University of Denver’s campus is located just minutes from downtown Denver, a regional hub for major corporations, financial institutions, law firms, nonprofit organizations, think tanks, and government offices.

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

Standardized Test Scores
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
• Minimum IELTS Score: 7
• Minimum CAE Score: 185

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

**Master of Public Policy**

**Degree requirements**

**Coursework requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PPOL 4100</td>
<td>American Public Policy System</td>
<td>28</td>
</tr>
<tr>
<td>PPOL 4200</td>
<td>Microeconomics for Public Pol.</td>
<td></td>
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<tr>
<td>PPOL 4300</td>
<td>Quantitative Analysis-Pub Pol</td>
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<tr>
<td>PPOL 4400</td>
<td>Analytical &amp; Critical Skills</td>
<td></td>
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<tr>
<td>PPOL 4500</td>
<td>Cost-Benefit Analysis/Pub Pol</td>
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<tr>
<td>PPOL 4600</td>
<td>Regulatory Policy</td>
<td></td>
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<tr>
<td>PPOL 4700</td>
<td>Public Management &amp; Budgeting</td>
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</tr>
</tbody>
</table>

**Great Issues Forums Requirement:**

Complete 6 Great Issues Forums for a total of 12 credits

| PPOL 4501 | Great Issues Forum                        | 12      |
| or PPOL 4502 | Issues Forum II                         |         |

**Policy Memorandum research credit:**

| PPOL 4995 | Independent Research                      | 4       |

**Elective Courses:**

Any PPOL class not already used as a required course, or a pre-approved course from any graduate program.

Note: Candidates may use 0-4 of Independent Study credits and/or 0-4 Internship credits to count towards the elective requirement.

Total number of credits: 60

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1 The Great Issues Forums are a series of policy seminars focused on the nation’s most important current issues. The graduate program in public policy offers five of these two-day, full-day courses every year for two quarter hours of credit each. Students must complete six forums (12 hours) to earn the MPP. The topics of these seminars rotate frequently, as expertise and events warrant, and are an integral part of the MPP program.

**Minimum number of credits required for the degree: 60 credits**

**Non-coursework requirements**

• Policy Memorandum

**Policy Memorandum**

As the capstone project of the MPP experience, the Policy Memorandum integrates the knowledge and skills learned in and outside the classroom. The Policy Memorandum provides an opportunity to experience firsthand the type of practical and professional work often required of a policy analyst. Students identify and define a real-world policy issue; analyze the issue by conducting research, gathering data and interviewing professionals with opposing views; analyze the costs and benefits of the issue; and recommend courses of action. Upon submission of the student’s Policy Memorandum, degree candidates are scheduled to present the results of their research, along with their recommended course of action, to a faculty committee, consisting of the student’s primary advisor, their cost-benefit advisor, and at least two additional faculty members, as appropriate to the student’s topic.
Courses

**PPOL 4100 American Public Policy System (4 Credits)**
The American Policy Agenda, which is required for MPP students, will provide an intensive overview of the development of American public policy in the 20th century, with special emphasis on the interconnection between the values of the public and private sectors. Through the lens of a useful descriptive model, graduate students will learn concepts of the role of government have evolved from: the (1) constitutional period, wherein political society was thought to be a rational device for the protection of property and liberty and prosperity was equivalent to the free management of affairs; the (2) administrative period, wherein powerful regulatory agencies were created to control concentrations of corporate power and the idea developed that the market does not always reflect the social good; to the (3) bureaucratic period, wherein the stock market collapse of 1929 and the Great Depression reversed key ideas of limited government inherent in the constitution and, beginning with the New Deal, social engineering in the "public interest" defined virtually every problem as "national," to the (4) social welfare period, wherein government became the source of vast entitlements and benefits and interest groups came to dominate the policy debate; to the (5) current period of stalemate, gridlock, and reconsideration, wherein big government is a given, along with a utilitarian social contract defined as that which provides the most efficiency, the most productivity, and the most consumption for the most people.

**PPOL 4200 Microeconomics for Public Pol. (4 Credits)**
Microeconomics for Public Policy Analysis will provide a comprehensive, case-based overview for the MPP student of the consequences of contemporary public policies for individuals, households, and firms. Public policy is often said to consist of the distribution of scarce or valuable resources or benefits through the mechanisms of the public sector. This course will provide the opportunity to gain fluency and expertise in the application of economic analysis to such problems as transfer payments, entitlements, government subsidies, taxation, housing, education, labor, welfare and crime. Issues concerned with exploring the government's role in encouraging innovation, maintaining a growing economy, and budgeting under conditions of "surplus," will be explored using contemporary policy initiatives. Two competing visions of public policy will be examined: the role of economic policy in securing the benefits of "ordered liberty," which accords to the individual; and (2) the vision of public policy as fundamental to the correction of anomalies in the market and in the distribution of scarce resources, often based on interest group claims of "disparity" and "inequality".

**PPOL 4300 Quantitative Analysis-Pub Pol (4 Credits)**
This course will provide the MPP student with the tools of mathematical analysis needed for the advanced study of public policy issues and evaluation of alternatives. Topics will include descriptive statistics, probability, sampling, estimation, inference and hypothesis testing, variable analysis and correlation, regression theory, reliability and validity, and prediction and simulation. Students needing review of college-level algebra will be referred to appropriate tutorials. The overall learning objective of this course is to help students recognize and apply basic statistical concepts to Public Policy and, more in general, Social Science analysis. Students will learn how to use statistical software to: build datasets, describe data in a visual and analytical fashion, perform statistical tests, and construct basic statistical inference models. Students will also learn how to report their analytical findings for Public Policy analysis.

**PPOL 4400 Analytical & Critical Skills (4 Credits)**
This course will provide the student with the analytical tools necessary to evaluate competing points of view, using empirical techniques, logic, and statistical inference. Case studies will be drawn from the current legislative and regulatory environment and will provide the MPP student with opportunities to construct a course of action, based on the use of logically consistent arguments and on the persuasive use of facts and empirical data. Students in this course will also learn the history and development of the scientific method, how to distinguish speculation, theory, fact, and opinion, how to identify the validity, ideological content or irrationality of data, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to argument not based on evidence. Students in this course how to identify the validity, ideological content or irrationality of information, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to arguments not based on evidence.

**PPOL 4500 Cost-Benefit Analysis/Pub Pol (4 Credits)**
How do we determine if programs have met their objectives? Increasingly, this is a matter for empirical evaluation. This course will focus on quantitative approaches to program evaluation and on the primary tool available to the policy analyst in the modern organizational framework, cost-benefit analysis. Various issues will be considered, including the "costs" associated with taxes (and tax expenditures), governmental mandates, health and safety regulation, environmental regulation, government "investments," such as those in education, defense, law enforcement, and the regulation of financial industries.

**PPOL 4501 Great Issues Forum (2 Credits)**
Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, healthcare, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policymakers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.
PPOL 4502 Issues Forum II (2 Credits)
Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, health care, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policy makers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.

PPOL 4504 The Policymaking Environment (2 Credits)
This forum aims to provide MPP students with a robust understanding of the essentials of the policymaking process in the United States. We will be examining in sequence three basic topics: 1) The political values and principles that establish the parameters for the policymaking environment; 2) The set of governmental and non-governmental actors who participate in policymaking and how they relate to each other; and 3) What policymaking models can help to explain the way policy is made by those actors.

PPOL 4600 Regulatory Policy (4 Credits)
This course will provide the MPP student with a solid understanding of the legal basis for policy action, through a case-based examination of executive and legislative authority, judicial policy-making, the expansion of the due process and equal protection clauses of the 14th Amendment, and the expansion of administrative authority under the Administrative Procedure Act. Such issues as affirmative action, government contracting, school finance, antitrust, and substantive due process will be presented utilizing a combination of traditional legal analysis and the cost-benefit approach of the policy specialist.

PPOL 4700 Public Management & Budgeting (4 Credits)
This course introduces students to the topic of public management, which includes concepts such as organizational structure, performance management, and strategy development. In addition, the instructor will teach the techniques and concepts of government and non-profit budgeting/financial management. The budgeting process includes program development/implementation, cost and revenue estimation and projection, and budget evaluation. The relationship between public management and budgeting will be explored.

PPOL 4701 Special Topics in Public Policy (4 Credits)
Various topics in public policy are covered. Topic subjects to change each term as deemed appropriate with local, regional and federal policy issues and regulation changes. Prerequisite: PPOL 4100. Two examples are: “Denver Dynamics” explores the policy options and responses to the challenges of big city governance. Exclusive interactions with major stakeholders in the City and County of Denver are featured, with a view to giving the student an insider’s view of power, economic development, political influence and decision-making. “Getting Results Inside the Beltway: Power and policy in Washington, D.C.” is a travel course consisting of specially-arranged one-on-one sessions with Washington-based lawmakers, decision-leaders, and policy experts, through which graduate students will gain an understanding of the dysfunctions of the current budget process, political polarization, the interest groups that shape the current policy dynamic, the increasing importance of media in shaping policy, the solutions that will be required for the United States to regain fiscal sanity and solvency—and the challenges that will need to be met to preserve American hegemony and redefine national security.

PPOL 4806 Decision Making in Public Policy (4 Credits)
Provides a new perspective on the process of decision-making in the public and private sectors. Viewed from the perspective of a significant paradigm shift, the "rational model" of policy-making is contrasted with emerging theories based on a view of human nature that is unpredictable, idiosyncratic, and context-based. Case studies are drawn from the current financial crisis and from the ongoing debate over economic stimulus and recovery. Additional examples are provided from the New Deal era, the Vietnam war, Watergate, and from the wars in Afghanistan and Iraq.

PPOL 4808 Health Care Policy (4 Credits)
No prerequisites. The purpose of this course will be to explore the assumptions, the history, the development and the current practices of the U.S. health care systems. What are its strengths and what are its weaknesses? How do we explain its paradox of excess and deprivation? We will spend some limited time examining other nation's health care systems for comparative purposes. The course will cover a broad range of topics and will explore a systems approach to health, obtaining an understanding of the integration of the public and private sector, free-market and government regulation; the effects on the doctor/patient relationship, the new health care demands, the search for quality, the role of new technologies and the changing ethical standards. Such a course cannot be designed to describe a functional world of health care delivery for even as the description is being formulated, the practical and functional aspects of that world are changing.

PPOL 4811 The Strategy of Public Policy (4 Credits)
Public Policy is formed in many ways: legislation, court rulings, initiative campaigns, executive orders, and regulations, not to mention many other subtle instruments that are often invisible to the public. All of these tools make analyzing policy a difficult task, and they make choosing the right strategy for getting a policy implemented even more complicated. How is it that policy makers choose to implement their policies? Are any options more effective than others? To understand the policy process in the U.S., policy analysts must understand the institutions that exist in government.
**PPOL 4812 Supreme Court & Public Policy (4 Credits)**
This course, which is specifically designed for graduate students in public policy, provides the necessary professional background for students to understand the role of the Supreme Court of the United States in the formulation of public policy. Central to the course are the due process and equal protection clauses of the 14th Amendment to the U.S. Constitution, which are the key to understanding the vast expansion of Supreme Court power since the New Deal. The course also provides a basis for the student to understand the constitutional basis for administrative regulation, as well as freedom of expression issues inherent in the 1st Amendment.

**PPOL 4900 Public Sector Internship (0-10 Credits)**
Students will gain hands-on experience with policy issues in a variety of settings.

**PPOL 4991 Independent Study (1-4 Credits)**
Students will work in collaboration with faculty from the Institute for Public Policy Studies to complete an independent study project.

**PPOL 4992 Directed Study (2-4 Credits)**

**PPOL 4995 Independent Research (1-4 Credits)**
The Policy Memorandum research project is designed to provide the MPP student with a capstone experience that will synthesize the knowledge and skills that were acquired during the 60 quarter hours of formal coursework. Included among the skills that students will apply are research, quantitative methods, economic analysis, cost-benefit analysis, budgeting and project management.

**International Studies**
Office: Anna & John J. Sie International Relations Complex
Mail Code: 2201 S. Gaylord St., Denver, CO 80210
Phone: 303-871-2544
Email: korbeladm@du.edu
Web Site: du.edu/korbel/

**Doctor Of Philosophy in International Studies**
The PhD degree is designed as a five to seven-year program provided the student a) enters with a closely related master’s degree and b) is able to devote full-time study during the entire period. The student working toward this degree must earn a grade average of 3.5 or higher for a minimum of 108 hours of graduate credit, of which 72 hours must be earned at the University of Denver. Students select two of the three fields available: Comparative Politics, International Relations, and Political Theory. In addition, each student must meet the core curriculum and field training, methodology and foreign language requirements, pass written and oral comprehensive field exams, file an approved prospectus, and successfully write and defend a dissertation.

**Master of Arts in Global Finance, Trade and Economic Integration**
The Global Finance, Trade, and Economic Integration (GFTEI) program provides students with a multi-disciplinary, policy-focused examination of the global economy. Courses within this degree focus on the complex changes underway in the global economy, including the emerging patterns of finance, trade, and human capital flows and their effect on national economies; the effect of globalization on state capacity, policy autonomy, and national economic conditions; the relationship between economic, political, and social outcomes; corporate governance and competition; and the interaction of interest groups, states, and multilateral agreements and organizations. All students within this degree receive training in advanced statistical methods, including econometrics. Students also select from a diverse collection of “hard” and “soft” skills courses (e.g. Art of Forecasting, Political Risk Analysis, Professional Communications, Project Management, Time Series and Panel Data, Social Entrepreneurship, International Business Transactions.)

Students pursuing the GFTEI degree are required to select one specialization that is tied to their intellectual and career aspirations. Some students have chosen to pursue two specializations. Examples of specializations that students have pursued recently include international political economy, international business, economic development policy, energy and environment, the political economy of Africa, China, the European Union, or Latin America, international security, quantitative analysis, and qualitative methods.

This degree is intended for students who intend to pursue careers in four domains:

1. International economic policy analysis for public sector agencies, such as the Department of Commerce, the International Trade Administration, and the Ministry of Finance;
2. Analyst positions in multilateral institutions and organizations, such as the World Bank, the World Trade Organization, the United Nations, the African Development Bank, and the Organization for Economic Cooperation and Development;
3. Research and analyst positions within non-governmental organizations, such as Oxfam, Action Aid, Accion, and Water for People; and
4. Private sector careers as economic policy consultants, country risk or international project analysts, or international project managers.

Students who seek a more specialized and technical training in portfolio allocation might consider creating their own customized, “flexible dual degree” with the Daniels College of Business (DCB) that allows them to earn an MS in Finance along with the GFTEI degree (for more information, see the “Flexible Dual Degree Programs (http://bulletin.du.edu/graduate/dual-degrees/flexible-dual-degree-programs)” section of the Graduate Bulletin).
Master of Arts in International Security

The International Security program provides education and training from a multi-disciplinary perspective on issues associated with the causes, consequences, and means of preventing and mitigating threats across the range of levels of analysis. The Security Program defines both security and threats broadly and interactively, ranging from and making linkages across traditional systemic/state level threats associated with the use of violence and those associated with the provision of human security at the societal/individual level. Utilizing a diverse faculty and an array of teaching approaches/practical exercises, our aim is to allow students to master, analyze, and test theories, policies, and approaches to the challenges of international security as well as develop the analytic and communications skills necessary to become leading practitioners in the security field via the public, private, non-profit, and/or international sectors.

At the completion of the Security Curriculum, students will have a clear understanding of the foundational concepts, theories, and approaches associated with the study and practice of international security and are able to relate these approaches to each other and to real world security challenges. In addition, students will have developed the analytic, professional, and communications skills necessary to provide and articulate professional level analysis as well as developed one or more sub-areas of expertise within the international security field.

Master of Arts in International Studies

The Master of Arts in International Studies combines an in-depth study of one of the principle fields of international studies with an issue-oriented specialization, skills courses, and opportunities for internships or advanced research. It is the traditional professional international studies curriculum, long favored by students pursuing career options in the government, private, and non-profit sectors, as well as those considering a PhD. It is also
our most flexible degree, as it allows you to tailor a program according to your particular needs and interests. Upon completion, MA in International Studies students will be expected to identify two of the major theoretical approaches in the chosen field and discuss their relevance to a specific issue in international affairs.

Certificate of Specialization in Homeland Security

This certificate program is offered to currently enrolled Josef Korbel School of International Studies’ Master’s or PhD students. The Homeland Security Certificate Program is a professional certification program focused on preparing participants to step directly into career opportunities in the local, state, and national homeland security profession.

Certificate of Specialization in Global Health Affairs

The Certificate in Global Health Affairs (CGHA) is the first global health program to be based in a school of International Studies. Unlike certificates offered by schools of medicine or public health, which emphasize biomedical approaches to health, CGHA places social and political solutions at the forefront of global health action. Combined with a degree, the seven-course CGHA sequence prepares students for systematic, evidence-based approaches to a broad range of global health problems relating to development, diplomacy, security, trade, and human rights.

CGHA’s core emphasis lies in building sound decision-making skills in an arena often suffused with inefficiency and blindness to political, social, and cultural context. Substantive courses address the widest conception of the causes and consequences of individual and population health, emphasizing short- and long-term effects, the increasing globalization and personalization of health; and interactions between health and other key areas of human endeavor such as politics, development, trade, and conflict. Practical courses build skills in epidemiology, research methodology, and program design and evaluation.

Students who graduate with the certificate in global health affairs distinguish themselves as leaders and innovators through the pursuit of the “science of service” on and off campus. While most GHA students take advantage of traditional internship opportunities at leading international health organizations, many also pursue action-oriented research and leadership projects through a network of partner agencies. Students are encouraged, but not required, to undertake action-oriented research projects including a thesis or Significant Research Paper, which may be completed for course credit. Throughout the GHA program, students build an evidence-based framework for evaluating project impacts on served communities, service agencies, their own career paths, and their community at DU.

Certificate of Specialization in Humanitarian Assistance

The mission of the Certificate in International Studies with a Concentration in Humanitarian Assistance is to prepare students to work in the humanitarian field. The certificate provides students with the theoretical and practical underpinnings for humanitarian work which is technically sound, engages with affected communities, responds to the diverse needs of impacted populations, and sets the stage for sustainable and inclusive recovery and development.

A limited number of students pursuing a Master’s degree at Korbel are admitted to the Certificate in International Studies with a Concentration in Humanitarian Assistance each year. Admission is extremely competitive on the basis of focus and motivation. Prior experience is not required.

Applications will be accepted from continuing Korbel students and from incoming students in Spring Quarter. Students will be informed of admission decisions in time to register for the fall quarter.

For more information about the program, please visit: http://www.du.edu/korbel/humanitarian-assistance/.

All certificate students are required to do the following:

1. Complete core humanitarian coursework comprising two courses which aim to introduce students to key aspects of humanitarian assistance (one focused on policy and the other on field operations) and two additional courses directly related to humanitarian assistance.
2. Take three elective courses in one of three tracks (personalized tracks are also possible with the HA program director’s approval):
   a. Monitoring, Evaluation and Analysis
   b. Management/Operations
   c. Policy/Advocacy
3. Complete an international humanitarian work focused internship (150 hours) with an organization whose core work includes international humanitarian assistance or humanitarian policy/advocacy. This is a critical component of the Certificate. It is unlikely that students in the Certificate Program will find appropriate internships in Denver. Certificate candidates should plan to spend some significant time interning at an appropriate location (either in the US or abroad) in order to fulfill this requirement.

Doctor of Philosophy in International Studies

Degree and GPA Requirements

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

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

**Standardized Test Scores**

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

**Master of Arts in International Studies**

**Degree and GPA Requirements**

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

**Standardized Test Scores**

- Applicants must take either the GRE General Test or the GMAT and submit the scores to the University of Denver. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

**Master of Arts in Global Finance, Trade & Economics**

**Degree and GPA Requirements**

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

- Applicants must take either the GRE General Test or the GMAT and submit the scores to the University of Denver. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

Master of Arts in International Human Rights

Degree and GPA Requirements

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

Standardized Test Scores

- Applicants must take either the GRE General Test or the GMAT and submit the scores to the University of Denver. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

Master of Arts in International Administration

Degree and GPA Requirements

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

Standardized Test Scores

- Applicants must take either the GRE General Test or the GMAT and submit the scores to the University of Denver. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
Minimum TOEFL Score (Internet-based test): 95
Minimum TOEFL Score (Paper-based test): 587
Minimum IELTS Score: 7
Minimum CAE Score: 185

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

**Master of Arts in International Development**

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

**Standardized Test Scores**
- Applicants must take either the GRE General Test or the GMAT and submit the scores to the University of Denver. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

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

**Master of Arts in International Security**

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

**Standardized Test Scores**
- Applicants must take either the GRE General Test or the GMAT and submit the scores to the University of Denver. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 95
- Minimum TOEFL Score (Paper-based test): 587
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

English Conditional Admission: No, this program does not offer English Conditional Admission.
# Doctor of Philosophy in International Studies

## Degree Requirements

### Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Core coursework requirements (four courses):</strong></td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>International Studies Core</td>
<td></td>
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<tr>
<td>INTS 4324</td>
<td>International Political Economy</td>
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<tr>
<td>INTS 4501</td>
<td>Comparative Politics in the 21st Century</td>
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<tr>
<td>INTS 4900</td>
<td>International Politics</td>
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<td></td>
<td>Plus one Political Theory course</td>
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<tr>
<td>INTS 4301</td>
<td>Introduction to Political Theory</td>
<td></td>
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<tr>
<td>INTS 4822</td>
<td>Contemporary Political Theory</td>
<td></td>
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<tr>
<td></td>
<td><strong>Field Requirement (five courses in each of two fields as specified below):</strong></td>
<td>40</td>
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<tr>
<td></td>
<td><strong>Comparative Politics (CP)</strong></td>
<td></td>
</tr>
<tr>
<td>INTS 4501</td>
<td>Comparative Politics in the 21st Century</td>
<td></td>
</tr>
<tr>
<td>INTS 4327</td>
<td>Advanced Issues in International Studies¹</td>
<td></td>
</tr>
<tr>
<td>INTS 4349</td>
<td>Comparative Public Policy and Finance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plus two additional courses in Comparative Politics (consult with Martin Rhodes and Tim Sisk before selecting your additional CP courses)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>International Relations (IR)</strong></td>
<td></td>
</tr>
<tr>
<td>INTS 4900</td>
<td>International Politics</td>
<td></td>
</tr>
<tr>
<td>INTS 4648</td>
<td>Theories of Security in World Politics</td>
<td></td>
</tr>
<tr>
<td>INTS 4320</td>
<td>Int’l Monetary Relations</td>
<td></td>
</tr>
<tr>
<td>or INTS 4310</td>
<td>International Trade</td>
<td></td>
</tr>
<tr>
<td>INTS 4903</td>
<td>Social Construction of International Society</td>
<td></td>
</tr>
<tr>
<td>or INTS 4622</td>
<td>Global Governance</td>
<td></td>
</tr>
<tr>
<td>INTS 4327</td>
<td>Advanced Issues in International Studies¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Political Theory (PT)</strong></td>
<td></td>
</tr>
<tr>
<td>INTS 4301</td>
<td>Introduction to Political Theory</td>
<td></td>
</tr>
<tr>
<td>INTS 4526</td>
<td>Modern Islamic Political Thought</td>
<td></td>
</tr>
<tr>
<td>INTS 4802</td>
<td>Foundational Ideas in Social Science: Marx and Weber</td>
<td></td>
</tr>
<tr>
<td>INTS 4820</td>
<td>Democracy and War</td>
<td></td>
</tr>
<tr>
<td>INTS 4822</td>
<td>Contemporary Political Theory</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For questions regarding this field, see Nader Hashemi or Micheline Ishay</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Methodology (two courses):</strong></td>
<td>8</td>
</tr>
<tr>
<td>INTS 4010</td>
<td>Epistemology</td>
<td></td>
</tr>
<tr>
<td>or INTS 4522</td>
<td>Philosophy of Social Science</td>
<td></td>
</tr>
<tr>
<td>INTS 4500</td>
<td>Social Science Methods</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Elective requirements (if applicable):</strong></td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Electives may be used to meet the remaining coursework total of 108 hrs.</td>
<td></td>
</tr>
</tbody>
</table>

## Total Credits

108

1. INTS 4327 Advanced Issues in International Studies is an advanced research course that combines the study of comparative and international political economy with research methods. Many PhD students write their extended research paper while taking this course. Offered only every other year; not annually.

2. Methodology training beyond these required courses is a matter of individual needs and interests, and students should consult their advisor or potential dissertation committee chair and members about available options. A limited fund is available to fund students to study at methods courses outside of DU, at for example, methods summer schools. Awards for this purpose will be made on a competitive basis and only when students and their advisors can prove that such training is vital for completion of the Ph.D. dissertation.

3. INTS 4522 Philosophy of Social Science is offered every other year.

## Minimum number of credits required for degree: 90 hrs.

### Non-coursework Requirements

- **One Extended Research Paper:** PhD students are required to write an extended research paper during their period of fulfilling course work requirements. Students demonstrate a capacity for independent research in writing the extended research paper.
• **Foreign Language Proficiency:** Required.

• **Comprehensive Written Exams:** PhD candidates must pass two comprehensive exams (in their chosen fields) in order to advance to candidacy. Within three weeks after the written exam, an approximately 1.5 hour oral exam is given. Comprehensive exam committees are comprised of three tenure-line faculty.

• Students cannot progress towards prospectus stage until they successfully pass both fields. A prospectus must have approval/signature of all JKSIS committee members.

• **Final Dissertation:** Prior to submitting the final dissertation for graduation, students must successfully pass an oral defense of the dissertation.

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**Master of Arts in Global Finance, Trade, and Economic Integration**

**Degree Requirements**

**Coursework Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Core Coursework Requirements (one course):</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>International Studies Core</strong></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Select one of the following:</td>
<td></td>
</tr>
<tr>
<td>INTS 4324</td>
<td>International Political Economy (recommended)</td>
<td></td>
</tr>
<tr>
<td>INTS 4372</td>
<td>Great Books in Political Economy</td>
<td></td>
</tr>
<tr>
<td>INTS 4374</td>
<td>The Ethical Foundations of Global Economic Policy</td>
<td></td>
</tr>
<tr>
<td>INTS 4501</td>
<td>Comparative Politics in the 21st Century</td>
<td></td>
</tr>
<tr>
<td>INTS 4900</td>
<td>International Politics</td>
<td></td>
</tr>
<tr>
<td>INTS 4301</td>
<td>Introduction to Political Theory (or any one of the Political Theory courses listed under the traditional International Studies degree)</td>
<td></td>
</tr>
<tr>
<td>or INTS 4822</td>
<td>Contemporary Political Theory</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Program Training Core (three courses):</strong></td>
<td>12</td>
</tr>
<tr>
<td>INTS 4310</td>
<td>International Trade</td>
<td>1</td>
</tr>
<tr>
<td>INTS 4320</td>
<td>Int’l Monetary Relations</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>plus one of the following:</td>
<td></td>
</tr>
<tr>
<td>INTS 4324</td>
<td>International Political Economy</td>
<td>2</td>
</tr>
<tr>
<td>INTS 4370</td>
<td>Political Economy of Globalization</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Specialization Area Requirement (three courses):</strong></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Specialization areas allow students to group at least three elective courses that relate to a particular theme. Students are required to complete at least one specialization but may also choose to complete a second specialization. Students have considerable latitude in the design of their selected specialization area(s). Examples of specializations that students have pursued recently include international political economy, international business, economic development policy, energy and environment, the political economy of Africa, China, the European Union, or Latin America, international security, quantitative analysis, and qualitative methods. Students must secure approval from the GFTEI Degree Director when selecting elective courses to complete their chosen specialization area(s).</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Skills Requirement (three courses):</strong></td>
<td>12</td>
</tr>
<tr>
<td>INTS 4051</td>
<td>Statistical Methods II</td>
<td>4</td>
</tr>
<tr>
<td>or INTS 4057</td>
<td>Statistics for International Affairs</td>
<td>5</td>
</tr>
<tr>
<td>INTS 4303</td>
<td>Econometrics for Decision Making I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A third skills oriented course approved by the GFTEI Degree Director.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Elective Requirements</strong></td>
<td>32</td>
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<tr>
<td></td>
<td>Remaining credits (after taking above) for a total of 72 credits.</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits**

| 72 |

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1. Prerequisite for INTS 4310 International Trade: grade of B- or better in undergraduate course in Introductory Microeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Prerequisite for INTS 4320 Int’l Monetary Relations: grade of B- or better in undergraduate course in Introductory Macroeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for INTS 4310 International Trade and INTS 4320 Int’l Monetary Relations should first complete INTS 4536 Economics: Fundamental Knowledge, Global Applications.

2. Students who have taken INTS 4324 to fulfill their International Studies Core requirement must take INTS 4370 to fulfill their Program Training Core requirement.

3. INTS 4310 and INTS 4320 are recommended as prerequisites for INTS 4370.
Students must complete INTS 4050 Statistical Methods I (with a grade of C- or better) before they are eligible to register for INTS 4051 Statistical Methods II. Students will receive elective credit for completing INTS 4050 Statistical Methods I.

Students may take INTS 4057 Statistics for International Affairs (which combines Stats I and Stats II) instead of INTS 4051 Statistical Methods II, if they have a strong quantitative background and a minimum quantitative GRE score of 148 coming into the program. This is a fast-paced course. Students with a lower quantitative GRE score may not take this course without permission of the instructor.

Minimum number of credits required for degree: 72 credits.

Non-coursework Requirements
- Foreign Language Proficiency: Optional, but strongly recommended
- Internship: Required (registered as INTS 4981 Internship 0-4 credits)*
- Thesis (0-8 credits) or Substantial Research Paper (0-4 credits): Optional

* Internships are required for most of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.
  1. Students entering Korbel with substantial relevant professional work experience, typically at least 5 years.
  2. Students with a confirmed job offer in a sector in which they had been working prior to beginning the Josef Korbel degree.
  3. Students sponsored by foreign governments whose terms of study discourage internships.

Students who have a degree and/or certificate internship requirement seeking internship exemptions are to formally petition the Associate Dean of Student Affairs during their first quarter of coursework.

Master of Arts in International Administration

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Coursework Requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>International Studies Core (two courses):</td>
<td>8</td>
</tr>
<tr>
<td>INTS 4324</td>
<td>International Political Economy</td>
<td></td>
</tr>
<tr>
<td>INTS 4501</td>
<td>Comparative Politics in the 21st Century</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Administration Core (three courses):</td>
<td>12</td>
</tr>
<tr>
<td>INTS 4391</td>
<td>Financial Management and Fundraising of Non-Profits</td>
<td></td>
</tr>
<tr>
<td>INTS 4394</td>
<td>Non-Profit Management Issues &amp; Techniques</td>
<td></td>
</tr>
<tr>
<td>INTS 4931</td>
<td>International Organizations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public Sector Core (two courses):</td>
<td>8</td>
</tr>
<tr>
<td>INTS 4349</td>
<td>Comparative Public Policy and Finance</td>
<td></td>
</tr>
<tr>
<td>INTS 4750</td>
<td>The Policy Making Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Specialization Area Requirement (three courses):</strong></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Students are expected to focus in a specialized area consisting of at least three thematically-linked courses. Students should consult with their degree director on the selection of appropriate elective and pre-approved courses to complete their selected area(s).</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Skills Requirements (one course):</strong></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Methodology/Skills Courses</td>
<td></td>
</tr>
<tr>
<td>INTS 4051</td>
<td>Statistical Methods II ^1</td>
<td></td>
</tr>
<tr>
<td>or INTS 4057</td>
<td>Statistics for International Affairs ^2</td>
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<tr>
<td></td>
<td>It is recommended that students intending careers in the development field also take:</td>
<td></td>
</tr>
<tr>
<td>INTS 4333</td>
<td>International Project Design and Monitoring</td>
<td></td>
</tr>
<tr>
<td>INTS 4966</td>
<td>Applied Field Methods</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Elective Requirements</strong></td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>To reach the 72 total credit hours required for the degree.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td>72</td>
</tr>
</tbody>
</table>

^1 Students must complete INTS 4050 Statistical Methods I (with a grade of C- or better) before they are eligible to register for INTS 4051 Statistical Methods II. Students will receive elective credit for completing INTS 4050 Statistical Methods I.
Students may take INTS 4057 Statistics for International Affairs (which combines Stats I and Stats II) instead of INTS 4051 Statistical Methods II, if they have a strong quantitative background and a minimum quantitative GRE score of 148 coming into the program. This is a fast-paced course. Students with a lower quantitative GRE score may not take this course without permission of the instructor.

**Minimum number of credits required for degree:** 72 hrs.

**Non-coursework Requirements**
- Internship: Optional, but strongly recommended (registered as INTS 4981 Internship 0-4 credits)
- Foreign Language Proficiency: Required
- Thesis (0-8 credits) or Substantial Research Paper (0-4 credits): Optional
- Students not pursuing a thesis must do one of the following:
  - Take two additional skills courses (a writing course is recommended)
  - complete one additional skills course and one SRP

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### Master of Arts in International Development

#### Degree Requirements

<table>
<thead>
<tr>
<th>Coursework Requirements</th>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Training Core (four courses):</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Economic Development</td>
<td>INTS 4350</td>
<td>Economic Development</td>
<td>16</td>
</tr>
<tr>
<td>Politics of Development</td>
<td>Take one of the following courses:</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4468</td>
<td>Politics of Development</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4521</td>
<td>Cultures of Development</td>
<td></td>
</tr>
<tr>
<td>Sustainable Human Development/Environment and Development (SHD/ED)</td>
<td>Take two of the following courses:</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4047</td>
<td>Global Sustainable Development and Human Rights</td>
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<tr>
<td></td>
<td>INTS 4110</td>
<td>Food and Nutrition Security for Sustainable Development</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4220</td>
<td>Political Economy of Energy &amp; Sustainable Development</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4290</td>
<td>Gender, Environment, and Development</td>
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<tr>
<td></td>
<td>INTS 4339</td>
<td>Microfinance, Financial Inclusion and Inclusive Markets</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4362</td>
<td>Gender and Health</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4379</td>
<td>Gender and Development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INTS 4397</td>
<td>The Environment, The Economy, and Human Well-Being</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INTS 4427</td>
<td>The Political Economy of Sustainable Development in Africa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INTS 4435</td>
<td>Health and Development</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4484</td>
<td>Agriculture and Sustainable Development</td>
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<tr>
<td></td>
<td>INTS 4492</td>
<td>Health and Humanitarian Aid</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4514</td>
<td>Population, Environment, and Development in Latin America</td>
<td></td>
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<tr>
<td></td>
<td>INTS 4521</td>
<td>Cultures of Development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INTS 4625</td>
<td>East African Development and Human Rights</td>
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<tr>
<td></td>
<td>INTS 4642</td>
<td>Environmental Security</td>
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<tr>
<td><strong>Specialization Area Requirement (three courses):</strong></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Each student creates a specialization area by completing at least three courses that are linked thematically. Specializations may center on an issue, region, or skill set. Students have great latitude in identifying thematic interests and choosing related courses. Selected specializations must be approved by the International Development Degree Director, who will be available to help identify relevant courses. Students who complete certificate programs may submit their certificate transcript in place of a specialization. Courses listed as SHD/ED options and Skills options are strongly recommended and may be applied to the specialization only if they have not been used to fulfill other requirements.</td>
<td></td>
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</tr>
<tr>
<td><strong>Skills Requirements (three courses):</strong></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>INTS 4051</td>
<td>Statistical Methods II</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>or INTS 4057</td>
<td>Statistics for International Affairs</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>INTS 4052</td>
<td>Statistical Methods III</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>or INTS 4332</td>
<td>Data Analysis and Development</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
One of the following courses will complete the skills requirement:

- INTS 4226 Social Entrepreneurship & Global Poverty
- INTS 4333 International Project Design and Monitoring
- INTS 4342 Project Management
- INTS 4391 Financial Management and Fundraising of Non-Profits
- INTS 4394 Non-Profit Management Issues & Techniques
- INTS 4423 Introduction to Epidemiology
- INTS 4555 Professional Communications
- INTS 4557 Cross-Cultural Communications
- INTS 4575 Systems Thinking for Social Scientists
- INTS 4579 International Futures
- INTS 4632 Qualitative Research Methods
- INTS 4633 Int'l Project Evaluation
- INTS 4966 Applied Field Methods

Elective Requirements (eight courses): 32

All other courses to total 72 credits for completion of the degree.

Total Credits 72

1. Students who have sufficient background in development economics may substitute INTS 4310 International Trade, INTS 4320 Int'l Monetary Relations, or INTS 4370 Political Economy of Globalization with explicit permission from the International Development Degree Director; see pre-requisite requirements. Students can exercise these options by presenting a transcript showing a grade of B or better in an upper-division undergraduate or accredited graduate course in economics of development. Requests for substitution must be approved by the degree director.

2. INTS 4521 Cultures of Development may be applied to either the Politics of Development requirement or the SHD/ED requirement, but not both.

3. Students must complete INTS 4050 Statistical Methods I (with a grade of C- or better) before they are eligible to register for INTS 4051 Statistical Methods II. Students will receive elective credit for completing INTS 4050 Statistical Methods I.

4. Students may take INTS 4057 Statistics for International Affairs (which combines Stats I and Stats II) instead of INTS 4051 Statistical Methods II if they have a strong quantitative background and a minimum quantitative GRE score of 148 coming into the program. This is a fast-paced course. Students with a lower quantitative GRE score may not take this course without permission of the instructor.

5. INTS 4052 Statistical Methods III requires successful completion (i.e. grade of C- or better) of either INTS 4051 Statistical Methods II or INTS 4057 Statistics for International Affairs as a pre-requisite.

Minimum number of credits required for degree: 72 hrs.

Non-coursework Requirements

- Internship: Required (registered as INTS 4981 Internship 0-4 credits)*
- Foreign Language Proficiency: Required
- Thesis (0-8 credits) or Substantial Research Paper (0-4 credits): Optional. Students who choose to complete a thesis should prepare a proposal and secure a faculty advisor for the project at least one year before they plan to defend and submit the thesis.

* Internships are required for most of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.

1. Students entering Korbel with substantial relevant professional work experience, typically at least 5 years.
2. Students with a confirmed job offer in a sector in which they had been working prior to beginning the Josef Korbel degree.
3. Students sponsored by foreign governments whose terms of study discourage internships.

Students who have a degree and/or certificate internship requirement seeking internship exemptions are to formally petition the Associate Dean of Student Affairs during their first quarter of coursework.

Master of Arts in International Human Rights

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTS 4301</td>
<td>Introduction to Political Theory</td>
<td>8</td>
</tr>
</tbody>
</table>

I. International Studies Core (take a minimum of 2 courses): 8
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTS 4324</td>
<td>International Political Economy</td>
</tr>
<tr>
<td>INTS 4501</td>
<td>Comparative Politics in the 21st Century</td>
</tr>
<tr>
<td>or INTS 4468</td>
<td>Politics of Development</td>
</tr>
<tr>
<td>INTS 4822</td>
<td>Contemporary Political Theory</td>
</tr>
<tr>
<td>INTS 4900</td>
<td>International Politics</td>
</tr>
</tbody>
</table>

**II. Human Rights Core (take a minimum of 8 courses):**

**A. Core Human Rights (take a minimum of 2 courses):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTS 4936</td>
<td>International Law and Human Rights</td>
</tr>
<tr>
<td>or INTS 4935</td>
<td>International Humanitarian Law of Armed Conflict</td>
</tr>
<tr>
<td>INTS 4940</td>
<td>Introduction to Human Rights</td>
</tr>
</tbody>
</table>

**B. Key Topics (take a minimum of 2 courses):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTS 4569</td>
<td>Migration</td>
</tr>
<tr>
<td>INTS 4649</td>
<td>Human Rights and the Middle East</td>
</tr>
<tr>
<td>INTS 4670</td>
<td>Gender, Security and Human Rights</td>
</tr>
<tr>
<td>INTS 4711</td>
<td>Topics in International Studies (Major Issues in Human Rights)</td>
</tr>
<tr>
<td>INTS 4875</td>
<td>Human Rights and Foreign Policy</td>
</tr>
<tr>
<td>INTS 4XXX</td>
<td>International Study Transfer (Human Rights and Security)</td>
</tr>
</tbody>
</table>

**C. Focused Human Rights Courses (4 courses):**

Take a minimum of 4 courses (16 credits) from at least 3 different areas: Economic, Development, and Health Rights; Security Rights and Humanitarian Assistance; Regions or Countries; or Human Rights Themes).

**1. Economic, Development, and Health Rights**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTS 4364</td>
<td>Global Poverty and Human Rights</td>
</tr>
<tr>
<td>INTS 4367</td>
<td>Global Health Affairs</td>
</tr>
<tr>
<td>INTS 4368</td>
<td>HIV &amp; AIDS in International Affairs</td>
</tr>
<tr>
<td>INTS 4492</td>
<td>Health and Humanitarian Aid</td>
</tr>
<tr>
<td>INTS 4521</td>
<td>Cultures of Development</td>
</tr>
</tbody>
</table>

**2. Security Rights and Humanitarian Assistance**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>INTS 4011</td>
<td>Comparative Genocide</td>
</tr>
<tr>
<td>INTS 4502</td>
<td>Comparative Revolutions</td>
</tr>
<tr>
<td>INTS 4581</td>
<td>Introduction to Humanitarian Systems</td>
</tr>
<tr>
<td>INTS 4630</td>
<td>Civilian Protection in Armed Conflicts</td>
</tr>
<tr>
<td>INTS 4647</td>
<td>Critical Issues in International Humanitarian Assistance</td>
</tr>
<tr>
<td>INTS 4987</td>
<td>Forced Labor and Human Trafficking</td>
</tr>
</tbody>
</table>

**3. Regions or Countries**

**Africa**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>INTS 4427</td>
<td>The Political Economy of Sustainable Development in Africa</td>
</tr>
</tbody>
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**Asia**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>INTS 4664</td>
<td>Emerging Powers: Development in Brazil, India and Beyond</td>
</tr>
<tr>
<td>INTS 4785</td>
<td>Modern China: Reform and Revolution</td>
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</table>

**Europe and Central Europe**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>INTS 4646</td>
<td>European Integration: States in Transition</td>
</tr>
<tr>
<td>INTS 4760</td>
<td>Russian Foreign and Defense Policy</td>
</tr>
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</table>

**Latin America**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>INTS 4453</td>
<td>Political Economic Development in Latin America</td>
</tr>
<tr>
<td>INTS 4794</td>
<td>Inequality in Latin America and the Caribbean</td>
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</table>

**Middle East**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>INTS 4384</td>
<td>Middle East and U.S. Security</td>
</tr>
<tr>
<td>INTS 4620</td>
<td>Introduction to Middle East and Islamic Politics</td>
</tr>
</tbody>
</table>

**United States**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>INTS 4700</td>
<td>United States Foreign Policy</td>
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</tbody>
</table>

**4. Human Rights Themes**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>INTS 4372</td>
<td>Great Books in Political Economy</td>
</tr>
</tbody>
</table>
INTS 4478  Donald Trump, Democratic Decline and Authoritarian Populism
INTS 4526  Modern Islamic Political Thought
INTS 4599  Ethics and International Affairs
INTS 4710  Topics in International Studies (Gandi, Socrates, and Mass Non-Violent Resistance)
INTS 4804  Realism and Democracy
INTS 4820  Democracy and War
INTS 4822  Contemporary Political Theory
INTS 4890  Revolutions and State Building

III. Methods and Skills Courses (take a minimum of 4 courses or 16 credits):

A. Methods

1. Interpretive (take a minimum of 1 course)
   - INTS 4010  Epistemology
   - INTS 4522  Philosophy of Social Science
   - INTS 4632  Qualitative Research Methods
   - INTS 4644  Human Rights Research Methods

2. Quantitative (take a minimum of 1 course)
   - INTS 4051  Statistical Methods II
   - INTS 4057  Statistics for International Affairs
   - INTS 4052  Statistical Methods III
   - INTS 4579  International Futures

3. Skills (take a minimum of 2 courses)
   - INTS 4333  International Project Design and Monitoring
   - INTS 4342  Project Management
   - INTS 4497  International Campaign Management
   - INTS 4711  Topics in International Studies (Campaigns and Foreign Policy)
   - INTS 4955  Human Rights Clinic I (and INTS 4956 Human Rights Clinic II)
   - INTS 4956  Applied Field Methods
   - INTS 4981  Internship (Highly recommended but this could be waived if students show previous professional experience in human rights. Alternatively, in lieu of internship, education Summer trip (such as Israel and the West Bank) – Israel and the West Bank – https://www.du.edu/korbel/middleeast/partnerships-programs/student-trip.html)

IV. Electives:

(0-6 courses) Electives can be selected from the MA in International Human Rights Program or from outside the field.

Language Proficiency (Required)

Effective September 1, 2019, a foreign language proficiency is required. See MA Handbook (foreign language requirement).

Independent Studies — Optional.

For Research Papers, Thesis, etc.

For Language acquisition and Culture.

Total Credits 56

1. Students must complete INTS 4050 Statistical Methods I (with a grade of C- or better) before they are eligible to register for INTS 4051 Statistical Methods II. Students will receive elective credit for completing INTS 4050 Statistical Methods I.

2. Students may take INTS 4057 Statistics for International Affairs (which combines Stats I and Stats II) instead of INTS 4051 Statistical Methods II, if they have a strong quantitative background and a minimum quantitative GRE score of 148 coming into the program. This is a fast-paced course. Students with a lower quantitative GRE score may not take this course without permission of the instructor.

3. INTS 4052 Statistical Methods III requires successful completion (i.e. grade of C- or better) of either INTS 4051 Statistical Methods II or INTS 4057 Statistics for International Affairs as a pre-requisite.
Minimum number of credits required for degree: 72
* Internships are required for most of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.
1. Students entering Korbel with substantial relevant professional work experience, typically at least 5 years.
2. Students with a confirmed job offer in a sector in which they had been working prior to beginning the Josef Korbel degree.
3. Students sponsored by foreign governments whose terms of study discourage internships.

Students who have a degree and/or certificate internship requirement seeking internship exemptions are to formally petition the Associate Dean of Student Affairs during their first quarter of coursework.

Master of Arts in International Security

Degree Requirements

Coursework Requirements

All International Security students are strongly encouraged to complete all Core Coursework, Foundational Coursework (Program Training Requirements A), and the Skills Coursework (Program Training Requirements B), in their first three to four quarters at the Josef Korbel School.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Coursework Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Studies Core (one course):</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>INTS 4324</td>
<td>International Political Economy</td>
<td></td>
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<tr>
<td>or INTS 4900</td>
<td>International Politics</td>
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<tr>
<td>Program Training Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Foundational Courses (three courses, to be completed during first year):</td>
<td>12</td>
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</tr>
<tr>
<td>INTS 4700</td>
<td>United States Foreign Policy</td>
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<tr>
<td>or INTS 4701</td>
<td>US National Security Policy</td>
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<tr>
<td>INTS 4702</td>
<td>Major Issues in International Security Policy</td>
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<tr>
<td>INTS 4703</td>
<td>Security &amp; Strategy</td>
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<tr>
<td>B. Skills Courses (two courses, to be completed during first year, or at first opportunity for Winter Quarter admits): 3</td>
<td>8</td>
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<tr>
<td>INTS 4735</td>
<td>Defense and Security Methods</td>
<td></td>
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<tr>
<td>INTS 4739</td>
<td>Defense and Security Quantitative Analysis</td>
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<tr>
<td>or INTS 4057</td>
<td>Statistics for International Affairs</td>
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<tr>
<td>C. Advanced Topics: Security (one course): 4</td>
<td>4</td>
<td></td>
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<tr>
<td>A list of approved Advanced Topics courses will be provided with the release of the JKSIS Graduate Course Schedule each fall. INTS 4735 is a pre-requisite for all Advanced Topics courses, which may also include INTS 4739 or INTS 4057 as pre-requisites. Students may substitute INTS 4996 (Substantial Research Paper) or INTS 4995 (Thesis) for the Advanced Topics Course.</td>
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</tr>
</tbody>
</table>

Specialization Area Requirement 12

Any set of three, 4000 level courses that, taken together, represent a common topic, region, or other security related specialization area. Students are welcome to generate their own specialization by topic/region (which must be approved by the International Security Degree Director) or select from the curriculum supported Security Specializations listed below. The phrase "or relevant, for-credit coursework/research" refers to individual work done via an Advanced Topics course, INTS 4991 - Independent Study, INTS 4995 - MA Thesis, or INTS 4996 - SRP, as approved by the International Security Degree Director. Options Include:

Intelligence
INTS 4753 | Intelligence and National Security |
Plus any two of the following courses or relevant, for-credit coursework/research:
INTS 4736 | Strategic Intelligence Data Collection and Analysis |
INTS 4738 | Current Issues in Strategic Intelligence |
INTS 4579 | International Futures |
Homeland Security
INTS 4730 | Introduction to Homeland Security |
INTS 4731 | Homeland Defense: Prevention & Mitigation |
Plus one of the following courses or relevant, for-credit coursework/research:
INTS 4736 | Strategic Intelligence Data Collection and Analysis |
INTS 4786 | Planning and Assessment in Complex Environments |
INTS 4907 | International Terrorism |
INTS 4989  North American Defense and Security

Emerging Security Issues

Any three of the following courses or relevant, for-credit coursework/research:

- INTS 4539  Food Security in the United States and the World
- INTS 4630  Civilian Protection in Armed Conflicts
- INTS 4642  Environmental Security
- INTS 4670  Gender, Security and Human Rights
- INTS 4935  International Humanitarian Law of Armed Conflict

U.S. National Security

- INTS 4700  United States Foreign Policy
  or INTS 4701  US National Security Policy

Plus any two of the following courses or relevant, for-credit coursework/research:

- INTS 4635  Civil-Military Relations
- INTS 4753  Intelligence and National Security
- INTS 4786  Planning and Assessment in Complex Environments
- INTS 4907  International Terrorism
- INTS 4935  International Humanitarian Law of Armed Conflict
- INTS 4989  North American Defense and Security

Comparative Foreign Policy

Any three of the following courses or relevant, for-credit coursework/research:

- INTS 4147  American Govt & Pol. Making
- INTS 4447  Making of Chinese Foreign Policy
- INTS 4622  Global Governance
- INTS 4701  US National Security Policy
- INTS 4760  Russian Foreign and Defense Policy

Customized regional/topical specialization (with International Security Degree Director approval)

Elective requirements

Remaining coursework to total 72 hrs.

Total Credits 72

1. Students may take INTS 4057 Statistics for International Affairs (which combines Stats I and Stats II) only if they have a strong quantitative background and a minimum quantitative GRE score of 148 coming into the program. This is a fast-paced course. Students with a lower quantitative GRE score may not take this course without permission of the instructor.

2. Course may not be used for specialization if it is being counted toward the Foundational Course requirement.

3. All International Security students must enroll in INTS 4735 at their first opportunity, and complete INTS 4739 or INTS 4057 in their first year.

4. Advanced Topics Courses, cannot be taken until a student has completed the aforementioned courses, as well as any foundational coursework that is a pre-requisite for those courses.

Minimum number of credits required for degree: 72 hrs.

Non-coursework Requirements

- Internship: Required (registered as INTS 4981 Internship 0-4 credits)*
- Foreign Language Proficiency: Optional, but strongly recommended
- Thesis (0-8 credits) or Substantial Research Paper (0-4 credits): Optional

* Internships are required for most of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.

1. Students entering Korbel with substantial relevant professional work experience, typically at least 5 years.
2. Students with a confirmed job offer in a sector in which they had been working prior to beginning the Josef Korbel degree.
3. Students sponsored by foreign governments whose terms of study discourage internships.

Students who have a degree and/or certificate internship requirement seeking internship exemptions are to formally petition the Associate Dean of Student Affairs during their first quarter of coursework.
## Master of Arts in International Studies

### Degree Requirements

#### Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Core Coursework Requirement (one course):</strong></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>International Studies Core</td>
<td></td>
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<tr>
<td></td>
<td>Choose one course from the following list (note: the selected course must be outside of the student's chosen field, see &quot;field requirement&quot; below):</td>
<td></td>
</tr>
<tr>
<td>INTS 4301</td>
<td>Introduction to Political Theory</td>
<td></td>
</tr>
<tr>
<td>INTS 4324</td>
<td>International Political Economy</td>
<td></td>
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<tr>
<td>INTS 4349</td>
<td>Comparative Public Policy and Finance</td>
<td></td>
</tr>
<tr>
<td>INTS 4370</td>
<td>Political Economy of Globalization</td>
<td></td>
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<tr>
<td>INTS 4501</td>
<td>Comparative Politics in the 21st Century</td>
<td></td>
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<tr>
<td>INTS 4599</td>
<td>Ethics and International Affairs</td>
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<tr>
<td>INTS 4715</td>
<td>Problems and Challenges of Democratization in Contemporary Democracies</td>
<td></td>
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<tr>
<td>INTS 4802</td>
<td>Foundational Ideas in Social Science: Marx and Weber</td>
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<tr>
<td>INTS 4820</td>
<td>Democracy and War</td>
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<tr>
<td>INTS 4890</td>
<td>Revolutions and State Building</td>
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<tr>
<td>INTS 4900</td>
<td>International Politics</td>
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<tr>
<td>INTS 4951</td>
<td>Comparing International Societies</td>
<td></td>
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<td></td>
<td><strong>Field Requirement (four courses):</strong></td>
<td>16</td>
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<tr>
<td></td>
<td>Students must choose one field from below and complete four courses within that field, as specified below:</td>
<td></td>
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<tr>
<td></td>
<td>Comparative Politics</td>
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<tr>
<td>INTS 4501</td>
<td>Comparative Politics in the 21st Century</td>
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<td></td>
<td>Plus three other courses in Comparative Politics.</td>
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<tr>
<td></td>
<td>International Political Economy</td>
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<tr>
<td>INTS 4324</td>
<td>International Political Economy</td>
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<tr>
<td></td>
<td>Plus three other courses in International Political Economy, selected from the following:</td>
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<tr>
<td>INTS 4210</td>
<td>Multinational Corporations</td>
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<tr>
<td>INTS 4303</td>
<td>Econometrics for Decision Making I</td>
<td></td>
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<tr>
<td>INTS 4310</td>
<td>International Trade</td>
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<tr>
<td>INTS 4318</td>
<td>Applied Research in International Economics</td>
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<tr>
<td>INTS 4320</td>
<td>Int'l Monetary Relations</td>
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<tr>
<td>INTS 4330</td>
<td>International Business Transactions</td>
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</tr>
<tr>
<td>INTS 4339</td>
<td>Microfinance, Financial Inclusion and Inclusive Markets</td>
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<tr>
<td>INTS 4341</td>
<td>Illicit Markets in the Americas</td>
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<tr>
<td>INTS 4349</td>
<td>Comparative Public Policy and Finance</td>
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<tr>
<td>INTS 4350</td>
<td>Economic Development</td>
<td></td>
</tr>
<tr>
<td>INTS 4359</td>
<td>Political Economy of Global Poverty &amp; Inequality</td>
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<tr>
<td>INTS 4370</td>
<td>Political Economy of Globalization</td>
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<tr>
<td>INTS 4397</td>
<td>The Environment, The Economy, and Human Well-Being</td>
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<tr>
<td>INTS 4427</td>
<td>The Political Economy of Sustainable Development in Africa</td>
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<tr>
<td>INTS 4536</td>
<td>Economics: Fundamental Knowledge, Global Applications</td>
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<tr>
<td>INTS 4643</td>
<td>Japan in East Asia: Economic, Business, and Trade Relations</td>
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<tr>
<td>INTS 4646</td>
<td>European Integration: States in Transition</td>
<td></td>
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<tr>
<td>INTS 4650</td>
<td>Globalization and Economic Crime</td>
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<tr>
<td>INTS 4653</td>
<td>Political Economy of the Resource Curse</td>
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<tr>
<td>INTS 4664</td>
<td>Emerging Powers: Development in Brazil, India and Beyond</td>
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<td></td>
<td>International Politics</td>
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<tr>
<td>INTS 4900</td>
<td>International Politics</td>
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<tr>
<td></td>
<td>Plus three other courses in International Politics.</td>
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<tr>
<td></td>
<td>Political Theory</td>
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</tr>
</tbody>
</table>
Choose four of the following:

INTS 4301  Introduction to Political Theory
INTS 4526  Modern Islamic Political Thought
INTS 4599  Ethics and International Affairs
INTS 4710  Topics in International Studies (Gandhi, Socrates, and Mass Non-Violent Resistance)
INTS 4802  Foundational Ideas in Social Science: Marx and Weber
INTS 4804  Realism and Democracy
INTS 4820  Democracy and War
INTS 4822  Contemporary Political Theory
INTS 4890  Revolutions and State Building

Specialization Area Requirement: 12

A three-course specialization. Students may design a customized specialization area with the approval of International Studies Degree Director. Students are only required to have one specialization, but may complete two if they wish. Students can consult with faculty with expertise in a particular specialization, pending final approval by the International Studies Degree Director, to get a list of suggested courses for any of the standard specializations.

International Development (for questions see Sally Hamilton or Aaron Schneider):

INTS 4350  Economic Development
INTS 4468  Politics of Development

Plus any course listed under the M.A. in International Development requirement for SHD/ED

International Security (for questions see Lewis Griffith):

Choose three of the following courses:

INTS 4700  United States Foreign Policy
INTS 4701  US National Security Policy
INTS 4702  Major Issues in International Security Policy
INTS 4703  Security & Strategy

Human Rights (for questions see Claude d’Estree):

INTS 4940  Introduction to Human Rights (required)

Plus one course from each of two subfields:

Legal and Organizational - choose from:
INTS 4936  International Law and Human Rights
INTS 4941  Human Rights and International Organizations

Regional and Country Focus:
INTS 4875  Human Rights and Foreign Policy

Topics - choose from:
INTS 4939  Genocide and the Human Condition
INTS 4987  Forced Labor and Human Trafficking

Theoretical Issues - choose from:
INTS 4804  Realism and Democracy
INTS 4935  International Humanitarian Law of Armed Conflict

Conflict Resolution (for questions see Karen Feste):

INTS 4920  Conflict Resolution

One course in Intervention, Peacebuilding, or Peacekeeping

One course in Negotiation, Mediation, or Conciliation (or International Organization, if approved by International Studies Degree Director)

Global Health Affairs (for questions see Sandy Johnson):

INTS 4367  Global Health Affairs
INTS 4516  Major Diseases in Global Health (From Pathophysiology to Action)

Plus a third approved course from the list of GHA courses or an approved health course offered in another unit of the university (University College courses are not eligible).

Policy Analysis

INTS 4349  Comparative Public Policy and Finance
INTS 4750  The Policy Making Process

And one course on a particular policy issue.

Environmental Policy
INTS 4397  The Environment, The Economy, and Human Well-Being
INTS 4642  Environmental Security
INTS 4972  Global Environmental Governance
Also recommended to deepen the specialization are INTS 4484, INTS 4514, INTS 4539, INTS 4566, and INTS 4653.

Homeland Security
INTS 4730  Introduction to Homeland Security
INTS 4731  Homeland Defense: Prevention & Mitigation
INTS 4734  Homeland Sec & Civil Soc

Humanitarian Assistance
While there is no formal specialization available in Humanitarian Assistance, interested students may build a customized specialization by taking at least three courses/12 credits from the following list of courses. Approval for this customized specialization must come from the International Studies Degree Director. Students interested in such a specialization must understand seats are available only on a space-available basis after Humanitarian Assistance Certificate students have had the opportunity to register for their required courses.
INTS 4XXX  International Study Transfer (Gender and Humanitarian Aid)
INTS 4056  Information Management in Humanitarian Crises
INTS 4492  Health and Humanitarian Aid
INTS 4496  Field Operations for Humanitarian Assistance
INTS 4581  Introduction to Humanitarian Systems
INTS 4583  International Protection in the Humanitarian Context
INTS 4647  Critical Issues in International Humanitarian Assistance
INTS 4652  Contemporary Issues in Refugee Studies
INTS 4787  Civil-Military Practices in Humanitarian Responses
INTS 4935  International Humanitarian Law of Armed Conflict

Customized Specialization
Three, interrelated courses as approved by the International Studies Degree Director.

Skills Requirements
Methodology/Skills: A package of three courses from the various methods and skills courses offered at the Josef Korbel School and, with permission, from other units at the University of Denver (excluding University College). The list below contains examples of the types of courses that students may choose and do not exhaust the possibilities. The best choices for each student will depend on each student’s specific career goals and should be discussed with the degree director.

Quantitative Courses
INTS 4051  Statistical Methods II
INTS 4052  Statistical Methods III
INTS 4057  Statistics for International Affairs
INTS 4333  International Project Design and Monitoring
INTS 4345  The Art of Forecasting
INTS 4575  Professional Communications
INTS 4583  Systems Thinking for Social Scientists
INTS 4633  Int'l Project Evaluation

Management and Communications Courses
INTS 4342  Project Management
INTS 4391  Financial Management and Fundraising of Non-Profits
INTS 4394  Non-Profit Management Issues & Techniques
INTS 4555  Professional Communications
INTS 4557  Cross-Cultural Communications

Issue-Oriented Courses
INTS 4423  Introduction to Epidemiology
INTS 4483  Practical Applications in Global Health
INTS 4735  Defense and Security Methods
INTS 4736  Strategic Intelligence Data Collection and Analysis
INTS 4739  Defense and Security Quantitative Analysis
INTS 4954  Human Rights Research and Design

Qualitative and Field Methods
INTS 4010  Epistemology
Elective requirements (seven courses):  28
Remaining coursework to total 72 hrs.
Total Credits 72

1. Students must complete INTS 4050 Statistical Methods I (with a grade of C- or better) before they are eligible to register for INTS 4051 Statistical Methods II. Students will receive elective credit for completing INTS 4050 Statistical Methods I.

2. INTS 4052 Statistical Methods III requires successful completion (i.e. grade of C- or better) of either INTS 4051 Statistical Methods II or INTS 4057 Statistics for International Affairs as a pre-requisite.

3. Students may take INTS 4057 Statistics for International Affairs (which combines Stats I and Stats II) instead of INTS 4051 Statistical Methods II, if they have a strong quantitative background and a minimum quantitative GRE score of 148 coming into the program. This is a fast-paced course. Students with a lower quantitative GRE score may not take this course without permission of the instructor.

Minimum number of credits required for degree: 72 hrs.

Non-coursework Requirements
- Foreign Language Proficiency: Optional, but strongly recommended
- Internship: Optional, but strongly recommended (registered as INTS 4981 Internship 0-4 credits)
- Thesis (0-8 credits) or Substantial Research Paper (0-4 credits): Optional

Certificate in Homeland Security

Program Requirements
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Complete the following courses:</td>
<td>28</td>
</tr>
<tr>
<td>INTS 4147</td>
<td>American Govt &amp; Pol. Making</td>
<td></td>
</tr>
<tr>
<td>INTS 4730</td>
<td>Introduction to Homeland Security</td>
<td></td>
</tr>
<tr>
<td>INTS 4731</td>
<td>Homeland Defense: Prevention &amp; Mitigation</td>
<td></td>
</tr>
<tr>
<td>INTS 4736</td>
<td>Strategic Intelligence Data Collection and Analysis</td>
<td></td>
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<tr>
<td>or INTS 4989</td>
<td>North American Defense and Security</td>
<td></td>
</tr>
<tr>
<td>INTS 4753</td>
<td>Intelligence and National Security</td>
<td></td>
</tr>
<tr>
<td>INTS 4907</td>
<td>International Terrorism</td>
<td></td>
</tr>
<tr>
<td>INTS 4989</td>
<td>North American Defense and Security</td>
<td></td>
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<tr>
<td>or INTS 4786</td>
<td>Planning and Assessment in Complex Environments</td>
<td></td>
</tr>
</tbody>
</table>

Minimum number of credits required for certificate: 28

Certificate in International Studies with a Concentration in Global Health Affairs

Program Requirements
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Core Coursework Requirements</td>
<td>8</td>
</tr>
<tr>
<td>Students are strongly encouraged to complete one or both courses before taking other classes.</td>
<td></td>
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</tr>
<tr>
<td>INTS 4367</td>
<td>Global Health Affairs</td>
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<tr>
<td>INTS 4516</td>
<td>Major Diseases in Global Health (From Pathophysiology to Action)</td>
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<tr>
<td></td>
<td>Methods and Practice Core</td>
<td>8</td>
</tr>
<tr>
<td>INTS 4423</td>
<td>Introduction to Epidemiology</td>
<td></td>
</tr>
<tr>
<td>INTS 4483</td>
<td>Practical Applications in Global Health</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective Requirements</td>
<td>12</td>
</tr>
<tr>
<td>Select three of the following (courses may not be offered every year):</td>
<td></td>
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<tr>
<td>Health Issues and Interactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTS 4XXX</td>
<td>International Study Transfer (Global Health and Human Rights)</td>
<td></td>
</tr>
<tr>
<td>INTS 4404</td>
<td>Cities, Security, and Health</td>
<td></td>
</tr>
</tbody>
</table>
Minimum number of credits required for certificate: 28

Non-coursework Requirements

- All GHA candidates must conduct a single, 150-hour health-related practical experience or a suitable alternative (see below). This experience must take place during the student's course of study and the work must be carried out off-campus. As an alternative to a traditional internship, this requirement could be fulfilled through current employment, an RPCV local internship, independent research (as long as it has an off-campus field component), or work on a GHA service-based research project. To qualify as health-related, a substantive component of the internship/practicum should focus on health issues. If this condition is not met within the context of the internship/practicum, the student may instead submit an additional, separate report on the health implications of their internship/practicum to the certificate director in order to fulfill the requirement. See the GHA Director for guidelines. It is possible for students to fulfill both a degree and certificate requirement with one internship/practicum.

Students are encouraged but not required to base their internship on their required proposal for INTS 4367 Global Health Affairs, and to prepare a thesis, significant research paper, or independent study based on one of their internships or other self-driven or faculty-driven research.

Certificate in International Studies with a Concentration in Humanitarian Assistance

Program Requirements

Coursework Requirements

Core Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTS 4496</td>
<td>Field Operations for Humanitarian Assistance</td>
<td>16</td>
</tr>
<tr>
<td>INTS 4581</td>
<td>Introduction to Humanitarian Systems</td>
<td></td>
</tr>
<tr>
<td>INTS 4215</td>
<td>Gender and Humanitarian Assistance</td>
<td></td>
</tr>
<tr>
<td>INTS 4056</td>
<td>Information Management in Humanitarian Crises</td>
<td></td>
</tr>
<tr>
<td>INTS 4492</td>
<td>Health and Humanitarian Aid</td>
<td></td>
</tr>
<tr>
<td>INTS 4583</td>
<td>International Protection in the Humanitarian Context</td>
<td></td>
</tr>
<tr>
<td>INTS 4647</td>
<td>Critical Issues in International Humanitarian Assistance (pre-req: INTS 4581)</td>
<td></td>
</tr>
<tr>
<td>INTS 4652</td>
<td>Contemporary Issues in Refugee Studies</td>
<td></td>
</tr>
<tr>
<td>INTS 4787</td>
<td>Civil-Military Practices in Humanitarian Responses</td>
<td></td>
</tr>
<tr>
<td>INTS 4935</td>
<td>International Humanitarian Law of Armed Conflict</td>
<td></td>
</tr>
</tbody>
</table>

Elective Requirements

At least three courses in one of the following tracks (note that this course list is not exhaustive and that not all courses listed are offered annually. Students may substitute other courses with the permission of the Certificate Director):

Management/Operations

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>INTS 4333</td>
<td>International Project Design and Monitoring</td>
</tr>
<tr>
<td>INTS 4342</td>
<td>Project Management</td>
</tr>
<tr>
<td>INTS 4391</td>
<td>Financial Management and Fundraising of Non-Profits</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>INTS 4394</td>
<td>Non-Profit Management Issues &amp; Techniques</td>
</tr>
<tr>
<td>INTS 4497</td>
<td>International Campaign Management</td>
</tr>
<tr>
<td>INTS 4557</td>
<td>Cross-Cultural Communications</td>
</tr>
<tr>
<td>INTS 4920</td>
<td>Conflict Resolution</td>
</tr>
<tr>
<td>PPOL 4700</td>
<td>Public Management &amp; Budgeting</td>
</tr>
</tbody>
</table>

**Monitoring, Evaluation, and Data Analysis**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>INTS 4050</td>
<td>Statistical Methods I</td>
</tr>
<tr>
<td>INTS 4051</td>
<td>Statistical Methods II</td>
</tr>
<tr>
<td>INTS 4057</td>
<td>Statistics for International Affairs</td>
</tr>
<tr>
<td>INTS 4058</td>
<td>Applied Time-Series Analysis</td>
</tr>
<tr>
<td>INTS 4332</td>
<td>Data Analysis and Development</td>
</tr>
<tr>
<td>INTS 4423</td>
<td>Introduction to Epidemiology</td>
</tr>
<tr>
<td>INTS 4500</td>
<td>Social Science Methods</td>
</tr>
<tr>
<td>INTS 4575</td>
<td>Systems Thinking for Social Scientists</td>
</tr>
<tr>
<td>INTS 4576</td>
<td>Seminar: Community-Based Research Methods</td>
</tr>
<tr>
<td>INTS 4632</td>
<td>Qualitative Research Methods</td>
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<tr>
<td>INTS 4633</td>
<td>Int'l Project Evaluation</td>
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<tr>
<td>INTS 4644</td>
<td>Human Rights Research Methods</td>
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<tr>
<td>INTS 4966</td>
<td>Applied Field Methods</td>
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<tr>
<td>GEOG 3100</td>
<td>Geospatial Data</td>
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<tr>
<td>GEOG 3130</td>
<td>Advanced Geographic Information Systems</td>
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<tr>
<td>PPOL 4300</td>
<td>Quantitative Analysis-Pub Pol</td>
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<tr>
<td>PPOL 4400</td>
<td>Analytical &amp; Critical Skills</td>
</tr>
<tr>
<td>PPOL 4500</td>
<td>Cost-Benefit Analysis/Pub Pol</td>
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</tbody>
</table>

**Policy/Advocacy**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>INTS 4033</td>
<td>Natural Resources and Armed Conflicts Under Intern. Law</td>
</tr>
<tr>
<td>INTS 4036</td>
<td>Mobilities: Critical Perspectives on Forced and Voluntary Migration</td>
</tr>
<tr>
<td>INTS 4110</td>
<td>Food and Nutrition Security for Sustainable Dev.</td>
</tr>
<tr>
<td>INTS 4200</td>
<td>Water and Sanitation in the Global South</td>
</tr>
<tr>
<td>INTS 4270</td>
<td>Gender, Security, and Human Rights</td>
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<tr>
<td>INTS 4290</td>
<td>Gender, Environment, and Development</td>
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<tr>
<td>INTS 4362</td>
<td>Gender and Health</td>
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<tr>
<td>INTS 4369</td>
<td>Political Economy of Global Poverty &amp; Inequality</td>
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<td>INTS 4379</td>
<td>Gender and Development</td>
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<td>INTS 4396</td>
<td>Education and Development</td>
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<td>INTS 4404</td>
<td>Cities, Security, and Health</td>
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<td>INTS 4435</td>
<td>Health and Development</td>
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<tr>
<td>INTS 4497</td>
<td>International Campaign Management</td>
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<tr>
<td>INTS 4509</td>
<td>Food Security, Nutrition, and Sustainable Dev.</td>
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<tr>
<td>INTS 4539</td>
<td>Food Security in the United States and the World</td>
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<td>INTS 4569</td>
<td>Migration</td>
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<td>INTS 4622</td>
<td>Global Governance</td>
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<td>INTS 4624</td>
<td>Private Actors and Conflict</td>
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<tr>
<td>INTS 4631</td>
<td>The Politics of Civil Society</td>
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<tr>
<td>INTS 4746</td>
<td>Gender and Human Rights</td>
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<tr>
<td>INTS 4750</td>
<td>The Policy Making Process</td>
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<tr>
<td>INTS 4875</td>
<td>Human Rights and Foreign Policy</td>
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<tr>
<td>INTS 4909</td>
<td>Climate Justice</td>
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<tr>
<td>INTS 4931</td>
<td>International Organizations</td>
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<tr>
<td>INTS 4936</td>
<td>International Law and Human Rights</td>
</tr>
<tr>
<td>INTS 4941</td>
<td>Human Rights and International Organizations</td>
</tr>
<tr>
<td>CPSY 4500</td>
<td>International Disaster Psychology: Foundations</td>
</tr>
</tbody>
</table>
Minimum number of credits required for certificate: 28

Non-coursework Requirements

- An internship, focused on international humanitarian aid, (150 hours) with an organization, whose core work includes international humanitarian assistance or humanitarian policy/advocacy, is required for the Humanitarian Assistance Certificate. These are usually completed by students in the summer between the first and second years of the MA program. Students arrange their own internship placements but should consult with the HA program director for ideas, contacts, and must obtain approval from the HA Program Director prior to starting the internship. Internships must also be approved by the JKSIS Office of Career and Professional Development before the internship starts.

Public Diplomacy Certificate of Specialization

Program Requirements

Coursework Requirements

Students will take classes in three categories as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFJS 4065</td>
<td>Public Diplomacy and Nation Branding</td>
<td>8</td>
</tr>
<tr>
<td>MFJS 4160</td>
<td>Media Theories</td>
<td></td>
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<tr>
<td>or MFJS 4650</td>
<td>Global Media and Communication</td>
<td></td>
</tr>
<tr>
<td>or MFJS 4080</td>
<td>Global/Multicultural Campaigns</td>
<td></td>
</tr>
<tr>
<td>MFJS 4050</td>
<td>Foundations of Strategic Communication</td>
<td>4</td>
</tr>
<tr>
<td>MFJS 4060</td>
<td>Strategic Messaging</td>
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<tr>
<td>MFJS 4165</td>
<td>Global Health and Development Communication</td>
<td></td>
</tr>
<tr>
<td>MFJS 4912</td>
<td>Seminar in Media Film &amp; Journalism Studies (approval from Certificate Director required)</td>
<td></td>
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<tr>
<td>INTS 4142</td>
<td>After the Fall: Russia &amp; China</td>
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<tr>
<td>INTS 4367</td>
<td>Global Health Affairs</td>
<td></td>
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<tr>
<td>INTS 4384</td>
<td>Middle East and U.S. Security</td>
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<tr>
<td>INTS 4438</td>
<td>International Public Opinion and Foreign Policy</td>
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<tr>
<td>INTS 4447</td>
<td>Making of Chinese Foreign Policy</td>
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<tr>
<td>INTS 4450</td>
<td>Democracy and Militarism in Latin America</td>
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<td>INTS 4497</td>
<td>International Campaign Management</td>
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<tr>
<td>INTS 4516</td>
<td>Major Diseases in Global Health (From Pathophysiology to Action)</td>
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<tr>
<td>INTS 4521</td>
<td>Cultures of Development</td>
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<tr>
<td>INTS 4526</td>
<td>Modern Islamic Political Thought</td>
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<tr>
<td>INTS 4595</td>
<td>Civil Wars and International Responses: Evaluating Post-War Peacebuilding</td>
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<tr>
<td>INTS 4670</td>
<td>Gender, Security and Human Rights</td>
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<tr>
<td>INTS 4708</td>
<td>Topics in International Studies</td>
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<tr>
<td>INTS 4709</td>
<td>Topics in International Studies</td>
<td></td>
</tr>
<tr>
<td>INTS 4760</td>
<td>Russian Foreign and Defense Policy</td>
<td></td>
</tr>
<tr>
<td>INTS 4907</td>
<td>International Terrorism</td>
<td></td>
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<tr>
<td>INTS 4920</td>
<td>Conflict Resolution</td>
<td></td>
</tr>
<tr>
<td>MFJS 4050</td>
<td>Foundations of Strategic Communication</td>
<td></td>
</tr>
<tr>
<td>MFJS 4060</td>
<td>Strategic Messaging</td>
<td></td>
</tr>
</tbody>
</table>
Non-Coursework Requirements
Applicants must be enrolled master’s students in good standing in either MFJS or JKSIS. Applicants from either unit must apply for the Certificate no later than February 1 in the first year of their master’s program in order to be able to complete all of the necessary coursework for the Certificate by the end of their second year.

Certificate in Global Environmental Change and Adaptation
Program Requirements
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>INTS 4397</td>
<td>The Environment, The Economy, and Human Well-Being</td>
<td>12</td>
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<tr>
<td>INTS 4642</td>
<td>Environmental Security</td>
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<tr>
<td>INTS 4972</td>
<td>Global Environmental Governance</td>
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<tr>
<td>Electives</td>
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<td>12</td>
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<tr>
<td>INTS 4110</td>
<td>Food and Nutrition Security for Sustainable Development</td>
<td></td>
</tr>
<tr>
<td>INTS 4220</td>
<td>Political Economy of Energy &amp; Sustainable Development</td>
<td></td>
</tr>
<tr>
<td>INTS 4223</td>
<td>Global Dynamics and Local Threats in Agricultural Development</td>
<td></td>
</tr>
<tr>
<td>INTS 4290</td>
<td>Gender, Environment, and Development</td>
<td></td>
</tr>
<tr>
<td>INTS 4333</td>
<td>International Project Design and Monitoring</td>
<td></td>
</tr>
<tr>
<td>INTS 4339</td>
<td>Microfinance, Financial Inclusion and Inclusive Markets</td>
<td></td>
</tr>
<tr>
<td>INTS 4367</td>
<td>Global Health Affairs</td>
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</tr>
<tr>
<td>INTS 4484</td>
<td>Agriculture and Sustainable Development</td>
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</tr>
<tr>
<td>INTS 4539</td>
<td>Food Security in the United States and the World</td>
<td></td>
</tr>
<tr>
<td>INTS 4909</td>
<td>Climate Justice</td>
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</tbody>
</table>

Total Credits 24

Courses

INTS 4010 Epistemology (4 Credits)
An introductory course covering philosophy and history of science, epistemology, causality, and the logic of inquiry as related to international studies. The relation between theory and practical politics is explored, and differences between empirical and normative theory are examined in the context of foundational principles of politics and social science.

INTS 4011 Comparative Genocide (4 Credits)
This course examines the historical origins, patterns, and legacies of contemporary genocides around the world. We begin with the UN Convention on the Prevention and Punishment of the Crime of Genocide in 1948, which legally codified the definition of genocide and compelled ratifying parties to prevent its reoccurrence. Yet as we’ll see, genocide has instead reoccurred with alarming frequency. We will discuss the definitional and analytical challenges facing this subject, as well as academic and policy debates regarding how to define and prevent genocide. We will also explore different approaches to seeking justice and reconciliation in the aftermath. To do so, this class will ground theoretical debates in empirical case studies.

INTS 4029 International Business: Strategy and Practice (4 Credits)
This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture, and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc.
INTS 4031 Conflict and Security in Cyberspace (4 Credits)
This course is for Korbel in DC program participants only. Cyber conflict is a new and complicated strategic problem that will engage the international community at many different levels. The cyber environment challenges traditional strategic thinking, and work on an adequate policy framework to assess and manage cyber conflict is at an early stage. Many traditional security concepts will need to be adjusted for the cyber environment through review and discussion. This class will look at both the national and international dimensions of cyber conflict in the larger international security context.

INTS 4033 Natural Resources and Armed Conflicts Under International Law (4 Credits)
The course will offer a description and an assessment of how international law regulates the relationship between natural resources and armed conflicts. Attention will be given to principles and rules regulating access to natural resources in the pre-conflict phase; protecting the resources pending the conflict; regulating the exploitation of the resources during and after occupations and international administrations. The role of transnational corporations in fueling conflicts will be considered with reference to recent developments such as certification schemes, the emerging legal framework on transparency in business, and the debate on corporate responsibility for international crimes. The concept of “illegal exploitation of natural resources” will be analyzed in light of the relevant resolutions of the United Nations Security Council. Finally, possible solutions to the issue of armed conflict resources (i.e. resources fueling the initiation of conflicts) will be considered from a legal perspective.

INTS 4036 Mobilities: Critical Perspectives on Forced and Voluntary Migration (4 Credits)
The mobility of people across international borders, be they labeled as refugees or economic migrants, is becoming a crucial debate both within academia and in the public sphere. Migrants are presented as potential promoters of peace and actors of development in their country of origin, but also as a threat to the national cohesion in their country of destination. This course deals with key issues related to the field of migration studies. Building on an anthropological perspective on the predicaments and strategies of people, it will offer a critical scrutiny of existing categories such as the distinctions between forced and voluntary migration, between situations of conflict and development. At the conceptual level, the course questions the narrow framework of the nation-state to relocate migration processes in all their complexity and proposes new approaches that take into account ongoing circulation and the existence of transnational ties. At the practical level, it stresses the normality and potential of human mobility throughout history to renew the policy debates of states and international organizations.

INTS 4039 Violence, History and Memory in Twentieth Century Africa Law (4 Credits)
This course offers historical, theoretical and empirical perspectives on the impact of conflict in the modern history of Africa. Opening with a guided discussion of broad debates over models of warfare and violence that apply social, cultural, materialist and instrumental theories of causation, the course then proceeds through a series of case studies in seminars. These include colonial wars of decolonization in Algeria and Kenya, the Biafran War of secession and its repercussions in Nigeria, contrasting genocides in Burundi and Rwanda, the Red Terror in revolutionary Ethiopia, liberation struggles in Southern Africa, the ‘African World War’ in Congo, interlinked conflicts in Sierra Leone and Liberia, and other cases of contemporary significance. In each case, students will be encouraged to consider the means of violence employed, the causes and motivations of conflict, issues of gender, youth, religion, politics and ethnicity, the personal and communal impacts of experiencing and witnessing various forms of violence, and the transnational dynamics of conflict. Throughout, questions of culpability, ethics and moralities will be tackled in relation to the various approaches to transitional or retributive justice, the problem of ‘living together again’ dominated by the pressures of memory, silence, memorialization and mythico-history.

INTS 4040 Technology and War (4 Credits)
This course introduces graduate students to past, present, and future trends in warfare, focusing especially on the how technological advances affect the ways in which states engage in international conflict. The course will begin by introducing students to a number of theories that help shed light on why technological developments occur and how they affect the conduct of war. Subsequent classes will then examine important technological developments and assess how each has impacted the use of force over time. Topics range from the invention of gunpowder and the use of machine guns, to the development of nuclear weapons, the use of unmanned technologies on the battlefield, and the growing importance of the cyber domain to future inter-state conflict.

INTS 4046 Global Economic Inequality and Human Rights (4 Credits)
The main purpose of this course is to understand the conceptual and empirical issues underlying the political economy of global inequality and its relation to Human Rights. What is inequality? What are the global dimensions of inequality and what are the connections between global inequalities and human rights? What are the proximate and deeper causes of global inequality? How does the analysis of deeper causes of global inequality and poverty relate to the underlying political economy of global capitalism? In order to do this, we will look at the relationship between the world economic system, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus on the more recently developed social capabilities approach developed by Amartya Sen and others. In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy. A special feature of the course will be an analysis and assessment of the millennium development goals and the prospects for progressive policies in the post-MDG period, e.g., the SDGs. We will also examine the problems of the advanced countries in a rigorous holistic framework that will go beyond the important work of Pickett and his collaborators on inequality.
INTS 4047 Global Sustainable Development and Human Rights (4 Credits)
The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between sustainable development and human rights globally. For this purpose we will need to understand both the current global political economy (GPE) and Geopolitics. The key questions are: What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between sustainable development and human rights globally and within particular nation states? How does the discourse of the linkages between sustainable development and human rights relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between sustainable development and human rights relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among sustainable development, human rights, energy, technology, geopolitics, geo-economics, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus critically on the more recently developed social capabilities approach developed by Amartya Sen and others within the context of domestic and global political economy. In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy and within the nation states. For this purpose we will try to find the approximate but deep causal structure of GPE and the place of sustainability and human rights within this GPE. A special feature of the course will be an analysis and assessment of the climate change issues and renewable energy and critiques of technological fix.

INTS 4048 International Politics of Nuclear Weapons (4 Credits)
This MA-level course analyzes subjects central to the understanding of the role of nuclear weapons in international politics. The course addresses the origins of the atomic bomb project, early efforts to control nuclear materials, deterrence theory, nuclear strategy and force posture, and considers contemporary challenges to the global nuclear order including nuclear latency and nuclear terrorism. The goal of the course is to introduce students to the evolution of scholarship on the role of nuclear weapons in international politics, and to evaluate contemporary nuclear security issues in light of this broader context. Each class will focus on a different substantive topic, interweaving theory with history to better understand each issue area. The course will start with the initial development and use of nuclear weapons, followed by an in-depth look at the early thinking on nuclear strategy and escalation during the Cold War. These classes will cover the Manhattan Project, the bombings of Hiroshima and Nagasaki, the basics of deterrence theory, the arms race between the United States and Soviet Union, and historical cases of nuclear crises and brinkmanship (the Cuban Missile Crisis being the most well-known example). During weeks 5-7 students will explore the politics of nuclear acquisition, evaluating different explanations for why states build nuclear weapons. This section of the course will also explore the variety of ways that the international community has sought to prevent the spread of nuclear weapons, including the important role of international institutions, norms, and the nuclear disarmament movement. The final three classes are devoted to contemporary topics in nuclear politics, including the threat of nuclear terrorism, nuclear energy and dual-use issues, regional instability in Northeast and South Asia, the Iran nuclear deal, and the implication of new technologies (e.g. autonomous systems, 3D printing, precision weapons) for nuclear issues. The final class will provide the students with the opportunity to take stock of what we have learnt over the course of the quarter and to reevaluate early thinking on nuclear weapons in light of what we know now.

INTS 4049 Addressing Complex Interagency Problems (4 Credits)
This class will ask students develop the skills and addresses the challenges associated with the process by which policy recommendations are developed within the United States Government, particularly as they relate to complex multi-dimensional security problems. Students will learn about the roles played by various departments and agencies that are engaged in the policy making process, as well as how external actors impact the development of national security policy. This class will also give students the opportunity to learn about the policy making process in the United States inter-agency environment through a series of presentations from practitioners as well as hands-on experience via role-playing and the development of briefing memos, presentations and other materials. Students will learn about the history, structure and function of the interagency process, including past and current reform processes such as the Clinton Administration's Presidential Decision Directive on Managing Complex Contingency Operations (PDD-56) as well as the more recent Project on National Security Reform. Students will also hear several real-life examples of interagency policy-making from former government officials and various subject-matter experts. Students will be expected to role-play members of a mock National Security Council (NSC) team or as representatives of various US Government Departments and Agencies involved in the interagency decision-making process. Students will identify an actual national security problem and be responsible for debating and agreeing to a set of policy recommendations within the format and structure of the mock NSC. Select students may have the opportunity to present their recommendation to a current member of the National Security Council via video-teleconference. At the end of the course, students should have a fundamental understanding of the strengths and weaknesses of the current system; what constitutes good NSC products and how to produce them; and how concession and compromise, trade-offs, external public pressure, intelligence issues and budget realities all can play a role in how national security decisions are made.

INTS 4050 Statistical Methods I (4 Credits)
An introductory course featuring statistical reasoning, probability, sampling, statistical inference, nominal and ordinal measures of association, and correlation. Open only to students with no prior background in statistics.

INTS 4051 Statistical Methods II (4 Credits)
This course is a continuation of Statistical Methods I, covering the fundamentals and primary methods of statistical inference. Topics include two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, correlation, simple regression and multiple regression. Emphasis will be on problem solving, computer applications (using Stata) and interpretation of results. This course is offered in the Winter quarter only. Prerequisites: INTS 4050.

INTS 4052 Statistical Methods III (4 Credits)
This course will serve as continuation of Statistical Methods II. This will be an applied, non-calculus based course on statistical techniques used in nonparametric and multivariate analysis. Emphasis will be on applications and data analysis using the statistical software package SAS. Prerequisite: INTS 4051 or INTS 4057.
INTS 4056 Information Management in Humanitarian Crises (4 Credits)
Accurate, reliable and timely data collection, processing, analysis and dissemination (four steps in information management) are critical for the effective implementation of both development and humanitarian programs. In humanitarian responses, there are numerous challenges to managing information in what may be a rapidly evolving situation. This course introduces students to the theory of information management and its application in the humanitarian context.

INTS 4057 Statistics for International Affairs (4 Credits)
This is a fast-paced course which serves as an introduction to basic and intermediate concepts in statistics and probability, as well as the primary methods of statistical inference. Topics include data collection, presenting data in tables and charts, summarizing and describing numerical data, basic probability, discrete probability distributions, normal distribution, sampling distributions, confidence interval estimation, single-sample and two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, simple regression and multiple regression. Emphasis will be on statistical reasoning, problem solving, computer applications (using Stata), and interpretation of results. This course is offered in the Fall quarter only. Prerequisite: Strong quantitative background and a minimum quantitative GRE score of 148 or permission of the instructor.

INTS 4058 Applied Time-Series Analysis (4 Credits)
This course serves as an introduction to time-series analysis and panel data analysis techniques. Topics include moving averages, exponential smoothing, time-series decomposition, model identification and estimation, Box-Jenkins method, ARMA and ARIMA models and VAR analysis. Panel data analysis includes fixed effects and random effects models. Emphasis will be on computer applications (using Stata) and interpretation of results. This course is offered in the Winter quarter only (and occasionally in the Spring quarter instead of Winter). Prerequisites: INTS 4051 or INTS 4057.

INTS 4087 Tch Conflict & Nuclear War (0 Credits)
This course is offered in the Winter quarter only. Prerequisites: INTS 4051 or INTS 4057. This course will build a political ecology of policy domains central to improving food security and nutrition outcomes in both global north and south. We will examine policy issues and constituencies, institutional approaches, theoretical perspectives, and empirical analyses. You will have opportunities to engage with institutional approaches through structured exercises, including a mid-term graded exercise. You will also have an opportunity to produce an independent project that will include your own policy recommendations.

INTS 4110 Food and Nutrition Security for Sustainable Development (4 Credits)
This policy-oriented course will examine structures and processes that result in varying food security outcomes across space and time. Food security outcomes reflect interactions among political, economic, socio-cultural, and physical environmental systems. These systems, which are both dynamic and permeable, give rise to particular forms and patterns of food production, distribution, and consumption, and to more or less environmentally-sustainable uses of the natural resources critical to food and nutrition security. Ultimately, food security is realized when all people within a population consume sufficient nutrients to live active and healthy lives. This normative focus on human health and well-being, as the metric by which food security outcomes will be measured, is critical to the framing of this course. Political, economic, and social institutions–positioned at scales encompassing global, national, “local” (micro-regional, community), and household–are simultaneously charged with producing food in particular physical environments and/or making food available and accessible to their populations, and with protecting environmental resources and public health in ways that contribute to nutritional components of human development. The term “political ecology” has been used to describe an analytical framework that explicitly focuses on the interactions among the structures of political economy and those of physical/biological ecologies (including human), together with the socio-cultural contexts that influence structural impacts and help to explain outcomes. This framework incorporates both an explicit navigation among scales (of power and of analysis) and a long-term perspective. Cumulatively, the readings and exercises of this course will build a political ecology of policy domains central to improving food security and nutrition outcomes in both global north and south. We will examine policy issues and constituencies, institutional approaches, theoretical perspectives, and empirical analyses. You will have opportunities to engage with institutional approaches through structured exercises, including a mid-term graded exercise. You will also have an opportunity to produce an independent project that will include your own policy recommendations.

INTS 4127 The Rise and Fall of Great Powers (4 Credits)
This new graduate course provides an in-depth look at often ignored areas of history. Learning about the rise and fall of the Roman Empire, British Empire, Russian Empire, Soviet Empire and Chinese Empire provides an excellent backdrop to understanding important historical lessons that are often downplayed in the early 21st century. The course provides a series of good works that can help students better understand the present and future developments of our century.

INTS 4134 Forever Emerging? The Developmental Trajectory of Modern Brazil (4 Credits)
Brazil has the largest population, economy, and industrial basis in Latin America. It is the seventh largest economy in the world, fifth largest country in land area, outranking the continental United States. Like the US, Brazilians are a mix of indigenous, European, and African peoples, along with subsequent inflows of Asian and Middle Eastern immigration, though race, ethnicity, and class have been interpreted with distinct cleavages and hierarchies. We approach our understanding of Brazil through the country’s former capital, Rio de Janeiro, a city of numerous complexities, wonders, contradictions, challenges, and potential. By looking at the historical evolution of this fascinating city, the course will offer students an opportunity to study the evolution of Brazil, from the colonial period to the present day, when the country has increasingly been seen as a regional economic and diplomatic powerhouse, as well as a globally emergent player. By focusing on the historical trajectory of Rio de Janeiro, in an in-depth reflection structured along textual, visual, and in-sight materials and experiences, students are invited to reflect about matters of change and continuity as well as how national socio-political trends are reflected in local contexts, thus also learning to reflect about the interpretive relationship between the micro-macro levels of analysis. Historical political and economic narratives, contemporary analysis of the country’s place in the world, films, music, architecture, guided visits to neighborhoods and local cultural institutions will be our explanatory prisms into the Carioca (Rio-based) spirit and cultural memories as expressions of national trends and trajectories. Through lectures, seminar discussions, and field studies, we explore Rio’s renowned and sometimes notorious informality, from informal housing (favelas) to language, social organization and economic activities. We also explore themes such as tourism, the history of housing policies, and the transformation of local culture into ‘national’ and ‘export’ cultures. Moreover, by looking at the urban transformations over the last 200 years, we explore Brazil’s drive to become an industrial power, as well as the new social conflicts produced by these efforts. Finally, we investigate Brazil’s contemporary culture, politics, sports, achievements, promises and continued challenges as it proceeds as a so-called emergent nation into the 21st century, while still struggling with its colonial past.
INTS 4141 Domestic/Int'l Conseq:Drug War (4 Credits)
Domestic and international policy and the impact of the drug war on both.

INTS 4142 After the Fall: Russia & China (4 Credits)
Provides analysis of the historical rise of Russia and China, and their complex inter-relationship and interaction with the United States and the world.

INTS 4147 American Govt & Pol. Making (4 Credits)
Examines governmental fragmentation affects and policies and examines how policy issues engage different segments of the government.

INTS 4151 History, Culture and Conflict (4 Credits)
An introductory course examining how and why historians develop diverse interpretations of events and periods. Methods of analyzing evidence, selecting research material, and supporting arguments are discussed and evaluated in assessments of selected historical cases. Methodological ties between the historiographic approach and social sciences including anthropology and psychology, as well as the study of gender are also drawn.

INTS 4200 Water and Sanitation in the Global South (4 Credits)
The current water governance systems are intertwined with politics and power and prioritize some groups and water uses over others. Worldwide, there are 750 million people who lack basic water access and 2.5 billion who lack sanitation access. Water is life. It sustains ecosystems, it fuels energy and industry, it enables livelihoods, it is essential for food security, health and nutrition, and it is central to many social and spiritual practices. Inadequate access to safe drinking water, sanitation facilities and hygiene practices deepens income poverty, weakens health, undermines education and exacerbates gender inequality. This interdisciplinary course will explore water and sanitation issues in the Global South. Political ecology and the hydro-social cycle will be introduced as concepts for moving beyond technical water and sanitation planning to consider how water is related to broader issues of power, politics, culture, and society. We will learn about practical and applied approaches for planning water, sanitation and hygiene (WASH) programs, discuss interactions between society and water, and critically examine constructions of water scarcity. In this process we will move between scales at the community, river basin, regional and global level. Several special topics will be explored including gender and water, multiple use water services, water privatization, water and culture, WASH technologies, sustainability, health and behavior change. This course will focus on the water needs of communities in the Global South from a perspective of social justice.

INTS 4210 Multinational Corporations (4 Credits)
The emergence of sweeping new legal rights for MNCs in relation to their foreign direct investment and cross-border trading activities under the avalanche of bilateral investment treaties negotiated in the last few decades and under multilateral conventions such as NAFTA represent what many have termed "revolutionary" changes in the nature of state sovereignty as it relates to state-investor relations. That expansion of investor/MNC rights in relation to state sovereignty has thus seemingly reached a point calling for re-examination of the nature and appropriate scope of MNC rights, as well as the nature of MNE accountability and responsibilities which are the flip side of such rights.

INTS 4215 Gender and Humanitarian Assistance (4 Credits)
In recent decades, the humanitarian system has grappled with the concept of gender and how to operationalize it in the context of humanitarian preparedness and response. Through readings, class discussions, guest speakers and assignments, students will have the opportunity to gain a better understanding of how the humanitarian system's approach is evolving in theory and practice.

INTS 4220 Political Economy of Energy & Sustainable Development (4 Credits)
The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between energy and sustainable development within the current global political economy(GPE) and Geopolitics. What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between energy and sustainable development? How does the discourse of the linkages between energy and sustainable development relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between energy and sustainable development relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among energy, geopolitics, geoeconomics, economic growth, poverty and inequalities in several different dimensions.

INTS 4221 India in the Global Economy (4 Credits)
The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between Indian economic development and the world economy within the current global political economy(GPE). What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between Indian strategy for development and sustainable development? Is the Indian strategy for development sustainable? How does the mainstream Indian development discourse relate to the underlying political economy of global capitalism? What are the deep underlying causes of inequality and poverty in India? In order to do this, we will look at the relationship between India's development strategy, energy, economic growth, poverty and inequalities in several different dimensions.

INTS 4222 Slavery and Genocide: A Comparative Analysis (4 Credits)
This course attempts to examine the similarities and differences between slavery and genocide by using comparative techniques. Since both slavery and genocide studies have definitions problems we will work toward clarity since politics has played a major role in naming events. Beyond definitions, we need to take a close look at the political economy of both slavery and genocide.
INTS 4223 Global Dynamics and Local Threats in Agricultural Development (4 Credits)

Many low- and middle-income countries in which agriculture plays a key role for development are characterized by high levels of socio-economic inequality, a mixed human rights record and a dominance of transnational corporate power in domestic agricultural export markets. At the same time, these countries face processes of environmental degradation through anthropogenic and natural drivers of change that affect the availability of ecosystem services and thus shape agricultural development and human wellbeing. This course offers an in-depth study of the political, socio-economic and social-ecological conditions for sustainable agricultural development in low- and middle-income countries. We explore the political economy of agricultural production and trade in countries that depend to a significant extent on the export of agricultural commodities as a source of foreign revenue. We examine the design and implementation of global policy frameworks, international agreements, and national strategies for agricultural production and trade, with a particular focus for the governance of natural resource use. Our goal is to assess the relevance and effectiveness of current governance structures for agriculture to respond to local-, regional- and global-scale environmental changes and socio-economic challenges in ways that address current and future human needs. Through case studies from selected agricultural sub-sectors and diverse countries from across Asia, Africa and Latin America, we investigate local strategies for natural resource use in the context of poverty, inequality, and environmental change. The course provides a comprehensive coverage of the political economy of agricultural development and an introduction to social-ecological systems analysis as a theoretical framework for interdisciplinary research in the field of sustainable development.

INTS 4224 Trade Unions in the Global Economy (4 Credits)

Trade unions are major influences in the political economy of most nations, even as they face apathetic or hostile governments and increasingly powerful multinational corporations. As globalization has created common employers across national boundaries, trade unions have struggled to establish institutions and mechanisms to defend workers and build global power. The course will familiarize students with the underappreciated role of trade unions in the global economy. Having a grasp of the subject matter is essential to anyone working in the international arena for governments, corporations, non-governmental organizations and trade unions.

INTS 4225 Civic Strategies for Fighting Extremism (4 Credits)

This course will teach students hands-on community organizing, technology and intervention strategies for action to help combat extremism. The students will spend time working directly with community and government agencies on security strategies, identifying online risks, and learning about social media strategies for intervention. Some of the skills covered include network analysis, resource management, cognitive behavior change and political psychology, public narrative, power mapping, asset-based community development, and group facilitation.

INTS 4226 Social Entrepreneurship & Global Poverty (4 Credits)

This course provides an overview of the role of social entrepreneurs, innovative small firms, and entrepreneurial NGOs in sustainable development and poverty alleviation. Market-driven strategies are increasingly important for all organizations, in government, public, or private sectors, to encourage local solutions that are sustainable and do not require ongoing subsidy. Entrepreneurial NGOs and small firms are a great source of local innovation and adaptation, identifying potential strategies that can be scaled up through partnerships with governments, social purpose organizations, or private capital. These market-driven strategies are based on a good understanding of customers, the value provided, and how to best deliver products and services to vulnerable populations in a responsible way. Further, a strong customer and market focus ensures that all social purpose organizations (both for-profit businesses and NGOs) meet customer needs effectively and develop new products and services efficiently.

INTS 4233 Realism and International Security (4 Credits)

We focus in this course on realist understandings that relate to national security—a focus on the power wielded by states and the balance of power among them. Under anarchy (the absence of central authority), wars and “rumors” of wars are the continual expectation, whether dealing with city-states in ancient Greece, Renaissance Italy, American or European states in the 18th and 19th centuries, or interstate conflicts across the globe in the 20th and 21st centuries. It is a world aptly described by Thucydides and Sun Tzu, Machiavelli and Hobbes—not to mention, among others (and with variations in their approach), Carr, Niebuhr, Morgenthau, Waltz, Hoffmann, Gilpin, Schelling and, in our time (in no particular order), Mearsheimer, Walt, Betts, Layne, Posen, Schweller, Greco, Van Evera, Snyder, Jervis, and Nye. We also take account of critics of realism (for example, Haas, Ruggie, and Ashley)—as well as those who have made their peace with it (for example, Keohane and Wendt). The central question is what does realism offer to both theorists and policy practitioners?

INTS 4234 International Security, Diplomacy and Force (4 Credits)

The course examines the ways and means of war and peace with a focus on both multilateral and bilateral forms of diplomacy. We begin with the use of force and the modalities of peacemaking in the Greco-Roman, Indian and Chinese ancient worlds. Ending wars in the “modern” period has often resulted in new constructs to maintain peace. Thus, the Peace of Augsburg (1555) and the Peace of Westphalia (1648) that ended warfare among German states established a foundation for sovereignty as cornerstone of a new state system. When post-1789 France became a “revolutionary” power, she dramatically upset the status quo. After the defeat of Napoleon in 1815, conservative powers gathered in the Congress of Vienna to restore a balance of power. The arrangements they established (dubbed the “Concert of Europe”) successfully avoided general war for 99 years. World War I (1914-18) was followed by multilateral diplomacy at Versailles and formation of the League of Nations and agreement to maintain international security through application of international law. Failure of this design in the interwar period led to another attempt after World War II (1939-45) at Yalta, Potsdam, Dumbarton Oaks, and San Francisco to establish and maintain peace not just by international law (collective security), but also through alliances (collective defense)—both under United Nations auspices. In the seven decades since, both bilateral and multilateral diplomacy have been used to restore or maintain international peace and security, also engaging in peacekeeping and arms control efforts in relation to weapons of mass destruction, confidence- and security-building measures (CSBM), space and other security-related matters on present-day national and international security agendas.
INTS 4235 Realism and National Security (4 Credits)

We focus in this course on realist understandings that relate to national security—a focus on the power wielded by states and the balance of power among them. Under anarchy (the absence of central authority), wars and “rumors” of wars are the continual expectation, whether dealing with city-states in ancient Greece, Renaissance Italy, American or European states in the 18th and 19th centuries, or interstate conflicts across the globe in the 20th and 21st centuries. It is a world aptly described by Thucydides and Sun Tzu, Machiavelli and Hobbes—not to mention, among others (and with variations in their approach), Carr, Niebuhr, Morgenthau, Waltz, Hoffmann, Gilpin, Schelling and, in our time (in no particular order), Mearsheimer, Walt, Betts, Layne, Posen, Schewler, Greico, VanEvera, Snyder, Jervis, and Nye. We also take account of critics of realism (for example, Haas, Ruggie, and Ashley)—as well as those who have made their peace with it (for example, Keohane and Wendt). The central question is what does realism offer to both theorists and policy practitioners?

INTS 4250 Global Dynamics & Local Threats in Agricultural Development (4 Credits)

Many low- and middle-income countries in which agriculture plays a key role for development are characterized by high levels of socio-economic inequality, a mixed human rights record and a dominance of transnational corporate power in domestic agricultural export markets. At the same time, these countries face processes of environmental degradation through anthropogenic and natural drivers of change that affect the availability of ecosystem services and thus shape agricultural development and human wellbeing. This course offers an in-depth study of the political, socio-economic and social-ecological conditions for sustainable agricultural development in low- and middle-income countries. We explore the political economy of agricultural production and trade in countries that depend to a significant extent on the export of agricultural commodities as a source of foreign revenue. We examine the design and implementation of global policy frameworks, international agreements, and national strategies for agricultural production and trade, with a particular focus for the governance of natural resource use. Our goal is to assess the relevance and effectiveness of current governance structures for agriculture to respond to local-, regional- and global-scale environmental changes and socio-economic challenges in ways that address current and future human needs. Through case studies from selected agricultural sub-sectors and diverse countries from across Asia, Africa and Latin America, we investigate local strategies for natural resource use in the context of poverty, inequality, and environmental change. The course provides a comprehensive coverage of the political economy of agricultural development and an introduction to social-ecological systems analysis as a theoretical framework for interdisciplinary research in the field of sustainable development.

INTS 4270 Gender, Security, and Human Rights (4 Credits)

This course examines the gendered dimensions of security and human rights, with a particular focus on periods of violence and insecurity. Gender equality has been at the heart of human rights and development efforts over the past half-century. Governments and multinational organizations have created legal and normative instruments to address the ongoing marginalization of women and girls around the world, such as the 1979 Convention on the Elimination of Discrimination Against Women (CEDAW) and the 1995 Beijing Platform of Action. More recently, these same actors have turned their attention towards the importance of “gendering” discussions of international security. For instance, UNSCR 1325, passed in 2000, is a landmark legal framework that aims to secure women's inclusion in post-war peace processes. Despite these formal achievements, gender-based violations and insecurity continue persist around the globe. Moreover, there remain profound gaps between legal provisions aiming to promote women’s equality and the lived experience of women on the ground. Drawing from critical feminist analyses, this class will introduce you to the concepts of gendered rights and security, challenge you to think about intersectionality as a lens through which to understand “rights,” and increase your understanding of the contemporary human rights and security crises unfolding around the world today.

INTS 4280 Contemporary Peace Operations: Disarmament, Demobilization, & Reintegration (4 Credits)

Disarming, demobilizing and reintegration (DDR) of former fighters in the aftermath of conflict is as old as war itself. Tens of thousands of soldiers were voluntarily DDR-ed during the Roman-Etruscan wars in the 3rd century BC and virtually every conflict since. In fact, no fewer than 60 DDR initiatives have taken place globally since the UN and major bi-lateral engagement the late 1980s. While most were launched in the wake of international or civil wars as part of an internationally mandated peace support operation, shifting conflict dynamics and emergent caseloads over the last decade continue to alter the landscape in which DDR operations are implemented. Whether occurring in a humanitarian crisis, as an outcome of a peace accord or during active conflict, DDR represents a voluntary civilian led non-violent policy option for peacebuilding and human security for the international community. Often applied in a post conflict environment, the global caseload in 2014 was estimated at approximately 250,000 DDR candidates spread across more than 20 planned or ongoing DDR operations. Presently, DDR targets persons in combatant and non-combatant roles from statutory armies and non-state armed groups. It is not uncommon for DDR to serve as tool for security sector reform and transformation efforts aimed at downsizing and legitimizing armed forces under civilian control. In doing so DDR is a unique policy tool that enhances the resilience of local, national and regional actors, by addressing various peace consolidation issues spanning the civilian and security sectors. The course will utilize illustrative global case studies to examine 3 distinct ‘generations’ of DDR since the 1980s. Tracking the evolution of DDR in contemporary peace operations, the course will demonstrate the critical role DDR continues to play in peacebuilding and recovery in settings as diverse as the Balkans and Philippines where DDR is used to facilitate the ‘normalization of relations’, to the Sahel, the Horn of Africa, South America and the Middle East where DDR addresses mercenaries and terrorism. DDR’s current role in stabilization efforts in the Ukraine, Afghanistan and The Sudan will be juxtaposed with political stability and development issues in Central America and Southern Africa where gang violence and veteran’s concerns are related to DDR outcomes. The first generation of DDR occurred in the wake of the Cold War. Typified by verifiable caseloads under unified command and control, these occurred regionally in Latin America and Southern Africa. In the mid-2000s, 2nd Generation policy approach emerged in response to the perception by the international community that DDR, and reintegration specifically, was not achieving intended development aims. This led to a broad range of initiatives targeting communities as a means to facilitate enabling conditions for DDR. Presently, DDR is undergoing a 3rd shift. The monetization of DDR is creating a cottage industry for former fighters traveling across international borders rejoining armed groups as mercenaries. At the same time peace operations are receiving DDR mandates in areas where conflict is ongoing and insurgent groups slated for DDR are associated with ‘terrorist’ organizations complicating the legal and political environment.
INTS 4290 Gender, Environment, and Development (4 Credits)
This course is concerned with how and why gender matters in producing environmental, economic, and social outcomes of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of environmental and related economic planning. Beyond these practical implications of gendered environments, the course will engage theoretical and ideological underpinnings for the gendered structures of environmental control and management encountered in a wide range of physical environments.

INTS 4301 Introduction to Political Theory (4 Credits)
Political theory analyzes and interprets the foundations of political life and evaluates its principles, concepts and institutions. It is fundamentally concerned with the normative political relationships among human beings that revolve around the organization and basis of government. This course provides an introduction to Western political theory through key texts and thinkers that are essential reference points in the social science literature. The focus will be on the Enlightenment tradition and the approach will be geared toward understanding how the seminal texts and thinkers of this period have shape--and continue to shape--our understanding of political ideas and norms. This course will also have a pragmatic component, where the books and ideas under consideration will be applied to contemporary international debates and issues. Please note that this course is geared toward students without a strong background in political theory. No previous knowledge is required or assumed. All that is needed is an open mind and willingness to work hard.

INTS 4303 Econometrics for Decision Making I (4 Credits)
The first course in a two course sequence in Applied Econometrics. Introduces basic probabilistic techniques for the quantitative analysis of economic and social data and their application to international public policy decision making. Prepares students to: compile and analyze data sets; build and test regression models; interpret and critically evaluate applied econometric studies; and conduct their own applied econometric research using computerized statistical packages. Prerequisite: INTS 4051 or INTS 4057.

INTS 4310 International Trade (4 Credits)
An intermediate course analyzing causes and consequences of international trade. Classical, neo-classical, and product- cycle models included. Topics include international specification, terms of trade of developed and less- developed countries, distribution of gains from trade, instruments and uses of commercial policy, nominal and effective protection, and theory of customs unions and economic integration. Prerequisite: grade of B- or better in undergraduate course in Introductory Microeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for INTS 4310 should first complete INTS 4536.

INTS 4318 Applied Research in International Economics (4 Credits)
The purpose of this course is to critically review the literature in political economy and introduce students to some recent empirical work to analyze data and test relevant theories and hypotheses in political economy, IPE and related social science disciplines. The course provides students with the tools necessary to conduct and critically evaluate empirical analysis in these fields. Two data sets are handed out during the course and students analyze them. The final paper deals with a substantive empirical issue.

INTS 4319 Governing the Global Economy: The Effectiveness of Multilateral Economic Institutions (4 Credits)
Multilateral Economic Institutions are the primary mechanisms by which the global economy is governed when it is governed at all. This course examines the institutions and theoretical foundations that are at the center of this system of global governance by studying their history, sources of authority, and ideological underpinnings. Simultaneously, each multilateral economic institution/regime is examined from an empirical perspective in order to determine the impact of these institutions and whether or not they are accomplishing their respective tasks in the governance of the global economy. The course is both theoretical and empirical and there is a bias to the course - it is that the MEIs are among the most written about and least understood institutions in the global economy. In addition, the course also examines the practical reality of multilateral economic negotiations through an examination of recent attempts to govern segments of the global economy; including international trade, finance, and climate.

INTS 4320 Intl Monetary Relations (4 Credits)
An intermediate course examining history of the monetary system, foreign exchange rates, balance of payments analysis, and adjustment processes under different exchange systems, current status problems, and prospects for reform. Prerequisite: grade of B- or better in undergraduate course in Introductory Macroeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for 4320 should first complete INTS 4536.

INTS 4324 International Political Economy (4 Credits)
The course examines 3 contrasting visions of international political economy: economic security, trade and finance.

INTS 4327 Advanced Issues in International Studies (4 Credits)
The purpose of this course is to train students in advanced research in the fields of International Relations and Comparative Politics. The course achieves these ends through an investigation into a particular empirical theme (of the professor’s choosing in any given year). While due emphasis is placed on the major findings of the specified literature, as much or more attention is given to the research design, methods and evidence of the selected literature. Students will learn what constitutes a falsifiable hypothesis and what the alternatives to falsifiability are, examine various scholars’ methods of operationalization and measurement, consider the merits of treating rival explanations to one’s own, and judge the veracity of findings by these and other criteria. In addition, students will apply such knowledge gained by writing their own original research paper during the quarter. The course aims to assist primarily PhD candidates in their abilities to carry out research, to assess the quality of other scholars’ research, to teach in the fields of International Relations and Comparative Politics, and to excel in their comprehensive exams. Please note that this course is offered only once every other year. Thus PhD candidates must enroll in the first year it is available in their course program.
INTS 4330 International Business Transactions (4 Credits)

INTS 4332 Data Analysis and Development (4 Credits)

INTS 4333 International Project Design and Monitoring (4 Credits)

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Design and Monitoring course (formerly International Project Analysis) is to provide students with an appreciation for the myriad of considerations in designing and monitoring an international development intervention and exposure to conventional and unconventional methods and means for doing so. The international project cycle begins with identifying an intervention to address a development impediment or opportunity faced by a target group. A development intervention typically falls into a sector or thematic area, such as education and health care, and it is generally directed towards physical, human, institutional/legal capacity building, or a combination of them. Projects can be singular in scope, such as building a new primary school, or broadly scoped to mitigate causes of poverty, such as the Millennium Development Villages project, but they all should be a unique endeavor with a beginning and an end. Much of the physical development today is supported by the private sector or state sponsored organizations, with less support through traditional foreign aid unless it is a major reconstruction effort like in Afghanistan. In this course, students will learn that a project proposal should be designed in concert with the beneficiaries to be relevant, feasible, and supported by their needs, but also recognizing their absorption capacities. Such a project proposal should ideally have gone through a systematic analysis of factors that will affect its design and management of risk, including economic, financial, environmental, technical, and social factors, as well as special safeguard areas. Students will also learn about the continued need for project proposals to define the underlying theory of change, assumptions, and logical framework for linking inputs, activities, outputs, outcomes and ultimately desired impacts. Establishing a performance management plan for the project that defines, among other things, the metrics and milestones for monitoring the process is an essential component of most project proposals. However, students will learn that adherence to plans is challenging under complex development conditions.

INTS 4339 Microfinance, Financial Inclusion and Inclusive Markets (4 Credits)

This course provides an overview of why microfinance and financial inclusion are key strategies and platforms to build sustainable development and inclusive markets and how the financial inclusion ecosystem supports development outcomes through direct impact of microfinance institutions (MFIs) and systems change. Microfinance and financial inclusion are important ways to improve economic choices and household resilience among the poor, providing access to credit, safe savings options, payment systems, and even micro-insurance to help the poor manage risk and financial uncertainty. They are also important tools to create local, inclusive markets and economic opportunity by facilitating micro and small business development and access to development assets like clean energy, clean water, agricultural inputs, education, and healthcare. We will focus on lessons and insights from microfinance’s evolution into financial inclusion, how digital finance and other technology innovations are creating new opportunities and risks in development, and the shared characteristics of highly effective microfinance institutions and NGOs that integrate microfinance into their development strategies.

INTS 4341 Illicit Markets in the Americas (4 Credits)

This course applies the understandings of International Political Economy (IPE) to the study of illicit market activity in the western hemisphere. While sociologists, criminologists, legal scholars and law enforcement agencies have all contributed substantially to this area of study, IPE has only recently been applied. So what can this approach contribute? Through IPE, we can place illicit market activity within the larger structure of trade and monetary relations, the rise of the informal sector and the existence of economic and other inequalities in particular regions. We can consider the nature and impact of North-South relations and the process of structural adjustments as advised by international financial institutions. Further, we can evaluate the overall function and effectiveness of law enforcement, governing institutions and international organizations in controlling illicit market activity. Finally, through IPE, we can consider the ideational context of participation in illicit market activity.
INTS 4342 Project Management (4 Credits)
It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the Project Management course is to expose students to right- and left-brain approaches to managing the knowledge areas of project management, such as time and cost management, as well as approaches used by project managers and their teams. This course concentrates on the implementation and completion/transition phases of the international project cycle. The implementation phase commences after stakeholders approve a project proposal—translated into a project charter—from which a detailed project management plan is developed to execute the project. Project managers rely, to a large extent, on internationally recognized management approaches to move workflow smoothly among project phases, allocate project tasks effectively, efficiency track project milestones, and make adjustment for inevitable and often uncontrollable project delays and cost overruns. The completion/transition phase ends the project and transfers control from the project team to the operational team, preferably through a defined exit strategy. The course covers the knowledge and skills needed to meet the educational requirements for certification by the Project Management Institute (PMI). PMI serves practitioners and organizations by providing standards that describe leading practices, globally recognized credentials that certify project management expertise, and resources for professional development, networking and community. PMI credentials certify your knowledge and experience in project management so you can be more confident at work and more competitive in the job market. Several other organizations will be mentioned that also provide certification, but all share in common required education hours, years of experience, and passing a professional examination. Students in the course will exhibit their new knowledge and skills by joining small teams to prepare a professional project management plan for the selected development project charter and through individual examination.

INTS 4345 The Art of Forecasting (4 Credits)
Course defines forecasting techniques and expert systems. Will cover Delphi techniques, expert systems, modeling and economic forecasting.

INTS 4349 Comparative Public Policy and Finance (4 Credits)
Course aims to provide in-depth treatment of the question "why do size, form, financing, and distributive outcomes of government differ so greatly across nations?.

INTS 4350 Economic Development (4 Credits)
This course combines an introduction to the theories and key issues in economic development with a rigorous analysis of empirical evidence from low- and middle-income countries in Asia, Africa, and Latin America. The course enables participants to develop an in-depth understanding of diverse local, national, and regional patterns of economic development, and to critically assess the design and potential social and economic consequences of global policy frameworks and national economic development strategies. The course starts with providing an outline of global trends in poverty, inequality and growth, including a discussion of key concepts and ways of measuring economic development. Part I focuses on classical, neoclassical, and institutional theories of economic development. Linkages between the intellectual basis of different theories and major political currents and ideologies, and the associated policy design, are assessed. In part II, core themes in economic development are explored, including agriculture, trade, industrialization, labor, and the environment. The analysis of diverse country studies illuminates how historically specific social, political, and institutional conditions shape development outcomes. In part III, we examine the design and implementation of economic development policy through an analysis of international aid agendas and institutional modalities of ODA, with a particular focus on emerging donors. We investigate the strength and weaknesses of national economic development policies through an in-depth study of selected country case studies. Please note that a mastering of quantitative economics is not a requirement for this course.

INTS 4355 Finance and Development (4 Credits)
An advanced course which examines the relationship between financial system organization and economic performance. The political economy of financial innovation, liberalization and globalization, state-finance-industry relations, micro-lending, stock markets and regional financing are discussed with reference to Latin America, Asia and African countries.

INTS 4362 Gender and Health (4 Credits)
INTS 4363 Discrimination, Minorities, and Rights of Indigenous People (4 Credits)
INTS 4364 Global Poverty and Human Rights (4 Credits)
This course explores the many dimensions of global poverty and human rights and well-being of people around the world. Three particular areas are emphasized and explored in detail. The first is the exact dimensions and extent of globalization. The second is the exact nature of another complex thought called poverty. The third area explores the connections between globalization, poverty, and human rights. After rigorous discussion of the conceptual foundations, we focus on the U.N. millennium development goals for poverty reduction in particular. At the end we will be able to explore the analytical foundation of alternative policies, strategies and evaluate these for formulating alternative strategies addressing human rights issues and global poverty reduction.

INTS 4365 Global Health Affairs (4 Credits)
Introductory survey class for all students interested in intersection of international affairs and global health and security, development and economics.
INTS 4368 HIV & AIDS in International Affairs (4 Credits)
Upon completion of the course, students will understand (a) the concept of global health security; (b) HIV/AIDS as an epidemiological phenomenon; (c) the political, economic and social contexts of HIV/AIDS in specific regions of the world; (d) HIV/AIDS as a threat to security and gender; (e) security considerations of HIV/AIDS impacts in development and as a human right.

INTS 4369 Political Economy of Global Poverty & Inequality (4 Credits)
The main purpose of this course is to understand the underlying causes of inequality and poverty in the world. In order to do this, we look at the relationship between economic growth, poverty, and inequalities in several different dimensions. First, the process of sustainable growth itself is analyzed. Second, the implications of different types of growth for income distribution and poverty are studied. Finally, the implications of such inequalities for human welfare in developing economies in particular are studied. After an initial exploration of the income-based measures of poverty and inequalities we focus on the more recently developed social capabilities approach developed by Amartya Sen and others.

INTS 4370 Political Economy of Globalization (4 Credits)
An introductory course on the nature of global economic integration in the postwar period, including contesting theoretic perspectives, and several applied issues and policy dilemmas such as the evolving nature of firms (e.g. globalization of production), the "new international of labor," and the status of national sovereignty/policy autonomy in an integrated world economy, politics and markets, and currents themes in political economy.

INTS 4372 Great Books in Political Economy (4 Credits)
This course investigates several contemporary approaches to Political Economy, ranging from institutionalist to Marxist, anti-essentialist, and (postmodernist) feminist thought. Rather than attempt to survey quickly a lot of literature, we carefully read a limited number of influential (and provocative) texts that present a range of perspectives with which most students are largely unfamiliar. These are very challenging texts, and students must be prepared to spend a good bit of time on the assigned readings weekly.

INTS 4374 The Ethical Foundations of Global Economic Policy (4 Credits)
This seminar course explores the contesting ethical theories that underlay contemporary debates over global economic policymaking. We explore the ethical foundations of neoclassical, Austrian, institutionalist and Marxian and economic theory (including utilitarianism, welfarism, libertarianism and egalitarianism) in order to better understand why and how these diverse economic theories generate distinct policy prescriptions. For example, we examine the controversy over "free trade" versus "fair" trade that is now at the center of policy debate in the U.S. and across the globe, and explore the contesting ethical theories that inform this debate. This is a reading intensive seminar. We examine central works of Amartya Sen, Milton Friedman, Robert Nozick, Michael Walzer, and other leading economists and political theorists.

INTS 4378 Terrorism, Transportation, and Homeland Security (4 Credits)
This course is designed to introduce students to the critical role that transportation plays in homeland security. Transportation is one of the most important critical infrastructures because society and economy are totally dependent upon the efficient movement of freight and people. Not surprisingly, terrorists, on numerous occasions and in many countries, have launched attacks against aircraft, ships, railway stations, airports and other transportation facilities. In the U.S. the devastating 9/11 attack proved to be a turning point and led to fundamental changes in the struggle against terrorism, including the largest governmental reorganization in many decades, the creation of the Department of Homeland Security and its Transportation Safety Administration. In this course, students analyze the degree to which a safe and secure transportation system for goods and people has emerged. Accordingly the course deals with such topics as the contemporary structure and role of transportation, the nature of the terrorist threat, including the potential of the weapons that are or might become available (ranging from WMD’s to suicide bombers to cyber-attacks), the difficulties inherent in safeguarding such facilities as airports, rapid transit, railroads, and seaports, the efficacy of the policies that have been implemented and the kinds of changes that might further enhance transportation and homeland security.

INTS 4379 Gender and Development (4 Credits)
This course is concerned with how and why gender matters in outcomes and impacts of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of development planning. Beyond these practical implications, the course engages theoretical and ideological underpinnings for the gendered structures of economic, political, and social power encountered in a wide range of economic and social development contexts. Throughout the quarter, the class examines interactions among structural and cultural (including ideational) factors that together comprise and construct gendered environments. Structural and cultural factors are, at the least, mutually reinforcing, and may be mutually constitutive. The class interrogates the ways in which each set of economic and social transformations broadly encompassed within a human-rights or human-development approach to international development. The class also engages interacting dimensions of change, including economic, social, political, physical environmental, and human biological dimensions. The class explicitly examines all interactions across scales from global to local. If we were looking for a label for this approach, it could be called “gendered political ecology.” We could also use a term coined by Diane Rocheleau and others, “feminist political ecology,” which suggests the need to examine the responsibilities, freedoms, and control of resources, together with the varying forms of agency, strategy, and tactic deployed by women (often in partnership with men) to redress these inequalities. The class considers numerous cases from the Global South, and some from the Global North. These case studies immerse us in the diversity and complexity of gender and development interactions and in the “grounded agency” (Radcliffe 2006) through which women and men attempt to secure livelihoods – that is, “making a living and making living meaningful” (Bebbington 2000) – to enjoy long and healthy lives, and to participate in full citizenship. These cases also illustrate myriad patterns of gender construction across ethnicity, class, age, marital status, and other differences among women and men. This is a policy-oriented course. The class explores the ways in which the gendered division of labor and resources, and the socio-cultural construction of masculinities and femininities, influence perceptions, formulation, and implementation of development policies and practices. The class traces the differential impacts of development policies and initiatives on women, men, and gender relations in the developing world as well as efforts to target women through more gender-sensitive development initiatives. Ultimately, this course considers how ideologies and institutions of global development might yet enable women’s empowerment and facilitate equity in a deeply unequal and interconnected world.
INTS 4384 Middle East and U.S. Security (4 Credits)
The course will examine current US strategies toward the Middle East, terrorism, and how Homeland Security in US will respond.

INTS 4386 Transnational Migration in the Americas (4 Credits)
The course examines movement of various nationalities from other nations into North, South and Central America.

INTS 4391 Financial Management and Fundraising of Non-Profits (4 Credits)
This course will introduce students to the legal, governance and financial structures that enable non-profit organizations to function effectively. It will also provide a practical orientation to financial management issues, such as budgeting, financial reporting, and independent audits. Finally, a comprehensive presentation will be given of the fundraising methods needed to sustain the viability of non-profit organizations. These methods include: annual campaigns, direct mail, special events, major gifts, corporate fundraising, foundation grants, and planned giving. The course combines exploration of the general conceptual issues with an emphasis on practical "how-to's" and skill building.

INTS 4394 Non-Profit Management Issues & Techniques (4 Credits)
Nonprofit management issues and techniques looks at current NGOs and issues in working with corporations.

INTS 4396 Education and Development (4 Credits)
Education is a major component of the human capital. It is both an indicator and a driver of an improved quality of life. Developed economies have already achieved high in terms of the average education of their populations. Most of the middle income and some low-income countries have also succeeded in enrolling a high percentage of their children in elementary schools, thanks to the internationally coordinated emphasis in this sector in the sixties and seventies of the last century. On the flip side, some of the developing regions are still struggling to provide basic education to a large share of their school age population. Research on economic growth and development has established a close connection between the economic performance of a country and the level of education of its population. These results have prompted a resurgence of focus on education in the global development agenda. From the Jomtien conference on Education for All (EFA) in 1990 to the Millennium Declaration, the world community has set targets on universal primary and gender balances at the higher levels of education. Despite the thrust on national commitment on education, supported by international efforts like the EFA/Fast Track Initiative, there still remains some inertia and uncertainties on issues like equity of access along different dimensions of deprivation - gender being an important one, balancing the demand and supply of education, the relative importance of basic education for capability creation and social cohesion versus mid-level education for knowledge diffusion or higher education for knowledge generation. Discussion of these issues in a regional comparative context is important in understanding and suggesting education policies for developing countries. This course is primarily intended for students who have a broader interest on human capital development, and specific interest on educational policies and their outcomes. Students with a general interest on development policies and developing economies would also find the course beneficial. It is expected that, after actively participating in the course, the students gather or enhance their understanding of the major education policy issues and debates in the context of developing countries. Students will also identify the best practices by analyzing the national education policies of some of the high performing countries and regions in the developing world. Students use this knowledge to examine the national and international education policy initiatives and develop their own recommendations as necessary.

INTS 4397 The Environment, The Economy, and Human Well-Being (4 Credits)
In this course we will explore the role of the environment plays in society and the determination of human well-being, and how this can be addressed from an economic perspective. A core premise of the course is that the human economy is embedded within the broader context of human society, which in turn is embedded within a natural environment. The natural environment provides a variety of goods and services, which, through interactions between the environment, individuals, and society, contribute to human well-being. Some of these services are directly used by people. Others contribute indirectly by allowing for the continued provision of other services. As such, any discussion of human well-being and development that ignores the natural environment is inherently problematic. We will specifically adopt an economic perspective, but one that goes well beyond that of conventional neoclassical economics.

INTS 4399 Issues in Global Economics and Financial Security (4 Credits)
This course is for Korbel in DC participants only. The course discusses global economic and financial security issues through the prism of the current crisis and its aftermath. We begin by developing the analytical framework and then applying it to key countries/regions. We consider the causes, the policy responses and prospects. We look at ways of ensuring global monetary and financial stability, including appropriate policies to ward off financial crises and asset prices bubbles. Other key topics, including food and energy security and the role of finance in promoting development, are also discussed as time permits. The focus is on applied economics and finance, and their importance as analytical tools in policy discussions on economic security and development. This course is less narrowly technical, more policy and political economy oriented, but nonetheless appropriate for students concentrating in global markets, development, finance and trade. These are a few guest speakers on special topics, in addition to answering questions about career choices and professional development.

INTS 4404 Cities, Security, and Health (4 Credits)
This course will present a framework to analyze the impact of urbanization on human development and security in a comparative context of major urban centers in the developed and developing world. It will provide a practicum for utilizing cross-disciplinary methods and perspectives to address specific challenges to urban and human development. We will examine urbanization through a framework of human development, environmental health and security, and explore how public policy and planning can create short- and long-term impacts on multiple outcomes.

INTS 4423 Introduction to Epidemiology (4 Credits)
Decisions and policy related to global health are based on data from various disciplines such as demography, medicine, and epidemiology. Therefore, it is crucial to correctly understand and interpret what health data and the data in general tell us. This course provides the knowledge and skills required to critically assess data, and understand both strengths and limitations of data and research. This course covers the basic principles and concepts of descriptive and analytic methods in epidemiology and their application to research and practice in public and global health.
This course introduces the political economy of sustainable Development in sub-Saharan Africa (SSA). It uses a multidisciplinary approach that draws on literature from development economics, international relations, comparative politics, sociology, and history, as well as a broad range of country case studies. We engage with the main theoretical and empirical debates on sustainable economic and human development in SSA and examine a diverse range of country case studies. The topics covered include past and current political and economic conditions for economic growth and the improvement of human welfare levels, sustainable agricultural development and governance of natural resources, increased resilience - socially and economically - to rapid environmental change, and the role of foreign aid in African development. We explore the region's integration into the global political economy and examine the role of the state in Africa's development today. The course helps students to understand the major development challenges facing African societies today by illuminating patterns as well as diversity in development trajectories across the region.

INTS 4428 Political Economy of Human Rights (4 Credits)
What does one mean by human rights? What can be the political economy of such rights? These are the two central questions that we will explore in this course. The goal is to understand the underlying social, political and economic processes that led in an evolutionary sense to the present human rights discourse. The nature and implications of economic rights will be given special attention. In particular, the implications of such rights for human wellbeing in both advanced capitalist and developing economies will be studied. The social capabilities approach to rights developed by Amartya Sen and others will be extended to the understanding of human rights.

INTS 4435 Health and Development (4 Credits)
Looks at how health status of populations affects culture and environment, and also how successful development affects health.

INTS 4437 American Public Opinion & Foreign Policy (4 Credits)
This course examines American public opinion and its impact of foreign policy. The course begins with an investigation of what is public opinion in general and how it is collected, analyzed and used. The primary sources of American public opinion data and analyses are identified. The course proceeds to outline the controversies of American public opinion related to foreign policy decision-making using historical perspectives and the most recent challenges from the first Iraq War to the Arab Spring. Although foreign policy is often a secondary issue for the public compared to domestic issues, in recent times it has been mostly responsible for the transition from a Republican-dominated era to the Democrats' ascendance. A series of principles that have informed practitioners and foreign policy experts concerning American opinion related to foreign policy is examined and affirmed or debunked. Also, media and its persuasive power in opinion formation are considered. At the conclusion of the course, students should be familiar with a selection of foreign policy challenges that America has confronted in the modern era, the role of public opinion in the national decision-making and the existence of guiding principles of public opinion and their exceptions.

INTS 4438 International Public Opinion and Foreign Policy (4 Credits)
This course examines international public opinion and introduces the major international opinion trends that impact foreign affairs. The course first reviews international public opinion worldwide, then by major regions and finally a selection of leading countries. The theoretical question is how public opinion influences foreign policy in countries around the world, and if and when it does, under what conditions. Also, how international opinion affects American foreign policy, including the views of foreign publics toward America and its policies, is also examined. The course begins with an investigation of the history of collection and diffusion of international survey research, the quality of the data and the techniques used to collect it. The relationship of public opinion research and democratic government and media freedom is examined. The second part of the course outlines some of the public opinion benchmarks, their variations and similarities among countries and regions, and their change over time. A variety of the best sources of opinion data are used. Benchmarks include: level of satisfaction with the direction of own nation; satisfaction with and preferences for form of government; satisfaction with and preferences for economic system, the role of government intervention and entrepreneurial values; nationalism and approach to neighbors; attitudes toward Americans, American leadership and foreign policy; and impact of cell phones and Internet on opinion formation and collection. The course's orientation is both from an American foreign policy perspective and from the perspective of key international organizations, such as the UN, OAS, EU, etc. At the conclusion of the course, students should be familiar with the history and sources of international public opinion research, the major similarities and differences in international and regional public opinion, and the impact that it has on both American and international, multinational organization foreign policy decision-making. When available, there are guest speakers concerning the impact of public opinion on foreign policy decision makers.

INTS 4447 Making of Chinese Foreign Policy (4 Credits)
This seminar course examines and analyzes the making of foreign policy in China, a rising power in the 21st-Century. We look at and identify major driving forces behind China's foreign policy-making, including ideological sources (historical legacy, strategic culture, communism, and nationalism), domestic and institutional sources (foreign policy making institutions, elite politics and key players), and international sources (international system and regimes). We also examine China's strategic relations with major powers and its Asian-Pacific neighbors. This course is aimed to equip students with sophisticated understanding of the ongoing debate about the role that a rising China has played and will play in world affairs.
INTS 4450 Democracy and Militarism in Latin America (4 Credits)
Many note that even as democratization has taken place throughout Latin America, there has been a persistent and evolving role for the military, police and private security forces in many cases. The purpose of the class is to explore this apparent contradiction by examining the various internal and external pressures that have come to bear on these societies. Through approaches derived from comparative politics and international political economy we study domestic factors such as interest groups, political parties, social movements and governing institutions on one hand, and the role of international relations and organizations on the other. From this standpoint, the state becomes a mediator of internal and external pressures and is shaped by these pressures in turn. In the first half of the class, we specifically apply institutions, political realist, class analytic and market globalization perspectives to the study of the military. In the second half, we look at the interplay between democratic development and security issues in a changing global environment. This includes a study of the nature of democratization in Latin America, so heavily applauded by scholars, politicians and others, the impact of the truth and reconciliation process that emerged after the bureaucratic-authoritarian era, and the role of civil society and international organizations. In the final part of the class, we turn to the issue of citizen security amid high levels of crime, gang activity, and drug trafficking with a focus on Central America.

INTS 4453 Political Economic Development in Latin America (4 Credits)
In the first five weeks of the class we consider various theories of political economy. These include dependency, hegemonic stability, class conflict, neoclassical economic theory, and the study of institutions and international regimes. Each approach is illustrated through and examination of a historic issue in development - patterns of land ownership, the role of the military, the rise or revolutionary politics, neoliberal development and the promotion of democracy. During this time, students are asked to choose a theoretical framework as a foundation for the required research paper. A term paper prospectus including a description of the framework is due week five. In the second five weeks of the class we consider specific topics in political economic development in the last three decades or what is often called the "global era." These topics include the emergence of "uneven" development, the rise of social movements and role of civil society, transnational migration, the rise of illicit networks of trade, and U.S. foreign policy considerations. Students are encouraged to draw from this or closely related material for the subject matter of the research.

INTS 4459 Global Business, Governance & Corporate Social Responsibility (4 Credits)
In an increasingly globalized world, civil society, states and businesses are trying to discern how to govern business conduct across the borders of nation-states. Many of the issues our society faces today—global financial crises, environmental degradation, and corruption, to name a few—are impossible to tackle within a given country. This course will dive into contemporary global governance mechanisms to better understand the opportunities and challenges that states, business, and civil society face when in engaging with issues such as global financial crises, labor standards, respect for human rights and the environment.

INTS 4460 Politics of China's Modernization (4 Credits)
After more than a century of decline and stagnation, China is reemerging as a great power in the twenty-first century. China's rise to the glorious has never been easy and still faces many changes in the year ahead. This course is designed to provide students with a comprehensive understanding of China's rise in the context of its political development. We examine how revolution, nationalism, communism and liberalization have all affected the development of modern China with a focus on the political dynamics of the People's Republic of China (PRC) and the politics of post-Mao economic and political reform. We start by analyzing the rise of the Chinese Communist Party and its state and nation building efforts in the early years of the PRC and move on to examine the Mao's failed socialist transformation and political campaigns (the Hundred Campaign, a Great Leap Forward, and the Cultural Revolution). The remainder of the course explores political dynamics of post-Mao economic and political reforms and the prospect for a democratic China. This course aims at equipping students with an analytical perspective for understanding contemporary Chinese politics.

INTS 4465 Population and Society (4 Credits)
Population can play a key role in defining the fates of societies, yet Auguste Comte's notion that "demography is destiny" has been subject to two centuries of oversimplification, misinterpretation, and manipulation. This course seeks to reverse key misconceptions and open up new avenues of inquiry through an in-depth look at the key elements of population - population size and growth, demographic events, and population structure - and their relationship to development, security, health, the environment, and human rights. The course begins with a look at theories on the relationship between population and the fates of societies from Malthus to Marx to the present day. In doing so, we move from thinking of population change in aggregate to considering the impact of three demographic events - birth, death, and migration - that occur according to highly measurable and predictable age and sex patterns. Armed with a powerful conception of demographic change as a product of population structures and events, we explore the implications of demographic shift and long-term demographic structures for national and global outcomes under a range of political, economic, and social conditions. We will use case studies to address salient issues such as the limits to the human life span; prospects for reversing or mitigating the effects of very low fertility; the consequences of coercive solutions to population control; prospects for global migration; and the impact of HIV/AIDS on society.

INTS 4468 Politics of Development (4 Credits)
Course explores political factors and parties which affect developing nations and hinder new development.

INTS 4478 Donald Trump, Democratic Decline and Authoritarian Populism (4 Credits)
To affirm that on a global level, liberal democracy is declining and authoritarian populism is ascendant, is to state the obvious. This confirms a trend that Larry Diamond predicted ten years ago about a “democratic recession” that shows no sign of abating. What is most intriguing and in need of explanation is the decline of democracy and the rise of authoritarianism in liberal societies of the West, where democracy has long been established and consolidated. According to the 2018 Democracy Index (published by the Economist Intelligence Unit), the United States in the era of Donald Trump, is better described as a “flawed democracy” rather than a “full democracy.” Similar trends are discernible in Europe, Latin America and Asia. How can we explain this development? What social conditions have produced this outcome and what are the implications for world order and the study of international affairs? Can the slide toward authoritarian populism be reversed? We will examine these questions theoretically, historically and comparatively.
INTS 4483 Practical Applications in Global Health (4 Credits)
This course is designed for students interested in a career in Global Health with a focus on low resource settings including humanitarian settings. This course focuses on analyzing and developing solutions to global health problems in a systematic and creative way. Students are introduced to a problem-solving paradigm and, working in small groups, apply this model to a global health issue of interest to them. In addition, we cover other critical issues that need to be considered in addressing global health issues including equity, social determinants, and health systems as well as leadership, innovation and working in multidisciplinary teams. At the completion of the course, students should be able to: apply a methodical approach to problem solving in global health; analyze the range of factors that contribute to global health problems and understand the importance for finding solutions; examine critically the implications of policy or programmatic solutions to global health problems; develop and present a program proposal.

INTS 4484 Agriculture and Sustainable Development (4 Credits)
This course provides an overview of world agriculture and an introduction to agricultural populations, politics, policy paradigms, and institutions. It contain modules in: the history of agricultural production for economic growth and food security; global distributions of (1) agricultural production regimes, (2) land (including historical and contemporary “land grabs”) and other productive factors, and (3) uses of agricultural products for food, fuel, feed, fiber, and agro-based construction materials; effects of agricultural trade on economic growth, livelihoods, and food security; relationship between humanitarian food aid and agricultural production and food security; social organization of agriculture and related productivity and human development issues, with special attention to gender; environmental constraints to agricultural sustainability and agricultural constraints to environmental sustainability (climate change, water demands and conversation, agricultural energy production and consumption, causes of soil loss and degradation); technological change and innovation in agriculture; and culture and agriculture.

INTS 4485 International Trade and Economic Negotiations (4 Credits)
This course is for Korbel in DC participants only. The purpose of the course is to explore the challenges confronting international trade and economic policy, as well as current negotiations designed to address these circumstances.

INTS 4492 Health and Humanitarian Aid (4 Credits)
According to the World Health Organization, “Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.” In order to address health in humanitarian settings we must therefore respond to a range of needs and consider the diversity within affected populations. In this course, students will have the opportunity to explore some key sectors of humanitarian aid and how they relate to health. By following a specific ongoing crisis throughout the quarter, each student will have the opportunity to gain a better understanding of the particular challenges inherent in humanitarian assistance and to analyze how the “theory” is actually implemented in practice. Whether the student’s future is in the field or at headquarters, internationally or at home, he or she will likely need to quickly and critically review and summarize available information in order to inform decision-making, and students will have ample opportunity to develop this skill during the quarter.

INTS 4495 Civil Wars and International Responses (4 Credits)
Throughout the post-cold war period and into the 21st century, the scourge of war today is seen in mostly internal conflicts fought along ethnic, religious, ideological, or economic lines that divide societies and lead to devastating armed conflict. This course investigates the problem of contemporary civil wars. This course explores theories, concepts, and empirical research in the analysis of contemporary civil wars and in-depth, student-led evaluation of specific cases. The course covers these themes: evaluation and patterns of armed conflict and war termination in the 1990s and early 2000s with a focus on methods for systematic, multi-causal conflict assessment methodologies; exploration of the processes of escalation in armed conflict and of concomitant peacemaking by international mediators; and evaluation of the concepts of “peace processes” and scrutiny of the terms of negotiated settlements in armed conflicts today. The principle learning outcomes for the course is to gain a complex and detailed understanding of the modal form of contemporary armed conflict-civil wars and concomitant international intervention by the international community (particularly the United Nations) to this form of armed conflict. Students who successfully complete the course gain an understanding of contemporary civil wars, issues in conflict duration and processes of war termination, and introduction to the scholarly and policy-relevant literature that has developed in the last two decades related to challenges of conflict prevention and of “peacemaking” or negotiation and mediation of civil war conflicts.

INTS 4496 Field Operations for Humanitarian Assistance (4 Credits)
Within a disaster response, various interrelating factors determine the ability of the humanitarian community to adequately respond. From coordination among governments, donors, non-governmental organizations (NGOs) to internal working components within an agency that drive programmatic support, the realm of humanitarian operations is a complex system that should be understood by anyone with an interest in supporting relief efforts. The main focus of this course is concentrating on the practical, specific systems that drive field operations - namely security, logistics, finance, monitoring and evaluation, human resources, administration, and advocacy that support program planning and implementation. Through understanding these components, the challenges that are encountered, and how each interrelates within an organization and the wider response community students gain a balanced understanding of humanitarian operations. While each emergency response comes with varying contextual challenges, the humanitarian imperative mandates the relief community to respond in a neutral manner based on need. Doing so, places strains on the operational systems that need to be overcome to provide quality interventions. Through this course we take an in depth look at both theoretical and practical ideals for humanitarian assistance.

INTS 4497 International Campaign Management (4 Credits)
This course will examine the principles of political campaign management and their application in a number of international political, public affairs and human rights campaigns. It will be an introduction to the tools of political campaign management: message development, survey research, audience targeting, paid and earned communications, fundraising and organizational structure. Case studies of campaigns in countries such as Sweden, the UK, and Australia will be used as examples of these techniques. Class will be comprised of lectures, discussion and some simulation exercises. Efforts will be made to bring outside specialists and experts to the class or by teleconference. Readings may include contemporary journals, periodicals, newspaper reports and excerpts from major studies of campaign and organizational management.
INTS 4499 Evolving Global Security Landscape (4 Credits)
This course is for Korbel in DC participants only. Change brings with it challenges—at the individual, organizational, and systemic levels. It involves behaviors and cultures with often deep-seated traditions. This course will explore the scope and magnitude of the transformational forces at work in the U.S. and to a lesser extent the global security and defense establishments. By its nature the course will be about peace and war—how the nation goes about the business of preparing, equipping, and training itself to deter and if necessary to fight traditional wars and the new kinds of challenges that might lead to armed conflict as well as shaping the post war environment for an enduring peace—but do NOT think about this as a linear process. It will also be about sociology, bureaucratic politics, the role of the media, economics, health care, power... Most of all this semester it will be about the transformational nature and effects of ROBOTICS, AUTONOMOUS SYSTEMS, and ARTIFICIAL INTELLIGENCE (RAS/AI) on security and the budget pressures on the national security/ defense budgets—and where to consider taking acceptable risks—geographically and functionally and force posture wise (for example, do we need a $1Trillion nuclear modernization program; or 2400+ F-35s; or 12 carrier battle groups?). THIS AGENDA NOW IS BEING SHAPED GOVERNMENTS and the PRIVATE SECTOR—COMMONLY KNOWN AS THE 3rd OFFSET. (The roots of this can be found in Secretary Hagel's 214 Innovation Initiative. http://www.defense.gov/News/Article/Article/603658).

INTS 4500 Social Science Methods (4 Credits)
Prerequisites: The course presumes a basic competence in statistics, social science, international relations, and comparative politics. This is an advanced, fast-paced course that seeks to provide students with a sensitivity to research design choices, both for designing their own projects and as critical consumers of the works of other scholars. The course is primarily intended for Ph.D. students at the pre-dissertation prospectus stage as well as for advanced MA candidates pursuing thesis projects. The course content covers diverse methodological approaches from the discipline of Political Science as well as methods from other fields. The course will cover topics including: research questions and 'puzzles' in political and social science; causality and causal inference; theory construction; measurement; the comparative method; case selection; and quantitative and qualitative methods. Students should enter the course with several research interests in mind since the final project for the course entails producing a research design that could serve as the basis for a future prospectus. The class sessions will include a formal introduction to different methods, a discussion of readings, and work-shopping of student work. We will also informally discuss tips and tradeoffs in the academic profession and for publishing. The class meetings will rely heavily on student participation and peer critique. At the end of the course, students should be able to identify the strengths and weaknesses of different research designs.

INTS 4501 Comparative Politics in the 21st Century (4 Credits)
INTS 4501, Comparative Politics: States and Societies in the 21st Century, is a core course in the graduate program curriculum of the Josef Korbel School of International Studies. The course explores theoretical perspectives and policy-relevant knowledge in comparative politics, a sub-field of contemporary political science that considers the ways in which states and societies govern themselves or "allocate value" in countries around the world. Governance is arguably the pivotal variable in the realization of contemporary global development and human security objectives. The principal question the course addresses is: What is "governance," and how does is serve to work for, or against, peace and development in countries around the world?

INTS 4502 Comparative Revolutions (4 Credits)
An intermediate course focused around the major revolutions that occurred in England, France, 19th century Europe, and in Russia and China during the 20th century. Emphasis is placed on historical facts, key theoretical debates generated during the various social upheavals, and diverse interpretations seeking to understand the nature and causes of revolutions and their impact on societies. Prerequisites: INTS 4702.

INTS 4509 Food Security, Nutrition, and Sustainable Development (4 Credits)
This policy-oriented course will examine structures and processes that result in varying food security outcomes across space and time. Food security outcomes reflect interactions among political, economic, socio-cultural, and physical environmental systems. These systems, which are both dynamic and permeable, give rise to particular forms and patterns of food production, distribution, and consumption, and to more or less environmentally-sustainable uses of the natural resources critical to food supply.

INTS 4514 Population, Environment, and Development in Latin America (4 Credits)
This course engages the complex and interlinked dynamics of changes in population, systems of production, and the physical environment. Navigating among scales from global to local, we examine the interactions of trade regimes, markets, natural resource tenure systems, migration, livelihoods, technologies, health, and natural resource stocks. Taking a political ecology perspective, we will interrogate the distributions of wealth and power that affect control of natural resources, human well-being, and environmental sustainability. We also investigate the multiple social and cultural meanings of "natural resources" to actors who are variously positioned in terms of class, ethnicity, and gender. These dimensions of the population/environment/development nexus are examined for the following sectors: water conflicts and watershed management in the Andes; colonization, cattle, and energy development in the Amazon; non-traditional agricultural exports and aquaculture development in Central America; and forests throughout Latin America.
INTS 4516 Major Diseases in Global Health (From Pathophysiology to Action) (4 Credits)
As future global health practitioners and policy makers, it is imperative that we each have a complete and solid understanding of the mechanisms, physiology, epidemiology, transmission patterns, and clinical impact of the major diseases affecting global health. How and when does a person transition from simple HIV infection to full-blown AIDS? Why is dracunculiasis so readily amenable to eradication whereas filariasis is not? For what populations is co-infection with HIV and TB or HIV and malaria so critical and why? On the individual patient level, how and why do certain diseases manifest so differently in resource-poor versus resource-rich or urban versus rural settings? Who are the vulnerable populations and how does disease impact them physiologically? When and where would specific program interventions work over other programs and for whom? In this course, the students develop an understanding of the etiology, agents, vectors, burden, methods of detection, basic treatment complexities, and life cycles of major diseases impacting the world. Specifically, this course details HIV/AIDS, TB, malaria, maternal/reproductive health, some protozoa, helminthes, and major parasites, chronic disease such as cancers and diabetes, and violence/trauma. As there is no shortage of amazing and interesting diseases globally, students learn a sound method of inquiry with which to address and disease process. Students also apply this method directly toward program analysis, and in the development of teaching sessions for community health workers.

INTS 4517 Politics of Deeply Divided Societies (4 Credits)
This course focuses on the politics, conflicts, and conflict transformation approaches to deeply-divided societies. While ethnic, religious, and other types of communal conflict have been around for millennia, since the decline of colonization, and especially since the end of the Cold War, such struggles seemed to have exploded onto the world scene. This course focuses on these "contemporary" ethnic, religious, racial, and other communal conflicts to better understand why and how such conflicts develop. We then examine both theory and practice on what can be done to ameliorate or remedy them. Units focus on the nature of identity and identity politics; the use of political violence to pursue identity or nationalistic goals, and nonviolent approaches to identity conflicts. We then look at alternative political and conflict-transformational approaches to such conflicts including frameworks for living together (such as consociationalism, federalism, and power-sharing, and scenarios for separation (partition or succession). We also look at the negotiation, mediation, and other peace processes that have been utilized to try to accomplish such ends, and examine which have worked better than others and (to the extent possible) why. Readings will include both case study and theoretical material. Students are required to make several short class presentations, participate actively in discussions and exercises, and prepare and present a term paper analyzing one currently destructive deeply-divided society, analyzing the cause of the current unrest, and possible remedies to that situation.

INTS 4521 Cultures of Development (4 Credits)
Explores cultural dimensions of economic and social change from perspectives of actors who create, promote, negotiate, and resist different agendas from global to local.

INTS 4522 Philosophy of Social Science (4 Credits)
What is the nature of social science and the knowledge that it produces? This course, which is intended to complement INTS 4500 Social Science Methodology and INTS 4010 Epistemology, introduces students to the leading mainstream perspectives on the philosophy of social science. Special attention is given to Positivism and Post-Positivism, Post-Structuralism, Pragmatism, and Scientific Realism.

INTS 4525 Religion-State Relations in Comparative Perspectives (4 Credits)
This seminar course provides an introduction to the key readings, concepts and debates on religion-state relations. While the focus is on the Western political tradition we explore the case of India and the Islamic world at the end of the course. Themes such as freedom of belief, the role of religion in the public sphere and debates over the political construction, location and meaning of secularism are examined.

INTS 4526 Modern Islamic Political Thought (4 Credits)
This seminar course explores the key writings of Muslim thinkers who have shaped Islamic political thought during the 20th Century. We begin with the writings of Jamal Eddin Al Afghani and his Egyptian disciple Muhammad Abduh. We then proceed to read from the selected writings and speeches of Hassan al-Banna (founder of the Muslim Brotherhood), Sayyid Qutb (radical Egyptian Islamist theoretician), Adul Ala Maududi (Pakistani Islamic thinker and founder of Jamaat-i Islami) and Ayatollah Ruhollah Khomeini (leader of Iran's 1979 Islamic Revolution). We also investigate some of the writings of Islamic reformist thinkers such as Abdolkarim Soroush, Nasser Hamed Abu Zayd and Khaled Abou El Fadl. The emphasis in this course is on understanding the historical and political context which has shaped Islamic political thought during the 20th Century.

INTS 4534 Topics in Middle East Politics (4 Credits)
The 2011 Arab Spring is widely viewed as a turning point in the modern politics of the Middle East and North Africa. Longstanding authoritarian regimes and dictators have fallen while others cling to power in the face of popular protests. The region is headed for uncertain waters with Islamist parties on the ascendancy, liberal and secular forces struggling to assert themselves while a Western world watches these developments with a combination of hope, concern and consternation. This course is devoted to examining the Arab Spring revolutions and more broadly the changing politics of the Arab-Islamic world. We do so by collectively reading one book per week on the Arab Spring and other situations in the Middle East. Specific themes that are analyzed include the legacy of authoritarianism, the process of democratization, religion-state relations, the role of external powers and the transformation of Islamist politics. Part of the course looks at how these books have been reviewed both in intellectual and scholarly journals. This class is designed for students who seek a deeper grasp of the Middle East and a more refined understanding of the politics and history of this region. This is not an introductory course on the Middle East, Islam, or the Arab world and previous course work is assumed. Those uncertain about their status should consult with the instructor before enrolling.

INTS 4536 Economics: Fundamental Knowledge, Global Applications (4 Credits)
This course provides an introduction to the methods used to analyze contemporary global economic events by examining the environment in which individual economic agents interact. We analyze what the economic problem is, how consumers and business firms make economic decisions, how markets work and how they fail, and how government public policy decisions affect individual and aggregate behavior in both domestic and international markets. A special feature of the course is the application of economic principles to real world problems.
INTS 4539 Food Security in the United States and the World (4 Credits)
This course discusses: food security in the United States (community food security, food insecurity); stunting and chronic nutritional deficiencies; global water crisis; land degradation; land deals; climate change; dictatorship and kleptocracy; economic approaches (westernized view, food justice, food sovereignty); World Food Summit; achieving food security (the agriculture-hunger-poverty nexus, biotechnology for smallholders in the (sub)tropics); risks to food security (fossil fuel dependence, genetic erosion in agricultural and livestock biodiversity, hybridization, genetic engineering and loss of biodiversity, price setting, treating food the same as other internationally traded commodities); access to basic food supplies; infant feeding; determining nutritional status; supplementary feeding; therapeutic feeding; malnutrition, nutrient requirements and sources.

INTS 4543 Religion and International Studies: The Apocalyptic Tradition (4 Credits)
The relationship between religion and international politics is an important and understudied topic. For year, religion was, at best, a handmaiden to international relations as scholars focused on state actors only. Since 9/11 this has changed in dramatic fashion because of the rise of radical Islam, the importance of the religious right in the United States and its role in Middle East politics, and a growing awareness of how religion can divide populations within states and in many regions of the world. This course begins with an evaluation of the thousand year history of religious conflict before 1648 when faith and international politics were inseparable. We study the struggles between Islam and Christianity as well as “heresy” in both of these religions which lead to events like the Protestant Reformation. We explore the role of religion in politics from the eighteenth to the twentieth centuries and conclude with readings on such topics as suicide bombing, shifting religious values, demographics, and projections on how religion will shape international politics in the 21st century.

INTS 4549 Managing Microfinance: Balancing Business with Development (4 Credits)
This course builds on the topics in “Introduction to Microfinance” and delves more deeply into the challenges of managing microfinance institutions (MFIs) and effective social entrepreneurship. How do MFIs make sure they stay in business (with good risk management and financial management) and make sure they have real social impact? How can they innovate financial services and other market-based solutions that create lasting economic opportunity or social change? Whether a market-oriented NGO or a socially-motivated business, an MFI needs a clear development strategy, a clear business strategy, and the operational tools to implement both strategies well. Regardless of legal structure, both NGO and for-profit MFIs need good management and financial information to meet both sustainability and social goals. Whether used for poverty alleviation and or banking services for the poor, there are shared characteristics among successful microfinance organizations, as well as common pitfalls and challenges. As organizations figure out the “business” side of providing loans and savings, they also need to figure out which development services have greatest benefit for clients, choose strategies for social change (e.g. basic education, health care, business skills), and assess how well those strategies are working. For example, large-scale MFIs in India and Latin America have been very successful financially, but have only recently focused on their social impact. Smaller NGOs may serve the poorest and provide many development services, yet struggle to find a viable business strategy and sustainability. MFIs share challenges faced by many development organizations: (1) How do we balance our financial and impact goals; (2) How do we choose where to invest resources for greatest impact (e.g. financial services for many or in-depth assistance for fewer?); (3) What information do we need to ensure financial transparency and accountability; (4) How do we assess social and financial performance to keep improving our business strategies? This class will use weekly readings and case studies of specific microfinance organizations to: Illustrate business challenges and specific business risks in microfinance; Review basic financial statements and key financial measures to assess financial performance and risk, for both for-profit and non-profits; Review different approaches to answering the question “are we making a difference?”; Analyze management situations of “too much profit” and “too much development”; Compare pros and cons of for-profit and NGO legal structures, and implications; Discuss governance and boards of directors, compare and evaluate approaches; Highlight examples of social entrepreneurship powering market-driven change in microfinance and other areas (mobile banking, small-scale solar electricity, etc). Cases include Adelante Foundation, BRAC, Fonkoze, Kenya Women’s Finance Trust, ACCION’s Center for Financial Inclusion, and others. The first half of each class focuses on a real MFI case study to highlight the issues and understand the topic; the second half on the financial implications of these risks, the financial principles involved, and how well the tools work. Students gain a better understanding of financial statements, MFI operations (with case studies from around the globe), and credit risk, as well as key principles of financial management and good governance.

INTS 4555 Professional Communications (4 Credits)
This course is designed to help graduate students improve their ability to communicate professionally to a variety of national and international/intercultural audiences for a variety of purposes, and to manage through communications. While INTS 4557, Cross-Cultural Communications, focused heavily on immersive experiences in verbal and non-verbal communication in professional, cross-cultural scenarios, this course will use professional writing in cross-cultural contexts as its starting point. Students will learn the tools they need to adapt their writing in varied professional, cross-cultural contexts and to translate it into effective verbal presentations in these settings. In particular, students will develop an awareness of professional language, written conventions, and multimodal communication, including verbal, written, and digital/visual modes. Students will learn skills in rhetorical analysis, which will enable them to adapt to multifaceted professional writing scenarios in the future. They will apply these skills in the context of case studies and other examples that will address challenges professionals must problem-solve using written communication. All students will complete a professional writing portfolio by the end of the quarter with the goal of being more prepared for the job search.
INTS 4557 Cross-Cultural Communications (4 Credits)
This course is designed to prepare graduate students for careers as international professionals by focusing on the cultural factors that influence communication in international relations as well as the rules that prescribe and prescribe behavior. The course emphasizes culture and will explore how different cultures: perceive and interpret their surroundings, and create and communicate a shared, cultural construct of reality and identity; develop unique communication rules; and evolve culture-specific verbal and non-verbal communication behaviors. Students will immerse themselves in a particular culture (its history, values, world views and associated thought processes, religion, gender and social perception, language, and nonverbal communication) and research its communication conventions, practices, standards, core metaphors, terms, cultural premises, and meaning systems. Students are expected to demonstrate a critical and informed awareness of cultural content and identity, as well as the communication imperatives and procedural issues in their country through class presentations, discussions, and a long paper. The course rationale is that cross-cultural communication is inevitable, and without an understanding of the cultural communication imperatives, it is very difficult, virtually impossible to understand, work with, manage, or influence individuals from another culture. The course will involve theory and proven models, but will primarily focus on cultural immersion, skills development, practical applications, and case studies—exploring how culture both influences and reflects communication dynamics, how to communicate effectively in a multicultural environment, and how to manage and resolve cross-cultural conflicts.

INTS 4566 Global and Sustainable Development (Case of Coffee & Chocolate) (4 Credits)
In recent years, the issue of sustainable development has received considerable attention from academia, governments, and international organizations. Of particular concern are countries that are heavily dependent on the export of commodities. Can sustainable development be achieved by such countries? Chocolate (cocoa) and coffee are not only among the world’s most popular little pleasures, they are also among the most traded commodities. Originating in Latin America and Africa respectively, their global diffusion has influenced the culture, society and politics of developed and developing countries for decades and continues to do so today. Coffee exports (the primary source of foreign exchange for many poor countries such as Ethiopia) are valued at about 9 billion annually. 25 million people in Asia, Latin America, and Africa struggle to earn a living through coffee production, it too is a major source of income for many countries in Latin America and West Africa. Yet, many problems have been identified such as farmers unable to earn a survival wage, the exploitation of child labor, and the damage that production processes inflict upon the environment. In short, these important commodities are apparently contributing little to sustainable development. Various organizations and individuals are involved in efforts to change this situation by promoting the establishment of specialty, organic and fair trade coffee and chocolate products. The degree to which these efforts can help turn the existing situation around remains unclear but the lives of millions of people and the future of many countries hangs in the balance. This seminar is designed to address such issues. We explore the meaning of sustainable development and consider the nature of globalization and the ways in which it has shaped the cultivation and consumption of coffee and chocolate over time. In order to understand this linkage, we utilize the concept of the “commodity chain”, an approach that allows us to conceptualize the nature of the international linkages, their key nodes, the distribution of power, and the ways in which external factors influence a country’s development efforts. The course is divided into three parts. In the first, we cover the basic concepts and seek to answer such questions as: 1) How have the coffee and cocoa commodity chains been shaped by globalization? 2) What has been the role of key actors - producers, local traders, governments, and multinational corporations - in shaping production and consumption patterns over time? In the second part we consider three basic forces that have shaped the commodity chains - the state and its policies, culture and consumption patterns, and entrepreneurs and technology. Here the questions are: 1) How have the policies of producing and consuming states affected the commodity chains? 2) How have changes in consumption patterns reflected in the growth of Starbucks influenced the situation in developing countries? 3) How have external technologies such as transportation and communication technologies as well as internal technologies such as instant coffee changed the chains?

INTS 4567 Democratization in Africa (4 Credits)
Since the mid-1970s, the world has seen an ongoing wave of democratization. Some 70 countries have undergone transitions to democracy since the 1970s, with some 40 countries having gone through such a transition in the 1990s and early 2000s. Perhaps nowhere is the "third wave" more fully felt than in sub-Saharan Africa, which has seen since the 1990s a myriad of transitions from one-party states to multiple-party democracies, as well as war-to-democracy transitions as countries today raise a number of important retrospective questions about the underlying drivers of democratization, the various paths that countries go through on the road to democracy; whether such changes are sustainable over time (and why or why not). The very word "transition" is rightly questioned: Is there a proverbial point of no return when democracy is "consolidated" and country goes from the transitional category to a fully formed democracy? While democratization may lead to peace over time, the actual process of political reform is destabilizing for societies, and that in the short term there may be real and direct threats to peace in democratizing societies as a result of the uncertainty and competition that democracy introduces into restive social environments. In Africa, despite celebrated transitional elections and a few clear success stories (such as Namibia), democratization has been fraught with challenges, from elections as the spark to civil war or massive political violence, to corruption, fraud, and rent-seeking by elected elites, to widespread discontent over the inability of democratically elected regimes to foster socio-economic development. As well, there is a critical concern that electoral processes in Africa are often accompanied by widespread political violence. Thus, Africa’s experience with democracy lies between the powerful force of liberation that guided the continent’s politics in the formative years, and the uneven, non-linear, and for the most part elusive goal of "consolidation." The course explores democratization - the means and methods by which countries in recent years have moved form a non-democratic to democratic regime type. What theories, concepts, and methods should be used to understand democracy and democratization in today’s complex, multiethnic societies? How does the Africa experience relate to broader theories and perspectives on democratization?
INTS 4569 Migration (4 Credits)
Migration is a fundamental feature of our lives. Indeed, every aspect of our civilization and our self-conception is shaped by the exodus of all humans from our origin as a species in Southern Africa 200,000 years ago. In our own era, the aging of western populations, the rise of new economic powers, and dramatic improvements in human capital have given rise to an era of labor migration unparalleled in magnitude and diversity, though not entirely unique. New technologies have risen to facilitate further migration, enable the transmission of resources and knowledge across borders, and create new transnational patterns of residence and livelihood that challenge our notions of nation, identity, and even the very meaning of the term migrant. To put it simply, migration is the human face of our modern era of globalization, entailing incredible costs, risks, and returns for migrants along with important impacts for host societies, and the global system. Migration comes in many varieties in terms of destruction, permanence, and level of coercion, yet common theoretical, empirical, and policy unite these different forms of mobility. This course offers a holistic view of the migration process from multiple perspectives, at multiple levels of analysis, and on multiple aspects of our world today. As a uniquely individual behavior, migration has proven over time to be notoriously unfriendly to policy, which is often ineffectual or even counterproductive. We explore this cross-cutting concern through case studies illustrating the promise and pitfalls of migration policy.

INTS 4575 Systems Thinking for Social Scientists (4 Credits)
The purpose of this course is to introduce students to systems thinking as an approach for understanding and analyzing real-world issues. In addition to introducing the basic principles of systems thinking, questions that will be addressed include: Why do systems behave the way they do? Why do systems resist change and often end up getting worse when we try to change them? How do you find points of leverage within a system? This course uses examples drawn from a range of issues across the field of international studies. In doing so, it illustrates how a systems perspective can allow you to see parallels between seemingly disparate issues. This course introduces both qualitative and quantitative approaches for analyzing systems and discusses the benefits and limitations of each. Quantitative, computer-based modeling is used in this course, but no background is required.

INTS 4576 Seminar: Community-Based Research Methods (4 Credits)
This course offers a weekly seminar in methods for community-based research in health, development, population, and humanitarian assistance. The course is intended as preparation for students preparing for a community-based research partnership in Delhi, Nairobi, Jerusalem, or Iquitos, Peru but is open to all students preparing to go to the field. Focus is on practical methods for gathering quantitative and qualitative data at the individual, household, village/neighborhood, facility, and total community level including "windshield observation", key informant surveys, household surveys, and gathering of secondary data from census and other government and non-government sources. Methods of data collection include Geographic Positioning System (GPS), facility/provider surveys, community governance/needs assessments, and knowledge-attitude-practice (KAP) behavioral surveys. Topics of particular emphasis include maternal and child health (MCH), water and sanitation (WASH), and primary health care (PHC).
Students learn to design, revise, collect, enter, and analyze basic surveys using Excel and the Stata statistical software package. The final project for the course includes a community "desktop assessment" document and a plan for further data acquisition and analysis for the student's focus community.

INTS 4579 International Futures (4 Credits)
Futures forecasting involved decisions about priorities. Decisions require forecasting the trajectory of a society with and without interventions of various kinds. This course involved students in the forecasting and analysis process. In the lab, students learn to use the International Futures (IFs) forecasting system. That system represents multiple issue areas (demographics, economics, energy, agriculture, education, health, socio-political, and environment subsystems) and is supported by a very large database. Students study the structure of each of these modules, learn how they represent the underlying subsystems, how they are linked to other subsystems, and what they tell us about the processes of change globally and in countries and regions around the world. Students use the system for forecasts and analyses of their own.

INTS 4581 Introduction to Humanitarian Systems (4 Credits)
The Humanitarian field has changed significantly since the founding, in 1863, of what is now the International Committee of the Red Cross. Since the early 1990s there have been efforts to improve coordination between humanitarian actors and to improve the quality of international humanitarian response. High profile humanitarian crises such as the Rwandan genocide, the 2004 Indian Ocean Tsunami, the Haitian earthquake, and the conflict in Syria have highlighted weaknesses in the system and spurred reform efforts. Through readings, class discussions, guest speakers, group work and individual assignments, students gain a better understanding of the development of humanitarian systems and policies and how these affect current humanitarian practice. Key debates in the humanitarian system are also discussed and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. At the completion of the course, students should be able to: Discuss the history of humanitarianism; Recall key components of the humanitarian infrastructure; Describe the humanitarian principles, their interpretation and application; Identify ethical issues which may arise for humanitarians; and discuss the implications for humanitarian practice of key emerging challenges.

INTS 4583 International Protection in the Humanitarian Context (4 Credits)
At the conclusion of World War II after witnessing the horrific and historic loss of life, and in an effort to save future generations from the direct impact of war and conflict, the Western powers created several important legal instruments to protect civilians. These instruments are largely derived from human rights, refugee, and international humanitarian law. These initial legal instruments were later combined with additional instruments, both regional and international in scope, and are collectively and cumulatively considered the legal framework for "International Protections." After sixty years of the progressive legal and theoretical development of international protection and its practical implementation, a slow but evident shift has developed over time. Theoretically speaking, a shift from the end of the Cold War’s position of absolute sovereignty to the ideals of the 1990s and the “responsibility to protect” which developed in direct response to the failed efforts of the international community to protect in Bosnia, Rwanda and other conflicts. As a result of the changing nature of conflicts, confusing mandates, ambiguous definitions, and political will, we have witnessed the failure of international protection in numerous humanitarian settings.
INTS 4624 Private Actors and Conflict (4 Credits)
This course surveys a range of arguments about how, whether, and/or the conditions under which global or transnational issues are governed. It examines different ways of thinking about governance and the governance process. It unpacks the variety of authorities that govern transnational issues. This course also considers different arguments about how the variety of actors engaged in a particular issue affects to the amount and type of governance possible. The course is intended for both masters and PhD students.

INTS 4620 Introduction to Middle East and Islamic Politics (4 Credits)
According to 2017 Global Peace Index, the Middle East and North Africa are the least peaceful parts of the world. The instability from this region has gone global and is now destabilizing large parts of the entire world. Why? Answering this question is the focus of this course. The approach taken will be historical and comparative with an emphasis on the relationship between religion and politics in the Islamic Middle East.

INTS 4599 Ethics and International Affairs (4 Credits)
This course examines the following: social "science" and ethics, power-rivalry and capitalism versus human rights and democracy, what are the dimensions of poverty, what role does the World Bank play, "laws of people," two classes of human rights (according to Rawls), national interest, and tolerance.

INTS 4595 Civil Wars and International Responses: Evaluating Post-War Peacebuilding (4 Credits)
Today, civil wars constitute the principle, realized threat to international security (measured in lives lost). This seminar critically explores the problems to international peace and security posed by contemporary civil wars and the efforts of international - primarily, United Nations - "peace building" missions to implement negotiated settlements aimed at substantially ending such wars and preventing their recurrence. The concept of peace building seeks to capture the complex, multidimensional task of implementing the terms of settlements to end war preventing the recurrence of war, and addressing the deep-seated causes of social conflict and deep divisions that gave rise to protracted armed conflict in the first place. Furthermore, the notion of peace building have been augmented by the concept of state building, which implies that the principle strategic objective of external efforts is to help develop and create legitimate, capable states that are able to realize the provision of security and human development and to manage future social conflict through nonviolent bargaining processes and institutions. The scope of the course includes the analysis of theories, concepts and empirical research in the analysis of post-war international interventions in civil wars and in-depth, student led evaluation of specific cases. Prerequisite: INTS 4495.

INTS 4593 Knowledge for Development (4 Credits)
Knowledge plays a critical role in improving human welfare. Rapid progress in science and technology in the recent times and an increasingly interconnected world facilitated by such progress have raised the potential for using knowledge in bringing development everywhere in the world within foreseeable future. This course examines the role of science, technology and innovation in achieving economic and social development through creation, diffusion, transfer and adaptation of knowledge within and across national boundaries. Course participants examine the role of knowledge and innovation in fostering economic growth and social development. They scan the modern science and technology challenges and opportunities especially those useful for development. They also study the various activities, institutions and policies that can help developing countries devise (or strengthen) and maintain a state of the art knowledge system. They have hands-on experience of designing a knowledge policy plan for a developing country or region. The course brings in material from various disciplines though the major focus remains on international development. It can be cross listed as a development, a technology policy or a GTEI course. No prerequisites.

INTS 4591 Advanced Fundraising Workshop (4 Credits)
This course compliments INTS 4391, in which an overview of non-profit fundraising - along with financial management - is given. In this course, we take an in-depth look at the major methods of non-profit fundraising, namely, annual giving, special events, corporate fundraising, grant writing, major gifts, and planned giving. The teaching methodology to be employed is that each 3 hour class session is, in effect, an intense workshop on a specific fundraising topic. During each class session, a fundraising professional from the community, who is actively engaged in the particular fundraising activity being discussed, joins the professor in leading the workshop. Due to the advanced nature of this course, enrollment is limited to those who have already been introduced to the major methods of fundraising through the previous completion of INTS 4391, or previous fundraising experience or educational pursuit in the fundraising field that is judged by the professor to be sufficient to be an active participant in this course.

INTS 4592 Private Actors and Conflict (4 Credits)
General approaches to conflict focus on violence between the military forces or states. The conflicts of the last two decades, however, involved a variety of other actors: private military companies training or fighting with armies, relief workers trying to mitigate the impact of conflict on non-combatants, environmental NGOs working to lessen the impact of conflict on endangered species, multinational corporations trying to continue their business dealings, paramilitary and/or other citizen groups trying to defend their private property or other rights, criminal networks working to exploit conflict for personal gain, and terrorist networks. How do these different actors behave in conflict situations? Does their presence alter the way conflict unfolds, strategies of conflict (and conflict resolution), and/or the prospects for long-term security (peace, stability and development)? How? How do we decide whether these actors are public or private? How do today’s “private” actors in conflict compare with the past? Is this a new phenomenon or simply a return to what has been typical at numerous points in history? This course explores the questions presented by the variety of actors involved in conflict today, compare today’s situation with the past, and examine the way states and non-state actors are coming to terms with each other in conflict situations.
INTS 4625 East African Development and Human Rights (4 Credits)
For our purposes, East Africa encompasses the countries of Sudan, South Sudan, Ethiopia, Eritrea, Djibouti, Somalia, Kenya, Uganda, Rwanda, Burundi, and Tanzania. This course begins with an introduction to the cultural richness and diversity of East African societies, with an overview as to how tribes, chiefdoms, and states function. Religious influences are noted. This history of development, as externally conceptualized, begins with the Berlin Conference of 1884/85 and the so-called “scramble for Africa.” If features socio-economic and socio-political processes. 20th- and 21st-Century external development programs are covered, most recently exemplified by the former Soviet Union, the United States, and China. Principles of induced development and participatory development are contrasted. Regarding the latter, indigenous innovations are stressed. The history of human rights, as externally conceptualized, begin much later, with the 1969 refugee-related innovations of the Organization of African Unity (now, the African Union). The “classic” issues of tribalism, corruption, and resource exploitation are covered, as well as the “late-breaking” issues of food security, refugee repatriation, and child soldier rehabilitation. Conceptually and theoretically, the course is grounded in disciplinary understandings derived from cultural anthropology, political science, ecology, and history. Resource use, in the context of socio-cultural systems development, are foundational. Special projects are featured, exemplified by those involving University of Denver personnel in Kibera, Kenya (water and sanitation); Mai Misham, Ethiopia (literacy); and Juba, South Sudan (indigenous leadership). At the broadest level, examples are most often drawn from the water/sanitation, agricultural, and health/mental health sectors.

INTS 4626 Civil Resistance (4 Credits)
Civil resistance is the application of unarmed civilian power using nonviolent tactics such as protests, strikes, boycotts, demonstrations, without using or threatening physical harm against the opponent. This method of struggle occurs worldwide in places as diverse as Russia, Moldova, Serbia, Spain, Egypt, Iran, Maldives, the Niger Delta, the West Bank, Thailand, and Burma, among many others. As a consequence of the growing use of civil resistance, the foreign policy community has become interested in understanding the causes, dynamics, outcomes, and consequences of civil resistance campaigns. This course serves as a primer on the topic of civil resistance, introducing students to the primary texts in the field, as well as the policy implications of empirical research on the topic. This five primary goals of this course are to: (1) present leading theories and concepts for understanding civil resistance; (2) explore international history to evaluate theories of civil resistance; (3) apply these theories to analyze current trends and make predictions about future development; (4) provide students with opportunities to synthesize their knowledge in a major written assignment; and (5) allow students to deepen their knowledge about several historical cases around the globe.

INTS 4627 African Security (4 Credits)
This is intended to be an advanced political science graduate course examining African politics and (in)security. The aim of this course is to introduce students to theoretical frameworks that, in turn, facilitate their understanding of African politics, conflict and security issues – especially as they pertain to human security. Importantly, this class takes a critical look at the concept of sovereignty as it relates to security. Through the reading, students become familiar with major analytic frameworks and debates in the analysis of contemporary African politics; students become conversant in relevant political, civil-military and human security issues as they relate to sub-Saharan Africa. The focus of this course is for the student to develop an analytical framework by which to make sense of context. Context is important, but without a cohesive theoretical framework to inform the practitioner it is insufficient. With the understanding that modern elites benefit from the existing structures and associated incentives, this course seeks to understand the modern African state in order to best engage said structures/elites to further development and, most importantly, individual security. Of note, it is clear that security is a fundamental condition for effective governance and development. Further, whereas it is true that weak empirical states, interstate wars, and conflicts over natural resources have proliferated throughout the continent and that ethnic, religious and regional violence is a common syndrome, we often forget basic (human) security needs. Specifically, we overlook that importance of access to potable water or an individual’s ability to pursue economic gain without fear of violence. At the heart of security lies the individual. Weak states or elites might affect inter-state relations and security (e.g. militant groups in under-governed spaces), but it is the individual who suffers. Thus, security in this context seeks to understand issues that affect individual lives.

INTS 4628 Soc Movements: Latin America (4 Credits)
The past year has been witness to Tahrir Square and Occupy, reminding us of the power and innovation of popular sectors making their voices heard. Latin America is a particularly useful place to explore popular movements, as it has long been the site of popular protest and national revolution, and it is currently a region governed by a significant number of Leftist governments with important ties to social movements. This course addresses major theories of social movements, including classical, structural, and new social movement theories. These theories have attempted to answer fundamental questions of what triggers mobilization among excluded groups, how they facilitate their action, and what changes they potentially trigger to basic rights and identities. The course also places social movements in their broader context, locating them I the political, social and economic structures that have shaped exclusion in Latin America over time. In the process, the course explores the role of popular movements in broader processes of democratization, economic development, and citizenship. We examine traditional and well-studied examples of social movements, including movements among workers, indigenous, women, environmentalists, and advocates for democracy and human rights. We also explore newly emerging and transnational movements, including those that articulate alternative models of globalization. The course takes an interdisciplinary approach, drawing on economics, sociology, anthropology, and political science. It places special emphasis on the political economy of popular organization, acknowledging the contested nature of development and the ongoing struggle for deeper democracies and more equitable societies.
INTS 4629 Cultures of Globalization: Networks, Commodities, Affections (4 Credits)
This course explores the effects of neoliberal globalization on the lives of individuals and their communities. In an increasingly interconnected world, how do everyday people and communities negotiate the opportunities, dislocations, and/or disjunctures engendered by neoliberal globalization? Does globalization contribute to increasing global homogeneity or does it restructure difference and inequality in new ways? We explore how a ground-up view of globalization can highlight some of its contradictory effects. We discuss how globalization influences increasing inequality, restructures individual and group identities, as well as the relation between globalization and migration. From a ground-up perspective, we attune to growing global connections to understand how transnational commodity circuits intersect with individual lives and communities. We ask: How are commodity chains also cultural objects that shape, and are shaped by, how we see the world? Moreover, we pay attention to the development of grassroots networks and social movements that forge connections across borders to channel and/or challenge the current trajectory of globalization. We also find it imperative to understand the affects dimension-how do human beings think about their emotional relationships, families, and identities in relation to changing global dynamics? We end by examining alternatives to thinking in terms of neoliberalism, while examining its ramifications in the current economic context. A central question we ask is: As everyday life becomes increasingly commoditized, how do people cope, find support and value, and reveal alternate ways of conceptualizing how we can all connect to one another.

INTS 4630 Civilian Protection in Armed Conflicts (4 Credits)
Studies of armed conflict tend to focus on the production of violence to the neglect of how civilians might instead be protected. In this course, we will study how to limit violence against civilians. We will begin with an overview of theories of violence and legal and ethical frameworks governing the use of force. We will then consider how various actors throughout society, from state actors, to international actors, to illegal arms actors, to NGO’s, to civilians and their communities—the would-be victims of violence—can either promote or restrain the use of violence. We will also consider the conditions under which the protection of civilians is most feasible as well as research methods for analyzing populations and their protection strategies. In their final projects, students will analyze the threats of violence faced by a particular population and design appropriate protection strategies and policies to deal with them.

INTS 4631 The Politics of Civil Society (4 Credits)
Every intractable problem of politics, many significant changes in regimes and much of the pressure on government for good or ill, depending on the point of view, emerges from the civil association of citizens. There are limits, however, to what people can and cannot do. In this way, the overall objective of this class is to explore how people exert political power outside of the formal political structures. Towards this end, student gain a greater understanding of the make-up and roles of civil society, beginning with its origins and definitions and working up to current thinking, including the post-Berlin Wall opening up of civil society. The class considers the linkages between social and political objectives, studying how both formal and informal forms of associations limit and open up the possibilities of people's power.

INTS 4632 Qualitative Research Methods (4 Credits)
This course provides training in ethnographic and engaged research methods while giving students the opportunity to apply their skills to the local Denver immigrant community. This class requires a commitment to doing fieldwork outside of the classroom and to organizational partners in the community. Students should expect to spend 3-4 hours a week in the field and 1-2 hours on their field note write-ups. Students will work on the Wage Theft in the Denver Construction Industry project being led by Professor Galemba in collaboration with El Centro Humanitario, a day laborer center in Denver. Or they may choose projects with Casa de Paz and the Colorado Immigrant Rights Coalition. Students will gain experience with participant observation, qualitative interviews, data security protections, qualitative data coding, analysis, reflexivity and positionality in research, and writing. The course culminates in a public presentation to share results with the community. Spanish skills are a plus, but are not required for all students.

INTS 4633 Int’l Project Evaluation (4 Credits)
It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Evaluation course is to provide students with a better understanding of and practical tools for designing, implementing, and reporting project evaluations. In all cases, a good evaluation design that is well implemented will allow the project manager to identify supportable findings, conclusions, and recommendations. The recommendations from both performance and impact evaluations can be directed to decision makers to support changes necessary to correct project deficiencies or to provide lessons learned for designing subsequent development interventions. Project managers can also use community or stakeholder participation in the process to build evaluation capacity and to gain support for the results. More specifically, students will learn about similar approaches used by four organizations that evaluate project, programs, and policies—the U.S. Government Accountability Office, the World Bank, United Nations Development Program, and United States Agency for International Development (USAID). Each of these organizations has developed templates for evaluation design, use similar methods and techniques to collection and analyze data, and share common elements in the framework of their evaluation reports. Two of these organizations have protocols to contract out evaluations to other groups through the preparation of an evaluation statement of work (SOW) or terms of reference (TOR). In this course, students will have the opportunity to compare evaluation approaches and to apply these approaches in preparing evaluation products. Small student teams will produce an evaluation SOW patterned after USAID guidance and defend their design in a final presentation.
INTS 4634 Practical Public Diplomacy (4 Credits)
When Madeleine Albright spoke at the Korbel School, she made a plea for more courses on the nuts and bolts rather than the theory of diplomacy. This course is a response to that plea; drawing on 28 years of experience as a Foreign Service Officer and practitioner of public diplomacy. In this hyper-connected world of ours, public diplomacy has taken on ever more importance. It is essential to use the traditional tools of public diplomacy, such as exchanges, cultural centers, language courses, etc., and meld them with the new tools of social media and social networks. The course is a combination of lectures and student presentations as well as talks by numerous experts in various aspects of the practice of public diplomacy.

INTS 4635 Civil-Military Relations (4 Credits)
Who guards the guardians? has been a long-standing dilemma in international politics. How can we make sure that military leaders enjoying the control of coercive power submit to civilian political authorities? How can military organizations be powerful enough to counter external threats without becoming themselves a threat to the political community they should protect? How can hierarchical institutions created to exert physical violence be compelled to respect human rights and democratic values? These questions lie at the heart of civil-military relations theory. Analyzing the different ways in which military organizations, political authorities, and the broader society interact is crucial to understand political outcomes such as state-building, democratization, and the outbreak of war. This course provides students with a comprehensive understanding of the problems surrounding civil-military relations. Besides looking at the theoretical foundations of the field, it offers a comprehensive overview of civil-military relations over time and across countries. Specifically, it focuses on some topical and yet poorly understood cases and phenomena, such as the impact of the rise of private military and security companies on control over the use of force and the role played by military in Middle Eastern countries such as Turkey, Egypt, Syria, Libya, and Pakistan.

INTS 4636 Diplomacy in the 21st Century (4 Credits)
This course will focus on the array of factors, interactions, and mechanics that must be engaged and synchronized for the effective execution of diplomacy. The course will explore these themes using first via an array of historical case studies and then will take those same themes and apply them to the current and future context as framed by Ambassador Hill’s real world experience. In the end, the students will have gained professional insight into the array of key elements and challenges associated with carrying out diplomacy in the current context. Enforced Prerequisites and Restrictions: INTS 4700: US Foreign Policy, or INTS 4701: US National Security Policy, or INTS 4702: Major Issues in International Security.

INTS 4637 Comparative State building (4 Credits)
The modern state is of central interest to students of political science, Latin America, development, sociology, and public policy. For some, the state is an instrument of repression and domination; for others it is the shepherd of development. For all, it has been the fundamental unit of national political authority for at least the last two hundred years. This course explores the nature of stat authority and the processes by which different types of states emerged at different moments in world history and in different regions of the world, as well as how the nature of states has evolved over time. We explore the modern states that emerged first in Western Europe, and then the transplantation, imposition, and emergence of state authority in other regions, including Africa, East Asia, and Eastern Europe. The second half of the course focuses entirely on Latin America, highlighting the way in which states emerged and shifted over time in that region through close study of particular cases. We end the course with a consideration of the nature of state authority in the current world characterized by more intense flows of people, goods, capital, and ideas.

INTS 4638 Modern Iranian History and Politics (4 Credits)
The Islamic Republic of Iran remains a mystery for many in the West. The policies of the Iranian regime represent one of the greatest challenges to U.S. foreign policy today, as reflected in the global debate about Iran’s controversial nuclear program. War seems inevitable and Iran and the West are in confrontation on a number of fronts around the world. How did we get to this point in global affairs? What is the relevant historical background needed to understand Iranian culture, society, politics, and foreign policy at a deeper level? What are the key moments in modern Iranian history that have shaped the contours of the current conflict between Iran and the United States? These are the overarching questions that this course seeks to examine. The course is the first of a two course sequence that seeks to demystify Iranian politics and society. Themes explored include the origins of Iran’s troubled relationship with the West, the emergence of the modern Iranian state, the construction of Iranian national identity, the tension between religion and politics, the struggle for democracy and the persistence of authoritarianism and the roots of the 1979 Islamic Revolution.

INTS 4639 Post-Revolutionary Iranian Politics (4 Credits)
The focus of this course is on Iran’s post-revolutionary period. The goal is to provide students with an objective examination of Iranian society and politics. Several themes are explored: the rise of religious politics and the consolidation of clerical rule, the nature and interaction between Iranian state institutions, civil-military relations, the Iranian economy, the domestic opposition and the prospects for democracy, the crisis in US-Iranian relations, and the role of women in Iranian society.
INTS 4640 Global Financial Crisis (4 Credits)
This course provides an in-depth and critical analysis of the global economic crisis of 2007-2009. The goals of the course are to provide: a) an understanding of the causes of the crisis, b) an overview of the onset of the crisis, including its similarities and differences with past crises, and c) a critical appraisal of the policy response to the crisis, including financial bailouts, monetary policy, fiscal policy and regulatory reforms since 2009. The class will take both a US and a global perspective, and will conclude with an outline of the aftermath and general lessons to be drawn. This course goes well beyond a historical treatment of the global economic crisis and provides general analytical frameworks that can be used to understand economic crises more generally. Each class will be organized around one or two topics related to a theoretical understanding of economic crisis and will apply them to an understanding of the 2008 crisis. The frameworks draw from the fields of microeconomics, macroeconomics, finance, international relations, global political economy, real estate and international economics, integrating and extending the knowledge obtained from other economic and policy courses. Basic Macroeconomics and Microeconomics, while not strictly a prerequisite, is highly recommended. Basic economic concepts will be used repeatedly during the class and basic knowledge of economics will be assumed. The format of the course is a classroom discussion of the reading and class debate. As such, it is imperative that you come well-prepared, having done all of the readings as this course entails a substantial amount of readings to prepare for class. The instructor has a point of view, but challenging that point of view will be encouraged, and even required. Lively class participation will be essential to the success of the course. Visitors from the worlds of finance and policy will contribute on occasion and will be announced.

INTS 4641 East Asia in the Global Political Economy (4 Credits)
The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between the East Asian Regional Economy and the Global Economy. What is the role of the East Asian Regional Economy within the current global political economy (GPE). What is sustainable development in the East Asian Regional Economy? What are the global dimensions of sustainable development in the East Asian Regional Economy? What are the linkages between technology and sustainable development in the East Asian Regional Economy. After an initial exploration of these issues we focus critically on the more recently developed social capabilities approach developed by Amartya Sen and others. In particular, we explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy and the East Asian Regional Economy. For this purpose we try to find the approximate but deep casual structure of GPE and the place of the East Asian Regional Economy within this GPE.

INTS 4642 Environmental Security (4 Credits)
This course surveys the expanding literature on the complex interrelationships between the environment, natural resources, conflict, and human security. Since the dawn of agriculture (~7000 BCE), but rapidly accelerating in the industrial age (1750 CE to present), humanity has conducted an uncontrolled experiment in bending the natural environment to fit human needs and desires. Despite the perceived distance that technology has placed between our physical environments and our daily lives, human interactions with our natural environment are still fundamental. Since the end of the Cold War, much attention has been paid to the role of natural resources and environmental scarcity as a source of conflict, ranging from "water wars" between states sharing a common river basin to communal conflict between pastoralists and farmers in the Sahel. This course will survey the expanding literature on environmental impacts on conflict, as well as conflict impacts on the environment, and the potential for making co-management of valuable natural resources and wildlife a source of cooperation, rather than conflict, between communities and states.

INTS 4643 Japan in East Asia: Economic, Business, and Trade Relations (4 Credits)
This course presents an overview of Japan’s economic, business and trade relations in East Asia (ASEAN plus China, South Korea and Taiwan). The focus is on the evolution of Japan’s economy and big business and its shifting role and impact in East Asia. The course is organized to provide a backdrop to understanding: (a) the growth of big business in Japan; (b) the rise of the ‘developmental state’ in Japan and its impact on East Asia; (c) the experience of Japanese multinationals with foreign direct investment in East Asia and creation of Asian production networks; and (d) the current trend of free trade agreements and other emerging trade arrangements in East Asia. Students work in groups to explore, for example, the experiences of major Japanese companies in East Asia or a period or specific event connecting the economy of Japan with those in East Asia.

INTS 4644 Human Rights Research Methods (4 Credits)
This course is about how social science research can be used as a tool to understand and promote human rights. The field of human rights is bedeviled by several challenging obstacles to research, including reporting bias, hidden abuses, missing data and politicization of the facts. To deal with these obstacles, we learn about various methodological tools and how they are applied for the analysis of special human rights topics. By the end of the course, students are equipped to compile and present information to highlight patterns of rights abuses and identify patterns of cause and effects.
INTS 4646 European Integration: States in Transition (4 Credits)
Not only have the global financial turmoil threatened by the Eurozone crisis and the negotiations of a trade agreement between the European Union (EU) and the United States made the study of EU integration increasingly important for students of International Relations. As a unique political entity distinct from both states and traditional international organizations, the EU remains an unidentified object, whose development has challenged the traditional paradigms of both international relations and political science. Besides providing an in-depth knowledge of a crucial political and economic actor, the study of the EU integration process, its drivers and its shortcomings will therefore enhance students’ understanding of some of the most crucial theoretical debates underlying today’s international studies. This course intends to provide students with a comprehensive knowledge of the politics and institutions of the EU, analyzing its development from its origins until the present day and beyond. It will do so by focusing on the following core issues: Firstly, it will briefly analyze the history of the EU, seeking to identify the rivers of the integration process and explain why, after the end of World War II, European countries have set aside their centuries-old antagonism and embedded themselves within an ever closer political Union. Secondly, it will examine what the EU is and how it functions, analyzing its key institutions, the architecture of its system of multilevel governance and its policy-making processes. Thirdly, it will investigate some key consequences of European integration, focusing on topical debates such as whether and to what extent the shifting of national decision-making powers at the EU level has created a democratic deficit, what is the impact of EU enlargement on both the Union and the institutions, societies and economies of new member states and what have been the economic and political consequences of the introduction of a single currency. Finally, the course intends to engage students in a debate on what is the future of the European Union in light of the latest development brought about by the entering into force of the Lisbon Treaty and the economic and financial crisis suffered by Southern European member countries. Prerequisite:

INTS 4647 Critical Issues in International Humanitarian Assistance (4 Credits)
In recent decades, the humanitarian system has undergone significant changes related to developments in global governance, lessons learned and relationships between agencies (UN/NGO), governments (donors, affected countries), as the nature of crises themselves the contexts in which they occur and actors involved in crisis response continue to evolve, the humanitarian system and those that work within it must contend with new challenges and critiques. Through readings, class discussions, guest speakers and assignments, students have the opportunity to gain a better understanding of the major emerging policy issues and internal and external challenges facing the international humanitarian system. The class discusses important debates in the humanitarian system and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. This course is aimed at those with an interest in humanitarian policy as well those who wish to explore the challenges that may face them as they prepare to work in the humanitarian field. Prerequisite: INTS 4581.

INTS 4648 Theories of Security in World Politics (4 Credits)
In the 40 years following World War II, the study of security assumed a divide between international relations (the politics between states) and domestic politics (the politics within states) and gradually became separated from studies of international economics. International or national security largely centered on one empirical and two different theoretical enterprises. The empirical enterprise explored the relationship between the US and Soviet Union, focusing particularly on deterrence and the effect of nuclear weapons. The theoretical enterprises explored the likelihood of conflict between states in different systems and scenarios (when does conflict occur? When is stability more likely?) and examined the causes and consequences for actors of pursuing different strategies (What determines which strategy states will choose and what are the consequences for security – i.e., war, conquest, security gain, security loss, etc. – of different choices). After the end of the Cold War debates about the meaning of security joined change in the prevalence of intra-state conflicts and growing attention to terrorism in ways that led many scholars to question the usefulness of assumed differences between international and domestic politics, and, to a lesser extent, between security and economics. Also studies of conflict and stability have increasingly focused on a variety of transitional and global actors that do not fall into the realm of the nation, the state, or even the “international” system at all. This course focuses on this post-Cold War security agenda. The class begins with a (rather old by now) debate over the definition of security, then consider the role of states and other actors and finally turn to a list of prominent questions. In examining these questions, the class reads studies based in a variety of explanations, research strategies and methods. Students are encouraged to think about prominent explanations that stretch across the questions in different weeks. Students should also consider the costs, benefits, and alternatives to the research strategies and methods that individual authors have chosen. While the focus is on the substance of debates in security studies, the professor hopes to also spend time each session talking about how to frame productive questions and research strategies. In the way of background, if students have never read Kenneth Waltz, Man, the State, and War, they are recommended to do so. It would also be useful to have some familiarity with some basic texts in political theory, particularly Hobbes, Machiavelli, Kant, and Weber.

INTS 4649 Human Rights and the Middle East (4 Credits)
This course is shaped in three parts; each focuses on a set of critical human rights questions drawn from different phases of the Arab uprisings. Part I focuses on the Arab Uprising and Promises of Human Rights Progress and asks: 1. What can we learn from past contagion of human rights struggles, while the class analyzes the Middle Eastern social transformation? 2. What are the main causes that shook the Arab Middle East? 3. What was/is the role of major social actors? Part II covers the Rise of the 2012 Islamist tides, which gained new momentum after the electoral victory of the Muslim Brotherhood in Tunisia and Egypt and asks: 1. Are these religious trends consistent with human rights efforts? What accounts for waves of contagious revival of religious fundamentalism in the Middle East and North African region before and after 2012? 3. What is the impact of religious fundamentalism and nationalism among Israelis and Palestinians? Part III analyses the Possible Paths of Democratization and Human Rights in the Middle East and explores: 1. What accounts for different Revolutionary Arab Paths? 2. Is there a human rights answer to the Israeli/Palestinian quandary regarding one or two state solution? What are the current and possible roles of external forces for the region (international and/or regional)?
INTS 4650 Globalization and Economic Crime (4 Credits)
This course explores the policy issues raised by international economic crime, a phenomenon that has mushroomed with globalization and now accounts by some estimates for one-fifth by value of all international commerce. But who gets to define “crime”? Are there standards applicable globally to all situations? Nation states, corporations, nongovernmental organizations and political advocacy groups have issued multiple and often conflicting definitions of acceptable and unacceptable behavior and have been free in affixing blame on other sectors. To assess the part played by economic liberalization in the increase of crime, readings focuses attention on the political, technological and economic factors that encourage criminal activity and on the direct and indirect economic costs of activities such as identity theft and counterfeiting; mislabeling and trade in illicit goods; political corruption; money-laundering; and securities and accounting fraud. The class discusses activities posing definitional challenges to policymakers, such as currency and commodity speculation, re-export, gray marketing and state sponsorship of organized crime. This class also looks at policy options available when state-supported criminal economic activity is deemed to violate peremptory norms, create a substantial domestic effect, or constitute an act of war. This course examines self-help programs such as due-diligence and know-your-customer rules as well as statutory regimes such as the U.S. Foreign Corrupt Practices Act, and the movement toward transparency and uniform financial standards.

INTS 4651 Field Knowledge for Agriculture and Sustainable Development (4 Credits)
Agriculture across the globe faces numerous challenges: feeding a growing population; adapting to climate change; reversing environmental degradation; and adapting to changing food consumption patterns, natural disasters, resource scarcity, global trade agreements and political pressure. Farmers and related businesses must deal with these challenges while also maintaining livelihoods and contributing to economic growth. These economic, environmental, social and political challenges shape the entire agricultural system. These challenges influence what the farmers grow and other important production and marketing decisions; these challenges also can discourage fundamental change. Farmers must negotiate tradeoffs that have negative consequences in one area to gain benefits in another. This class will analyze sustainability in agriculture through a regional lens, engaging with agricultural people and systems along the Front Range. We aim to understand the economic, environmental, social and political issues that regional farmers face while taking a fine-grained look at critical components of farming: land, labor and water.

INTS 4652 Contemporary Issues in Refugee Studies (4 Credits)
This course is designed to provide a stimulating interdisciplinary environment in which students explore contemporary issues in refugee studies. Through examination of relevant international instruments, research, case studies, agency policies and reports, students will begin to develop the skills necessary for understanding refugee-serving agencies and associated programs in large scale refugee operations. Specific emphasis will be given to recent developments in - refugee terminology, refugee status determination, urban refugee populations, refugee camps, durable solutions, and extremely vulnerable refugees. Throughout, the course will focus on humanitarian assistance and protection frameworks, including analysis of guiding principles and associated policies of refugee-serving organizations such as the United Nations High Commissioner for Refugees (UNHCR). The importance of reliance on refugee voices to frame the debate will also be emphasized. At the end of this course students should be able to integrate and apply knowledge of innovation policy and practice to begin to address contemporary challenges faced by humanitarian agencies working with refugee populations.

INTS 4653 Political Economy of the Resource Curse (4 Credits)
This course is about one of the more curious findings/non-findings in the history of economics and international relations; that valuable natural resources, such as oil, natural gas, and other mined commodities are not, in the main, associated with better development outcomes and may even depress long-run rates of economic growth and discourage democratization and effective governance. Common sense would seem to suggest that if one finds oneself sitting on a gold mine, then one should mine gold (or drill oil, as in the example above). But countries that have specialized in the production of extractive or “point-source” resources, such as mined commodities like gold, diamonds, and oil, tend to be poor, creating a nagging sense that specialization in extraction is a losing proposition in the global division of labor, condemning countries to be the "hewers of wood and drawers of water." This course briefly reviews the basic economics of the resource curse before turning to a discussion of its effects for deeper institutional determinants of long-run development outcomes: democracy, gender equality, state capacity, and civil strife. It then moves into the realm of interstate politics, examining the ways that resource wealth shapes the foreign relations of resource exporters and major importers, principally the United States and China. The last third of the class investigates both domestic and multilateral attempts to address the resource curse through policy interventions, including civil society-led good governance initiatives like the Kimberley Process and the Extractive Industries Transparency Initiative. This course presumes no deep knowledge of economics but will be of interest to students across the realms of security and development.

INTS 4654 Understanding Diplomacy in Peace and War (4 Credits)
The role of the US in the world has changed greatly in the past half-century. The purpose of this course is to examine how the practice of that change has been both informed by, and informs the scholarly political science literature. This course draws on several broad themes in international relations - democratic peace, balance of power, civil-military relations, war and its termination-and relates them to experiences in the practice of diplomacy worldwide.

INTS 4655 Emerging Powers: Development in Brazil, India and Beyond (4 Credits)
This course deals with two emerging powers, Brazil and India. We trace the political economy of both countries over time, and spend particular time exploring their historical trajectory, current emergence, challenges they face, and the significance of emerging powers for the international political economy. The course is organized around an understanding of their insertion into the international economy, the implications of international insertion for domestic transformation, and the politics of incorporating newly mobilized domestic social and political actors, especially as this plays out in existing political institutions. Students help define some areas of concentration for the course by identifying policy areas in which concentrated research will occur. This course takes an interdisciplinary approach by drawing on political science, economics, and sociology, and we are concerned to understand the potential for emerging powers to alter international relations, as well as the implications of different strategies of international insertion for domestic social sectors, especially those that have traditionally been excluded.
INTS 4665 Technology and War (4 Credits)
This course introduces graduate students to past, present, and future trends in warfare, focusing especially on the how technological advances affect the ways in which states engage in international conflict. The course begins by introducing students to a number of theories that help shed light on why technological developments occur and how they affect the conduct of war. Subsequent classes will then examine important technological developments and assess how each has impacted the use of force over time. Topics include the invention of gunpowder and the use of machine guns, the development of nuclear weapons, the use of unmanned technologies on the battlefield, and the growing importance of the cyber domain to future inter-state conflict.

INTS 4670 Gender, Security and Human Rights (4 Credits)
This course examines the gendered dimensions of security and human rights, with a particular focus on periods of violence and insecurity. Gender equality has been at the heart of human rights and development efforts over the past half-century. Legal and normative instruments have been created to address the ongoing marginalization of women and girls around the world, including the 1979 Convention on the Elimination of Discrimination Against Women (CEDAW) and the 1995 Beijing Platform of Action. More recently there has been increasing attention to the importance of “gendering” discussions of international security. For instance, UN Security Council Resolution 1325, passed in 2000, is widely seen as a landmark framework for ensuring women’s inclusion in the post-war peace process.

INTS 4671 Climate, Science, and Society (4 Credits)
This course examines the role of the natural and social sciences in the climate change issue. Climate change is a complex international problem that challenges scientific and policy analysis. Its effects will be far into the future, are globally widespread, and impact many aspects of society and ecosystems. Many of the costs of climate change policies will be borne in the short term, by countries and sectors that may not be the ones subject to the greatest impacts. There are also substantial uncertainties in the extent of future climate change, its consequences, and the effectiveness and cost of policy responses. All of these aspects of the climate issue make it ripe for political disagreement on how best to respond and for science to be used in various ways, from informing policymakers and the public to advancing political agendas.

INTS 4675 Advanced Topic: Defense and Security Policy Lab (4 Credits)
This is an advanced topics course centered on International Security students gaining, developing, and practicing their professional skills (specifically research and analytics, integration of creativity, academic material, and analysis, peer to peer leadership and coordination, project management and collaborative tools, and communications) via engagement with material/techniques associated with as well as the actual development and execution of a group based professional grade defense/security policy analysis. While the class will contain some traditional academic elements to provide all participants with an enhanced tool kit of skills and analytic options, the bulk of the class takes place through the development of the group defense/security policy analysis executed by 6 person student Project Teams that will be developed through an iterative process over the course and then presented to a group of defense and security professionals for their appraisal. Through this process, security students will be able to get a sense of how real world projects are developed and executed as well as the challenges that confront the production thereof.

INTS 4678 The Politics of Global Trade, Investment and Production: The Origins and Consequences of Open Border (4 Credits)
The last half century has seen national borders opened to the multiple flows now characterized as ‘globalization’ – the movement of traded goods, capital and people, all of which deserve attention. But if the financial crisis alerted the world to the consequences of free capital flows some years ago, the consensus on free trade and foreign direct investment outside of the developed economies is only now being questioned in national politics, most recently and notably in the 2016 US presidential campaign. In that campaign, both candidates questioned the wisdom of the mega-trade deals – the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP) – and one of them promised reverse the tide of outward US company relocation. The loss by the Democrats of much support among voters in blue-collar states affected by deindustrialization has forced a rethinking of both political strategy and policy orientation. The renewed salience of trade politics invites a number of questions, first about how the world managed the politics of surrendering to a large extent trade protectionism from the 1970s onwards, and second, how countries and regions have managed to govern an increasingly open trading order, both in terms of regulating the flow of goods but also in dealing with the domestic consequences – including initially widespread opposition by organized interests and ongoing battles with labor organizations in particular. There is a third question that is central to understanding what has happened with trade, and that concerns the melding of trade as traditionally understood with the transnationalization of production, whereby older and new forms of foreign direct investment (FDI) have created an international web of supply chains within which the greater part of trade (so-called inter-trade) is now conducted.

INTS 4680 Introduction to Political Theory (4 Credits)
Political theory analyzes and interprets the foundations of political life and evaluates its principles, concepts and institutions. It is fundamentally concerned with the normative political relationships among human beings that revolve around the organization and basis of government. This course provides an introduction to Western political theory through key texts and thinkers that are essential reference points in the social science literature. The focus will be on the Enlightenment tradition and the approach will be geared toward understanding how the seminal texts and thinkers of this period have shaped—and continue to shape—our understanding of political ideas and norms. This course will also have a pragmatic component, where the books and ideas under consideration will be applied to contemporary international debates and issues. Please note that this course is geared toward students without a strong background in political theory. No previous knowledge is required or assumed. All that is needed is an open mind and willingness to work hard. Professor Nader Hashemi will be the course coordinator and guest lectures will be delivered by several Korbel faculty members. For more information about the study of political theory at the Josef Korbel School, go to: www.du.edu/korbel/politicaltheory/.

INTS 4700 United States Foreign Policy (4 Credits)
An intermediate course on issues and perspectives for evaluating American foreign policy. Topics discussed include theories of foreign policy; historical epochs in Superpower relations: the Cold War, Dente, and confrontation; America’s role in the post-Cold War; war, peace, and trade in relation to U.S foreign policy planning and assessment.
INTS 4701 US National Security Policy (4 Credits)
An intermediate course which examines the post-war history of U.S. policy and America's response to the post-Cold War environment. Current issues include alternative strategies in nuclear deterrence and arms control; and security policy toward the Third World, Europe and the Atlantic Alliance, and Japan. Prerequisite: INTS 4702.

INTS 4702 Major Issues in International Security Policy (4 Credits)
This course focuses on contemporary challenges to global security. It seeks to familiarize students with the nature of these challenges and analytical tools with which to make sense of (and consider potential responses to) them. In the context of thinking about general issues, students learn about prominent individual instances (or "cases") of problems, think about problems through different theoretical lenses, and consider both logic and empirical evidence in evaluating different arguments. Beyond the substantive focus, the course also encourages students to develop analytical skills and their ability to communicate their analyses effectively.

INTS 4703 Security & Strategy (4 Credits)
This course will focus on the array of factors, options, and realities associated with the creation and execution of Strategy in order to achieve security objectives. The course begins with and centers on the classic works, concepts, and thinkers associated with strategy and then seeks to apply the foundational ideas to a range of current security challenges.

INTS 4704 Globalization and Security (4 Credits)
Course uses historical approaches to evaluate connections between economics and security and how views on security have been shaped.

INTS 4706 Topics in Int'l Studies (1-4 Credits)
INTS 4708 Topics in International Studies (1-4 Credits)
INTS 4709 Topics in International Studies (1-4 Credits)
INTS 4710 Topics in International Studies (1-4 Credits)
INTS 4711 Topics in International Studies (1-4 Credits)

INTS 4715 Problems and Challenges of Democratization in Contemporary Democracies (4 Credits)
This is a course in the field of comparative democratization studies. The class covers political science perspective topics such as the transition to democracy, consolidation of democracies, how and why democracy has spread around the world and the debates on the virtues and perils of democracy and on the nature and quality of the resulting representative democracies. The class focuses on the major explanatory factors for democratization: the case study/actor-centric approach, the statistical/structure-centric approach, and the region-centric approach. Additionally, the class studies many of aspects that might influence the process of democratization such as: institutional design and institutional functioning, political culture, democratic support and the structure of the party system. The geographical focus is global, due to the comparative nature of the theoretical discussion, but it will be mostly focused upon the Southern, Eastern European, and Latin American cases and the time frame is concentrated to the so-called "Third Wave of Democratization" that it started with the Greek and Portuguese transition during the mid-1970s.

INTS 4720 Capital Markets in Africa (4 Credits)
Capital markets – the buying and selling of equity and debt – are vital to the functioning of an economy. Using a comparatives study of capital markets in America and Africa, we will explore how they work, and how inefficiencies and structural challenges can inhibit private investment and access to capital among middle and lower classes in emerging economies generally. The tools in this course will also allow students to assess the efficiency of capital markets in emerging economies throughout the world. The course comprises five modules: 1) Banking and microfinance; 2) Mortgage and housing finance; 3) Private equity (including venture capital); 4) Stock markets; 5) Mobile money. For each module, we will begin with a study of how the industry functions in the United States, which is widely regarded to have the most efficient capital markets. We will then compare the US model to markets in Africa, examining the structural and practical limitations that impede those markets in sub-Saharan Africa (and, by extension, other emerging markets). The course will not attempt a comprehensive analysis of specific African countries, although examples will be drawn from specific markets. Instead, we will focus on many of the structural challenges to the development of mature capital markets in sub-Saharan African countries (mostly excluding South Africa). We will explore questions such as, Can microfinance be profitable? Why isn’t housing finance widely available? What types of “mobile money” systems are developing in Africa, and what are their business models? Why aren’t there more IPOs in Africa? Class participation is important, as the subject matter will range beyond the readings.

INTS 4723 Citizens in Representative Democracies and Comparative Political Behavior (4 Credits)
Citizens’ behavior and attitudes are fundamental for understanding the nature of the relationship between citizens and the state, and for assessing the QUALITY OF representative contemporary democracies and the nature of modern citizenship. This course focuses on the core aspects of citizens’ behavior and their core political attitudes. First, departing from a classification of the different modes of political participation, the class discusses some of the most important aspects that might influence the individual act of participating. Second, departing from the classic models of voting behavior, the class discusses how citizens make up their mind when they vote and the theoretical implications of that process. Third, departing from Easton's and Almond and Verba’s seminal works, this course studies the key dimensions of political support and political attitudes and the relationship among them. This class deals extensively with key concepts such as democratic support, political disaffection, political disengagement, political discontent, and social capital. The study of the factors influencing the different levels and evolution of these attitudes across countries are also covered. This course and its materials refer to studies using survey data and survey indicators, so some basic knowledge of statistics is recommended, although it is not a must.
INTS 4730 Introduction to Homeland Security (4 Credits)
This course will examine the post-1945 history of United states efforts at homeland security, and include an overview of other national efforts (e.g., by the Soviet Union, Switzerland, and Israel.) It will then turn to identifying and analyzing the spectrum of issues associated with U.S. homeland security, in the context of evaluating the United States post-9/11 response to date. Those issues include: framing homeland security, prevention, response and recovery overview, foreign actors and issues, domestic actors/issues, problems of intelligence, terrorism vs. violent crime, public expectations, role of the media, funding and resources, and how to address broad spectrum threats.

INTS 4731 Homeland Defense: Prevention & Mitigation (4 Credits)
This course will examine the following issues: political leadership, foreign and domestic intelligence organization and functions, role of intelligence, principles of indications and warning, legal/civil rights issues: balancing human rights and security, law enforcement, Public health, and the role of various U.S. federal agencies: Department of Energy, Environmental Protection Agency, the INS, border security among others, plus the role of first responders in prevention/detection, and establishing indicators and reporting procedures.

INTS 4732 Introduction to Strategic Cyber Threats and Policy (4 Credits)
At its core, cyber is a suite of complex, interrelated technologies affiliated with computers, communications networks, and digitalization. Like any powerful technology, cyber provides the capabilities for a range of political actors across a range of levels of analysis to increase their capabilities to achieve both benevolent and malignant goals (and which of these any particular effort is often rests in the eyes of the beholder). Yet, the massive scale of the utilization, both current and future, of cyber technologies and the speed, range, and impact that these technologies potentially generate also make cyber a realm, an area of practice, action, and, thus, policy. The challenge with the rise of such a sweeping development in national and international security is understanding the nature of the threat, how unique the characteristics of the threat are versus how much they resemble previous security challenges, how much existing security mechanisms and policies are applicable versus the need for the development of novel solutions and what are the trade-offs that have to be made, and thus will come to define, cyber security policy at the national and international level. This course will engage all four of these basic questions in survey fashion, setting students up for follow-on academic or professional engagement with the realities of strategic level cyber security issues.

INTS 4733 Homeland Sec & Civil Soc (4 Credits)
Examines host of potential societal consequences of homeland security efforts.

INTS 4734 Defense and Security Methods (4 Credits)
The purpose of this overview course in defense analysis methods is to provide students with the foundations to successfully conduct research and analysis in defense-related topics, whether within the national security community, in academia, or as a contractor. This course should also help prepare the student to complete his or her Master’s thesis. The course aims to improve the student’s ability to comprehend and assess the graduate-level readings assigned in other courses, and to write research papers and complete other written assignments for those courses. The course is intended to provide take-away skills that can be applied to professional activities after graduation: in particular, students should have greater confidence in their abilities to locate, read, commission, design, or conduct relevant research, and to draft research proposals. This class focuses on methods employed in both policy analysis and the social sciences. The emphasis is on qualitative rather than quantitative methods.

INTS 4735 Strategic Intelligence Data Collection and Analysis (4 Credits)
Course focuses on analytical prod. of strategic intell relative to inf'l security issues.

INTS 4736 Current Issues in Strategic Intelligence (4 Credits)
Advanced seminar which investigates current issues relative to strategic intell within international studies.

INTS 4737 Defense and Security Quantitative Analysis (4 Credits)
This course is the follow-on to INTS 4735 Defense and Security Methods and is designed to engage students in a professional conversation about the applicability of quantitative analysis and big data based analytics for the execution of defense and security analysis/research. Continuing the development of the students' individual research design proposal, but now introducing an array of quantitative ideas, options, and methods, this course begins with the foundational realities of coding and descriptive statistics before introducing students to bivariate and multivariate analysis, index/scale construction, and hypothesis testing techniques. In addition, the course continues to develop the students ability to engage with and understand real world defense and security research, in this case particularly quantitative analysis. Prerequisites: INTS 4735.

INTS 4738 International Weapons Proliferation (4 Credits)
This course explores the worldwide proliferation of weapons and military hardware. Special attention is given to weapons of mass destruction including fundamental principles of weapons development and deployment; unique characteristics and effects of nuclear, biological, and chemical weapons; and delivery systems. Capabilities and strategies to counter this international problem are developed.

INTS 4739 Gender and International Security (4 Credits)
In this course we will pay particular attention to the gendered dimensions of human security as they relate to war and political violence. We will talk about how security is a distinct concept from human rights or human development, but will also discuss how all are necessary and related. We will explore feminist approaches to international security and critically engage concepts like militarization, peacekeeping, and intervention. We will emphasize the importance of looking at structural cases of insecurity and at the linkages between various forms of insecurity. We will pay particular attention to the agency of local actors and to the strategies employed by women and women's movements to oppose war, secure peace, and promote human security. We will cover landmark international resolutions—such as R2P and UN Resolution 1325—in order to breakdown the impact these resolutions have had on gendered power dynamics in conflict zones, as well as to identify areas where more attention is needed.
INTS 4746 Gender and Human Rights (4 Credits)
This course examines the gendered dimensions of human rights, with a particular focus on human rights during (and after) periods of violence and insecurity. Gender equality has been at the heart of human rights and development efforts over the past half-century. Legal and normative instruments have been created to address the ongoing marginalization of women and girls around the world, including the 1979 Convention on the Elimination of Discrimination Against Women (CEDAW), the 1995 Beijing Platform of Action, and the 2000 UN Security Council Resolution 1325. Indeed, measures to prevent discrimination based on sex have been ingrained in nearly every human rights treaty since the United Nations Charter in 1945. Yet, gender-based rights violations continue to occur around the globe with alarming pervasiveness and frequency. Drawing from critical gender analyses and postcolonial feminist thinking, this class will introduce you to the concept of gendered rights, challenge you to think about intersectionality as a way of considering “rights,” and introduce you to many of the contemporary human rights crises unfolding around the world today. Critically, this class takes an inclusive view of “gender,” examining the human rights of women, men, queer, trans, or gender non-conforming people.

INTS 4750 The Policy Making Process (4 Credits)
Governments make public policies through a complex process, which varies in its details from country to country and even from issue to issue within the same country. In this course we study various parts of those processes and some of the inputs into them. In addition, we play close attention to problem framing or problem definition in those policy processes. Within all these disparate policy processes political actors must have some notion of what problem they are trying to solve and what constitutes the set of feasible solutions to those problems. These ideas about problems and feasible solutions are not given exogenously, are not some fact of nature, but instead arise from complicated interactions among actors and institutions in the policy process. The quest we ask throughout the course is how policy problems and solutions could be framed differently, how we can learn to look outside the conceptual box that partisans to policy debates try to draw for us. Students write a series of papers during the course following a policy issue of their choice through the policy process.

INTS 4751 European Foreign and Defense Policy (4 Credits)
The focus of this course is on foreign and defense policies of key states and international organizations in modern Europe, from the Atlantic to the Urals. After introducing Europe as a cultural, political, and geographical construct, we focus on the North Atlantic Treaty Organization and the European Union before turning to a comparative analysis of six leading European states. Security in an increasingly globalized world deals not only with defense issues, but also with economics, human rights, and questions of identity. We focus on Germany, France, the United Kingdom, Italy, Russia, and Turkey, underscoring their bilateral and multilateral associations with other European states, the United States, and the European Union, NATO, OSCE, and Council of Europe. We conclude with considerations of what “Europe” really means, and what the future holds for this vital content.

INTS 4753 Intelligence and National Security (4 Credits)
Focuses on the craft of U.S. Intelligence and its role in the making and implementation of national security policy.

INTS 4760 Russian Foreign and Defense Policy (4 Credits)
Course explores Russian foreign and defense policy from Vladimir Lenin to Vladimir Putin - heavy focus on security policy.

INTS 4767 Cultures of Capitalism (4 Credits)
This seminar lays the theoretical foundations for a cultural critique of capitalism. With an eye towards colonialism, modernity, and globalization, readings are devoted primarily to different schools of thought parsing out capital as a social relationship, object of value, and form of mediation. The purpose of this class is to establish temporal and spatial commensurability across tendencies and discontinuities in capitalism by i) locating the phenomenological, ontological, and epistemological conditions of possibility for the reproduction of value and ii) asserting history, experience, and embodied praxis as productive features in the imagined abstraction of economic life and market discourse. More than an attempt to historicize the contemporary moment of deregulation, precariousness, or flexible accumulation, the course is designed primarily to unveil concurrent theories of value and the work of abstraction and reification, morality, and power, labor and materiality foregrounding the processual logics of capitalism. To do so, this course explores the theoretical stakes of production, circulation, and consumption occurring in time-space relations of commodity exchange, markets, and global finance in late capitalism. How to account for the increasing disconnect between the “real” economy and the “fictitious” value of virtual markets, financial derivatives, and future trading? How to make sense of the work of mediation - or perceived gaps therein - between consumers and producers, the labor of abstraction and the concrete reification of economic objects? Registration by departmental approval only; restricted to students participating in the Geneva travel program.

INTS 4768 Introduction to a Critique of Market Society and its Solidarity Alternatives (4 Credits)
This course is taught in French. Le séminaire propose d’introduire ou de conforter une vision "indignée" de l’hégémonie des marchés en s’appuyant principalement sur la lecture socialiste et chrétienne de l’économie par Karl Polanyi et ses critiques en particulier d’Adam Smith et de Karl Marx. Ceci se réfère surtout au concept de marchandise fictive (appliqué aux ressources naturelles comme au travail humain et à la monnaie), de richesse commune partagée et d’interdépendance économique (appliquée aux mécanismes complémentaires et antagoniques de concurrence, de redistribution, de solidarité et de partage). Une large part de cette réflexion interdisciplinaire doit ressortir des propres expériences des étudiant(e)s et de leurs recherches. Elles doivent aussi permettre de comprendre l’élaboration des alternatives, leurs potentialités et leurs limites. La situation de Genève, capitale des spéculations sur les matières premières sera notamment interpellée. Registration by departmental approval only; restricted to students participating in the Geneva travel program.
INTS 4770 The Politics and Economics of International Energy (4 Credits)
Although it is becoming increasingly evident that the world does not face an imminent shortage in the availability of fossil fuels, access to energy resources and security of energy supply remain important preoccupations for governments and companies alike. Utilization of fossil energy resources will be increasingly constrained by environmental considerations and the threat of global warming. Energy will remain a key concern in international relations for the coming decades and will influence the perception of national interest and the pattern of international exchanges and interdependence. The course aims at providing students with the critical knowledge and skills to avoid superficial generalizations and stereotypes - which unfortunately remain all too common. Requires departmental approval; registration is restricted to students participating in the Geneva travel program.

INTS 4771 Trade and Development (4 Credits)
Development, trade and their interlinkages are among the most controversial topics of today. Economics has much to say concerning these issues, and constitutes a powerful tool in terms of debunking commonly held misperceptions. This course considers a number of topics associated with the links between international trade and development. A particular emphasis is placed on the consequences of trade openness on outcomes in developing countries, i.e. on inequalities, growth and poverty, institutions and financial development, the impact of export instability and countries’ specialization, terms of trade, financial crises, trade and environment. The course is applied-oriented: after reviewing basic theories associated with each topic, each lecture involves presentations of recent empirical papers. By the end of the course, it is hoped that participants will be able to intelligently read and critically assess policy documents on the topics covered that are commonly produced by international institutions. Requires departmental approval; registration is restricted to students participating in the Geneva travel program.

INTS 4775 Droit diplomatique international (4 Credits)
Ce course vise à combler une lacune, l'enseignement du droit diplomatique ne faisant généralement l'objet que de développements à titre incident, ce malgré l'importance séculaire de ce domaine du droit international. AXé sur l'évolution de la pratique étatique des relations diplomatiques (y compris les relations avec les organisations internationales) et la jurisprudence pertinente de la CIJ, le cours se propose d'analyser les grands thèmes du droit diplomatique, tels que le droit de légitimation, la création et l'extinction des relations diplomatiques, les fonctions et droits/obligations liés à la mission diplomatique, le contenu et les limites des immunités des personnes, biens et locaux diplomatiques, ou encore les mécanismes sanctionnant les violations du droit diplomatiques. Il fera finalement une place à la pratique récente relative aux immunités des Chefs d'État et Ministres des affaires étrangères. Registration by departmental approval only; restricted to students participating in the Geneva travel program. Students must be fluent in French; course is taught in French only.

INTS 4776 Financial Crises (4 Credits)
This is a seminar designed to go over the literature on the sources, channels, characteristics and impacts of financial crises. The sessions are devoted to the study of papers, some older fundamental contributions and some very recent early analyses inspired by the crises that started in 2007 and is not yet over. The seminar is primarily designed for second-year Master and PhD students. Students from other programmes and departments may attend if they have a strong background in economics. Registration by departmental approval only; restricted to students participating in the Geneva travel program.

INTS 4777 Governing Global Threats: Expert and Legal Regimes (4 Credits)
This course examines major threats to human security (from climate change to nuclear proliferation and terrorism, and the global financial crises), and how these threats can be prevented by legal, political and social mechanisms. Theoretically, this course focuses on various socio-historical approaches to law and expertise in transnational settings. It focuses specifically on the role that legal regimes (either made of treaty-based rules or soft-law regulations articulated by experts) play in contemporary modes of global governance, which go beyond the forms of state authority that are traditionally called upon to interpret and enforce these rules. We will survey different disciplinary approaches to the topic and to illustrate their approach by research.

INTS 4778 Rise and Fall of the "Third World (4 Credits)
This seminar explores ideas and movements for colonial unity and solidarity since the late-19th Century and the programs for solidarity they inspired amongst nations emerging from decolonization. Where and who did these ideas originate? How effectively did they translate into political programs? How were such ideas and programs deployed in changing international contexts? What wider influences did they exert? In what ways did the international system deal with these ideas and programs? What prospects exist for such solidarities in the contemporary world? These and similar questions will be explored in this seminar.

INTS 4780 Terror in History: Challenges and Responses (4 Credits)
Terror/ism has been a feature of political relations for more than 2000 years and has a history that reaches back far beyond 9/11. This seminar will look at the historical evolution of terrorism and antiterrorism as well as the different stages they have gone through since antiquity. The main focus, however, will be the past 150 years, with the emergence of what David C. Rapoport calls "modern terror." The course will 1) highlight the difficulties of defining the phenomenon; 2) explore the different experiences with and debates about terror--anarchist/social-revolutionary, ethnic, religious, "lone wolf," state (-sponsored) terror—in various regions and countries since the 1880's (such as Russia, Italy, Germany, the US, Spain, Ireland, Israel/Palestine, Namibia, Algeria, etc.); and 3) address how the countries concerned and the international community at large dealt with the challenges deriving from terrorism (e.g., at the League of Nations and the UN).
INTS 4782 Law without the State (4 Credits)
This course discusses situations, theoretical and empirical, in which law is made primarily outside state power. It reviews instances of private ordering and governance that enjoy a relatively important autonomy from state law. The absence of the state as a possible cause of ethical issues will be entertained. Other parts of the course will proceed at a higher degree of abstraction, asking for instance whether the orderings identified properly deserve to be called law. It will thereby delve into preliminary questions, too often neglected, that influence how the debate is framed on the whereabouts of non-state law. Why does 'being law' matter? How do definitions of what law is matter? What makes a definition of law of good definition? Can something be relatively law but not fully? Who decides on what law is and for whom such pronouncements are authoritative?

INTS 4783 Economics and Development (4 Credits)
The course provides a broad overview of the sort of topics that development economists work on, both on the micro and on the macro side. On the macro side, we will cover fundamental topics such as household consumption, insurance, credit, land markets, and migration.

INTS 4784 Foreign Policy of Major Powers (4 Credits)
This course is designed to review and analyze leading puzzles of foreign policy, based on the substance of foreign policies of major countries in the present time and the recent past. The objective is to develop analytical skills to use when confronting new foreign policy puzzles. Much emphasis will be given in this course to the relevance of foreign policy scholarship to understanding real-world, contemporary world affairs. It is important that students make themselves aware of what is happening in the world.

INTS 4785 Modern China: Reform and Revolution (4 Credits)
This course introduces the modern Chinese history since 1840s. The focus is on the historical, cultural, political, and economic interactions between modern Chinese state and its people and between China and the outside world. The modern fate of China has been alternating between revolutions and reforms, internal wars and external conflict had been the norm rather than exception until recent decades. It examines the features of modern Chinese political system, economy and social and cultural identities. It also traces the roots of recent reforms in China that have transformed the country in a fundamental way. The relationships between state and society, between politics and economy and between China and foreign powers will be discussed in detail.

INTS 4786 Planning and Assessment in Complex Environments (4 Credits)
The primary mission of this course is to provide participating students grounding in the planning methodologies, approaches, and expectations used within the US government in both military and civilian agencies as well as increasingly in the security related private and non-profit sectors. The starting point for this effort is Operational Art & Design and the military’s Joint Operational Planning Process (JOPP) as well as related literature. Military planning serves as the starting point both because it is the most mature and sophisticated government planning methodology and because most other US government planning practices are direct, contextually appropriate derivatives of DoD planning mechanics.

INTS 4787 Civil-Military Practices in Humanitarian Responses (4 Credits)
Changing U.S. national security priorities following 9/11, including updated Department of Defense doctrine, have led to U.S. military actors prioritizing humanitarian assistance as a central component of theater security cooperation arrangements. This trend includes not only considerations of protection of civilians during military operations but also planning for natural disaster response and steady state engagement to build the capacities of host nations to address crises, including natural and man-made disasters. Through readings, class discussions, group work and individual assignments, students in this course will gain a better understanding of the issues and roles of civilian and military actors in the humanitarian space, with a specific focus on how legal and policy guidance impacts the decision to utilize U.S. military forces in disaster response situations. While this course will focus specifically on how the U.S. government approaches humanitarian activities and the role of the U.S. Department of Defense assets, it will locate this discussion within the broader about the appropriate use of Military and Civil and Defense Assets in international humanitarian community.

INTS 4788 To Save and Defend: The History of Politics of Humanitarian and Security Organizations (4 Credits)
This interdisciplinary seminar looks at the policies and politics of humanitarian and security organizations. We will critically explore and contrast the concepts of "protection," "save," and "defend." We will focus on the perspective of those who save and defend as well as on those who are supposed to be saved and defended. Attention will be given to theories, practices, geographies, organizational cultures and underpinning ideologies of saving and defending.

INTS 4789 Violence, Memory, Cinema: Comparative Perspectives on Latin America & the Middle East (4 Credits)
This seminar aims at investigating the role of cinema (documentaries and fiction) in (re) shaping the collective memories of societies living in a context of armed conflict, post-civil war or political transitions from authoritarian rule. We will focus in particular on the role of the different generations of film directors as social actors in these processes; on the effects of censorship (the State-sponsored one, the forms of self-censorship and its indirect forms through distribution and production); and on the role of film festivals as arenas of power and of circulation of ideas. The first part of the seminar will develop problematically the relations between memory and history through present debates related to the visual arts and the politics of memorialization in Latin America and the Middle East. The seminar topic being at the crossroad of several disciplines, we will explore different anthropological, political, and historical paradigms, including the contributions of film studies. In the second part of the seminar we will focus on the specific topic of 'exiles and refugees', their representation through cinema and the contribution of fictions and documentaries in forging national identity and in keeping the memory of those who left and came back or for whom the return has become not an option anymore. In parallel to the main seminar, a series of 3-4 workshops will be organized for watching movies, with the presence of external lecturers. Finally, the seminar is conceived in the larger framework of the contribution of arts to reconciliation and peace-building, an emerging field of academic interest and policy investment.
INTS 4790 International Law and Development (4 Credits)
The course aims at providing a systematic overview of the main issues related to sustainable development from the standpoint of public international law. It strikes a balance between theoretical and practical questions, focusing on primary sources and international decisions. After a concise discussion of the basic principles and notions of the international legal order, the course deals with the evolution of development law from the United Nations resolutions on the New International Economic Order to the Monterrey Consensus and its follow-up. Particular attention will be paid to the attempt to conciliate economic growth with the protection of the environment and human rights. The course is then completed with the examination of (a) the activities of the World Bank Group and the International Monetary Fund in the field of development; (b) the participation of developing countries in international trade; and (c) the promotion of foreign investment as a vehicle for economic growth and development.

INTS 4793 Development Economics (4 Credits)
The course covers major issues in development economics from both the macro and micro perspectives. Topics where research is active will be covered. The focus is on acquiring the necessary theoretical and empirical skills to understand the challenges related to the socio and economic transformation in developing countries.

INTS 4794 Inequality in Latin America and the Caribbean (4 Credits)
This course will examine the historical roots of inequality in Latin America and the Caribbean. It begins by introducing students to the concept of inequality and the social construction of race, ethnicity, gender, sexuality, and class. It then explores how these structures have been shaped by a variety of forces including Spanish and Portuguese colonization, labour systems, cultural practices, and religion. We will also explore how various actors have attempted to challenge this inequality at different points in time through everyday resistance and revolutionary, populist, feminist, black nationalist, and liberation theology movements. This course will approach these issues using a mix of historical and anthropological case studies from across the region that allow us to consider not only how inequality is created, maintained, and challenged on a large scale, but also how it has been experienced in the day to day life of Latin American and Caribbean people.

INTS 4802 Foundational Ideas in Social Science: Marx and Weber (4 Credits)
Marx’s is the most striking and complex theory of revolution change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen’s Association, the Second International, the Third International). “Capital” is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington “consensus” about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals’ vision of a new society. Further, Marx’s vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatriate on what Marx’s views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx’s views are often misrepresented, dismissed without investigation as “obviously wrong.” This course provides an opportunity to read the first volume of “Capital” and some of Marx’s other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.

INTS 4804 Realism and Democracy (4 Credits)
Course answers questions such as: Can democracy check international cruelty? Why, according to Kant, Doyle, and Rawls, are democracies unlikely to go to war with other democracies? We discuss democratic individuality and Vietnam, democracy, and Realism as well.

INTS 4820 Democracy and War (4 Credits)
This course explores Socrates’ speech at his trial and decision to go to his death as, surprisingly, initiating two central features of modern democratic theory. First, Socrates is often depicted as simply hostile to the many, looking down on Athenian democracy. But what he in fact looks down on is tyrannical mob rule, the “democracy” of a particular interest arbitrarily enforced (what we might call a demented Joe McCarthy-kind of democracy). In contrast, Socrates also incarnates the idea of asking questions in a democracy, that is, dissent (prefiguring what is sometimes called today deliberative democracy). That makes a democracy capable of realizing, sometimes, a common good. Second, Socrates provides a paradigm for modern civil disobedience or satyagraha in Gandhi - we read Gandhi’s translation of Plato’s Apology - and Martin Luther King’s letter from the Birmingham City Jail. Nonviolent civil disobedience is necessary in a modern democracy because party-competition focuses mostly on personality issues and not on fundamental injustices. Further, this kind of protest promises major change even in dictatorships (consider Erica Chenoweth and Maria Stephan, Why Civil Resistance Works). Thus, this emphasis is a novel interpretation of Plato as opposed to, in scholarship and politics, Plato’s supposed link to authoritarian “commander-in-chief” power (Heidegger, Leo Strauss and William Kristol for example) which we also contrast in this course. The course explores the subtlety of these dialogues - the question of what Plato intended to teach his long-standing students like Aristotle who studied with him for 20 years - but leave the main points of Gandhi’s and King’s interpretation intact. Third, the course explores Thucydides, History of the Peloponnesian War and Plato’s response to it in the Republic in terms of modern critiques of Empire building and the “unhinged” wars by American democracy (we look at W. Robert Connors’s elegant break with previous understandings of Thucydides during Viet Nam and John Mearsheimer’s striking criticisms of post-Cold War American policy, echoing Obama’s 2013 speech at the National Defense University, in “America Unhinged.” Thucydides is a far deeper account of imperial expansion and the corruption of and threat to democracy at home than modern realist and neo-realist gestures at him. Neo-realists methodologically attempt to separate global politics from its domestic consequences as supposedly different levels of analysis; this interplay is the heart of Thucydides’ argument and deepest insight into the meaning of war and democracy.

INTS 4822 Contemporary Political Theory (4 Credits)
An examination of current 21st century political theory and how the events of the 20th century helped mold these ideas/concepts.
INTS 4851 Theories of Non-Violence (4 Credits)
Can a state be non-violent? Course explores topics such as the distinction between power and violence; whether nonviolent politics is possible; the distinction between an ethic of responsibility and an ethic of intention; is capitalism consistent with democracy? This seminar is interactive and class participation is required.

INTS 4854 Rising China and Challenges to the Global Order (4 Credits)
This course is for Korbel in DC program participants only. This seminar focuses on contemporary challenges to the global order posed by China’s growing economic power. The course charts China’s reform and opening, its development and integration into the global economy, and the challenges created for Western economic and security institutions and alliances. Specific topic areas covered include China’s non-market status and trade conflict, competition for technological leadership, ICT governance and standard setting, the Belt and Road Initiative, and the implications of China’s South China Sea activity. The course will combine extensive background readings, lectures, and discussion. Students will benefit from frequent guest lectures and discussions with experts from the Center for Strategic and International Studies.

INTS 4856 Global Sustainability and Development (4 Credits)
This course is for Korbel in DC participants only. This course considers the interaction of environmental, economics, and energy issues on global ecological systems. It offers an overview of relevant international legal frameworks and national governance systems, the state of major ecosystems – forests and species habitats; wetlands, oceans and rivers, and the atmosphere and selected policy issues related to each. Emphasis is less on “what” to think than “how” to think about and formulate policy responses to complex, multidimensional issues.

INTS 4875 Human Rights and Foreign Policy (4 Credits)
Global human rights issues and how those issues help mold foreign policy decisions.

INTS 4890 Revolutions and State Building (4 Credits)
Marx’s is the most striking and complex theory of revolutionary change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen’s Association, the Second International, the Third International). "Capital" is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington "consensus" about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals' vision of a new society. Further, Marx’s vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatiate on what Marx’s views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx’s views are often misrepresented, dismissed without investigation as "obviously wrong." This course provides an opportunity to read the first volume of "Capital" and some of Marx’s other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.

INTS 4900 International Politics (4 Credits)
Topics on discussion include: levels of analysis; realism; neo-realist structuralism; international society and the English school; international anarchy; process variables and international institutions; international security institutions; rationalism, constructivism, and the purposes of theory; norms and ideas; gender and identity; and postmodernism and post-structuralism.

INTS 4903 Social Construction of International Society (4 Credits)
Examines recent theoretical work in the field of international relations that treats international society and its practices as social constructs.

INTS 4905 War and Peace (4 Credits)
An intermediate course which examines the historical relationship of war to politics, such as the military profession, military organizations, economics of defense planning, limited use of force, demobilization, war reconstruction, military rule, and civilian control. Current world trends toward democratization focus attention on the issue of creating a democratic army for a democratic state. Readings cover western industrialized, communist, post-communist, and 3rd world countries.

INTS 4906 Classics of International Theory (4 Credits)
Professor will choose various books by classic political theorists for students to read and discuss in class.

INTS 4907 International Terrorism (4 Credits)
This course will examine the literature on international terrorism both before and after 9/11. It will include an overview of the origins, history, goals, strategies, and capabilities of significant terrorist groups (emphasizing Al Qaeda). It will also examine the history of United States and international efforts to combat terror, focusing on post 9/11 debates over grand strategy and tactics (e.g., the relationship between offense and defense, active vs. passive defenses, intelligence reform, multilateralism vs. unilateralism, the relationship between "rogue states" and terror, etc.).
INTS 4909 Climate Justice (4 Credits)
The science of climate change, while continuing to become more exact and nuanced, is clear – human behavior has caused the planet to warm unnaturally. Now that the science has been established the next question is how will it affect the ecosystem and, especially human habitation. As seems to be the norm, those most affected by climate change will be the poor, the disempowered, and native populations. The understanding and the possible solutions must be interdisciplinary – human rights, law, economics, development, gender and race equity, security, science – to name a few. The course will look at the history and philosophy of climate justice, which includes such disciplines as environmental justice and sustainability, move through an analysis via a number of different viewpoints, and conclude with a look into the future in terms of education and activism. Climate justice requires a sharp, critical look at systems and an understanding of the interconnectedness of science, ethics, and politics. Examples of this might include the rising of sea levels displacing very large numbers of people adding to the already impossible strain on refugee and IDP resettlement. Or the Brazilian economy’s almost sole reliance on hydro-electric power in face of the drying up of rivers and water basins. Or the role of the world’s religions and religious leaders in climate justice. One of the unique characteristics of this course will be the number of guest lecturers. It is incumbent on universities and colleges to take a multi-disciplinary approach to climate justice and lower the “silos” between academic units. To that end colleagues from DU and other institutions will bring their disciplines and insights to bear on the topic.

INTS 4912 Development in Africa: Challenges, Constraints and Strategies (4 Credits)
This course is for Korbel in DC participants only. As the Developed World falters over its financial difficulties, many eyes are turning to the third world for resources, markets and solutions. In a real sense, Africa is the “last frontier.” With this in mind, this seminar provides an overview of Africa and Development through the eyes of practitioners and scholars from the US and Africa who have devoted considerable effort to trying to affect development on the continent and speculating on what more it will take to make Africa prosperous. Beginning with an overview, the course proceeds through traditional development sectors (agriculture, health and education), newer perspectives and drivers (private sector, ICTs, democratization and China), and the three “C” barriers (corruption, conflict and climate change). Lively exchanges over the role of outsiders and the efficacy of aid as well as Africa’s growing role in the outside world, balance more traditional development perspectives.

INTS 4914 Statecraft and Smart Power in the Digital Era (4 Credits)
This course is for Korbel in DC participants only. This course examines new approaches to the practice of statecraft in an era of rapid global change. Globalization is upsetting traditional international order and institutions, and changing the pace and intensity of decision making. Nation-state governments, while still the primary actors, must adjust to new sub-national, regional and transnational forces and players in a far more complex global arena. Digital Communication is revolutionizing relationships and interaction in the global arena. More groups and the general public are involved or mobilized in public participation than ever before. Vastly more information flows ever more quickly. Partisanship rises with segmentation, threatening fragmentation in public life. The new era reflects the imbalances and strains of major demographic change, especially the impact of an expanding tech-savvy younger generation. A significant youth bulge in volatile developing nations fuels reform efforts, but also creates the potential for conflict arising from continuing injustice and unmet expectations Foreign policy institutions and decision makers here and abroad are increasingly subject to cross-pressures from competing domestic and transnational interests. In the U.S. the Inter-Agency must balance influential single-issue stakeholders and constituencies here and abroad. The course explores how the U.S. and other governments are responding to the new global challenges. Participants see to frame new “rules” of statecraft in the digital era.

INTS 4920 Conflict Resolution (4 Credits)
An introductory course which identifies the collective factors leading to successful reconciliation or agreeable compromises in conflicts; analyzes the role and influence of cultural norms, gender conditioning and different bargaining strategies on the resolution process; applies the practical fundamental of negotiation on particular problem-solving techniques.

INTS 4924 Democratization in the Middle East (4 Credits)
The promotion of democracy process and its implementation of democracy have emerged as a major goal for U.S. and world policy makers and have attracted the attention of many scholars. Democracy is now widely regarded as a political system that minimizes conflict, promotes sustainable development, and is a vital tool in the struggle against terrorism. However, the results of efforts to create democracies in various countries, including Iraq and Afghanistan are a clear illustration of the difficulties involved in making transitions to democracy. In this seminar, we shall focus on what is known about democratization, consider the nature and role of Islam, examine the state of democracy in key countries of the region, and consider the ways in which the U.S. and other external actors might strengthen democratic forces in the region.

INTS 4928 Torture (4 Credits)
This is a reading/seminar course. Students are asked to be well-prepared and contribute to the discussion. We explore mostly modern forms of torture. The use of torture has not abated in the last 100 years despite conventions, treaties and watchdog organizations. What has occurred is that torture has become "stealth", to use Professor Rejali’s term. These "stealth" techniques leave no mark and have been developed equally by democratic states and totalitarian regimes. It is also clear that the U.S. has engaged in state sponsored torture (see The Constitution Project bi-partisan report of April, 2013). An important question before us is if there is any place for torture in the 21st century and if torture is an effective means to gather intelligence. If the answer to both questions is "no," and torture violates the most basic ethical, moral, and legal norms of humanity, why does it persist?.

INTS 4931 International Organizations (4 Credits)
An intermediate course on approaches to the study of international organizations, including institutionalism, neofunctionalism, complex interdependence, international regimes, and epistemic communities. Case studies examining collective security and peacekeeping, human rights, Antarctica, and the environment are discussed.

INTS 4934 Intervention: Policies & Pract (4 Credits)
Procedures, policies and practices of international organizations and the roles they play in helping resolve internal issues and conflicts.
INTS 4935 International Humanitarian Law of Armed Conflict (4 Credits)
This course is a theoretical and practical introduction to international humanitarian law (IHL). IHL is known by many other names such as "humanitarian law," "law of conflict," and "laws of war." All these terms refer to the rules regarding the treatment of civilians and non-combatants in areas of armed conflict and the rules of engagement for soldiers and combatants. These "rules" are especially important to know if you eventually work for an IO or NGO that finds itself in areas of armed conflict. Cross listed with CPSY 4560.

INTS 4936 International Law and Human Rights (4 Credits)
An introductory course examining the concept of human rights, including political, economic, social, and cultural rights. International, regional and national institutions, norms and procedures to protect individual and group rights are discussed. Recommended prerequisite: INTS 4940.

INTS 4939 Genocide and the Human Condition (4 Credits)
The well known Holocaust scholar, Daniel Jonah Goldhagen has argued that genocide is worse than war and we look at the mass killings of the past one hundred years he is probably correct. This course not only examines genocide comparatively by studying the Holocaust and genocide in Rwanda, Cambodia other countries and regions of the world but focuses on the question of if it can be ended. Does the popular phrase "Never Again" have any meaning or will genocide continue and even escalate in the twenty first century.

INTS 4940 Introduction to Human Rights (4 Credits)
An introductory course focused around historical and theoretically relevant texts in human rights. First and second generation rights are emphasized. Early liberal, conservative, and socialist understandings of human rights are highlighted against their respective historical background.

INTS 4941 Human Rights and International Organizations (4 Credits)
An introductory course exploring the changing roles of international organizations in their efforts to protect and promote human rights. Examination of both the global and regional levels of human rights activities of international intergovernmental organizations are discussed. Recommended prerequisite: INTS 4940.

INTS 4951 Comparing International Societies (4 Credits)
Course explores variations in societies of states across time and place.

INTS 4954 Human Rights Research and Design (4 Credits)
The purpose of this course is to acquaint students with graduate level research and writing strategies that facilitate the composition of concise, articulate, and informative pieces of scholarly and policy-oriented work. We explore an array of research options and techniques and look critically at the ways in which different uses of language are constitutive of meaning and structure in written works. This is considered a "skills" course which is designed to allow students to explore in depth a sub-topic of interest within a broader topic in the field of Human Rights. The topic varies each term. The work completed by students is edited minimally, and published in the Human Rights and Human Welfare Digest, the Josef Korbel School's online human rights journal. This digest is intended to serve as a resource for policymakers, non-profit organizations, and human rights advocates, by presenting concise and reliable information that is both informative and accessible. In the first half of the class, we focus on building practical research strategies, including: determining the parameters of research; identifying and accessing appropriate sources of information; using bibliographic management software; and compiling an annotated bibliography. The second half emphasizes the development of writing techniques that culminate in the production of an analytical essay and annotated bibliography of publishable quality. Attention is paid to grammar, syntax, structure, stylistics, and appropriate language use.

INTS 4955 Human Rights Clinic I (0 Credits)
Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.

INTS 4956 Human Rights Clinic II (4 Credits)
Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.

INTS 4964 Political Risk Analysis (4 Credits)
Investigates risks associated with political instability or uncertainty in countries with emerging markets.

INTS 4965 Technology and Sustainable Development (4 Credits)
Technology has always been a major influence on cultures and societies, national and international. Today, all countries recognize the key role that technology plays in achieving sustainable development and are striving to harness its potential while minimizing its negative impacts. New technologies such as robotics, genetics, information and communication all promise transformations that can greatly improve the quality of life of peoples everywhere. At the same, time they can also develop in ways that do not lead to as sustainable a future. Thus, they generate controversy and difficult policy choices for governments and peoples everywhere. Accordingly, it is essential to understand the nature of technology and its role in social and political change as well as the ways in which it can be controlled and harnessed for positive ends. In this seminar we will focus upon the relationship of technology to sustainable development and pay special attention to emerging technologies and to such issues as technology transfer, the relationship between technology and democracy, technology assessment and control, the role of appropriate technology, and how developing countries can develop modern scientific and technological capabilities that promote sustainable futures.
INTS 4966 Applied Field Methods (4 Credits)
An introductory course for students planning to conduct research in developing countries. Practical information is presented on transforming hypothesis into a fieldwork setting, questionnaire construction and administration, and interviewing techniques.

INTS 4972 Global Environmental Governance (4 Credits)
Global environmental problems pose seemingly intractable problems for international relations and policy. In this seminar, we probe some of the practical and theoretical difficulties associated with solving such problems. These problems include: How can sovereign nation-states agree to cooperate on environmental problems and how can such cooperation include businesses and civil society? No international institution can legitimately coerce nations into such cooperation. Therefore, international institutions must get them to agree to cooperate, must find ways to bring business and civil society into those agreements, and then find ways to monitor and enforce the agreements. This task is harder than it might seem, and we explore both theories and cases that illuminate it.

INTS 4981 Internship (0-4 Credits)
The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student’s education. An internship should both complement the student’s academic field of study and relate to his/her career goals. Through internships, students will: Apply acquired academic theory, knowledge, and skills to professional practice; Further develop knowledge and skills needed to work effectively in the field; Gain greater understanding of the private, public, or nonprofit/NGO sectors; Build a network of professional contacts; and Develop career-related skills applicable to the future job search. The course is open to currently enrolled Korbel MA candidates. Registration is by instructor approval after review of materials.

INTS 4987 Forced Labor and Human Trafficking (4 Credits)
This course looks at a brief history of slavery, especially as it pertains to the British, West African, West Indies, and American triangle. We then look at contemporary issues of forced labor, human trafficking and contemporary slavery. Human trafficking is a very complex problem that requires a sophisticated, inter-disciplinary critique.

INTS 4989 North American Defense and Security (4 Credits)
This course will challenge students to analyze the evolving North American Defense and Security environment since 1945. The course will begin by focusing on the history of the Canada - United Status (CANUS) defense and security relationship that began in the wake of World War Two and was precipitated upon protecting the North American continent from Soviet attack with the formation of the Permanent Joint board on Defense (PJBD), Military Cooperation committee (MCC), and North American Air Defense Command (NORAD). However, the end of the Cold War and subsequent terror attacks of 9/11 dramatically changed the North American Defense and Security environment and created the need for enhanced cooperation between the United States, Canada, and Mexico.

INTS 4991 Independent Study (1-12 Credits)
A special individual arrangement for students to pursue more advanced work beyond that available through regular courses. Such study is arranged between professor and student prior to registration. Academic grades are assigned for course performance. Tutorial Record Form required.

INTS 4992 Directed Study (2-4 Credits)
INTS 4993 International Students Writing Lab (0-1 Credits)
Emphasizes aiding international students in perfecting their English writing skills as well as assisting them in developing ideas and solutions for specific course papers. Students receive advice on writing logic and structure as the instructor individually reviews draft papers and provides written comments. Classroom sessions provide students with the opportunity to share ideas as well as problems. An online portion will provide students with samples of scholarly writing, exercises, and classroom discussion supplements. Former participants are welcome to attend as part of independent study. Course can be taken for 0 or 1 credit and may also be repeated.

INTS 4995 M.A. Thesis Research (1-8 Credits)
This course allows a student to receive credit for research and writing undertaken as part of the master’s thesis. Such study is arranged between professor and student. Academic grades are assigned for performance. Independent Research form required.

INTS 4996 Substantial Research Paper (0-4 Credits)
A Substantial Research Paper (SRP) is a problem-focused paper designed to engage student in the process of applied research. In contrast, an independent study tends to be a more general research project, while an MA thesis involves in-depth academic research typically undertaken by students interested in pursuing a PhD. An SRP is typically shorter than an MA thesis, and does not require a review committee or an oral defense. Rather, the SRP will be supervised and graded by a single appointed faculty member.

INTS 5991 Independent Study (1-12 Credits)
INTS 5992 Directed Study (1-5 Credits)
INTS 5995 Ph.D. Dissertation Research (1-8 Credits)
This course allows a student to receive credit for research and writing undertaken as part of the doctoral dissertation preparation. Grades of "P" (pass) are assigned after the dissertation is accepted by the committee. Prerequisite: Ph.D Candidacy (passing Comprehensive exams).

Morgridge College of Education
The University of Denver Morgridge College of Education is committed to preparing highly competent, socially responsible, ethical and caring professionals to promote learning in diverse settings. With a guiding commitment to excellence, our programs offer high-quality and rigorous
academics with an emphasis on relevant, practical experience through field experiences, research and community-oriented projects. Through our focus on inclusiveness and innovation, we strive to create purposeful learning experiences designed to transform people and ideas.

With several regionally and nationally recognized programs, the College is known for its diverse, high quality students and alumni. The College offers certificate, master’s and doctoral programs in Educational Research, Policy and Practice; Research Methods and Statistics; Library and Information Science; and School and Counseling Psychology.

Counseling Psychology
Office: Katherine A. Ruffatto Hall, 2nd floor
Mail Code: 1999 E. Evans Avenue, Denver, CO 80208
Phone: 303.871.2473
Email: mce@du.edu
Web Site: morgridge.du.edu/programs/counseling-psychology/

Counseling Psychology
As a graduate student in the Department of Counseling Psychology (CP), you’ll develop the skills necessary to become an effective practitioner, researcher and/or leader in your field. Our goal is to develop professionals who are insightful and self-reflective, who are innovative risk takers and superior critical thinkers. Our highly selective doctoral program is accredited by the American Psychological Association and is well known for providing access to high-quality national internships for our students. This scientist-practitioner program has a strong focus on both research and practice. Similarly, the master’s program has excellent practicum and internship sites all over the Denver area, and is accredited by the Masters in Psychology and Counseling Accreditation Council. One of the strengths for our Counseling Psychology program for both master’s and doctoral students is the opportunity to provide counseling in our in-house clinic.

We want our students not only to demonstrate accurate and current knowledge, but to have expertise related to the many issues that confront society, and to have the skills to create effective strategies and approaches to address these challenges.

Doctor of Philosophy in Counseling Psychology
The goal of the CP doctoral curriculum at the University of Denver is to educate counseling psychologists who have a solid foundation in science, practice, and culture. Although CP programs may lie at various points on the continuum from a very heavy emphasis on science to a very heavy emphasis on practice, the Counseling Psychology department at DU lies closer to the middle of the continuum. Although the course of study provides students with some flexibility to emphasize either the practice or scientific side of the continuum, we expect that all students will have a solid foundation in science and practice and will approach each aspect of their training from a multicultural informed position. Many of our graduates work in practice settings after graduation, and some are in research/faculty positions across the country. However, when they do so, we believe they are trained to practice from a scientific/critical perspective infused with cultural awareness. In this way, our philosophy is consistent with the perspective of Pepinsky (1954), who suggested that the scientist portion of the scientist-practitioner model is reflected in the way counseling psychology practitioners think about and conduct their practice: they think critically and are appropriately skeptical about theories, research findings, and clinical practices, including their own as well as others. In addition, our students strive for cultural competence in order to be effective with diverse clients.

Counseling psychologists encourage groups of individuals in an array of cultural contexts to better understand themselves and their own behavior, to develop an increased repertoire of adaptive skills, and to more effectively approach life problems in light of this understanding and skill development. Counseling psychologists also help individuals make vocational-educational decisions, take productive action in marriage or family systems, and assist individuals with health-related crises, being careful to take cultural consideration into account. Counseling psychologists are also trained to provide supervision, consultation, and interprofessional/interdisciplinary skills and to use these skills in a variety of settings. Consistently, DU Counseling Psychology department emphasizes multicultural counseling and social justice, health psychology, psychological assessment, group dynamics, and treatment of addictions. Seminars are offered in all of these areas.

The faculty encourages students to develop individualized programs of study commensurate with their career goals. Practicum setting are arranged to further intensify training in particular specialty areas (e.g., college counseling, VA, in-patient, integrative care, correctional settings, community mental health). Students whose goals include college teaching are encouraged to co-facilitate introductory counseling classes with faculty and teach undergraduate courses. Students are also required to participate in and contribute to a pre-dissertation research project that leads to a presentation and/or a submission for publication.

Interim Master of Arts in Counseling Psychology with a Concentration in General Counseling (for PhD students only)
This concentration leads to a general Master’s degree in Counseling, and is available as an interim degree for PhD candidates only. This concentration requires a minimum of 55 quarter hour credits, including a 200-hour practicum, but it does not lead to licensure as a professional counselor on its own.
Master of Arts in Counseling Psychology with a Concentration in Clinical Mental Health Counseling

The Clinical Mental Health Counseling concentration has been designed to meet the requirements necessary to become a Licensed Professional Counselor. Students who complete this degree and two years of post-master’s work in the field can apply to become a Licensed Professional Counselor in the State of Colorado. **Other states may have other requirements.** Students completing this concentration often work in agencies or in community settings all over the Denver area. This degree requires two years and 90 quarter credits. It also includes a 200-hour practicum, a 600-hour internship, and two quarters of counseling in our in-house clinic.

Master of Arts in Counseling Psychology with a Concentration in Research Counseling

Some students wish to develop more advanced research skills as well as counseling skills. This concentration requires two years and 72 credit hours to complete. Students wishing to complete a master’s thesis are strongly encouraged to apply to participate in this concentration during the winter quarter of the first year of study. If the student chooses to apply for the Research concentration later, it will take longer to complete the degree. It is recommended they begin discussing this option with their advisor during their first quarter of graduate work. Students who complete a thesis are not required to take the comprehensive examination. This is the only concentration students may pursue if they are interested in writing a thesis. The Research concentration does not meet requirements to achieve licensure.

Doctor of Philosophy in Counseling Psychology

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Master of Arts in Counseling Psychology with a Concentration in Clinical Mental Health Counseling, Concentration in General Counseling, Concentration In Research Counseling, Concentration in School Counseling, SchoolCounseling@Denver

Degree and GPA Requirements

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master’s degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master’s degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
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- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Doctor of Philosophy in Counseling Psychology

Degree Requirements

A total of 135 hours are required for the doctorate in the Morgridge College of Education and up to 45 credits from a master’s degree may be eligible to be transferred depending on the content overlap with current courses. Students are able to transfer in up to an additional 15 hours for graduate work provided the credits have been earned after the master’s degree was awarded and it does not conflict with the doctoral residency requirement.

Coursework Requirements for Students Entering with a Master’s Degree That Included a Supervised Practicum/ Clinical Requirement

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CNP 4700</td>
<td>Counseling Theory (can be waived)</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4701</td>
<td>Advanced Seminar: Counseling Theory</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4710</td>
<td>Career Counseling (can be waived)</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4720</td>
<td>Group Counseling Theory (can be waived)</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4752</td>
<td>Counseling Psychology Advanced Practicum I (3 qtrs/3 credits each) *</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4752</td>
<td>Counseling Psychology Advanced Practicum I (3 qtrs/3 credits each) **</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4753</td>
<td>Counseling Psychology Advanced Practicum II (3 qtrs/1 credit each) ***</td>
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<tr>
<td>CNP 4753</td>
<td>Counseling Psychology Advanced Practicum II (3 qtrs/1 credit each) **</td>
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<tr>
<td>CNP 4753</td>
<td>Counseling Psychology Advanced Practicum II (3 qtrs/1 credit each) ***</td>
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<tr>
<td>CNP 4754</td>
<td>Couns Psych: PhD Internship</td>
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<tr>
<td>CNP 4756</td>
<td>PhD Counseling Clinic (2 qtrs/1 credit each) ***</td>
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<tr>
<td>CNP 4756</td>
<td>PhD Counseling Clinic (2 qtrs/1 credit each) ***</td>
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### Counseling Psychology Seminar: Research

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<tr>
<th>Code</th>
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<tr>
<td>CNP 4770</td>
<td>Counseling Psychology Seminar: Research</td>
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<tr>
<td>CNP 4780</td>
<td>Counseling Psychology Seminar: Supervision</td>
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<tr>
<td>CNP 4792</td>
<td>Pro-Seminar in Counseling Psychology</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4784</td>
<td>Psychopathology (can be waived)</td>
<td>5</td>
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<tr>
<td>CNP 4800</td>
<td>Consultation</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4794</td>
<td>Counseling Psychology Seminar: Special Topics (Electives in Counseling Psychology/Special Topics - e.g., Advanced Group, Grief and Loss, Health Psych, Couple Therapy)</td>
<td>1-10</td>
</tr>
<tr>
<td>CNP 4758</td>
<td>PhD Field Experience (no syllabus; these credits are not paid for by the student) #</td>
<td>8</td>
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</tbody>
</table>

# (Register for this Fall, Winter, and Spring terms during internship year for 8 credits per quarter)

* Assumes completion of a supervised field experience of 400 hours in the MA/MS program (if not, see section on coursework required for those who did not complete a practicum as part of their MA/MS program)

** Advanced Practicum I and Advanced Practicum II students are required to spend 15 to 20 hours per week in practicum placement for three consecutive quarters for a total of 500-600 hours per practicum experience (of which 250-300 should be direct client time per practicum setting). Ideally a minimum of 500 to 600 direct service hours will be accumulated at the end of the two practicum experiences). All quarters must be at the same site and must be consecutive. Some students take an additional practicum placement if necessary based on goals for internship and career. For more information on practicum requirements, please see the separate practicum handbook.

*** PhD Clinic is generally taken for two consecutive quarters: either winter-spring, spring-summer, summer-fall, or fall-winter. Students are surveyed about their preferences and these are accommodated if possible.

**** Students must have successfully completed Advanced Practicum I and have completed or are completing Advanced Practicum II.

### RESEARCH REQUIREMENTS

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>RMS 4910</td>
<td>Introductory Statistics (*)</td>
<td>5</td>
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<tr>
<td>OR</td>
<td></td>
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</tr>
<tr>
<td>RMS 4930</td>
<td>Empirical Research Methods (*)</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4911</td>
<td>Correlation and Regression (Prerequisite: RMS 4910)</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4912</td>
<td>Analysis of Variance (ANOVA - Prerequisite: RMS 4910)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Required</strong></td>
<td></td>
<td><strong>14-21</strong></td>
</tr>
</tbody>
</table>

* May test out; see Dr. Cutforth regarding testing out or waiving based on previous coursework for RMS 4910, RMS 4930, and RMS 4941 respectively.

### RMS Electives: Select At Least Two Courses

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>RMS 4913</td>
<td>Multivariate Analysis (Prerequisite: RMS 4911)</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4951</td>
<td>Mixed Method Research Design (Prerequisite: RMS 4910, 4941)</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4922</td>
<td>Item Response Theory (Prerequisite: RMS 4921)</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4914</td>
<td>Structural Equation Modeling (Prerequisite: RMS 4911)</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4915</td>
<td>Hierarchical Linear Modeling (Prerequisite: RMS 4911)</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4916</td>
<td>Latent Growth Curve Modeling (Prerequisite: RMS 4914)</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4942</td>
<td>Qualitative Data Collection and Analysis</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4945</td>
<td>Community-Based Research (Prerequisite: RMS 4942)</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4932</td>
<td>Meta-Analysis Social Science Research (Prerequisite: RMS 4910)</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4939</td>
<td>Topics in Quantitative Research Methods (Prerequisite: RMS 4939)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Other statistical/methodology electives can be approved by advisor</strong>*</td>
<td>**</td>
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</tbody>
</table>

**Total Electives**

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td><strong>5-10</strong></td>
<td></td>
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</table>

### Dissertation Credits

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CNP 5995</td>
<td>Dissertation Research (10 minimum)</td>
<td>1-20</td>
</tr>
</tbody>
</table>

1 Students can take up to 5 credits prior to comprehensive exams. In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 135 credits is required for the PhD in Counseling Psychology.
Coursework Requirements for Students Entering with a Master’s Degree without Clinical Training (*e.g., a supervised Practicum/Clinical requirement*)

For students entering without a supervised M.A. practicum or clinical experience, there are several extra requirements included in the list below.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CNP 4788</td>
<td>Physiological Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4775</td>
<td>Counseling Psychology: Cognitive &amp; Affective Basis of Behavior</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4768</td>
<td>Counseling Psychology: Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4921</td>
<td>Psychometric Theory</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4794</td>
<td>Counseling Psychology Seminar: Special Topics (Advanced Integrative Course)</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4645</td>
<td>Lifespan Development</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4702</td>
<td>Introduction to Assessment</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4704</td>
<td>Psychological Assessment</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4706</td>
<td>Cognitive Assessment</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4772</td>
<td>Diversity Seminar: Psycho-Social Issues (2 qtrs/ 1 credit each)</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4772</td>
<td>Diversity Seminar: Psycho-Social Issues</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4705</td>
<td>History and Systems of Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4773</td>
<td>Diversity: Multicultural Counseling Psychosocial Issues</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4790</td>
<td>Counseling Psychology Seminar: Ethics</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4700</td>
<td>Counseling Theory</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4710</td>
<td>Career Counseling</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4720</td>
<td>Group Counseling Theory</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4740</td>
<td>Basic Counseling Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4741</td>
<td>Int Counseling Techniques</td>
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</tr>
<tr>
<td>CNP 4743</td>
<td>Fieldwork in Counseling</td>
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<tr>
<td>CNP 4751</td>
<td>Counseling Psychology Beginning Practicum (2 qtrs/3 credits each)</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4752</td>
<td>Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each)</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4752</td>
<td>Counseling Psychology Advanced Practicum II (3 qtrs/ 3 credits each)</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4753</td>
<td>Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each)</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4754</td>
<td>Couns Psych: PhD Internship</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4756</td>
<td>PhD Counseling Clinic (2 qtrs/ 1 credit each)</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4756</td>
<td>PhD Counseling Clinic</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4770</td>
<td>Counseling Psychology Seminar: Research</td>
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<td>Counseling Psychology Seminar: Special Topics (Electives in Counseling Psychology/Special Topics - e.g., Advanced Group, Grief and Loss, Couple Therapy, Family Therapy)</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4758</td>
<td>PhD Field Experience (students do not pay for these credits)</td>
<td>8</td>
</tr>
</tbody>
</table>

*Students must complete Basic Counseling Techniques with a grade of "B" or better before enrolling in Beginning Counseling Practicum.

# (Register for this each term during internship year for a total of 8 credits per quarter)
** Advanced Practicum I and Advanced Practicum II students are required to spend 15 to 20 hours per week in practicum placement for three consecutive quarters for a total of 500-600 hours per practicum experience (of which 250-300 should be direct client time per practicum setting). Ideally a minimum of 500 to 600 direct service hours will be accumulated at the end of the two practicum experiences. All quarters must be at the same site and must be consecutive. Some students take an additional practicum placement if necessary based on goals for internship and career. For more information on practicum requirements, please see the separate practicum handbook.

*** PhD Clinic is generally taken for two consecutive quarters either winter-spring, spring-summer, summer-fall, or fall-winter. Students are surveyed about their preferences and these are accommodated if possible. Note that students who enter without practicum experience in their MA/MS program are required to complete both MA Clinic and PhD Clinic, for a total of four quarters of clinic.

**** Students must have successfully completed Advanced Practicum I.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>RMS 4910</td>
<td>Introductory Statistics (*)</td>
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<td>RMS 4941</td>
<td>Introduction to Qualitative Research (*)</td>
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<tr>
<td>RMS 4911</td>
<td>Correlation and Regression (Prerequisite: RMS 4910)</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4912</td>
<td>Analysis of Variance (ANOVA - Prerequisite: RMS 4910)</td>
<td>5</td>
</tr>
</tbody>
</table>

Total Required: 9-21

*May test out; see Dr. Cutforth regarding testing out or waiving based on previous coursework for RMS 4910, RMS 4930, and RMS 4941 respectively.

RMS Electives: Select At Least Two Courses

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<td>Multivariate Analysis (Prerequisite: RMS 4911)</td>
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<tr>
<td>RMS 4951</td>
<td>Mixed Method Research Design (Prerequisite: RMS 4910, 4941)</td>
<td>4</td>
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<tr>
<td>RMS 4922</td>
<td>Item Response Theory (Prerequisite: RMS 4921)</td>
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<td>RMS 4914</td>
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<td>RMS 4916</td>
<td>Latent Growth Curve Modeling (Prerequisite: RMS 4914)</td>
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<td>RMS 4942</td>
<td>Qualitative Data Collection and Analysis</td>
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<tr>
<td>RMS 4945</td>
<td>Community-Based Research (Prerequisite: RMS 4942)</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4932</td>
<td>Meta-Analysis Social Science Research (Prerequisite: RMS 4910)</td>
<td>3</td>
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<tr>
<td>RMS 4939</td>
<td>Topics in Quantitative Research Methods (Prerequisite: RMS 4939)</td>
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</tbody>
</table>

Other statistical/methodology electives can be approved by advisor***

Total Electives: 5-10

Dissertation Credits

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CNP 5995</td>
<td>Dissertation Research (10 minimum)</td>
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</table>

1 Students can take up to 5 credits prior to comprehensive exams. In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 135 credits is required for the PhD in Counseling Psychology.

Coursework Requirements for Students Entering with a Bachelor’s Degree

(135 qtr. hrs. for completion of PhD requirements)

A total of 135 post-Bachelor’s quarter hours is the minimum required for the doctorate in the Morgridge College of Education for students coming in without a master’s degree.

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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<tr>
<td>CNP 4788</td>
<td>Physiological Psychology</td>
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<td>CNP 4775</td>
<td>Counseling Psychology: Cognitive &amp; Affective Basis of Behavior</td>
<td>3</td>
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<tr>
<td>CNP 4768</td>
<td>Counseling Psychology: Social Psychology</td>
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<td>RMS 4921</td>
<td>Psychometric Theory</td>
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<td>CNP 4645</td>
<td>Lifespan Development</td>
<td>5</td>
</tr>
<tr>
<td>Code</td>
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<td>Credits</td>
</tr>
<tr>
<td>----------</td>
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<td>---------</td>
</tr>
<tr>
<td>CNP 4702</td>
<td>Introduction to Assessment</td>
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<tr>
<td>CNP 4704</td>
<td>Psychological Assessment</td>
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<tr>
<td>CNP 4706</td>
<td>Cognitive Assessment</td>
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<tr>
<td>CNP 4794</td>
<td>Counseling Psychology Seminar: Special Topics (Advanced Integrative Course)</td>
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<td>CNP 4772</td>
<td>Diversity Seminar: Psycho-Social Issues (2 qtrs/ 1 credit each)</td>
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<td>Diversity Seminar: Psycho-Social Issues</td>
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<tr>
<td>CNP 4773</td>
<td>Diversity: Multicultural Counseling Psychosocial Issues</td>
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<tr>
<td>CNP 4705</td>
<td>History and Systems of Psychology</td>
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<tr>
<td>CNP 4790</td>
<td>Counseling Psychology Seminar: Ethics</td>
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**COUNSELING REQUIREMENTS**

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<tr>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CNP 4700</td>
<td>Counseling Theory</td>
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<tr>
<td>CNP 4701</td>
<td>Advanced Seminar: Counseling Theory</td>
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<tr>
<td>CNP 4710</td>
<td>Career Counseling</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4720</td>
<td>Group Counseling Theory</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4740</td>
<td>Basic Counseling Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4741</td>
<td>Int Counseling Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4743</td>
<td>Fieldwork in Counseling</td>
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</tr>
<tr>
<td>CNP 4750</td>
<td>Counseling Psychology Beginning Practicum (2 qtrs/ 3 credits each) *</td>
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</tr>
<tr>
<td>CNP 4750</td>
<td>Counseling Psychology Beginning Practicum (2 qtrs/ 3 credits each) *</td>
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</tr>
<tr>
<td>CNP 4752</td>
<td>Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) **</td>
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</tr>
<tr>
<td>CNP 4752</td>
<td>Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) **</td>
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<tr>
<td>CNP 4752</td>
<td>Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) **</td>
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<td>CNP 4753</td>
<td>Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **</td>
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<tr>
<td>CNP 4753</td>
<td>Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **</td>
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<tr>
<td>CNP 4753</td>
<td>Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **</td>
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<tr>
<td>CNP 4754</td>
<td>Couns Psych: PhD Internship</td>
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<tr>
<td>CNP 4756</td>
<td>PhD Counseling Clinic (2 qtrs/ 1 credit each) ***</td>
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<tr>
<td>CNP 4756</td>
<td>PhD Counseling Clinic (2 qtrs/ 1 credit each) ***</td>
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<tr>
<td>CNP 4770</td>
<td>Counseling Psychology Seminar: Research</td>
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<tr>
<td>CNP 4780</td>
<td>Counseling Psychology Seminar: Supervision ****</td>
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<tr>
<td>CNP 4792</td>
<td>Pro-Seminar in Counseling Psychology</td>
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<tr>
<td>CNP 4784</td>
<td>Psychopathology</td>
<td>5</td>
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<tr>
<td>CNP 4800</td>
<td>Consultation</td>
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</tr>
<tr>
<td>CNP 4758</td>
<td>PhD Field Experience (students do not pay for these credits) #</td>
<td>8</td>
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</table>

# (Register for this each term during internship year for 8 credits per term)

* Students must complete Basic Counseling Techniques with a grade of "B" or better before enrolling in Beginning Counseling Practicum. Beginning counseling is a 10 to 15 hour a week requirement in a practicum placement over two quarters, for a total of 200 hours on site.

** Advanced Practicum I and Advanced Practicum II students are required to spend 15 to 20 hours per week in practicum placement for three consecutive quarters for a total of 500-600 hours per practicum experience (of which 250-300 should be direct client time per practicum setting). Ideally a minimum of 500 to 600 direct service hours will be accumulated at the end of the two practicum experiences). All quarters must be at the same site and must be consecutive. Some students take an additional practicum placement if necessary based on goals for internship and career. For more information on practicum requirements, please see the separate practicum handbook.

*** PhD Clinic is generally taken for two consecutive quarters either winter-spring, spring-summer, summer-fall, or fall-winter. Students are surveyed about their preferences and these are accommodated if possible. Note that students who enter with a bachelor's degree are required to complete both MA Clinic and PhD Clinic, for a total of four quarters of clinic.

**** Students must have successfully completed Advanced Practicum I.

**RESEARCH REQUIREMENTS**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS 4910</td>
<td>Introductory Statistics *</td>
<td>(5)</td>
</tr>
<tr>
<td>RMS 4930</td>
<td>Empirical Research Methods *</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research (*)</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4911</td>
<td>Correlation and Regression (Prerequisite: RMS 4910)</td>
<td>4</td>
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</tbody>
</table>
RMS 4912  Analysis of Variance (ANOVA - Prerequisite: RMS 4910)  5

Total Required  16

*May test out; see Dr. Cutforth regarding testing out or waiving based on previous coursework for RMS 4910, RMS 4930, and RMS 4941 respectively.

RMS Electives: Select At Least One Course  4-5

RMS 4913  Multivariate Analysis (Prerequisite: RMS 4911)  5
RMS 4951  Mixed Method Research Design (Prerequisite: RMS 4910, 4941)  4
RMS 4922  Item Response Theory (Prerequisite: RMS 4921)  3
RMS 4914  Structural Equation Modeling (Prerequisite: RMS 4911)  5
RMS 4915  Hierarchical Linear Modeling (Prerequisite: RMS 4911)  4
RMS 4916  Latent Growth Curve Modeling (Prerequisite: RMS 4914)  4
RMS 4942  Qualitative Data Collection and Analysis  4
RMS 4945  Community-Based Research (Prerequisite: RMS 4942)  4
RMS 4932  Meta-Analysis Social Science Research (Prerequisite: RMS 4910)  3
RMS 4939  Topics in Quantitative Research Methods (Prerequisite: RMS 4939)  3

Other statistical/methodology electives can be approved by advisor***

Dissertation Credits

CNP 5995  Dissertation Research (10 minimum)  1

1 Students can take up to 5 credits prior to comprehensive exams. In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 135 credits is required for the PhD in Counseling Psychology.

Interim Master of Arts in Counseling Psychology with a Concentration in General Counseling

To be eligible, students must enter the PhD program without an earned master's degree. Students must submit an application to graduate and meet with their advisor for candidacy sign-off by the deadline.

The interim MA does not prepare students for licensure as a Licensed Professional Counselor (LPC). It is intended for students who wish to complete a Master's degree as they pursue their PhD. Students must meet the requirements for the Master of Arts in Counseling Psychology with a Concentration in General Counseling listed below.

Master of Arts in Counseling Psychology with a Concentration in Clinical Mental Health Counseling

Degree Requirements
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNP 4645</td>
<td>Lifespan Development</td>
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</tr>
<tr>
<td>CNP 4700</td>
<td>Counseling Theory</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4702</td>
<td>Introduction to Assessment</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4710</td>
<td>Career Counseling</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4720</td>
<td>Group Counseling Theory</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4730</td>
<td>Research Methods and Program Evaluation</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4740</td>
<td>Basic Counseling Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4741</td>
<td>Int Counseling Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4743</td>
<td>Fieldwork in Counseling</td>
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<tr>
<td>CNP 4755</td>
<td>MA Clinic (2 qtrs/ 5 credits each)</td>
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<tr>
<td>CNP 4755</td>
<td>MA Clinic (2 qtrs/ 5 credits each)</td>
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<tr>
<td>CNP 4773</td>
<td>Diversity: Multicultural Counseling Psychosocial Issues</td>
<td>5</td>
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<tr>
<td>CNP 4784</td>
<td>Psychopathology</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4795</td>
<td>Master of Arts Counseling: Legal and Ethical Issues</td>
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</tbody>
</table>

Practicum and Internship  15
### MASTER OF ARTS IN COUNSELING PSYCHOLOGY WITH A CONCENTRATION IN GENERAL COUNSELING

#### Degree Requirements

**Coursework Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Foundations</strong></td>
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<tr>
<td>CNP 4702</td>
<td>Introduction to Assessment</td>
<td>5</td>
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<tr>
<td></td>
<td><strong>Concentration</strong></td>
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<tr>
<td>CNP 4645</td>
<td>Lifespan Development</td>
<td>5</td>
</tr>
<tr>
<td>CNP 4700</td>
<td>Counseling Theory</td>
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</tr>
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<td>CNP 4710</td>
<td>Career Counseling</td>
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<tr>
<td>CNP 4720</td>
<td>Group Counseling Theory</td>
<td>5</td>
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<tr>
<td>CNP 4740</td>
<td>Basic Counseling Techniques</td>
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<tr>
<td>CNP 4741</td>
<td>Int Counseling Techniques</td>
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</tr>
<tr>
<td>CNP 4743</td>
<td>Fieldwork in Counseling</td>
<td>1</td>
</tr>
<tr>
<td>CNP 4773</td>
<td>Diversity: Multicultural Counseling Psychosocial Issues</td>
<td>5</td>
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<tr>
<td>CNP 4772</td>
<td>Diversity Seminar: Psycho-Social Issues (2 qtrs/ 1 credit each)</td>
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<td>CNP 4772</td>
<td>Diversity Seminar: Psycho-Social Issues (2 qtrs/ 1 credit each)</td>
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<tr>
<td>CNP 4784</td>
<td>Psychopathology</td>
<td>5</td>
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<tr>
<td>CNP 4795</td>
<td>Master of Arts Counseling: Legal and Ethical Issues¹</td>
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</tr>
<tr>
<td>or CNP 4790</td>
<td>Counseling Psychology Seminar: Ethics</td>
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<td></td>
<td><strong>Practicum</strong></td>
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<tr>
<td>CNP 4750</td>
<td>Counseling Psychology Beginning Practicum (2 qtrs/ 3 credits each)</td>
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<td>CNP 4750</td>
<td>Counseling Psychology Beginning Practicum (2 qtrs/ 3 credits each)</td>
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<td><strong>Total Credits</strong></td>
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¹ Master’s students in the concentration should take CNP 4795. CNP 4790 is open only to doctoral students pursuing the interim MA.

**Minimum number of credits required for degree: 55**

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### Master of Arts in Counseling Psychology with a Concentration in Research Counseling

#### Degree Requirements

**Coursework requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tr>
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<td><strong>Select one of the following:</strong></td>
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<tr>
<td>RMS 4930</td>
<td>Quantitative Research Design</td>
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<tr>
<td>or</td>
<td>RMS 4900</td>
<td>Education Research and Measurement</td>
</tr>
<tr>
<td></td>
<td><strong>Plus:</strong></td>
<td></td>
</tr>
<tr>
<td>RMS 4910</td>
<td>Introductory Statistics</td>
<td>5</td>
</tr>
</tbody>
</table>

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**Minimum number of credits required for degree: 90**

**Non-coursework Requirements**

- Comprehensive Exam
CNP 4995  Research - M.A. Thesis  3

Foundations
CNP 4702  Introduction to Assessment  5

Concentration  42
CNP 4645  Lifespan Development  5
CNP 4700  Counseling Theory  5
CNP 4710  Career Counseling  5
CNP 4720  Group Counseling Theory  5
CNP 4740  Basic Counseling Techniques  3
CNP 4741  Int Counseling Techniques  3
CNP 4743  Fieldwork in Counseling  1
CNP 4773  Diversity: Multicultural Counseling Psychosocial Issues  5
CNP 4784  Psychopathology  5
CNP 4795  Master of Arts Counseling: Legal and Ethical Issues  5

Practicum
CNP 4750  Counseling Psychology Beginning Practicum (2 qtrs/ 3 credits each)  3
CNP 4750  Counseling Psychology Beginning Practicum (2 qtrs/ 3 credits each)  3

Electives  8

Total Credits  72

Minimum number of credits required for degree: 72

Non-coursework Requirements
• Comprehensive examination

Master of Arts in School Counseling@Denver
Curriculum (18 four-credit courses)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
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<td>Theories of Counseling and Psychotherapy</td>
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<tr>
<td></td>
<td>Introduction to Assessment</td>
<td>4</td>
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<tr>
<td></td>
<td>Orientation to Professional Counseling &amp; Ethical Practice</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Lifespan Development</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Career Counseling</td>
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<tr>
<td></td>
<td>Group Counseling Theory</td>
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</tr>
<tr>
<td></td>
<td>Research Methods &amp; Program Evaluation</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Basic Counseling Skills</td>
<td>4</td>
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<tr>
<td></td>
<td>Diversity: Multicultural Counseling Psychosocial Issues</td>
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</tr>
<tr>
<td></td>
<td>Counseling Children, Adolescents, and the Family</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Mental Health &amp; Substance Use</td>
<td>4</td>
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<tr>
<td></td>
<td>Educational Strategies and Policies for School Counselors</td>
<td>4</td>
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<tr>
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<td>Comprehensive School Counseling Programs</td>
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<td>Roles &amp; Responsibilities of the School Counselor</td>
<td>4</td>
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<td>School Counselor Interventions &amp; Strategies</td>
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<td>School Counseling Practicum</td>
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<td>School Counseling Internship 1</td>
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<tr>
<td></td>
<td>School Counseling Internship 2</td>
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</table>

Total Credits  72
Courses
CNP 4303 Risk Resiliency and Prevention (3 Credits)
This course examines the history and theoretical bases of resiliency research and the characteristics of children at significant risk of delays, disorders, and low-incidence disabilities. Participants obtain practical information regarding the assessment, identification, amelioration, facilitative responses, and intervention in school and community settings for these populations. The course moves beyond a pathology approach that focuses on the deficits of children and families to an empowerment perspective that focuses on strengths. The course is grounded in child development research and educational and family systems theory as well as psychopathology and content associated with exceptional children. Prevention principles, curriculum, and policy agendas are discussed that build on a model of collaboration between and among disciplines in community and school settings.

CNP 4312 Counseling Psychology: Learning Application and Analysis (3 Credits)
Learning theories and the principles of behaviorism are active in shaping the individual person, groups of people, and society as a whole. In realizing which actions lead to desirable outcomes and which fail to do so, we alter or change our behaviors accordingly. Through the examination of learning theories and applied behavioral principles, we will explore how behaviors develop, especially those that may be maladaptive or related to psychological disorders, and how clinicians can intervene to enact effective behavior change. Learning will be examined at three levels: the observable or behavioral level, the cognitive process level, and the physiological level.

CNP 4342 Crisis Intervention and Prevention (3 Credits)
This course provides knowledge about crisis prevention and intervention theory and effective strategies for use in direct and indirect services for children and staff in schools and in practice with children. Emphasis is on application to child-centered and school-based crises such as bullying, child abuse, death, loss and grief, trauma, community and school-based violence, threats, and suicide. The course provides students with basic knowledge and skills for crisis intervention in school settings.

CNP 4641 Adolescent Development (3 Credits)
Physical, cognitive, emotional, social, and moral development in adolescents with emphasis on interaction of various aspects of development within an environmental context; focus on normal development with exploration of special problems of adolescents, e.g., substance abuse, teen-age pregnancy, eating disorders and delinquency; critical study, and discussion of literature on adolescence and interviews with adolescents.

CNP 4642 Adult Development (3 Credits)
Literature on normal development of adult thinking and problem-solving processes and the self-esteem. Physiological changes and relationship between cognitive development and developmental tasks of adults included.

CNP 4645 Lifespan Development (5 Credits)
Survey of the principles of development from conception to adulthood, emphasizing biological, environmental, and cultural factors affecting development.

CNP 4700 Counseling Theory (5 Credits)
Basic counseling theories and philosophical principles as a foundation for professional training including history, concepts, techniques and trends.

CNP 4701 Advanced Seminar: Counseling Theory (3 Credits)
Focus on advanced practice issues and (doctoral students only) integration of theory and practice.

CNP 4702 Introduction to Assessment (5 Credits)
This is a biweekly course designed to give students an introduction to the essentials of psychological testing, assessment, and report utilization. This course will provide students with exposure to basic objective tests, projective tests, personality tests and other diagnostic techniques.

CNP 4704 Psychological Assessment (5 Credits)
Administration, scoring and interpretation of objective and projective personality-assessment techniques, the DSM IV, diagnostic categories, report-writing skills, ethical standards for testing. Lab fee required. Prerequisite: counseling or school of psychology Ph.D. student or instructor approval.

CNP 4705 History and Systems of Psychology (3 Credits)
Historical and philosophical basis of modern psychological theories; basic issues as related to major school of psychology.

CNP 4706 Cognitive Assessment (5 Credits)
This course provides students in Counseling Psychology with experience in individual intelligence, learning and memory, and neurocognitive screening test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive measures, with particular emphasis on the Wechsler Scales. Contemporary issues pertinent to the assessment of intelligence are covered. Emphasis is placed on synthesizing and integrating information from cognitive assessment with other sources to produce effective intervention and therapeutic recommendations. Issues regarding the use of such tests are discussed, as well as appropriate use in agencies and clinical practice. Lab fee required.

CNP 4707 Introduction to Integrated Health (3 Credits)
This course is designed to provide students with an introduction to issues in the practice of integrated health psychology, including the topics of interprofessionalism, diagnosis and assessment, treatment, treatment adherence, and consultation. Students will learn about the roles held by behavioral health providers, particularly in the primary care medical setting. Emphasis is placed on evidence-based and culturally competent practice in the integrated health environment.
CNP 4710 Career Counseling (5 Credits)
This course is designed to facilitate student development of knowledge, skills and competencies to engage in counseling clients with career issues; utilize occupational/career resources including technology-based resources and assessments; examine theories of career development and decision-making; develop the ability to evaluate and implement appropriate assessments; collaborate with clients in identifying personal and career goals; and organize and implement program planning and techniques and do so in a diversity of work settings. Lab fee required.

CNP 4711 Advanced Group Counseling (3 Credits)
Advanced group course that concentrates on advanced leadership skills, leadership styles, and leader methods geared toward conducting counseling groups with diverse populations for different problem areas. This class will also focus on the theory and research on group counseling and psychotherapy.

CNP 4712 Grief and Loss (3 Credits)
This course is an opportunity for students to examine their own ideas about grief and loss and come to a clearer understanding of their meaning, with the goal of using this personal growth to facilitate the development of professional and clinical skills. The course will examine current theory, clinical applications, and research implications with an emphasis on personal exploration and cultural considerations.

CNP 4713 Multicultural Issues in Vocational Psychology (3 Credits)
This elective seminar course in Multicultural Vocational Psychology will critically examine existing career theory, research, and interventions from a multicultural perspective. Students will be exposed to cutting-edge literature and explore the future of multicultural vocational psychology. Issues pertaining to: gender, race, ethnicity, sexual orientation, gender identity, social class, aging, ability status, and immigration will be discussed in depth as they relate to career development and the psychology of working.

CNP 4720 Group Counseling Theory (5 Credits)
This course is designed to introduce graduate counseling students to group counseling theory, research, and practice. This course will focus on group theory and research but will also provide instruction and experiences in a variety of group techniques. The course is designed for students in counseling psychology, school psychology, and other related fields who work with persons in a group context. This course focuses on the entire age range from children, adolescents, and adults. This course aims to define therapeutic groups broadly. Students will learn about group theory, research, and techniques through class lectures and discussion, group demonstrations, videotapes on group topics, reading assignments, a group presentation, an experiential task group, a required paper related to the task group presentation, and other required assignments.

CNP 4730 Research Methods and Program Evaluation (5 Credits)
This course is designed to provide an introduction and overview of comprehensive program development and evaluation, and research methods. The course will provide direction on the following topics: causation, research hypotheses, independent and dependent variables, sampling, internal and external validity, experimental, quasi-experimental, single-subject, causal-comparative, and correlational designs, measurement and data collection procedures, types of instrumentation and methods for determining reliability.

CNP 4740 Basic Counseling Techniques (3 Credits)
Basic counseling and interviewing skills; emphasis on building counseling relationships and facilitating client’s self-exploration; skills of empathy, advanced empathy, self-disclosure, confrontation and immediacy.

CNP 4741 Int Counseling Techniques (3 Credits)
Sample of counseling techniques and effectiveness with different types of clients. Prerequisite: CNP 4740.

CNP 4743 Fieldwork in Counseling (1 Credit)
Introduction to the field of counseling with special emphasis on practicum placement. Prerequisite: admission to the MA program in counseling psychology.

CNP 4750 Counseling Psychology Beginning Practicum (1-4 Credits)
Supervised practice in counseling for master’s students. Prerequisite: CNP 4740, and be a counseling psychology student.

CNP 4751 M.A. Internship (1-5 Credits)
Yearlong, 600-hour supervised field practice for second-year master’s students with weekly seminar. Prerequisites: CNP 4750 and be a counseling psychology master’s students.

CNP 4752 Counseling Psychology Advanced Practicum I (3 Credits)
Supervised practice in counseling for doctoral students. Prerequisites: CNP 4750 or prior practicum, and be a counseling psychology student.

CNP 4753 Counseling Psychology Advanced Practicum II (1 Credit)
Group supervised practice in counseling for second-year doctoral students with emphasis on process and countertransference issues. Prerequisite: CNP 4752.

CNP 4754 Couns Psych: PhD Internship (1 Credit)
Meets 12-month internship requirement in counseling psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.

CNP 4755 MA Clinic (2-5 Credits)
MA clinic is a required course for all students in the 90-credit Clinical Mental Health Counseling Concentration.

CNP 4756 PhD Counseling Clinic (1 Credit)
On-campus, advanced-experience counseling of clients from the community with close supervision and observation. Prerequisite: Doctoral student in counseling psychology.
CNP 4758 PhD Field Experience (8 Credits)
Required 12-month, 40-hour-per-week internship for doctoral students in Counseling Psychology. Registration for this course indicates full-time enrollment. This course is not graded. Prerequisites: completion of comprehensive examination and dissertation proposal. Department approval is required for registration. Fall quarter enrollment must be done in conjunction with CNP 4754.

CNP 4760 School Counseling Practicum (1-4 Credits)
A minimum of 100 hours supervised practice in School Counseling for Master’s students in the School Counseling Concentration. Students must be supervised by a licensed school counselor. Enforced Prerequisites: CNP 4740 with a minimum grade of C.

CNP 4761 School Counseling Internship I (1-4 Credits)
100-hour supervised field practice in a school setting for Master’s students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

CNP 4762 School Counseling Internship II (1 Credit)
A minimum of 600-hour supervised field practice in a school setting for master’s students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

CNP 4767 Relationship and Psychotherapy Research (3 Credits)
Students engage in inquiry through a critical analysis of major theoretical approaches to counseling and psychotherapy based on various research methods. Readings and class discussions include an extensive review of research literature associated with couple and individual psychotherapy. The use of actual case studies addresses the relevance and application of each theoretical approach to real world problems presented by clients. Students develop awareness of the importance of an advocacy role through the application of clinical practice to the unique needs of diverse and special populations in particular through the study of multicultural orientation.

CNP 4768 Counseling Psychology: Social Psychology (3 Credits)
Social Psychology is designed to provide students a broad and general understanding of social psychology. The course will cover aspects of self, cultural dynamics, group processes, emotional/cognitive aspects of social behavior.

CNP 4769 Cognitive Behavioral Therapy (4 Credits)
Cognitive Behavior Therapy (CBT) is a treatment approach that incorporates a multitude of evidence-based strategies to construct an individualized and comprehensive treatment plan for a wide variety of mental/behavioral disorders. CBT has been extensively investigated in both research and applied setting. CBT offers foundational knowledge and skills to provide an active, client involved approach to resolving individual and family challenges. CBT is structured, goal-directed, and focuses directly on client problem areas. Students will practice and develop the skills necessary to implement CBT techniques and strategies.

CNP 4770 Counseling Psychology Seminar: Research (3 Credits)
Review of current process and outcome research in counseling and psychotherapy; substantive issues, including client and therapist variables as well as methodological issues and experimental designs. Prerequisite: doctoral student.

CNP 4772 Diversity Seminar: Psycho-Social Issues (1-5 Credits)
Series of courses to analyze social and psychological impacts of oppression related to minority status, socioeconomic status, gender and family configurations; taught using an awareness and knowledge approach; implications for counseling; series includes general seminar and series of 1 credit follow-up seminars on particular topics, e.g., American Indian mental health, African-American mental health and women's mental health. Prerequisites: CNP 4773 and students must take the 3-credit general seminar prior to the individual seminars.

CNP 4773 Diversity: Multicultural Counseling Psychosocial Issues (5 Credits)
The purpose of this course is to provide an overview of multicultural and social justice issues in the United States. While this is not a skills training course, implications for multicultural counseling skills will also be discussed. Issues and concepts related to gender, race, ethnicity, sexual orientation, gender identity, and social class will be examined within a framework of privilege and oppression. This course is designed to present a general introduction to multicultural and social justice issues as well as culturally responsive counseling. Due to the extensive amount of material in this area, only some selected issues and topics will be presented. Students interested in gaining more specific, or in-depth knowledge of topics covered in this class may pursue the one-credit Counseling Psychology diversity seminars offered in the Counseling Psychology program. Significant emphasis will also be placed on experiential learning and the application of students’ awareness and knowledge accrued throughout the quarter.

CNP 4774 Counseling Psychology Seminar: LGBT Counseling (2 Credits)
Sexuality and gender are an integral part of human existence and are understood through the lenses of psychology, biology, culture, politics, and religion. As a result of a variety of converging factors including societal oppression, sexual and gender minorities are at greater risk for depression, anxiety, suicidality, substance abuse, and trauma than same-aged peers. Mental health professionals are vital in caring for these diverse populations and are well-positioned to break cycles of oppression both within therapy and through advocacy. The purpose of this class is to increase personal awareness, increase knowledge, and build greater clinical competency in working with sexual and gender minorities.

CNP 4775 Counseling Psychology: Cognitive & Affective Basis of Behavior (3 Credits)
The seminar is intended to enhance students’ understanding of the fundamental psychological concepts in cognitive and affective sciences and of the relevance of these theories and concepts to clinical practitioners. This seminar will provide weekly lectures to engage students in core issues surrounding the scientific study of affective and cognitive processes involved in human behavior. Academic inquiry and dialogue will also be fostered through group presentations and discussions of peer-reviewed journal articles and book chapters.
CNP 4776 Family Counseling (3 Credits)
Introduction to family counseling, including survey of major theories and research, and in-class demonstrations of techniques. Prerequisite: advanced master’s or doctoral student.

CNP 4778 Health Psychology (3 Credits)
Overview of rapidly expanding field of health psychology; wide variety of topics dealing with role of psychological processes in health and health care; includes impact of stress on physical health, and psychological factors that determine health-related behavior, psychological aspects of delivery of health care, and assessment issues in health psychology.

CNP 4780 Counseling Psychology Seminar: Supervision (3 Credits)
Introduces literature and research on counseling supervision, including awareness of individual differences; provides experience supervising master’s level counselors. Prerequisites: doctoral student and CNP 4752.

CNP 4781 Counseling Psychology: Introduction to Psychodynamic Theory (4 Credits)
This class will explore psychodynamic theory, with an emphasis on creating case formulations and practicing an analytic position in the treatment process. We will be focusing primarily on individual treatment with adults in outpatient settings using a developmental lens. You will be encouraged to develop and deepen your capacities for curiosity and self-reflection, in part as they relate to the exploration of countertransference reactions and meaning making. You will be learning both professionally and personally, as they mutually influence one another, what it means to be a psychodynamic clinician.

CNP 4782 Counseling Psychology: Mindfulness, Psychotherapy and Trauma (3 Credits)
The aim of this course is to provide students with the knowledge on major theories and research findings in the field of mindfulness and its relation to modern psychotherapies. The students will learn the foundations of Buddhist psychology and its similarities with and differences from the major Western modalities of psychotherapy, such as psychodynamic, cognitive-behavioral and humanistic.

CNP 4783 Counseling Psychology: Eating Disorders (3 Credits)
This class will offer the opportunity to learn about the diagnosis, assessment, theory, and treatment of eating, weight and shape disorders. While working with clients with eating disorders (EDs) can present unique challenges, we will explore the perception/stigma that these clients are notoriously difficult to treat. We will focus on the importance of integrative treatments, and the role of behavioral, symptom focused techniques in addition to psychodynamic approaches that explore underlying characterological and developmental issues. This class will also consider the impact of culture and media on body image, and the effects of these messages on personal beliefs, attitudes and behaviors.

CNP 4784 Psychopathology (5 Credits)
This course is designed to provide students with a thorough understanding of assessment, diagnosis and classification of psychological abnormalities. Psychopathology is typically characterized by deviance from cultural norms, personal distress, danger to oneself or others, or an inability to function in daily life. We will explore the empirical basis for understanding psychopathology as defined in the DSM 5, as well as, the inherent limitations of the current diagnostic system. Interactions of biological, social, psychological, cultural, political, and environmental factors will be stressed, particularly as they contribute to the development and maintenance of mental disorders. Cultural perspectives on each disorder will be addressed every week to attend to issues of social justice and multiculturalism related to diagnosis.

CNP 4787 Motivational Interviewing (4 Credits)
Motivational Interviewing is a client-centered collaborative style of therapeutic relationship designed to strengthen a person’s motivation for and commitment to change. This class will facilitate skill development in managing client ambivalence, eliciting change-talk and honoring the client’s autonomy regarding taking steps toward a commonly agreed upon goal.

CNP 4788 Physiological Psychology (3 Credits)
Physiological Psychology is designed to expose students to the field of physiology and highlights its reciprocal relationship with behavior. We will cover topics including the structure and function of the nervous system and areas of research relevant to clinical psychology (e.g., substance abuse, mental illness, and biological rhythms). Given the limited time devoted to each area, more in-depth coverage should be pursued by interested persons.

CNP 4789 Pharmacology of Addictive Behavior I and II (4 Credits)
This class provides a solid base of knowledge about the drugs of abuse including what occurs physiologically with drug use and other addictive behaviors. Additionally, this course explores neuroscience and genetic research on addiction to better understand the changes in the brain that underlie drug use and addictive behaviors.

CNP 4790 Counseling Psychology Seminar: Ethics (3 Credits)
Professional ethics in practice and research in counseling psychology, including informed consent, confidentiality, clients' rights, psychologists' obligations, etc.; basic APA documents. Prerequisite: doctoral student.

CNP 4791 Counseling Psychology Seminar: Counseling Couples (3 Credits)
Introduction to couples counseling, including survey of major theories and research.

CNP 4792 Pro-Seminar in Counseling Psychology (1 Credit)
Introduction to field of counseling psychology required for all first-quarter doctoral students. Prerequisite: counseling psychology doctoral students.

CNP 4794 Counseling Psychology Seminar: Special Topics (1-15 Credits)
Variety of special topics on research and practice in counseling psychology; readings, lectures and projects to provide an in-depth understanding of topics, which vary from to year and cover areas such as counseling women, counseling in business and industry, advanced group therapy, time-limit counseling, vocational counseling, etc.
CNP 4795 Master of Arts Counseling: Legal and Ethical Issues (5 Credits)
Introduction to ethical and legal issues in school and agency counseling for master's students. Prerequisite: Master's student in Counseling Psychology.

CNP 4797 Counseling Addictive Behavior (4 Credits)
Introduction to assessment, treatment and outcome evaluation of chemical and nonchemical addictive behaviors. Requirements include abstinence from a "compulsive" behavior; journaling about one's cognitive, emotional and behavioral reactions during the abstinence period; attending 12-step meetings; participating in a quasi-12-step in class meeting; critiquing a film depicting dynamics of an alcoholic family.

CNP 4799 Infectious Diseases in Addictive Behaviors (2 Credits)
Drug and alcohol abuse and infectious diseases go hand in hand. This class explores the high risk for contracting and spreading infectious diseases among drug abusers. This class helps prepare students to identify such diseases, determine client risk for infection, and educate students about disease prevention and treatment options.

CNP 4800 Consultation (1 Credit)
This course is designed to teach the basic theories of psychological consultation that can be used to guide practice in a variety of settings. Students learn to differentiate process, collaborative and expert consultation. The class format includes presentations from practitioners working in school, medical, forensic, and business settings. In addition, students also learn about the ethical principles that guide their practice and to also become sensitive to how their work with diverse cultural backgrounds may be perceived. Prerequisite: must be enrolled in the Counseling Psychology doctoral program.

CNP 4991 MA Independent Study (1-10 Credits)
CNP 4992 Directed Study (1-10 Credits)
CNP 4995 Research - M.A. Thesis (1-10 Credits)
CNP 5991 PhD Independent Study (1-10 Credits)
CNP 5992 Directed Study (1-10 Credits)
CNP 5995 Dissertation Research (1-20 Credits)

Educational Leadership and Policy Studies
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Email: mce@du.edu
Web Site: http://morgridge.du.edu/programs/educational-leadership-and-policy-studies/

Educational Leadership and Policy Studies
The Educational Leadership and Policy Studies (ELPS) department prepares courageous, visionary and transformative leaders in educational settings at all levels of the education system. To achieve this, the program offers intensive and integrated academic and field-based experiences and competency-based learning that develop and support students as they obtain effective leadership competencies. Partnerships and memberships within national networks with the Carnegie Project on the Education Doctorate (CPED), Alliance to Reform Educational Leadership (AREL), University Council of Educational Administration (UCEA), Wallace Foundation, Carnegie Foundation, New York City Leadership Academy, Teach For America, Colorado Association of School Executives (CASE) and partnerships with local school districts help the program to continuously improve. The ELPS department is a CDE approved provider of School Turnaround Leadership (http://www2.ed.gov/programs/turnaroundschl/index.html?exp=0). Students within the department focus on leadership, policy studies and research that are relevant and appropriate for meeting today’s and tomorrow’s educational challenges.

All of the degree programs in ELPS engage students in rigorous content, collaborative inquiry, and reflective practice within a tightly connected cohort structure that intentionally builds learning communities and professional networks. Faculty members partner with individuals, schools, districts and organizations to build leadership capacity and improve all educational contexts. All components of ELPS programs incorporate the following practices to prepare students to generate new knowledge and expand career choices within the field of education.

• Leading change and demonstrating impact in K-12 education
• Learning through integrated academic and school-based experiences and projects
• Grounding all work in social justice, problems of practice and authentic contexts
• Creating learning communities that foster academic achievement and optimal growth and development for each learner
• Engaging in leadership, policy and research that are relevant and appropriate for meeting today’s and tomorrow’s educational challenges in complex and ever-changing educational contexts
Doctor of Philosophy in Educational Leadership & Policy Studies

The 90-credit-hour program beyond a master’s degree is a degree with coursework that includes a strong focus on quantitative and qualitative research methods, educational leadership, organizational theory, systems theory, and policy analysis. These areas are studied in an effort to expand and enhance research skills and add to the knowledge base needed for effective schools. The ELPS PhD prepares individuals for successful careers in research, academia, educational leadership and policy.

The program consists of two years of foundational doctoral coursework (two courses/quarter; one research and one leadership course), and a third year of coursework specializing in a research methodology and a specialized focus of study. The coursework in the initial two years of the program is offered in a doctoral cohort format with ELPS EdD students and this cohort structure builds a learning community of fellow educational leaders and scholars who support each other through the coursework and research. PhD students complete a traditional dissertation. In addition to the requirements for the degree, students have the option of completing a 300 hour Administrative Internship (requirement for Administrator License, Special Education Director License and Gifted Education Director license). Applicants must hold a master’s degree.

Program Accreditation

Colorado Department of Education (CDE) Approved Educator Preparation Program. Graduates who have completed the Administrative Internship may apply for Colorado Initial Administrator License (http://www.cde.state.co.us/cdeprof/checklist-initialadministratordirectorofspecialed) through the CDE.

Doctor of Education in Educational Leadership & Policy Studies

This 65-credit-hour program builds on prior leadership experience and preparation and/or a Master’s degree in a leadership related program and prepares students to be transformative leaders in a variety of educational settings. The program consists of two years of foundational doctoral coursework (two courses/quarter; one research and one leadership course). The coursework in the initial two years of the program is offered in a doctoral cohort format with ELPS PhD students and this cohort structure builds a learning community of fellow educational leaders and scholars who support each other through the coursework and research. After the initial two years of coursework, EdD students continue to develop and complete their Doctoral Research Project. The Doctoral Research Project is independent research regarding a persistent, complex problem of practice with a supportive structure of quarterly research seminars. In addition to the requirements for the degree, students have the option of completing a 300 hour Administrative Internship (requirement for Administrator License, Special Education Director License and Gifted Education Director license). Applicants must hold a master’s degree and have completed a principal, teacher-leadership, or other leadership related program or work experience.

Program Accreditation

Colorado Department of Education (CDE) Approved Educator Preparation Program. Graduates who have completed the Administrative Internship may apply for Colorado Initial Administrator License (http://www.cde.state.co.us/cdeprof/checklist-initialadministratordirectorofspecialed) through the CDE.

Master of Arts in Educational Leadership & Policy Studies with a Concentration in Principal Licensure

The MA in Educational Leadership and Policy Studies with a concentration in Principal Licensure is designed to be completed the year following the Certificate in Educational Leadership and Policy Studies program (see below) and offers extended study of transformative and turnaround leadership: issues of culture, diversity, poverty and special needs; business design, and entrepreneurial and data-driven leadership. The MA consists of a total of 45 credit hours - the Certificate in Educational Leadership and Policy Studies with a concentration in Principal Licensure program (30 credits) and four additional courses (15 credits). The completion of the MA culminates with the design and execution of an action research or school design project.

Program Accreditation

Colorado Department of Education (CDE) approved Educator Preparation Program and Turnaround Leader Program. Graduates may apply for Colorado Initial Principal License (http://www.cde.state.co.us/cdeprof/checklist-initialprincipal) through the CDE.

Certificate in Educational Leadership & Policy Studies with a Concentration in Principal Licensure

The certificate in Educational Leadership and Policy Studies leads to recommendation for Colorado Principal Certification. The program offers competency-based learning that is individualized to the leadership needs of the aspiring leader and the needs of the school in which the student is interning. It focuses not only on developing the skills and abilities necessary for success as a school leader, but also on developing a strong commitment to core values essential for ethical and responsible leadership.

The certificate consists of four quarters of coursework and requires a minimum of 300 internship hours that are integrated with coursework. During the first quarter of the program (usually Summer) students engage in a leadership retreat to build community and provide an experiential learning experience to practice the leadership theories and concepts that serve as the foundation of the program. The program can be completed as a certificate and/or combined with additional coursework (see above) for a master’s degree.
The cohort structure promotes the development of a rich learning community for collaboration and challenge with many different opportunities for interaction and analysis. Each quarter incorporates face-to-face sessions with cohort and faculty, inquiry projects, self-assessments, various online learning activities including discussion boards and reflection journals, as well as readings to guide instruction and learning.

Program Accreditation

Colorado Department of Education (CDE) Approved Educator Preparation Program. Graduates may apply for Colorado Initial Principal License (http://www.cde.state.co.us/cdeprof/checklist-initialprincipal) through the CDE.

Doctor of Philosophy in Educational Leadership & Policy Studies

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Doctor of Education in Educational Leadership & Policy Studies

Degree and GPA Requirements

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

Prerequisites:

- Applicants must have completed principal, teacher-leadership, or other leadership preparation or served in a leadership position.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169
English Conditional Admission: No, this program does not offer English Conditional Admission.

**Master of Arts in Educational Leadership & Policy Studies (Denver Public Schools) with a Concentration in Principal Licensure**

**Degree and GPA Requirements**

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

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

**Doctor of Philosophy in Educational Leadership and Policy Studies**

**Degree Requirements**

**Coursework Requirements**

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<tr>
<th>Code</th>
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<th>Credits</th>
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<td><strong>Year 1 and 2 - Foundation Requirements</strong></td>
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<tr>
<td>ADMN 4827</td>
<td>Foundations of Educational History and Philosophy</td>
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<td>RMS 4940</td>
<td>Structural Foundations of Research in Social Sciences</td>
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<td>ADMN 4819</td>
<td>Organization Theory &amp; Behavior</td>
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<td>Leading Teaching and Learning</td>
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<td>Policy Analysis for Educational Systems</td>
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<td>RMS 4911</td>
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<td>RMS 4914</td>
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<td>RMS 4922</td>
<td>Item Response Theory</td>
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### Recommended Options, Qualitative Fous

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### Other Recommended Research Options

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS 4932</td>
<td>Meta-Analysis Social Science Research</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4951</td>
<td>Mixed Method Research Design</td>
<td>4</td>
</tr>
<tr>
<td>ADMN 5900</td>
<td>Research Planning and Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**REQUIRED: Cognate Area Courses (DU Leader Prep Programs MAY be counted in some circumstances)**

Total Additional Cognate Hours: 28

**Dissertation Research**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMN 5995</td>
<td>Dissertation Research</td>
<td>10 MIN.</td>
</tr>
</tbody>
</table>

Students are required to register for at least 1 credit hour each quarter (F,W, S) following all other coursework.

**Total Credits**: 90

1. Indicates Research Courses which a student may have waived or test out.
2. Recommended
   
   * In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 90 credit hours is required beyond the earned master’s degree. No credit hours from the earned master’s degree can be transferred into the PhD.

**PhD in Educational Leadership - Summary of Requirements**

- Program Area Requirements (26 credit hours)
- Introductory Research Areas (25 credits)
- Intermediate/Advanced Research Areas (12 credit hours)
- Additional Cognate Hours (17 credit hours)
- Dissertation Research Hours (10 MIN. credit hours)
- Total: 90 credit hours
- OPTIONAL: Internship Hours (6 needed if Superintendent/Administrator license is sought) (6 credit hours)

**Doctor of Education in Educational Leadership and Policy Studies**

### Degree Requirements

#### Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMN 4827</td>
<td>Foundations of Educational History and Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4940</td>
<td>Structural Foundations of Research in Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>ADMN 4819</td>
<td>Organization Theory &amp; Behavior</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4910</td>
<td>Introductory Statistics $^1$</td>
<td>5</td>
</tr>
<tr>
<td>ADMN 4835</td>
<td>Leading Teaching and Learning</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research $^1$</td>
<td>4</td>
</tr>
<tr>
<td>ADMN 4823</td>
<td>Educational Policy Making in the United States</td>
<td>4</td>
</tr>
<tr>
<td>ADMN 4900</td>
<td>Advanced Inquiry and Analysis</td>
<td>4</td>
</tr>
<tr>
<td>ADMN 4821</td>
<td>Improvement Science and Action Research</td>
<td>5</td>
</tr>
<tr>
<td>ADMN 4820</td>
<td>Educational Program Evaluation</td>
<td>4</td>
</tr>
<tr>
<td>ADMN 4836</td>
<td>Improving Organizational Culture</td>
<td>4</td>
</tr>
</tbody>
</table>

$^1$ Indicates Research Courses which a student may have waived or test out.
ADMN 4812 Perspectives in District Leadership 4
ADMN 4844 Policy Analysis for Educational Systems 4
ADMN 4822 Leadership in Complex Systems 4

Doctoral Research Hours 2
ADMN 5900 Research Planning and Design 7
ADMN 5993 Doctoral Research Seminar (7 MIN. Students are required to register for at 1 credit hour each quarter (F,W,S) following all other coursework.) 7 MIN.

Optional Internship
ONLY needed if seeking district level Administrator license
ADMN 4817 Administrative Internship (300 field hours. 50 clock hours/credit for a total of 6 credits.) 0-6

Total Credits 65-78

1 Indicates Research Courses which a student may have waived or test out.
2 In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 65 credit hours is required beyond the earned master's degree. No credit hours from the earned master's degree can be transferred into the EdD.

EdD Summary of Course Requirements
• Program Area Requirements (43 credit hours)
• Research Requirements (12 credit hours)
• Doctoral Research Hours (ADMN 5900 and ADMN 5993) (10 MIN. credit hours)
• Total: 65 credit hours
• Optional - Internship Hours (6 needed if Administrator license sought) (6 credit hours)

Master of Arts in Educational Leadership and Policy Studies with a Concentration in Principal Licensure

Degree Requirements
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS 4900</td>
<td>Education Research and Measurement</td>
<td>4</td>
</tr>
<tr>
<td>ADMN 4834</td>
<td>Seminar in Multicultural Issues</td>
<td>3</td>
</tr>
<tr>
<td>ADMN 4848</td>
<td>Business Design and Innovation for School Leaders</td>
<td>4</td>
</tr>
<tr>
<td>ADMN 4849</td>
<td>Action Research for School Leaders</td>
<td>4</td>
</tr>
<tr>
<td>ADMN 4840</td>
<td>Strategic and Transformative School Leadership</td>
<td>9</td>
</tr>
<tr>
<td>ADMN 4841</td>
<td>Instructional Leadership for Equitable Schools</td>
<td>5</td>
</tr>
<tr>
<td>ADMN 4842</td>
<td>Human Resource Leadership</td>
<td>5</td>
</tr>
<tr>
<td>ADMN 4843</td>
<td>Strategic Resource Management for School Leadership</td>
<td>5</td>
</tr>
<tr>
<td>ADMN 4860</td>
<td>Principal Internship</td>
<td>2</td>
</tr>
<tr>
<td>ADMN 4860</td>
<td>Principal Internship</td>
<td>2</td>
</tr>
<tr>
<td>ADMN 4860</td>
<td>Principal Internship</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>45</td>
</tr>
</tbody>
</table>

Minimum number of credits required for degree: 45 credit hours

Summary of Requirements
• A. Foundation Requirements (8 credit hours)
• B. Program Requirements (7 credit hours)
Certificate in Educational Leadership and Policy Studies with a Concentration in Principal Licensure

Certificate Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMN 4840</td>
<td>Strategic and Transformative School Leadership</td>
<td>9</td>
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<td>ADMN 4841</td>
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<tr>
<td>ADMN 4860</td>
<td>Principal Internship</td>
<td>2</td>
</tr>
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</tr>
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<td>ADMN 4860</td>
<td>Principal Internship</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credits 30

The program consists of four quarters of coursework and requires a minimum of 300 internship hours that are aligned with coursework.

Minimum number of credits required for degree:

30 credit hours

Courses

ADMN 4700 Special Topics in K-12 Administration (1-5 Credits)

ADMN 4810 School Administration: Case Studies (3 Credits)

ADMN 4812 Perspectives in District Leadership (4 Credits)

ADMN 4817 Administrative Internship (0-6 Credits)

Opportunity to be supervised in on-the-job experience to better prepare school administration students for district administration careers.

ADMN 4819 Organization Theory & Behavior (3 Credits)

Educational institutions are complex, political organizations with a wide variety of constituents and many layers of sometimes competing cultures, systems, and explicit and implicit goals. Leaders who work with these systems must find ways to make meaning of the organization and the context in which work occurs. This course will look at organizational behavior from several points of view, with the goal of understanding major theories that have been developed and learning to apply these theories in the management and study of organizations. The roles and responsibilities of various members of the organizations will be examined as well as the governance and control issues surrounding education. Organizational analysis will be viewed through the lens of structural, political, human resource and symbolic frames. This course includes an experiential learning component.

ADMN 4820 Educational Program Evaluation (4 Credits)

The purpose of this course is to review theories of program evaluation, evaluation designs and analysis, and current trends in evaluation. Program evaluation aims to determine whether a program, regulation, or policy is achieving its objectives by ascertaining whether it had the desired effect on intended outcomes. The evaluation process may include evaluation of programs, products, personnel, policy, performance, proposals, technology, research, theory, and even of evaluation itself. The course equips students with basic evaluation tools and understandings necessary to be thoughtful consumers and effective users of program evaluations in improving policy outcomes and designing more effective programs and policies. It is designed to provide students with the meaning and methods of program and policy instrument evaluation in education with the intent to contribute to informed decision making and enlightened change. Students analyze evaluations of the effectiveness of a variety of programs through discussion, field work, and case studies. This course includes an experiential learning component.
ADMN 4821 Improvement Science and Action Research (5 Credits)
The course focuses on school reform and improvement through improvement science and action research. Improvement science is an emerging concept which focuses on exploring how to undertake continuous quality improvement. Action Research is a strategy for professional development and collaborative, transformative school improvement. The aim of this class is to merge strategies of improvement science and action research to develop educators’ knowledge and skills to uncover and use data that exist in classrooms and schools for the purpose of promoting educational change and improvement. The participants in this course will create and conduct an action research or improvement science project. This course includes an experiential learning component.

ADMN 4822 Leadership in Complex Systems (4 Credits)
The purpose of this graduate course is to support leaders in melding theory and practice relative to sustaining complex organizations through developing skills that facilitate the convergence of leadership, communication and change. This course will focus on research applications of theoretical frameworks of leadership and successful leadership actions for complex systems. Leadership is a process that involves influence and goal attainment and occurs in a group context of uncertainty and complexity. Today’s solutions often become tomorrow’s problems. When changes occur in one part of the system, many others are affected in a cascading manner. Leadership is the lever for change. “Give me a lever long enough...and single-handed I can move the world” (Archimedes). The course is highly interactive and demands significant participation from students. This course includes an experiential learning component.

ADMN 4823 Educational Policy Making in the United States (4 Credits)
This course focuses on policy and advocacy in educational leadership. The course is designed to develop aspiring and current leaders' understanding of local, state, and federal policy systems with a focus on the socio-cultural context surrounding educational policy decision-making. The course examines the basic governmental structure, the expansion of federal powers in policy making, the role and power of interest groups, the function of the state board, and the role of local boards of education. This course includes an experiential learning component.

ADMN 4827 Foundations of Educational History and Philosophy (3 Credits)
This foundational course examines the various theoretical, ethical, historical and philosophical perspectives that will inform educational leaders as policy and change strategies are formulated. This course includes an experiential learning component.

ADMN 4828 Leadership for the 21st Century: Using Creativity to Build Effective Schools (3 Credits)
Designed to assist leaders, at the district or building level, in the implementation of standards-based education to improve student learning and achievement. Primary emphasis is given to applying strategies for addressing critical issues in sustaining the equitable access to learning in a standards-based educational organization.

ADMN 4834 Seminar in Multicultural Issues (3 Credits)
Extends understanding of complex systems' operations and responses by examining multicultural issues in the historical and social context and complexity of schools and school districts. Opportunities will be provided for students to develop an understanding of issues of diversity and the relationship of these issues to the roles and work of school/district administrators. The exploration of multicultural issues will occur through the examination of various themes relative to school/district administration such as curriculum, administration, human resources, policy and reform. Particular emphasis will be given to the exploration of the historical and future purposes of schooling in a democratic/pluralistic society in an effort to help students to develop critical knowledge and skills essential for providing leadership in 21st century schools.

ADMN 4835 Leading Teaching and Learning (4 Credits)
This course will examine educational practices that are meeting success as schools and districts attempt to learn, grow, and reinvent themselves using the principles of organizational learning and improvement science. Participants will understand basic systems theory and gain practical and theoretical tools to improve curriculum development, instruction, and student learning. This course includes an experiential learning component.

ADMN 4836 Improving Organizational Culture (4 Credits)
The purpose of this course is to understand organizational culture as a complex and challenging issue to shape and lead. The complex culture of schools or other educational organizations means many things including climate, organizational members' engagement, culturally competent practices and the quality of human relationships in the organizational environment. This course will enable leaders to analyze the components of an educational organization's culture and develop specific plans to create a culture that supports improved learning outcomes for every student, using high-quality, best instructional practices. Following the collection and analysis of data, students will be prepared to serve as Equity Oriented Change Agents (EOCA), leading the improvement of school culture focused on equitable access to high-quality instruction and services for every student. This course includes an experiential learning component.

ADMN 4840 Strategic and Transformative School Leadership (9 Credits)
Effective school administration is guided by research and best practices which inform governance, vision, leadership, and implementation processes. Effective principals base their work on commitment to moral principles, core values, and the many dimensions of effective theory and practice. Understanding personal values, developing leadership skills and building a strong knowledge base regarding research and best practice are a key focus of the course. In addition, this course also examines strategies for visioning, mission building and branding; defining and assessing value and quality; developing competitive strategy; building networks and partnerships; assessing risk and gauging opportunity; building systems and sustainability; recruiting and developing staff, boards and stakeholders; engaging communities; and acquiring sources of funding. Students must be accepted into an ELPS certificate or MA program.
ADMN 4841 Instructional Leadership for Equitable Schools (5 Credits)
This course serves aspiring principals in the development and application of skills and knowledge associated with standards-based instructional practices, curriculum planning and development, assessment, and program evaluation. Students are assisted in developing and understanding issues of diversity and multiculturalism and their influence on the development and supervision of the instructional program. Although the major focus is on local aspects of standards-based education, some attention is given to the national role in this area. School leaders need to apply quantitative and qualitative research skills in a variety of ways to understand and improve the work of schools. This course reviews methods, applications, and data sources, including assessments and large-scale datasets, for continuous school improvement and program evaluation. In addition to the issues of instructional leadership, considerable attention is given to the examination of the needs of the individual student in the learning environment as well as research on learning styles, learning theories and models of teaching. Primary focus areas are supports for special education students, English Language learners, gifted students, and students in poverty. Students must be accepted into an ELPS certificate or MA program.

ADMN 4842 Human Resource Leadership (5 Credits)
This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation are discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Formal and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

ADMN 4843 Strategic Resource Management for School Leadership (5 Credits)
This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation will be discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Formal and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

ADMN 4844 Policy Analysis for Educational Systems (4 Credits)
This course introduces students to theories and methods of policy analysis including analyzing resources used and benefits gained from educational programs, policies, and organizations. Prerequisites: Introductory Statistics; acceptable Program Evaluation course. This course includes an experiential learning component.

ADMN 4845 Network and Systems Analysis for Educational Settings (4 Credits)
This course works with a variety of applied research methods for analysis of networks, systems, and program and policy impacts, with a focus on education and community/social services settings. Prerequisites: Introductory Statistics; acceptable Program Evaluation course. This course includes an experiential learning component.

ADMN 4848 Business Design and Innovation for School Leaders (4 Credits)
A school district is a large and complex business organization. By design, the course has a broad focus ranging from legislative issues, to manners and matters of local governance, to school finance, capital planning and budgeting concerns to more directed school and district support services. The course demands practitioners become aware of and demonstrate critical thinking as to what constitutes an effective and equitable use of people, time, technology and money in order to ensure achievement for all students. Being able to think differently, create a culture of innovation, and lead a systematic approach to implementing new ways of doing things is one of the most critical aspects of being a school leader. This course will be enhanced with a design thinking framework that takes a human-centered design approach to helping organizations innovate and grow.

ADMN 4849 Action Research for School Leaders (4 Credits)
This course emphasizes the use of research methods which are linked to research needed in schools. Students will learn to identify, analyze and solve problems. Some of the action research methods include focus groups, interviews, observations, school records and surveys. Capstone project will relate directly to the improvement of school policy and practice.

ADMN 4859 Action Research Capstone (1 Credit)
Provides support for students as they develop their action research project into the Capstone for the Masters in Educational Administration.

ADMN 4860 Principal Internship (2 Credits)
The purpose of a formal internship with a principal is to participate in supervised practical training in many of the aspects of school building administration. It is imperative that an applicant have as many first hand experiences as possible in all phases of building administration which focus upon the standards set for principals in Colorado. Must be accepted into an ELPS certificate or MA program.
ADMN 4900 Advanced Inquiry and Analysis (4 Credits)
This course is part two of a two-part course series. In part one of this series, Introductory Qualitative Research (RMS 4941), you learned about the foundations of qualitative research including philosophical perspectives, theoretical underpinnings, key characteristics, and common approaches to inquiry and research design: case studies, ethnography, narrative (testimonios), grounded theory, phenomenology, and action research. You ended the course with a design of a qualitative study proposal informed by the extant literature and your personal, practical, and intellectual goals. You completed the course with the design of a qualitative research study. ADMN [xxxx], Advanced Inquiry and Analysis, is the counterpart where you will go in the field to execute your qualitative study designed in your Introductory Qualitative Course. This intermediate level qualitative course builds on the content of other qualitative research courses at the University of Denver. In this course, you will continue to learn the skills and competencies needed to gather, analyze, and report high quality data. You will leave the course well-grounded in the application of the IRB process, data collection, data analysis, data interpretation, handling concerns about reliability, validity, and ethics; and writing the final report. The final product for this course will be the execution of a rigorous qualitative research design with preliminary findings that could be presented at a professional conference and with further development for manuscript publication.

ADMN 4991 MA Independent Study (1-10 Credits)
ADMN 4992 Directed Study (1-10 Credits)
ADMN 4995 Research - M.A. Thesis (1-10 Credits)
ADMN 5900 Research Planning and Design (3 Credits)
This course is designed to support doctoral students to design research and successfully defend a research proposal for their culminating project/dissertation.
ADMN 5991 PhD Independent Study (1-10 Credits)
Special projects in the field of education, taken by arrangement of Educational Administration faculty.
ADMN 5992 Directed Study (2-10 Credits)
ADMN 5993 Doctoral Research Seminar (1-4 Credits)
The Doctoral Research Seminar is designed to prepare students to undertake the completion of doctoral research or a dissertation. The research process can often be confusing and overwhelming, especially for students coming from a cohort-based program. This course assists students in turning a research idea into the EDD doctoral research project or a polished dissertation proposal and provides students strategies for making the process manageable and enjoyable.
ADMN 5995 Dissertation Research (1-10 Credits)

Higher Education
Office: Morgridge Office of Admissions
Mail Code: 1999 E. Evans Avenue, Denver, CO 80208
Phone: 303-871-2509
Email: edinfo@du.edu
Web Site: morgridge.du.edu/programs/higher-education/

Colleges and universities all over the world face multiple challenges. These institutions need enlightened leaders and faculty who can guide various external audiences and internal constituencies toward new educational solutions to societal challenges. Our degrees provide students opportunities to study various subjects in the field of higher education, providing deep research-based understandings across a breadth of post-secondary education concerns. The Higher Education department (HED) mission is three-fold:

1. Prepare social justice professionals for careers in post-secondary education related to administration, policy, teaching and research, as well as careers in public and private agencies of higher education, for-profit and not-for-profit settings, and in a multicultural and changing world.
2. Conduct equity-based research about persistent and/or timely problems facing post-secondary education.
3. Provide meaningful service to the University of Denver and broader Colorado community in matters pertaining to post-secondary education, especially related to equity, diversity and social justice.

The Higher Education department is an “Inclusive Excellence Unit” (www.aacu.org) and supports the concept that inclusiveness and excellence are one and the same. That is, students and instructors from diverse social and cultural backgrounds who become part of the department all bring unique gifts, talents and experiences that make tremendous contributions to the teaching and learning climate of the Higher Education department.

Doctor of Philosophy in Higher Education
Students in the 90-credit Doctor of Philosophy degree program gain knowledge and demonstrate competence through coursework designed to provide a strong foundation in the field of higher education and research methods. In addition, students broaden their scope of study through a wide range of elective possibilities. Students are required to complete the doctoral comprehensive exam (also known as the preliminary oral examination) near the end of coursework. The culminating requirement for the degree is a dissertation, defended in a final oral defense.
Doctor of Education in Higher Education

Students in the 65-credit Doctor of Education degree program gain knowledge through coursework and research experience. Competence is demonstrated by the successful completion and oral defense of a doctoral comprehensive exam, and the successful oral defense of the doctoral research project (DRP). It is expected that the DRP will be a publication quality project that investigates a key issue or problem important to the field of higher education. Upon completing the research project, students will be able to translate what they have learned into real-world applications, and offer practical and policy related recommendations.

Master of Arts in Higher Education

The 50-credit Higher Education master’s degree is designed to prepare professionals for administrative, leadership, student-centered, and/or policy-focused careers in post-secondary institutions, private and public agencies of higher education, and other educational settings. This generalist program enables students to explore the academic and practitioner-oriented issues related to post-secondary settings and to expand their experiential awareness through practical activities in administration, policy, and research. Elective coursework allows students to complete an optional emphasis in one of three areas: College Student Affairs, Diversity and Higher Learning, or Public Policy & Organizational Change. The final degree requirement is the successful completion of a capstone portfolio.

Doctor of Philosophy in Higher Education

Degree and GPA Requirements

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

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842. The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

Doctor of Education in Higher Education

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

**Master of Arts in Higher Education**

**Degree and GPA Requirements**

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

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

**Doctor of Philosophy in Higher Education**

**Degree Requirements**

**Coursework Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS 4910</td>
<td>Introductory Statistics</td>
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</tr>
<tr>
<td>RMS 4940</td>
<td>Structural Foundations of Research in Social Sciences</td>
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<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
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<td></td>
<td><strong>Intermediate/Advanced Methods Courses</strong></td>
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<td></td>
<td>Students will complete a minimum of 10 credits (3 or 4 courses) in Research Methods and Statistics.</td>
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<td><strong>HED Research Experience</strong></td>
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<td>The HED research requirement can be satisfied through any combination of the following, with advisor approval: Independent study (HED 5991) that focuses on research methodology or research practice; HED 4216 Research Processes; additional Research Methods &amp; Statistics (or related) coursework; or internship experiences wherein research practice is a primary component of the internship (e.g., institutional research or policy analysis or program evaluation.)</td>
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<tr>
<td></td>
<td><strong>Dissertation Research Credits</strong></td>
<td>10</td>
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<tr>
<td></td>
<td>HED 5995 Dissertation Research</td>
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<td><strong>HED Required Courses</strong></td>
<td>24</td>
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<tr>
<td></td>
<td>HED 4210 Critical Higher Education</td>
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<td>HED 4211 Current Issues in Higher Ed</td>
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<td>HED 4220 Org &amp; Governance of Higher Ed</td>
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<td>HED 4294 Seminar in Higher Education</td>
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<td></td>
<td>HED Electives Students will complete a minimum of 16 credits (four courses) to complete the elective requirement.</td>
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</tbody>
</table>
A minimum of 90 credit hours is required beyond the earned master's degree. No credit hours from the earned master's degree can be transferred into the PhD.

Non-coursework Requirements
  • Comprehensive Exam
  • Oral Defense of Comprehensive Exam
  • Dissertation
  • Oral Defense of Dissertation

A minimum of 65 credit hours is required beyond the earned master's degree. No credit hours from the earned master's degree can be transferred into the EdD.
Non-coursework Requirements

- Comprehensive Exam
- Oral Defense of Comprehensive Exam
- The Doctoral Research Project
- Oral Defense of Doctoral Research Project

Master of Arts in Higher Education

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>Research Requirement</td>
<td>4</td>
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<tr>
<td>RMS 4900</td>
<td>Education Research and Measurement</td>
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<tr>
<td>HED Required Courses</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>HED 4214</td>
<td>History American Higher Ed</td>
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<tr>
<td>HED 4219</td>
<td>Introduction to Higher Education</td>
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<tr>
<td>HED 4220</td>
<td>Org &amp; Governance of Higher Ed</td>
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<tr>
<td>HED 4246</td>
<td>Issues of Access &amp; Opportunity</td>
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<tr>
<td>HED 4247</td>
<td>Retention, Persistence, and Student Success in Postsecondary Settings</td>
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<tr>
<td>HED 4270</td>
<td>Student Affairs Internship</td>
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<tr>
<td>or HED 4295</td>
<td>Internship in College and University Administration</td>
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<td>or HED 4296</td>
<td>Internship in Public Policy</td>
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<tr>
<td>or HED 4297</td>
<td>Internship in College Teaching</td>
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<td>HED Electives (Mix and match across HED course offerings or choose one of these optional emphasis areas: College Student Affairs, Diversity &amp; Higher Learning, Leadership &amp; Organizational Change)</td>
<td>24</td>
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<tr>
<td>HED 4217</td>
<td>Student Affairs Administration</td>
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<td>HED 429</td>
<td>Student Support in College</td>
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<td>HED 4260</td>
<td>Students and College Environments</td>
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<td>HED 4201</td>
<td>Assessment in Higher Education</td>
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<td>HED 4261</td>
<td>College Student Development Theory</td>
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<tr>
<td>HED 4294</td>
<td>Seminar in Higher Education (as appropriate)</td>
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<tr>
<td>Diversity &amp; Higher Learning Emphasis</td>
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<td>HED 4281</td>
<td>Inclusive Excellence Programming and Development</td>
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<td>HED 4284</td>
<td>Inclusive Excellence in Organizations</td>
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<td>HED 4287</td>
<td>Critical Race Theory and Education</td>
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<td>HED 4288</td>
<td>Gender &amp; Sexual Orientation in Education</td>
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<td>HED 4289</td>
<td>Race and Racism in Higher Education</td>
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<td>HED 4294</td>
<td>Seminar in Higher Education (as appropriate)</td>
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<tr>
<td>Leadership &amp; Organizational Change Emphasis</td>
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<tr>
<td>HED 4212</td>
<td>Introduction to Public Policy and Higher Education</td>
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<td>HED 4213</td>
<td>Leadership and Supervision</td>
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<td>HED 4221</td>
<td>Financing Higher Education</td>
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<td>HED 4222</td>
<td>Legal Issues in Higher Education</td>
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<td>HED 4242</td>
<td>Educational Policy Analysis</td>
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<td>HED 4294</td>
<td>Seminar in Higher Education (as appropriate)</td>
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<tr>
<td>Total Credits Required</td>
<td>50</td>
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</tbody>
</table>

Non-coursework requirements

- Internship experience
- Successful completion of a capstone portfolio
Courses

HED 3263 Sports and Higher Education (4 Credits)
This course provides an overview of the general history of college and university sports, athletics, intramurals, intramurals, and wellness programs as a broad introduction to this area; additional emphases center on issues related to intercollegiate sports e.g., athletic department positions, student-athlete support systems, ethical considerations, legal issues, politics and policies pertaining to institutional and NCAA norms/regulations, and current and future issues in collegiate athletics. Prerequisite: must be junior- or senior-level student.

HED 3264 Psychosocial Dimensions of Sports and Wellness (4 Credits)
Cross listed with HED 4264.

HED 3991 Independent Study (1-10 Credits)

HED 3992 Directed Study (1-10 Credits)

HED 4201 Assessment in Higher Education (4 Credits)
This course is designed to give student a broad understanding of assessment in higher education. This course will improve student's familiarity with existing assessment instruments for students, services, programs and facilities as well as provide an understanding importance of maintaining high standards of ethics and integrity in assessment of higher education and student affairs.

HED 4202 Program Evaluation in Higher Education (4 Credits)
This course is an overview of the craft of program evaluation, “…the systematic assessment of the operation and/or the outcomes of a program or policy, compared to a set of explicit or implicit standards, as a means of contributing to the improvement of the program or policy” (Weiss, 1998, p. 4). Program evaluation, simply put, is the craft of applying research methods in a thoughtful way to the task of finding out what and/or how interventions work in the context of the programs or policies in which they operate. This is accomplished by systematically investigating the effectiveness of program processes and outcomes within their political and organizational context. The goal is to inform social action and, by extension, improve conditions for program recipients and participants. Students in this course will explore program evaluation within the context of higher education. The purpose of this course is threefold: (1) Develop an understanding of existing evaluation theory and practice; (2) Apply evaluation theory and approaches to the context education evaluation; and (3) Develop an experiential base upon which to engage in evaluation in educational practice, and for many as a component of doctoral research projects.

HED 4210 Critical Higher Education (4 Credits)
This course examines the social and political context of U.S. education and provides an analysis of schooling, cultural politics, and global influences that inform current practices and structures of the higher education system. Central to this course is the development of a critical understanding of topics related to meritocracy, stratification, diversity, and decentralization in higher education. Prerequisite: Ph.D. student in higher education or permission of instructor.

HED 4211 Current Issues in Higher Ed (4 Credits)
A study of contemporary higher education as a specialized field of inquiry and as a professional area in which to work. Explores institutional missions as well as entities such as administration, faculty, curriculum, and student, in relationship to current issues.

HED 4212 Introduction to Public Policy and Higher Education (4 Credits)
This is an introductory course that gives students an overview of federal and state public policy, current issues, research methods, and practical skills required for the policy formation process. This is the introductory seminar to the Public Policy, Leadership and Organizational Change emphasis area for the master’s program.

HED 4213 Leadership and Supervision (4 Credits)
General leadership theory and its implications for higher education; specific focus on leadership skills, such as conflict resolution, problem solving, use of teams and change advocacy.

HED 4214 History American Higher Ed (4 Credits)
Development of North American higher education from colonial times to the present, focusing on important educators and institutions.

HED 4215 Curriculum Development and Teaching Strategies in Higher Education (4 Credits)
The goal of this course is to prepare those who will serve in higher education with the knowledge, skills, and dispositions necessary to design curriculum and pedagogical strategies that produce effective and equitable learning outcomes for all students and adults in postsecondary settings. This course pushes students to think about curriculum and instruction as a decision-making process that requires articulated goals, strategic alignment, and thoughtful planning in order to realize a more effective and inclusive pedagogy. Throughout the course students will come to understand the complexities of curriculum and teaching design, but also have the process clarified with a framework for choosing among different ways of teaching that result in significant and transformative learning experiences for their future students.

HED 4216 HED Research Processes (1-5 Credits)
Enables students to explore current research and theories associated with their scholarly interests and resources for doing research, and to address problems in conducting original inquiry and investigations in postsecondary education. Attention is directed to the investigation of a research problem of each student’s interest. Prerequisite: Successful completion of 10 credit hours of research courses or permission of instructor.
HED 4217 Student Affairs Administration (4 Credits)
A review of student services, emphasis on programmatic content and relationship to student development; organization of student service programs and national trends. To further describe the historical development of student affairs work including significant persons and activities and to begin the development of students’ own professional identities as a reflective practitioner and to understand the responsibilities for integrating assistantships/internships/work experiences to theory and new knowledge.

HED 4219 Introduction to Higher Education (4 Credits)
This course is designed to provide students an overview of higher education as a field of study and practice. The topics covered attempt to equip students with working knowledge of the structures, functions, challenges, concerns, and opportunities within higher education as a social institution. Grounded in values and principles of inclusive excellence, the course takes equity and diversity as departure points from which any and all productive understandings of higher education must engage.

HED 4220 Org & Governance of Higher Ed (4 Credits)
Study of theoretical perspectives and empirical research drawn from the social sciences related to higher education organizations and governance with an emphasis on application of theory and practice.

HED 4221 Financing Higher Education (4 Credits)
Financing public and private institutions of higher learning; sources of income, budgeting procedures, funding and control, use of simulated exercises to illustrate principles. Recommended prerequisites: HED 4210, HED 4211 and HED 4214.

HED 4222 Legal Issues in Higher Education (4 Credits)
Review of a broad range of administrative problems with legal dimensions; process for analyzing case law on issues of access, student rights, employment, collective bargaining, church-state relations, private sector and liability. Students gain practical experience (praxis) in analyzing and applying legal concepts to higher education subjects.

HED 4223 Inst Research & Enroll Mgmt (3 Credits)
Explores the important area of institutional research (IR) in a postsecondary setting. Issues relating to how an IR office functions and typical responsibilities of the professionals who staff these offices will be explored. Enrollment management concepts and themes will be highlighted along with data collection and reporting aspects of the college admissions and retention processes. Recommended prerequisites: HED 4213, HED 4217 and HED 4260 for master’s students; HED 4213, HED 4220 for doctoral students.

HED 4226 The Community College (4 Credits)
General issues related to community college, such as history, mission, characteristics, students, curricula, teaching and student services.

HED 4229 Student Support in College (4 Credits)
This class will introduce students to basic interpersonal helping skills required in Higher Education settings, including relationship building, listening, giving feedback, problem-solving, and resolving conflicts. Students will become familiar with crisis intervention models and techniques; signs and symptoms of distress and mental illness; strategies for making appropriate referrals to mental health providers; and considerations about self and other when engaged in helping relationships, particularly those with cultural differences. Central to the course will be discussion of the appropriate role Higher Education professionals have in helping students while recognizing their limitations.

HED 4230 Inclusive Excellence in Capstone (1-6 Credits)
The purpose of this course is to promote the integration of the core curriculum with practitioner related experiences in the masters program. Advanced students have an opportunity to use concepts and theories learned in previously complete coursework to understand and analyze current issues facing student affairs. The course is also designed to assist students by facilitating the transition in to professional positions in higher education.

HED 4232 Research Methods in Higher Education I (1-3 Credits)
Introductory research methods course for higher education professionals.

HED 4233 Research Methods in Higher Education II (1-4 Credits)
Introductory research methods course for higher education professionals, part II.

HED 4235 Organizational Change (4 Credits)
This course will focus on designing, implementing, and evaluating effective change in higher education through an equity-minded lens. The course is intended to assist students in developing a set of understandings in how to plan and implement change in higher education organizations, institutions, and as an industry. The course will introduce “equity-minded change” in higher education and will focus on how institutions can change to achieve equity, while addressing the importance of managing organizational development on a macro and micro level in higher education institutions and organizations. Students will acquire tools to manage and understand change through structural, political, human resource, and symbolic perspectives to understand the systemic interrelationships among these factors to effectively meet the changing socio/economic/political environments within higher education as they impact student success.
HED 4242 Educational Policy Analysis (4 Credits)
Students in this experiential course will develop critical policy analysis and Praxis skills that have relevance for the implementation of public policy and finance strategies for higher education. Students will employ critical thinking skills to analyze, evaluate and interpret public policy and finance with the goal of advancing the field of higher education's understanding of effective public policy and finance, as well as the unintended consequences that may arise with various policy solutions and funding strategies. Specifically, students will learn how to evaluate whether public policy and finance hinders or assists post-secondary institutions and their leaders in dismantling systemic oppression while promoting educational equity and opportunity and strengthening the public purposes of higher education. Students will interact directly with public policymakers, post-secondary administrators, policy researchers and policy analysts while assisting with a quarter-long experiential policy analysis project with an intermediary public policy organization. Students will also develop a policy analysis paper.

HED 4246 Issues of Access & Opportunity (4 Credits)
This course addresses theories and research on a variety of issues related to college preparation, school structures, and inequalities in college access. The course will cover different levels of analyses: theoretical, individual levels (i.e., race, ethnicity, and social class), organizational levels (family, geography, high school context, and outreach), and field levels (i.e., policy, testing, rankings, media, and policy). Special attention will be paid to the sociocultural context influencing issues of college access and opportunity for students.

HED 4247 Retention, Persistence, and Student Success in Postsecondary Settings (4 Credits)
This course introduces students to relevant research, theory, and practice related to college student retention and persistence. Students explore cultural, institutional, and individual factors that may impact college student persistence and critically examine theories attempting to explain why students leave college. In addition, students also closely explore the dynamics of oppression at the individual, institutional, and socio-cultural levels and the resulting impact on student retention. Effective retention practices, programs, and assessment procedures are also identified and examined.

HED 4260 Students and College Environments (4 Credits)
This course will serve as an introduction to college environments and the complexity of campus and culture. The purpose of this course is to familiarize you with today's higher education settings and provide you with strategies to maximize learning and development, for all students. In line with inclusive excellence, attention will be paid to the impact of campus environments on diverse student populations. Theoretical concepts will help explain, describe, and examine the college environments as a system and its impact on students, faculty, and staff.

HED 4261 College Student Development Theory (4 Credits)
An overview of human development theories relevant to college students, of traditional and non-traditional ages. This application will enhance the ability of student affairs professionals as they work to maximize the affective and cognitive development of students within the college setting.

HED 4264 Psychosocial Dimes of Sport (3 Credits)
Psychology and sociology of sports as related to college and university athletics and wellness. Cross listed with HED 3264.

HED 4270 Student Affairs Internship (1-6 Credits)

HED 4281 Inclusive Excellence Programming and Development (4 Credits)
IE in Programming and Development will provide an overview related to the development and implementation of cultural programming and cultural centers over time. This course will pay specific attention to the role of student activism in creating change on college campuses in the form of cultural programming, centers, diversity curriculum, and inclusive excellence initiatives. The course will also address the challenges and competencies associated with inclusive excellent programming and development.

HED 4282 Characteristics of College Students (3 Credits)
Characteristics to consider in working with adult learners, including aptitude, motivation, cognitive development, psycho-social development, intelligence, learning styles, gender, ethnicity and social class; practice in analyzing learning characteristics of a specific individual.

HED 4284 Inclusive Excellence in Organizations (4 Credits)
In recent years, major demographic and economic changes in this country and worldwide have contributed to the diversification of the workplace. As a result, the need for understanding how to enhance cultural diversity in organizations has taken on a greater importance. Accordingly, framed through the concept of Inclusive Excellence, this course focuses on the changing demographics of our society, especially related to race and culture, gender, age, physical ability, sexual orientation, and socio-economic status, emphasizing the implications these factors have for leadership and management in a variety of organizational settings.

HED 4287 Critical Race Theory and Education (4 Credits)
The purpose of this course is to provide students with an in-depth exposure to Critical Race Theory (CRT) as it pertains to education. Critical Race Theory is an analytical framework that provides race-based epistemological, methodological, and pedagogical approaches to the study of everyday inequalities in P-20 education.

HED 4288 Gender & Sexuality in Higher Education (4 Credits)
This course examines how the related constructs of gender and sexuality are understood within the context of higher education institutions, practices, policies and research. We'll begin this discussion by examining the evolution of thinking around gender and sexuality. Historically, these constructs have been portrayed primarily as a matter of "natural fact" (Halperin, 1989). In other words, gender and sexuality should be viewed as functions of the body and therefore objectively biological. There is, of course, a resounding counter-argument to this claim, lead by the likes of Michel Foucault, Judith Butler, David Halperin, Eve Sedgwick and others, who suggest that gender and sexuality are socially constructed ideas, fundamentally performative and enforced through existing configurations of power that regulate our bodies via a pervasive social norms and taken-for-granted patterns of socialization.
HED 4289 Race and Racism in Higher Education (4 Credits)
This course explores connections between race, racialization, and racism in American higher education. It draws on historical, political, economic, and cultural explanations of racial inequity in educational outcomes and processes. The course uses institutional and systemic levels of analysis to examine racial equity in higher education.

HED 4290 Inclusive Excellence in Praxis (1-6 Credits)
This course assesses and helps students develop critical self-reflection, leadership, and communication skills. Career plans are developed based on personal, academic, and professional goals. An emphasis is placed on applying theories discussed within the classroom to their respective professional roles on campus. Introductory course for all first-year master’s students. This course combines the professional development seminar and practicum.

HED 4291 Doctoral Professional Development Seminar (1-3 Credits)
This course is designed to introduce the first year doctoral students to the field and discipline of Higher Education and to prepare doctoral students for their academic study.

HED 4294 Seminar in Higher Education (1-4 Credits)
Advanced seminar to examine timely topics, issues, and problems. The course description is developed each time the course is offered to describe the topics to be investigated.

HED 4295 Internship in College and University Administration (1-6 Credits)
Supervised experience in administration at college or university level.

HED 4296 Internship in Public Policy (1-6 Credits)
Supervised experience in postsecondary public policy analysis or research, usually at a state or national compact or agency in the Denver-Boulder area. Recommended prerequisites: HED 4210, HED 4211, HED 4212, HED 4221, HED 4242, HED 4243.

HED 4297 Internship in College Teaching (1-6 Credits)
Supervised experience in teaching at college level.

HED 4991 MA Independent Study (1-10 Credits)
HED 4992 Directed Study (1-10 Credits)
HED 4995 Research - M.A. Thesis (1-10 Credits)
HED 5991 PhD Independent Study (1-10 Credits)
HED 5992 Directed Study (1-10 Credits)
HED 5993 Doctoral Research - EdD (1-20 Credits)
Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in HED; must have completed at least 80% of coursework; cannot complete more than five credit hours of HED 5993 prior to passing the comprehensive exam.

HED 5995 Dissertation Research (1-20 Credits)

Research Methods and Information Science
Office: Katherine A. Ruffatto Hall, Room 110
Mail Code: 1999 E. Evans Avenue, Denver, CO 80208
Phone: 303-871-2509
Email: edinfo@du.edu
Web Site: http://morgridge.du.edu/programs

Doctor of Philosophy in Research Methods and Statistics
The goal of the Research Methods and Statistics (RMS) PhD is to prepare graduate students with the state-of-the-art skills needed to conduct research in education and the social and health sciences. The faculty members equip students with cutting-edge research skills, creative educational vision, social responsibility, and sufficient experience in the application of these skills and knowledge to achieve mastery. The faculty are committed to shaping a safe, sustainable, democratic, and just world and believe that high-quality research is one approach to achieving this goal.

The education and social and health sciences fields have a growing need for professionals with strong skills in research design, statistics, qualitative and mixed methods, and data analysis. The RMS PhD course plan provides the courses and experiences necessary to conduct and supervise effective social science research.

Graduates with RMS PhD degrees hold leadership positions in testing and program evaluation companies, universities, school districts, and state agencies, among others.
Doctor of Philosophy in Research Methods and Statistics with a Concentration in Institutional Research

The RMS concentration in Institutional Research is targeted towards professionals with career goals in institutional research in applied settings including higher education, K-12 schools, non-profits, government settings, and business. Foundational coursework will equip Institutional Research students with strong quantitative, qualitative, and mixed research methods skills. Students will specialize in higher education or library and information science and take institutional research content knowledge courses in management, business intelligence, and public policy.

Doctor of Philosophy in Research Methods and Statistics with a Concentration in Qualitative Research

The RMS concentration in Qualitative Research primarily focuses on preparing students with strong, versatile, qualitative research methods skills to be utilized in different fields.

Master of Arts in Research Methods and Statistics

The goal of the Research Methods and Statistics (RMS) MA is to enhance student development and use of research in education and the social and health sciences with a specific focus on program evaluation. The faculty equip students with cutting edge research skills, creative educational vision, social responsibility, and sufficient experience in application of your skills and knowledge to achieve mastery. RMS is committed to shaping a safe, sustainable, democratic and just world and believe that high-quality research is one approach to doing this.

The education and social and health sciences fields have a growing need for professionals with strong skills in research design, statistics, qualitative and mixed methods, and data analysis. The RMS MA degree requirements provide the courses and experiences necessary for graduates to conduct effective social science research.

Graduates with RMS MA degrees hold professional positions in program evaluation at non-profit organizations, service agencies, school districts, and state agencies, among others.

Master of Library and Information Science in Library and Information Science

Library and Information Science (LIS) has developed a distinctive program of study to serve the rapidly changing needs of future librarians, archivists and information professionals in the Rocky Mountain region. There are a number of areas of focus including: Archives and Special Collections, Digital Libraries, Early Childhood Librarianship, Academic Libraries, Public Libraries, School Libraries Concentration, Special Libraries, and Web Services Librarianship.

With a dedicated faculty, we get to know our students very well through face-to-face interaction so that we can connect them to the highly regarded professional network in the region (and beyond). Practitioners speak highly of our students and are eager to have DU MLIS students as interns and employees.

Program Accreditation
American Library Association

Master of Library and Information Science in Library and Information Science with a Concentration in Teacher Librarian

The DU Teacher Librarian (T-L) Program is authorized by the Colorado Department of Education (CDE). A concentration in School Libraries prepares students to work with children and young adults in K-12 school libraries as well as youth services departments in public libraries. Colorado endorsement as a Teacher Librarian requires applicants to have a valid teaching credential, one year of classroom teaching and pass the Place Exam (School Librarian endorsement is available for applicants without classroom teaching experience). Recommendation for the added endorsement as a school librarian is made by the DU LIS Program, but endorsement is granted by the State of Colorado. Individual State requirements vary and may include teaching experience and media examinations in addition to a valid teaching credential. Students should consult with the Colorado Department of Education for the most updated endorsement requirements. Dr. Mary Stansbury of the LIS faculty is the primary contact for this specialization.

Program Accreditation and Authorization
American Library Association

Colorado Department of Education (CDE)

Master of Library and Information Science in Library and Information Science with a Concentration in Research Data Management

Research Data Management responds to the emerging need for well-trained information professionals in the digital environment. The concentration prepares professionals to support the research data life-cycle in the areas of scholarly communication, open access, copyright advice, and research
CERTIFICATE in LIBRARY AND INFORMATION SCIENCE WITH A Concentration IN RESEARCH DATA MANAGEMENT

The knowledge students gain in our library information science certificate program can prepare them to provide support in many areas in research data management. Research data expertise can be invaluable in scholarly communication, open access, copyright advice and research data management. Students take part in rigorous coursework in information science, research methods and statistics, collaborating with classmates as part of this comprehensive 28-credit program.

Our students can learn how to manage research data at a variety of settings, including academic libraries, research service centers, scientific and research organizations, government agencies and non-profit organizations. Graduates can enter into fields with significant needs for well-trained information professionals who can manage, preserve and share data generated throughout the research process.

Doctor of Philosophy in Research Methods & Statistics

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Master of Arts in Research Methods & Statistics

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Master of Library and Information Science in Library & Information Science, Library and Information Science@Denver

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Doctor of Philosophy in Research Methods and Statistics

Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>I. Morgridge College of Education requirements</td>
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<td></td>
</tr>
<tr>
<td>A. Research</td>
<td>10-17</td>
<td></td>
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</tbody>
</table>

Complete all of the following courses:

- RMS 4930 Quantitative Research Design
- RMS 4941 Introduction to Qualitative Research
- RMS 5995 Independent Research (Minimum 10 credits)  

II. Program requirements

A. Measurement

Complete all of the following courses:

- RMS 4921 Psychometric Theory
- RMS 4922 Item Response Theory
- RMS 4932 Meta-Analysis Social Science Research
- RMS 4924 Factor Analysis in the Social Sciences

B. Research Methods

Complete all of the following courses:

- RMS 4918 Propensity Score Analysis
- RMS 4940 Structural Foundations of Research in Social Sciences  
- RMS 4942 Qualitative Data Collection and Analysis
- RMS 4951 Mixed Method Research Design
RMS 4952 Research Ethics
RMS 4960 Introduction to Evaluation

Select at least one of the following:
RMS 4931 Survey and Design Analysis ²
RMS 4945 Community-Based Research ²
RMS 4946 Advanced Qualitative Research ²
RMS 4947 Arts-Based Research ²
RMS 4959 Topics in Research Design ²

C. Statistics

Complete all of the following courses:
RMS 4911 Correlation and Regression
or PSYC 4300 Correlation and Regression
RMS 4912 Analysis of Variance
or PSYC 4330 Analysis of Variance
RMS 4913 Multivariate Analysis
RMS 4914 Structural Equation Modeling
or PSYC 4350 Structural Equation Modeling for the Social Sciences
RMS 4915 Hierarchical Linear Modeling
RMS 4916 Latent Growth Curve Modeling

III. Practicum

Complete the following course:
RMS 4980 Practicum in Research

IV. Cognate (Minimum 10 credit hours)

Total Credits 90

1 In order to maintain degree candidacy, MCE doctoral students who have finished all requested course work will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

Optional

A minimum of 90 credit hours is required beyond the earned master’s degree. No credit hours from the earned master's degree can be transferred into the PhD.

Non-coursework requirements
• Doctoral comprehensive exam
• Dissertation and oral defense

Doctor of Philosophy in Research Methods and Statistics with a Concentration in Institutional Research

Degree requirements

Coursework requirements

I. Morgridge College of Education requirements

Complete all of the following courses:
RMS 4910 Introductory Statistics
RMS 4930 Quantitative Research Design
RMS 4941 Introduction to Qualitative Research
RMS 5995 Independent Research (Minimum 10 credits) ¹

II. Program requirements

Complete at least one of the following:
MGMT 4301 Organizational Psychology
MGMT 4302 Leading Talent
MGMT 4303 Negotiations and Change
### B. Measurement

Must complete 1st two classes

<table>
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<th>Course Title</th>
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<tr>
<td>RMS 4921</td>
<td>Psychometric Theory</td>
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<td>RMS 4932</td>
<td>Meta-Analysis Social Science Research</td>
</tr>
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<td>RMS 4924</td>
<td>Factor Analysis in the Social Sciences</td>
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### C. Research Methods

Must complete 1st four classes

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>RMS 4931</td>
<td>Survey and Design Analysis</td>
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<tr>
<td>RMS 4951</td>
<td>Mixed Method Research Design</td>
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<tr>
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<td>Research Ethics</td>
</tr>
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<td>RMS 4960</td>
<td>Introduction to Evaluation</td>
</tr>
<tr>
<td>RMS 4940</td>
<td>Structural Foundations of Research in Social Sciences</td>
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<tr>
<td>RMS 4942</td>
<td>Qualitative Data Collection and Analysis</td>
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<td>RMS 4945</td>
<td>Community-Based Research</td>
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<tr>
<td>RMS 4946</td>
<td>Advanced Qualitative Research</td>
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<td>RMS 4947</td>
<td>Arts-Based Research</td>
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<td>RMS 4959</td>
<td>Topics in Research Design</td>
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### D. Statistics

Must complete 1st three classes

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<tr>
<td>RMS 4911</td>
<td>Correlation and Regression</td>
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<tr>
<td>or PSYC 4300</td>
<td>Correlation and Regression</td>
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<tr>
<td>RMS 4912</td>
<td>Analysis of Variance</td>
</tr>
<tr>
<td>or PSYC 4330</td>
<td>Analysis of Variance</td>
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<tr>
<td>RMS 4913</td>
<td>Multivariate Analysis</td>
</tr>
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<td>RMS 4919</td>
<td>Topics in Statistics</td>
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<tr>
<td>RMS 4914</td>
<td>Structural Equation Modeling</td>
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<tr>
<td>or PSYC 4350</td>
<td>Structural Equation Modeling for the Social Sciences</td>
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<tr>
<td>RMS 4915</td>
<td>Hierarchical Linear Modeling</td>
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<td>RMS 4916</td>
<td>Latent Growth Curve Modeling</td>
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Choose at least one of the following:

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<tr>
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<th>Course Title</th>
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<tr>
<td>or PSYC 4350</td>
<td>Structural Equation Modeling for the Social Sciences</td>
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<tr>
<td>RMS 4915</td>
<td>Hierarchical Linear Modeling</td>
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<tr>
<td>RMS 4916</td>
<td>Latent Growth Curve Modeling</td>
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### III. Practicum

Complete the following course:

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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>RMS 4980</td>
<td>Practicum in Research</td>
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### IV. Specialization Area Courses

(18 credits minimum; *Required Courses)

#### Specialization in Higher Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HED 4220</td>
<td>Org &amp; Governance of Higher Ed</td>
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<tr>
<td>HED 4212</td>
<td>Introduction to Public Policy and Higher Education</td>
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<tr>
<td>HED 4221</td>
<td>Financing Higher Education</td>
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<td>HED 4214</td>
<td>History American Higher Ed</td>
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<tr>
<td>HED 4211</td>
<td>Current Issues in Higher Ed</td>
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<tr>
<td>HED 4284</td>
<td>Inclusive Excellence in Organizations</td>
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<tr>
<td>HED 4246</td>
<td>Issues of Access &amp; Opportunity (Issues of Access &amp; Opportunity)</td>
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<td>HED 4247</td>
<td>Retention, Persistence, and Student Success in Postsecondary Settings</td>
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#### Specialization in Library and Information Science

<table>
<thead>
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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>LIS 4010</td>
<td>Organization of Information</td>
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<tr>
<td>LIS 4404</td>
<td>Metadata Architectures</td>
</tr>
<tr>
<td>LIS 4206</td>
<td>Web Content Management</td>
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<tr>
<td>LIS 4820</td>
<td>Digitization (Specialization in Business Analytics)</td>
</tr>
<tr>
<td>LIS 4700</td>
<td>Topics in LIS (Academic Libraries)</td>
</tr>
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</table>

#### Specialization in Business Analytics
INFO 4140  Business Databases
INFO 4240  Data Warehousing
INFO 4300  Predictive Analytics
INFO 4340  Data Mining and Visualization
INFO 4360  Complex Data Analytics

1 In order to maintain degree candidacy, MCE doctoral students who have finished all requested course work will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.
2 Optional

A minimum of 90 credit hours is required beyond the earned master’s degree. No credit hours from the earned master’s degree can be transferred into the PhD.

Non-coursework requirements
- Doctoral comprehensive exam
- Dissertation and oral defense

Doctor of Philosophy in Research Methods and Statistics with a Concentration in Qualitative Research

Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
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<td>A. Research</td>
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<tr>
<td>Complete all of the following courses:</td>
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<tr>
<td>RMS 4930</td>
<td>Quantitative Research Design</td>
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<tr>
<td>RMS 4910</td>
<td>Introductory Statistics</td>
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</tr>
<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
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<tr>
<td>II. Program requirements</td>
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<tr>
<td>A. Measurement</td>
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<td></td>
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<tr>
<td>Complete the following course:</td>
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<tr>
<td>RMS 4931</td>
<td>Survey and Design Analysis</td>
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<tr>
<td>B. Research Methods</td>
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<td>Complete all of the following courses:</td>
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<td>RMS 4951</td>
<td>Mixed Method Research Design</td>
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<td>RMS 4952</td>
<td>Research Ethics</td>
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<td>Introduction to Evaluation</td>
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<td>C. Statistics</td>
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<td>Complete all of the following courses:</td>
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<tr>
<td>RMS 4911</td>
<td>Correlation and Regression</td>
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<td>RMS 4912</td>
<td>Analysis of Variance</td>
<td></td>
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<tr>
<td>or RMS 4913</td>
<td>Multivariate Analysis</td>
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<tr>
<td>D. Qualitative</td>
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<tr>
<td>RMS 4942</td>
<td>Qualitative Data Collection and Analysis</td>
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<td>E. Qualitative Concentration (Total 24 Credits)</td>
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<td>Complete 24 credits from the following list:</td>
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<tr>
<td>RMS 4946</td>
<td>Advanced Qualitative Research</td>
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<td>RMS 4945</td>
<td>Community-Based Research</td>
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<td>RMS 4947</td>
<td>Arts-Based Research</td>
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<tr>
<td>RMS 4948</td>
<td>Criticism and Connoisseurship: Qualitative research and the enhancement of practice</td>
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<tr>
<td>COMN 4932</td>
<td>Critical Methods for Studying Culture</td>
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<tr>
<td>COMN 4160</td>
<td>Performance Ethnography</td>
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<td>ANTH 3060</td>
<td>Cultural Narratives</td>
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<tr>
<td>ANTH 3750</td>
<td>Ethnographic Methods</td>
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</table>
A minimum of 90 credit hours is required beyond the earned master’s degree. No credit hours from the earned master’s degree can be transferred into the PhD.

Non-coursework requirements
- Doctoral comprehensive exam
- Dissertation and oral defense

Master of Arts in Research Methods and Statistics

Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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<tr>
<td></td>
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<td>A.</td>
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<td>RMS 4910</td>
<td>Introductory Statistics</td>
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<tr>
<td>A.</td>
<td>Measurement</td>
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<td>RMS 4921</td>
<td>Psychometric Theory</td>
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<td>B.</td>
<td>Research Design</td>
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<td>RMS 4930</td>
<td>Quantitative Research Design</td>
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<tr>
<td>RMS 4931</td>
<td>Survey and Design Analysis</td>
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<tr>
<td>RMS 4932</td>
<td>Meta-Analysis Social Science Research</td>
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<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
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<td>RMS 4952</td>
<td>Research Ethics</td>
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<td>B.</td>
<td>Statistics</td>
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<td>RMS 4969</td>
<td>Topics in Program Evaluation</td>
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<td>D.</td>
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<tr>
<td>RMS 4995</td>
<td>Independent Research</td>
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Total Credits

Minimum number of credits required for degree: 45 credits
Non-coursework Requirements
  • Practicum
  • MA comprehensive exam or Thesis

Master of Library and information Science in Library and Information Science:
MLIS@Denver

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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<td>LIS 4000</td>
<td>Foundations of Library, Archival, and Information Science</td>
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<tr>
<td>LIS 4010</td>
<td>Organization of Information</td>
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<tr>
<td>LIS 4015</td>
<td>User and Access Services</td>
<td>3</td>
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<tr>
<td>LIS 4040</td>
<td>Management of Information Organizations</td>
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</tr>
<tr>
<td>LIS 4050</td>
<td>Library and Information Technologies</td>
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</tr>
<tr>
<td>RMS 4900</td>
<td>Education Research and Measurement</td>
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<td>LIS 4910</td>
<td>Culminating Internship</td>
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<td>or LIS 4901</td>
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Elective requirements: 36 Elective credits

Total Credits: 58

Non-coursework Requirements
  • Portfolio

Master of Library and information Science in Library and Information Science

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<td>Organization of Information</td>
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<td>Management of Information Organizations</td>
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<td>or LIS 4901</td>
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Elective requirements: 36 Elective credits

Total Credits: 58

Non-coursework Requirements
  • Portfolio
Master of Library and Information Science in Library and Information Science with a Concentration in Research Data Management

Degree Requirements

Coursework Requirements

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<th>Code</th>
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<tr>
<td>LIS 4010</td>
<td>Organization of Information</td>
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<tr>
<td>LIS 4015</td>
<td>User and Access Services</td>
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<tr>
<td>LIS 4040</td>
<td>Management of Information Organizations</td>
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<td>Library and Information Technologies</td>
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<td>LIS 4910</td>
<td>Culminating Internship</td>
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<tr>
<td>or LIS 4901</td>
<td>Capstone Course</td>
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<th><strong>Concentration Requirements</strong></th>
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<tr>
<td>LIS 4210</td>
<td>Data Visualization</td>
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<tr>
<td>LIS 4220</td>
<td>Data Curation</td>
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<tr>
<td>LIS 4135</td>
<td>Scholarly Communication</td>
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<td>LIS 4230</td>
<td>Database Management Systems</td>
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<td>LIS 4235</td>
<td>Scripting for Large Databases</td>
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<td>RMS 4931</td>
<td>Survey and Design Analysis</td>
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<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
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**Elective Requirements**

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**Total Credits**

53

Non-coursework Requirements

- Portfolio

Master of Library and Information Science in Library and Information Science with a Concentration in teacher-librarian

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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<tbody>
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<td>LIS 4000</td>
<td>Foundations of Library, Archival, and Information Science</td>
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<td>LIS 4010</td>
<td>Organization of Information</td>
<td>3</td>
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<td>LIS 4015</td>
<td>User and Access Services</td>
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<tr>
<td>LIS 4040</td>
<td>Management of Information Organizations</td>
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<td>LIS 4050</td>
<td>Library and Information Technologies</td>
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<tr>
<td>RMS 4900</td>
<td>Education Research and Measurement</td>
<td>4</td>
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<tr>
<td>LIS 4911 &amp; LIS 4912</td>
<td>Elementary School Culminating Internship and Secondary School Culminating Internship</td>
<td>4</td>
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| **Concentration requirements** | | |
|---------------------------------|---------|
| LIS 4321 | Collection Management                   | 3       |
| LIS 4510 | Children's Materials and Services       | 3       |
| LIS 4520 | Young Adult Materials & Services         | 3       |
| LIS 4700 | Topics in LIS (School Libraries)        | 2       |
| LIS 4508 | Early Childhood Materials and Services    | 3       |
| or LIS 4350 | Adult Materials & Services          |         |

**Elective requirements**
### Required Elective Credits

22

### Elective Credits

13

### Total Hours

58

1 Or another literacy or literature class as approved by your advisor.

## Non-coursework Requirements

- Portfolio

### Certificate in Library and Information Science with a Concentration in Research Data Management

#### Degree Requirements

##### Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>LIS 4135</td>
<td>Scholarly Communication</td>
<td>3</td>
</tr>
<tr>
<td>LIS 4210</td>
<td>Data Visualization</td>
<td>3</td>
</tr>
<tr>
<td>LIS 4220</td>
<td>Data Curation</td>
<td>3</td>
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<tr>
<td>LIS 4230</td>
<td>Database Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>LIS 4235</td>
<td>Scripting for Large Databases</td>
<td>4</td>
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<tr>
<td>RMS 4910</td>
<td>Introductory Statistics</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4930</td>
<td>Quantitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
<td>4</td>
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<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>28</strong></td>
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### Library Information Science Courses

- **LIS 4000 Foundations of Library, Archival, and Information Science (3 Credits)**
  An overview of the theoretical and conceptual foundations of library, archival, and information sciences and an introduction to the information professions, including principles, values, professional organizations, publications, current and future challenges.

- **LIS 4010 Organization of Information (3 Credits)**
  This course introduces basic concepts in the theoretical, practical, and technological aspects of information organization. It provides an overview of the methodologies for organizing and representing information resources in the library, archives, and museum settings.

- **LIS 4011 Information Access & Retrieval (3 Credits)**
  Information retrieval is defined as the process of searching for (and retrieving) relevant information within a document collection. The document collection could be textual (bibliographic records), structured and unstructured data, library databases, web based information resources, multimedia resources, and numerical data. This course introduces students to important access and retrieval tools and technologies used to retrieve information that are relevant to a user's information need. In addition to the underlying principles and processes revolving around access and retrieval such as text operations, indexing, query languages, and searching, the course covers relevant topics such as library discovery systems, web based information retrieval technologies, and enterprise search systems.

- **LIS 4015 User and Access Services (3 Credits)**
  Overview of human information processing and user services in the changing information environment and different communities of practice. This course introduces the concepts of user information needs, seeking, and processing as a foundation for understanding users and designing user-centered information services. The course examines both traditional reference and current/emerging information services in different settings and populations. Course also introduces the concepts of information literacy, user education, and assessment of information services. Recommend prerequisite: LIS 4015.

- **LIS 4040 Management of Information Organizations (3 Credits)**
  An introduction to current theory and practice of management in information organizations through the study of organizations, communications, decision making, planning, leadership, human resources and budgeting. Prerequisite: LIS 4000 or instructor approval.

- **LIS 4050 Library and Information Technologies (3 Credits)**
  A foundation course on the applications of information and communications technology in libraries and information agencies. Integrated library systems and the acquisition, evaluation, and implementation of library automation solutions, including electronic resource management systems are explored. The course further introduces database design, Internet technology, web services, cloud computing, computer networks, telecommunications, and computer security. Hardware, software, and other productivity tools and utilities from organizations such as OCLC, Amazon, and Google are discussed.
**LIS 4060 Reference (3 Credits)**
Information resources include a number of different kinds of reference materials in a wide variety of formats. These include guidebooks, encyclopedias and dictionaries, indexes and abstracts, handbooks, bibliographies, biographical finding tools and biographies, data sets and much more. Many of these resources are available on-line, as well as in print and other digital formats. This course will help students identify and evaluate the most likely resources for information queries in particular settings. It will also provide the opportunity to find answers to real research questions. The course will cover the primary resources for the broad disciplines of business, humanities, sciences, social sciences and government publications in print and electronic formats. Class exercises will reflect the multidisciplinary and multicultural interests and characteristics of library users. Prerequisite: LIS 4015. Recommended prerequisites: LIS 4000 and LIS 4011.

**LIS 4070 Cataloging & Classification (3 Credits)**

**LIS 4135 Scholarly Communication (3 Credits)**
This course will provide a broad understanding of scholarly communication systems regarding the creation, dissemination, and evaluation of scientific information. The concept of scholarly communication refers to the ways researchers publish and disseminate their research findings in the digital environment and encompasses formal and informal channels of communication among scholars. Traditionally, scholarly dissemination systems have involved conference presentations and publication of books and articles in subscription-based journals. Digital technology has transformed scholarly communication by introducing open access publishing models and alternative ways of measuring scholarly impact. This course will explore the changing nature of scholarship and will examine the topics of scholarly publishing, peer review, intellectual property, the open access movement, digital repositories, bibliometrics, and altmetrics.

**LIS 4206 Web Content Management (3 Credits)**
This course will include instruction in web page creation, selection, and evaluation of web content as well as web site management. Selection of web page content will be discussed in the context of organizational knowledge management and competitive intelligence needs. Differences in information needs for provision of public information and competitive intelligence on Internet pages versus the organizational information needs of Intranets in knowledge management will be explored. This course also will address human-computer interface design to allow web page designers to create effective web pages according to established principles of design.

**LIS 4208 Usability (3 Credits)**
This course provides an overview of usability analysis and user experience research and introduces students to practical methods and techniques in conduction usability evaluation. The focus of the course will be on the selection of appropriate evaluation methods, as well as planning, designing, and conduction usability evaluations of information services. In addition, the course will discuss the methods and tools of user-experience research, the theoretical underpinnings of usability, and the role of usability in iterative design and the development of information systems.

**LIS 4209 Information Architecture (3 Credits)**
The web is a complex information environment consisting of billions of web pages, users, and clicks and interaction every single day. This course introduces students to the fundamentals of web information architecture (IA) - a discipline that aims to understand the information needs and activities of web visitors and create design elements to help users find their way around in the complex information environment with ease. The course will cover various strategies and skills, in which information architects structure, organize, label, navigate, and search for information on large websites. A service learning component is built into this course so that students can transfer their IA knowledge and skills to a real-world project. The course is designed following a project management approach and students will be exposed to different activities from start to finish.

**LIS 4210 Data Visualization (3 Credits)**
This course provides a practical introduction to the principles, theories, and applications of information visualization in the research data context. This course contextualizes modern practices in information visualization by examining historical approaches to visualization with an eye on theories that inform contemporary visualization best practices. Using a hands-on component, students will get real-world experience in visualizing datasets, and building visualization dashboards that integrate multiple visualizations.

**LIS 4220 Data Curation (3 Credits)**
Across the academic domains, digital data are becoming more visible as critical products of scholarly work. Digital technologies, such as sensor networks in the environmental sciences, social networking tools in the social sciences, and the digitization of cultural artifacts in the humanities, allow researchers to produce far greater volumes and complexities of digital data than were possible in the past. Digital technologies, and the data that they produce, offer tremendous opportunity for researchers in every academic discipline to ask questions that were previously impossible to study. Some digital technologies enable researchers to study very local phenomena in great detail. Others enable the integration of many diverse data streams in order to conduct synthesis and longitudinal studies. But while the possibilities of digital data are exciting, they also present tremendous challenges: how to best organize and manage data, how to make data discoverable and accessible to diverse user communities, and how to store and preserve data over the long term.

**LIS 4230 Database Management Systems (3 Credits)**
This is a foundation course on the principles of database design and the use of database management systems for information professionals. The course covers database systems, data modeling, relational models, relational algebra, SQL, emerging NoSQL systems, data storage and querying, query languages, query optimization, OLAP, transaction management, data warehousing, and data mining. In addition, fundamentals on systems analysis and the database application lifecycle will be reviewed.
LIS 4235 Scripting for Large Databases (4 Credits)
This course will introduce students to the basics of data storage and acquisition as part of a multi-step data gathering, processing, analysis and visualization effort. The logic and structure of relational databases will be reviewed, exploring the more common databases like SQL Server and Postgres. along with exploration of JSON and NoSQL based data stores. Techniques and methods for automation and scalable data processing will be introduced under the Python programming language with a focus on using Pandas and other libraries to simplify data tasks. These skills will be integrated and applied by the student through the use of prepared data sources, along with use of APIs and web scraping technique to acquire data through internet sources.

LIS 4320 Outreach (3 Credits)
Outreach as a library service is evolving at a rapid pace. This course will examine the history, current practice, and future promise of outreach across all kind of library organizational settings. Topics addressed in this course will include competencies for outreach librarianship; practices in outreach services; definition and scope; planning, designing and budgeting for services; environmental scanning, key performance indicators, and barriers; developing and maintaining partnerships.

LIS 4321 Collection Management (3 Credits)
Topics addressed in this course include collection development and access policies, selection methods and practices, collection assessment, preservation and conservation, de-selection, treatment of rare material, manuscripts and archives, U.S. government publications, non-book and digital formats management, juvenile, and other special materials.

LIS 4330 Library Instruction (3 Credits)
This course provides an introduction to the principles of library instruction and information literacy including a historical overview of their place within the profession. Emphasis is on instruction within an academic setting, but students will learn important educational theories that can be applied to a variety of settings. ACRL and AASL standards will be examined as well as types of instruction, instructional design, collaboration with faculty, various competencies, assessment, and lifelong learning. The class has a strong emphasis on public speaking, communication skills, and the practical application of educational theory.

LIS 4350 Adult Materials & Services (3 Credits)
This course provides the student with an opportunity to explore readers advisory service from a customers perspective. Students study the readers advisory literature and examine all types of genre fiction. Lecture, readings and class discussion will focus on specific genres and authors within them. Students will also be required to read in all the genres.

LIS 4370 Database Searching (2 Credits)
Nearly all historic, traditional search and retrieval tools such as library catalogs, indexes, microform guides, and archival findings aids have migrated to web-based systems. This course explores the complexities of searching for materials in an online environment. Topics to be covered include database and field structures; controlled vocabularies and indexing schema; search syntaxes, reference linking; data exploring and manipulation; non-textual database searching including numerical, image, and multimedia data; metasearch and web-scale discovery technologies.

LIS 4404 Metadata Architectures (3 Credits)
Provides an overview of the principles and theories of metadata development in the digital environment. Focuses on the design and application of metadata schemas for distinct domains and information communities, issues in metadata interoperability, vocabulary control, quality control and evaluation. Examines international standards, activities and projects. Prerequisites: LIS 4010.

LIS 4510 Children's Materials and Services (3 Credits)
This course is designed to prepare librarians to work with children (ages birth to 12 years) in school and public libraries. Topics covered include children's development, reading interests and needs, materials selection, collection development (including print and non-print materials), discussions of specific genres, reading motivation skills, designing a children's area, and developing various programming ideas. Students read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks and stories, become familiar with review sources, and design a one-year plan for youth services in a school or public library.

LIS 4520 Young Adult Materials & Services (3 Credits)
This course prepares librarians to work with young adults (ages 12-18) in school and public libraries. Topics covered include young adult development, reading interests and needs, materials selection, collection development (including print and non-print materials), and discussions of specific genres, reading motivation skills, designing a YA area, programming, and intellectual freedom issues. Participants will read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks, become familiar with review sources, and design a one-year plan for a YA department in a small school or public library.

LIS 4535 School Libraries (2 Credits)
This course is a study of school libraries and the characteristics that make them different from other types of libraries. There is an emphasis on information literacy and educational technology standards as they apply to school libraries, the collaborative instructional process, and standards-based instruction including summative and formative assessment revision techniques. Collaborative planning and curriculum development through the school library program is addressed, as well as an understanding of networks and instructional delivery systems. Various strategies to improve students' reading will be addressed, as well as a variety of methods for promoting children's and teen literature through collaboration with classroom teachers. Administration of the school library is addressed in a review of mission statements, goals and objectives, strategic planning, policies and procedures, and communication with school administration. The discussions will create an awareness of the important of leadership and professionalism through educational and professional organizations, lifelong learning, educational research, and mentoring. Most of the concepts in this class will have been introduced in other classes. This class will specifically tie the concepts to the school library setting.
LIS 4700 Topics in LIS (1-5 Credits)
This flexible library and information science course will provide students with the opportunity to explore issues of current importance in the field. Topics and credit hours will vary and will address subjects such as emerging technologies, new methodologies, specific reader services, standards and practices, and social and economic trends in the profession. Prerequisite courses may be recommended or required as determined by the content of the specified course.

LIS 4701 Reference Topics (1 Credit)
This course provides the student with an opportunity to explore information resources in specific subject materials. Lecture, readings, class discussions, and exercises will address all formats of materials including print, electronic, and web resources.

LIS 4702 Type of Library: Topics (2 Credits)
This course is a study of specific types of libraries, such as public libraries, academic libraries, and special libraries, and the characteristics that make them different from other types of libraries. Specific topics covered will depend on the type of library, but may include collections, management, budgets and funding, as well as professional competencies.

LIS 4800 Intro Archives & Records Mgmt (3 Credits)
This course provides an introduction to the objectives and methods of the archival and records management professions including an overview of terminology, issues, and common practices. The systematic control of records throughout their life cycle from creation through processing, distribution, organization, retrieval and archival disposition will be covered. Prerequisites: LIS 4000 and LIS 4010; or instructor permission.

LIS 4805 Records Management (3 Credits)
This course covers the establishment of information maintenance plans, evaluations and audits of records and information management Programs, the records and information survey, retention policies and legal requirements, and techniques for integrating automation to records and information management.

LIS 4806 Advanced Archives (3 Credits)
In this course, students will be given the opportunity to put into practice basic archival principles and functions. Students will perform the actions of appraisal, accessioning, arrangement, description, and access solution review for both analog and digital archival collections. Additionally, students will be given the task of providing solutions for new paradigms in archival processing such as creating a web archive, processing email collections, and capturing social media content. The course will be a combination of lecture, demonstration, lab time, discussion, and projects.

LIS 4808 Digital Libraries (3 Credits)
This course provides a theoretical foundation for the study of digital libraries and discusses the technological, organizational, social, and legal issues associated with the development and use of digital libraries. Through this course students develop an understanding of digital library components and explore theoretical and practical approaches to constructing, maintaining, and evaluating digital libraries. Topics examined include digital library definitions, design and architecture of digital libraries. Topics examined include digital library definitions, design and architecture of digital libraries, information access in the digital library environment, digital library users and user services, data repositories, digital curation, digital preservation, digital library evaluation, and digital librarianship.

LIS 4820 Digitization (3 Credits)
The course offers an introduction to issues and trends in planning, developing and managing digitization projects at libraries, archives, and museums. The focus of the course is on the conversion process of analog materials into the digital format, online delivery, and preservation of master files. The course discusses collection development policy for digital projects, copyright, digital imaging technology, digitization standards and best practices for text, images, audio, and video, metadata for cultural heritage collections, delivery platforms, preservation, project management, sustainability, documentation, promotion, and evaluation of digital projects.

LIS 4830 Building Digital Collections (3 Credits)
This course provides a theoretical foundation and practical experience in building interoperable digital collections. It will introduce students to all aspects of building digital collections, including planning, user needs analysis, selecting standards and content management systems, creating digital objects and metadata, designing user interface, preservation of digital objects, and management and evaluation of digital collections. Topics covered include content creation standards and best practices, metadata, interoperability, sustainability, scalability of management systems, and concepts related to designing access tools and delivery systems. Discussion of technology and its application to digital library practices will be a major theme. The course will be a combination of lecture, discussion, and problem solving. It requires participants to conduct independent research and writing. Critical reading of course materials is essential to stimulate active participation in class discussions.

LIS 4850 Digital Preservation (3 Credits)
Students will learn the principles and practices of preserving access to information encoded in digital form. They will learn how to assess digital preservation needs within an institution, write digital preservation policies, and how to collect and present data to make a case for acquiring funds for digital preservation activities. Students will learn the basics of digital information encoding as it applies to the technological aspects of digital preservation, and will learn about current tools and practices used to preserve access to digitally encoded information over time. The course will be a combination of lecture, discussion, and problem solving. It requires participants to conduct independent research and writing. Critical reading of course materials is essential to stimulate active participation in class discussions.
LIS 4901 Capstone Course (3 Credits)
Students in this course will design and complete a project to demonstrate the ability to integrate and synthesize their masters course work and apply their knowledge to a topic. The class meets with an instructor regularly over the nine-week summer quarter. The instructor monitors and guides the students to ensure that they complete the phases of the project in accordance with the proposed timeline and goals. Evaluation will be based on individual performance, with respect to the quality and professionalism of the research, the management of the project, and analytical and writing skills. Prerequisite: Minimum of 45 quarter hours of graduate LIS course work completed, including all core courses, a proposal approved by the academic advisor and faculty permission.

LIS 4902 Internship (1-4 Credits)
This course will offer up to 4 credits for an internship position in libraries and archives. Students are encouraged to gain practical experience.

LIS 4910 Correlation and Regression (4 Credits)
This beginning statistics course examines use and interpretation of statistics in educational and human services research, including descriptive and inferential techniques. Prerequisite: Minimum of 45 quarter hours of graduate LIS course work completed, including all core courses, a proposal approved by the academic advisor and faculty permission.

LIS 4910 Culminating Internship (3 Credits)
This course is designed to supplement the classroom experience by giving students practical experience working in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include fields of medicine, law, art, public, and academic libraries. It is the students responsibility to select a practicum site and a field supervisor, who must be approved by LIS faculty. One hundred hours of service over a 10-week quarter are required. The student, faculty, and field supervisor will determine specific requirements for the final paper or report. Students must notify the LIS academic advisor one quarter before enrolling in Culminating Internship. Prerequisites: Completion of a minimum of 38 quarter hours of graduate LIS coursework, including all core courses.

LIS 4911 Elementary School Culminating Internship (2 Credits)
This course is designed to provide elementary school practical experience for teacher-librarians by working a minimum of 80 hours in an elementary school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

LIS 4912 Secondary School Culminating Internship (2 Credits)
This course is designed to provide secondary school practical experience for teacher-librarians by working a minimum of 80 hours in middle or high school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

LIS 4920 Service Learning in LIS (1-4 Credits)
This course is designed to supplement the classroom experience by giving students an opportunity to participate in a service learning project. Students will propose an independent study component highlighting the learning aspects of the project. The experience should provide practical work in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include many areas related to the information needs of an underserved population. It is the students responsibility to select a site and a field supervisor. The student, faculty coordinator, and field supervisor will work together to establish the goals and objectives of the experience. A minimum of 40 hours of service is required for two quarter hours of credit.

LIS 4991 MA Independent Study (1-10 Credits)
Independent study projects allow students more in-depth investigation of the many facets of library and information science. Students must work with an approved faculty advisor and submit a proposal outlining the objectives, scope, outcomes, and evaluation criteria. The faculty advisor and the department director must approve proposals. Prerequisites: Completion of a minimum of 30 quarter hours of graduate LIS coursework, including all core courses and a minimum GPA of 3.0.

LIS 4992 Directed Study (1-10 Credits)

Research Methods and Stats Courses
RMS 4900 Education Research and Measurement (4 Credits)
This course is intended for Master’s degree students in the College of Education. Quantitative research designs, empirical methods of data collection and interpretation, and measurement issues in research are examined.

RMS 4910 Introductory Statistics (5 Credits)
This beginning statistics course examines use and interpretation of statistics in educational and human services research, including descriptive and inferential techniques. Cross listed with SOWK 5930.

RMS 4911 Correlation and Regression (4 Credits)
This course focuses on the study of correlation and multiple regression research designs and their application to educational and social science programs. Cross listed with SOWK 5202. Prerequisite: RMS 4910.

RMS 4912 Analysis of Variance (5 Credits)
Conceptual and applied analyses of one-way through factorial nested analysis of variance designs and multivariate analysis of variance are presented. Prerequisite: RMS 4910.

RMS 4913 Multivariate Analysis (5 Credits)
Conceptual and applied analyses of common multivariate statistical techniques used in research in social sciences are presented as are assumptions and limitations of techniques and interpretation of results. Cross listed with SOWK 5950. Prerequisite: RMS 4911 or RMS 4912.

RMS 4914 Structural Equation Modeling (5 Credits)
This course covers major applications of and issues related to covariance structure modeling, specifically confirmatory factor analysis and latent variable path modeling; types of research applications for which covariance structure modeling analyses are appropriate. Prerequisite: RMS 4913.
RMS 4915 Hierarchical Linear Modeling (4 Credits)
This course introduces models that extend multiple regression to analysis of nested data structures common in education and other social sciences. Application of those methods to various forms of multilevel data, including repeated measure (growth trajectory) data is emphasized. Prerequisite: RMS 4911.

RMS 4916 Latent Growth Curve Modeling (4 Credits)
This course covers advanced issues in longitudinal data analysis using structural equation modeling and hierarchical linear modeling with latent variables. It involves both conceptual development and practical implementation of longitudinal data analysis. This course is intended to be a hands-on approach to working with data and addressing research questions that can be best answered by longitudinal data. Prerequisite: RMS 4914.

RMS 4917 Computer Applications in Social Science Research (3 Credits)
This course focuses on use of statistical software and other appropriate software programs in the analysis of quantitative data. Prerequisite: RMS 4910.

RMS 4918 Propensity Score Analysis (3 Credits)
Propensity score analysis provides a conceptual understanding of the rationale and importance of controlling for biases that might emerge during the selection process in experimental research. The common procedures of fitting a propensity score model and estimating the effect of the treatment after correction for biases are demonstrated.

RMS 4919 Topics in Statistics (1-5 Credits)
Topics vary by quarter but may include log-linear analysis, factor analysis, or missing data analysis.

RMS 4920 Educational Measurement (3 Credits)
This course examines the meaning, characteristics, and processes of educational measurement and evaluation. Development and interpretation of both standardized and informal tests are considered.

RMS 4921 Psychometric Theory (3 Credits)
This course examines major psychometric theories (e.g., classical, item response) as related to reliability, generalizability, validity, and item analysis methods. Prerequisite: RMS 4910.

RMS 4922 Item Response Theory (3 Credits)
Theory and methods for the educational and psychological measurement of latent variables using item response theory are covered in this course. Prerequisite: RMS 4910, RMS 4921.

RMS 4924 Factor Analysis in the Social Sciences (4 Credits)
This course instructs students in both exploratory and confirmatory factor analysis as those methodologies are employed in the social sciences.

RMS 4929 Topics in Psychometrics (1-3 Credits)
Topics vary, but include: large scale testing, computer applications of item response theory, affective measure construction, generalizability theory, additive conjoint measurement, and standing testing. Prerequisite: RMS 4921 or instructor permission.

RMS 4930 Empirical Research Methods (3 Credits)
This course provides in depth study of empirical research methods involved in experimental, quasi-experimental, correlational, and single-subject designs.

RMS 4931 Survey and Design Analysis (3 Credits)
Survey techniques, needs assessment, item construction, sampling, maximizing response rates and data analysis; survey construction and data analysis are required. Prerequisite: RMS 4910.

RMS 4932 Meta-Analysis Social Science Research (3 Credits)
This course examines meta analytic techniques in the social sciences. Included are discussions of review of critical data bases, coverage of all major methods of data collection and analysis, and coverage of how best to present meta analytic findings for publication. Prerequisite: RMS 4911, RMS 4930, and preferred RMS 4912.

RMS 4939 Topics in Quantitative Research Methods (1-5 Credits)
Topics vary, but include minimization as an alternative to randomization, propensity score modeling as an alternative to experimental control, and analysis of data from single-subject designs. Prerequisite: RMS 4930.

RMS 4940 Structural Foundations of Research in Social Sciences (3 Credits)
This introductory course on epistemology and research includes discussion of identification and development of problems for research; introduction to basic quantitative and qualitative methods of conducting research in social science settings, ethnographic, and criticism methods.

RMS 4941 Introduction to Qualitative Research (4 Credits)
This course is designed to provide students with more in-depth understanding of naturalistic, qualitative research methods. It is assumed that students enrolling in this course have already completed an introductory research methods course in either education or another discipline. Purposes and questions posed in their course include: Why should a researcher choose to conduct a qualitative study? How are data collection strategies carried out in a qualitative research design? What are some of the ethical concerns that impact qualitative research?.

RMS 4942 Qualitative Data Collection and Analysis (4 Credits)
In this intermediate level qualitative research course students learn about design, purposeful sampling, field work, observational approaches, and interviews, with special attention directed to the skills and competencies needed to gather and analyze high quality data. Prerequisite: RMS 4941 or instructor permission.
RMS 4943 Computer Applications in Qualitative Research (3 Credits)
Review of assumptions of qualitative designs, types of qualitative approaches and current data-analysis techniques; computer software to analyze qualitative data.

RMS 4944 Action Research (3 Credits)
Definition of action research, whether it improves classroom practice, methods of conducting, strengths and weaknesses; use to improve specific aspects of educational practice, to become more reflective practitioners.

RMS 4945 Community-Based Research (4 Credits)
This class introduces the emerging philosophical and methodological issues that arise when university faculty students collaborate on research with community-based organizations. Prerequisites: RMS 4942 and RMS 4946.

RMS 4946 Advanced Qualitative Research (4 Credits)
This course introduces exemplary qualitative studies and consideration of implications for education and the social sciences, and considers the types of questions asked by qualitative researchers and methods they use, particularly observation and interviewing. Students undertake their own qualitative study to consider application of theory, techniques, and practice to their dissertation research. Prerequisite: RMS 4941 and RMS 4942 or permission of instructor.

RMS 4947 Arts-Based Research (3 Credits)
In this course students explore the ground upon which arts-based research is built and become acquainted with salient issues regarding this kind of research. We practice interviewing, observations and a few arts-based practices. Prerequisites: RMS 4942 and RMS 4946 or permission of instructor.

RMS 4948 Criticism and Connoisseurship: Qualitative research and the enhancement of practice (3 Credits)
Qualitative inquiry in educational settings takes many forms: ethnography, grounded theory, case-study research, and more. What these methods have in common is a framework built upon social science. Criticism and connoisseurship, however, draws its conceptual underpinnings from the arts and humanities. What does it mean to have a conceptual framework dependent upon the arts? How are the methods of educational criticism different from other research methods? This class teaches students how to conduct research using this method and it provides responses to these types of questions in order that students can defend this type of research as well as others that depend on the arts and humanities as their basis. Prerequisite: RMS 4941.

RMS 4949 Topics in Qualitative Research (1-5 Credits)
This seminar builds on the content of other qualitative research courses offered in the RMS program and meets the students where they are on their dissertation journey; thus learning opportunities are tailored to individual needs as far as possible. Assignments focus on the issues pertinent to the design of dissertation proposals and writing, including ethical issues and IRB preparation, theoretical/conceptual framework, literature review, methodology, data collection and analysis strategies, and various forms of representation.

RMS 4950 Qualitative Research Methodologies (3 Credits)
Each year this course examines three qualitative research methods. The methods that might be covered in any given year include: phenomenology, grounded theory, narrative, case study, and ethnography. For each method, the following is addressed: philosophical and historical foundations, various ways the method has been utilized, and practical recommendations for conducting research utilizing this method.

RMS 4951 Mixed Method Research Design (4 Credits)
This course is designed as a fundamental exploration of mixed model and mixed method approaches. Students design mixed model and mixed method research studies with a particular emphasis on multi-site and longitudinal designs that are especially suited to educational issues. Students learn analysis approaches that incorporate previously learned quantitative and qualitative skills, and apply these in practice problem examples. Prerequisites: RMS 4911, RMS 4930 and RMS 4942.

RMS 4952 Research Ethics (3 Credits)
This course introduces ethical theory and a selection of current issues in research ethics.

RMS 4953 Topics in Data Management (1-3 Credits)
This is a preparatory course emphasizing the manipulation and analysis of data in electronic form.

RMS 4954 Grant Writing (3 Credits)
This course provides a focused overview of grant writing for educators. It examines the development of reference tools (paper, electronic, and online), websites, structuring, and writing funding requests, community collaboration and partnerships, project budgeting, management, evaluation, sustainability, and reporting activities.

RMS 4959 Topics in Research Design (1-5 Credits)
Topics vary, but include single subject design issues, minimization as an alternative to randomization, advances in quasi-experimental design. Prerequisite: RMS 4930.

RMS 4960 Program Evaluation Theory (3,4 Credits)
This course reviews theories of program evaluation and current trends in evaluation.

RMS 4961 Program Development & Evaluation (3 Credits)
This course focuses on the practice of program development and evaluation in school, business, or community agency settings. Both qualitative and quantitative methods of program evaluation are discussed. Students have the opportunity to focus on evaluation of a specific program.
RMS 4962 Program Development and Assessment (3 Credits)
This course focuses on how student affairs administrators conduct student outcomes assessment, evaluate program development, and monitor program and division budgets.

RMS 4969 Topics in Program Evaluation (1-5 Credits)
Topics vary, but include advocacy and policy change, assessment in higher education, multi-level evaluation, cost effectiveness analysis, data visualization and reporting, assessment in distance education, and evaluation in the arts and culture. Prerequisite: RMS 4960.

RMS 4978 Practicum in Qualitative Research (1-4 Credits)
Students may complete the Practicum in Qualitative Research with an individual professor or with a community partner. The goal of this practicum is to provide further experiences in thinking about, conceptualizing, designing, conducting, and/or presenting qualitative research. Prerequisites: RMS 4941, RMS 4942, and at least two of the following classes RMS 4945, RMS 4946, RMS 4947, RMS 4948.

RMS 4980 Practicum in Research (1-5 Credits)
This course provides a supervised experience in design and implementation of an empirical research or evaluation study. Organization of research proposals, completion of human subjects applications, collection, and analysis of data are emphasized. Students are expected to prepare a written report of their project which is suitable for professional presentation or publication.

RMS 4981 Community-Based Research Practicum (1-5 Credits)
Students provide community-based research assistance to a community partner (non-profit, school, community based organization, etc). Student researchers are supervised by DU faculty. This course is an excellent opportunity to match the student's research expertise with the real needs of community partners. Prerequisite: RMS 4945.

RMS 4991 Independent Study (1-10 Credits)
This course allows Masters students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

RMS 4992 Directed Study (1-10 Credits)
RMS 4995 Independent Research (1-10 Credits)
This course is for Masters students in RMS whose program requires completion of a Master’s thesis.

RMS 5991 Independent Study (1-10 Credits)
This course allows Ph.D. students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

RMS 5992 Directed Study (1-10 Credits)
RMS 5995 Independent Research (1-18 Credits)
This course is for Ph.D. students in RMS who are engaged in completing their doctoral dissertation.

Teaching and Learning Sciences
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Doctor of Philosophy in Child, Family, and School Psychology
Our doctoral training is designed to prepare highly competent, collaborative, ethical, and self-reflective scientist-practitioners who can problem-solve and share decision-making with others to optimize social, emotional, cognitive, academic, and behavioral outcomes for typically and atypically developing children and youth. The CFSP doctoral program student learning objectives aim to produce professionals who are competent in consultation, assessment, intervention, and scholarship/advocacy as they work on behalf of individuals, families, schools, and communities. These competency areas are defined as follows:

- **Consultation:** able to collaborate in strengths-based, problem-solving, interdisciplinary teams with families, teachers, administrators, and other school and community personnel and to demonstrate appropriate interpersonal relations and professional dispositions and work characteristics;

- **Assessment:** able to demonstrate evidence-based and culturally competent decision-making regarding selection, administration, and interpretation of assessments;

- **Intervention:** able to employ data-based decision-making and systems-thinking that links assessment outcomes to effective individual, family, and group change and to deliver preventative, remedial strategic accommodations, intervention, and crisis services in a timely and professional manner;

- **Scholarship and Advocacy:** able to apply, translate, and expand upon scientifically-based pedagogy and professional practice; able to advocate for the needs of children and families, to respect the dignity and worth of all persons, to exhibit compassion and self-awareness, and to demonstrate strong listening, oral and written communication skills.

Our PhD curriculum provides a strong foundation and core knowledge base in developmental, psychological, and learning theories, general and special education, and legal, ethical and professional standards of practice. Professional skills and advanced training are required in research, measurement,
program evaluation, assessment, prevention, intervention, and consultation with family, school and community professionals. All CFSP applied experiences are designed within the CoRE framework. Doctoral students in the PhD program gain competencies in conducting original research, grant writing, and in advanced qualitative and quantitative analysis, research design, and statistics. Graduates assume positions as administrators, university professors, and educational evaluators. PhD students are expected to gain a high level of collaborative and then independent research involvement with an assigned faculty mentor. Students with a Master’s or EdS Degree are accepted into the PhD programs.

**Program Accreditation**

The EdS Degree and School Psychology Licensure PhD degree programs are fully accredited by NASP. Graduates of approved degrees are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and the attainment of a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information on NASP visit [http://www.nasponline.org/certification/NASPapproved.aspx](http://www.nasponline.org/certification/NASPapproved.aspx).

The School Psychology Licensure PhD degree program is under review for initial American Psychological Association (APA) approval.

**Doctor of Philosophy in Child, Family, and School Psychology - Pathway for EDS Professionals**

The CFSP PhD - Pathway for EdS Professionals is a unique PhD program designed for EdS professionals who wish to deepen their expertise in the dynamic field of education and school psychology. This degree program meets the needs of experienced professionals and recent graduates with an Educational Specialist (EdS) from a National Association of School Psychologists (NASP) approved program interested in enhancing their careers through the development of applied research and leadership skills. It is intended to link professional knowledge and research with the world of practice in a chosen specialty area of study. Students take a flexible array of advanced courses in child and family studies, family and systems service delivery, organizational management, research and program evaluation and policy development that are designed to develop expertise matched to individual interests and proficiency.

**Program Accreditation**

The EdS Degree and School Psychology Licensure PhD degree programs are fully accredited by NASP. Graduates of approved degrees are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and the attainment of a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information on NASP visit [http://www.nasponline.org/certification/NASPapproved.aspx](http://www.nasponline.org/certification/NASPapproved.aspx).

The School Psychology Licensure PhD degree program is under review for initial American Psychological Association (APA) approval.

**Doctor of Philosophy in Curriculum and Instruction**

PhD students take a wide range of courses in the areas of curriculum, instruction, foundations, diversity and research. The PhD is particularly well suited for students interested in becoming higher education faculty in schools and colleges of education. Dissertation topics cover a broad assortment of theoretical and practical topics in schools or associated institutions or community groups. Additionally, students are encouraged to consider enrolling in courses in other academic units in the Morgridge College of Education and throughout the University in order to enhance or expand their educational experience. There are specializations in four areas: Curriculum Studies, Gifted Education, Mathematics Education, and Special Education.

**Doctor of Education in Curriculum and Instruction**

The EdD in Curriculum and Instruction is designed to prepare educational practitioners as experts of curriculum and instruction, capable of engaging in problems and challenges in a variety of education institutions and contexts particularly at the school or district level. The aim of this program is to produce graduates who are leaders and innovators in education (broadly defined), equipped with cutting-edge applied research skills, creative educational visions based on established academic disciplines, moral imagination, curricular expertise and commitments to issues of equity and social responsibility. There are specializations in four areas: Curriculum Studies, Gifted Education, Mathematics Education, and Special Education.

**Educational Specialist Degree in Child, Family and School Psychology**

The CFSP Educational Specialist degree – School Psychology Generalist (EdS-G) prepares professionals in all aspects of School Psychology services to work with children and families from birth to age 21 in school or community settings. All graduates of the Eds program are eligible for a Colorado Department of Education license in School Psychology and the National Association of School Psychologist’s National Certification (NCSP) after the successful completion of all coursework and passing the Praxis II/National Association of School Psychology licensing exam.

**Program Accreditation**

The EdS Degree and School Psychology Licensure PhD degree programs are fully accredited by NASP. Graduates of approved degrees are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and the attainment of a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information on NASP visit [http://www.nasponline.org/certification/NASPapproved.aspx](http://www.nasponline.org/certification/NASPapproved.aspx). The School Psychology Licensure PhD degree program is under review for initial American Psychological Association (APA) approval.
Educational Specialist Degree in Child, Family, and School Psychology with a Concentration in Early Childhood

The CFSP Educational Specialist degree – School Psychology with Early Childhood Concentration prepares professionals in all aspects of School Psychology services to work with children and families from birth to age 21. This degree requires an additional 12 hours of integrated core and practical coursework, beyond that required for the EdS- Generalist degree. All graduates of the EdS program are eligible for a Colorado Department of Education license in School Psychology and the National Association of School Psychologist’s National Certification (NCSP) after the successful completion of all coursework and passing the Praxis II/National Association of School Psychology licensing exam.

Program Accreditation
The EdS Degree and School Psychology Licensure PhD degree programs are fully accredited by NASP. Graduates of approved degrees are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and the attainment of a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information on NASP visit http://www.nasponline.org/certification/NASPapproved.aspx. The School Psychology Licensure PhD degree program is under review for initial American Psychological Association (APA) approval.

EDUCATIONAL SPECIALIST DEGREE IN CHILD, FAMILY, AND SCHOOL PSYCHOLOGY WITH A CONCENTRATION IN ADDICTIONS

The CFSP Educational Specialist degree – School Psychology with an Addictions Concentration prepares professionals in all aspects of School Psychology services to intervene early, with children and adolescents, to address and prevent substance abuse. This degree requires an additional 12 hours of integrated core and practical coursework, beyond that required for the EdS- Generalist degree. All graduates of the EdS program are eligible for a Colorado Department of Education license in School Psychology and the National Association of School Psychologist’s National Certification (NCSP) after the successful completion of all coursework and passing the Praxis II/National Association of School Psychology licensing exam.

Program Accreditation
The EdS Degree and School Psychology Licensure PhD degree programs are fully accredited by NASP. Graduates of approved degrees are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and the attainment of a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information on NASP visit http://www.nasponline.org/certification/NASPapproved.aspx. The School Psychology Licensure PhD degree program is under review for initial American Psychological Association (APA) approval.

Master of Arts in Child, Family, and School Psychology

The CFSP Master’s (MA) degree prepares students interested in working in community agencies or educational settings that emphasize policy as it relates to direct service to young children and families. Licensure as a school psychologist is not available with the MA in CFSP degree. The MA courses are aligned with the CFSP School Psychology Doctoral degree and prepare students for further study.

Program Accreditation
The EdS Degree and School Psychology Licensure PhD degree programs are fully accredited by NASP. Graduates of approved degrees are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and the attainment of a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information on NASP visit http://www.nasponline.org/certification/NASPapproved.aspx. The School Psychology Licensure PhD degree program is under review for initial American Psychological Association (APA) approval.

Master of Arts in Curriculum and Instruction

This degree program is designed with the individual student's background and career goals in mind. Most students prepare for traditional and non-traditional positions in education that require planning, consulting, research, curriculum development, evaluation and policy-making. Instructional coaching is established in a profession that is increasingly gaining national attention. Many school districts across the US, including several in Colorado, are implementing instructional coaching as a component of transformative school reform.

Master of Arts in Curriculum and Instruction with a Concentration in Teacher Education Program-Elementary/Secondary/K-12

The Teacher Education Program concentrations offer an intensive, integrated, professional preparation experience. The program is structured similar to clinical preparation models where course work and field experiences are purposeful, connected, gradual, and cumulative. Program features such as small class sizes, built-in peer support, high academic standards, and a year-long residency in closely supervised field experiences in linguistically and culturally diverse settings promote student success in mastering the competencies of an effective teacher. Apprentice teachers can complete this program in one year (52 credits), earning both a teaching licensure and a master's degree.
Apprentice teachers are required to complete 840 hours of field experience in diverse public school classrooms. Apprentice teachers are required to be at their fieldwork site three days a week during fall and winter quarters and four-five days a week in the spring quarter. A gradual release of responsibility leads to solo teaching throughout the year-long residency.

The mission of the University of Denver Morgridge College of Education (MCE) Teacher Education Program (TEP) concentrations is to provide an extensive, integrated, professional experience that supports apprentice teachers in developing the dispositions, knowledge, and skills of an effective teacher of diverse learners in under-served K-12 schools. Ultimately, effective teachers engage, plan, teach, and lead to promote the growth and development of all learners, and they take an active role in their own professional development.

**Dual Undergraduate-Graduate Program in Teacher Education**

The Dual Undergraduate-Graduate Degree program in Teacher Education concentration is an approved program in which a University of Denver undergraduate student begins taking classes toward a teaching license and a graduate degree program prior to earning a baccalaureate degree. Both degrees must be earned within five years of matriculation into the undergraduate degree program. Dual degree students in the program take nine hours of graduate course work in their senior year (all nine hours double-count as undergraduate and graduate level course work). The nine hours of MCE course work can be spread across the fall, winter, or spring quarter; or stacked into one or two quarters. Dual degree students should initiate the admissions process in the winter of their junior year.

**Program Authorization and Accreditation**

The program is authorized by the Colorado Department of Education (CDE) and accredited by the Council for Accreditation of Education Preparation (CAEP).

**Master of Arts in Early Childhood Special Education**

The master's degree in Early Childhood Special Education (EC SPED) is a four quarter (one to two year) program that focuses on expanding opportunities for specialized work with young children, youth, and families in school and community settings. It also is a pipeline to licensure and non-licensure degrees including a doctoral degree. Students in the MA in EC SPED degree program develop the knowledge and practical skills needed to work successfully within the early childhood school and community agencies that serve the birth to eight-years-old age group.

Our goal is to prepare highly competent, collaborative, ethical, and self-reflective Early Childhood Special Education Specialists who will serve young children with special needs and their families in schools, districts, and in community organizations. This program will facilitate your training and development as a scientist-practitioner who can solve problems and share decision-making with others to optimize social-emotional, cognitive, academic, and behavioral outcomes for children from birth to age eight with special needs, and their families.

**Certificate in Curriculum and Instruction with a Concentration in the Teacher Education Program - Elementary/Secondary/K-12**

The Teacher Education Program concentrations offer an intensive, integrated, professional preparation experience. The program is structured similar to clinical preparation models where course work and field experiences are purposeful, connected, gradual, and cumulative. Program features such as small class sizes, built-in peer support, high academic standards, and a year-long residency in closely supervised field experiences in linguistically and culturally diverse settings promote student success in mastering the competencies of an effective teacher. Upon completion of the certificate program (43 credits, four quarters) the student will be eligible to apply for teacher licensure through the Colorado Department of Education.

Apprentice teachers are required to complete 840 hours of field experience in diverse public school classrooms. Apprentice teachers are required to be at their fieldwork site three days a week during fall and winter quarters and four-five days a week in the spring quarter. A gradual release of responsibility leads to solo teaching throughout the year-long residency.

The mission of the University of Denver Morgridge College of Education (MCE) Teacher Education Program (TEP) concentrations is to provide an extensive, integrated, professional experience that supports apprentice teachers in developing the dispositions, knowledge, and skills of an effective teacher of diverse learners in under-served K-12 schools. Ultimately, effective teachers engage, plan, teach, and lead to promote the growth and development of all learners, and they take an active role in their own professional development.

**Program Authorization and Accreditation**

The program is authorized by the Colorado Department of Education (CDE) and accredited by the Council for Accreditation of Education Preparation (CAEP).

**Certificate in Early Childhood Special Education**

The Early Childhood Special Education Certificate is a 24-credit hour program that is aligned with the Masters of Arts in Early Childhood Special Education. As with the MA ECSE program, the candidates in the ECSE Certificate program are required to complete 600 hours of practicum over three age-levels (infant-toddler, preschool, school-age), pass the PLACE ECSE test or Praxis II, and apply to the state for the Early Childhood Special Education Specialist Endorsement.
Certificate in Gifted Core Education

The Certificate in Gifted Core Education seeks to prepare students to become gifted education educators and be eligible for the Colorado Department of Education endorsement, Core Gifted Education.

Certificate For Special Education Generalist

The Certificate for Special Education Generalist focuses on expanded learning opportunities for students interested in specialized work with children (5-21 years) with developmental delays and disabilities. Students in the SEG certificate program will develop knowledge and practical skills needed to work successfully with special education programs in public schools, private schools, and community agencies that serve families with children with developmental delays, disabilities, or have at-risk characteristics and qualities.

The program is authorized by the Colorado Department of Education (CDE).

Doctor of Philosophy in Child, Family, and School Psychology with a Concentration in School Psychology

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Doctor of Philosophy in Child, Family, and School Psychology (Pathway to PhD for EdS Professionals) with a Concentration in School Psychology

Degree and GPA Requirements

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

Prerequisites:

- Applicants must have the following minimum qualifications to be considered for admission: (1) Current NCSP or Colorado license in School Psychology, and (2) an EdS degree earned from NASP-approved program.
Standardized Test Scores

Other Requirements
- Other requirements for the PhD for EdS professionals program are: (1) an employer/supervisor evaluation, (2) an in-service or training presentation and (3) a case study in NASP format.
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Doctor of Philosophy in Curriculum & Instruction

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

Standardized Test Scores
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Doctor of Education in Education: Curriculum & Instruction

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

**Master of Arts in Child, Family, and School Psychology**

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

**Standardized Test Scores**
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

**Master of Arts in Education Curriculum & Instruction**

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

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: No, this program does not offer English Conditional Admission.
Master of Arts in Curriculum, Instruction, & Teaching with a Concentration in Teacher Education Elementary

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Master of Arts in Curriculum, Instruction, & Teaching with a Concentration in Teacher Education K-12

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Master of Arts in Curriculum, Instruction, & Teaching with a Concentration in Teacher Education Secondary

Degree and GPA Requirements

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

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

Master of Arts in Curriculum, Instruction, & Teaching with Concentration in Denver Teacher Residency - Urban Education

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

Master of Arts in Early Childhood Special Education

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: No, this program does not offer English Conditional Admission.
Certificate in Curriculum, Instruction, & Teaching with a Concentration in Teacher Education K-12

Degree and GPA Requirements

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

Certificate in Early Childhood Special Education

Degree and GPA Requirements

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

Prerequisites:

• Applicants must have Colorado Teaching Licensure prior to beginning the program.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

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

Doctor of Philosophy in Child, Family, and School Psychology with a Concentration in School Psychology

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFSP 4310</td>
<td>Early Childhood Development</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4311</td>
<td>Child and Adolescent Development</td>
<td></td>
</tr>
</tbody>
</table>
### B. Research, Measurement, Program Evaluation and Technology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CNP 4642</td>
<td>Adult Development</td>
<td>3</td>
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#### Research Courses: Intermediate Level

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>RMS 4910</td>
<td>Introductory Statistics</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
<td>4</td>
</tr>
</tbody>
</table>

Select at least 11 credits from the approved list of Intermediate or Advanced level Courses.

#### Research Courses: Advanced level

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>RMS 4911</td>
<td>Correlation and Regression</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4912</td>
<td>Analysis of Variance</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4922</td>
<td>Item Response Theory</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4930</td>
<td>Quantitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4932</td>
<td>Meta-Analysis Social Science Research</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4942</td>
<td>Qualitative Data Collection and Analysis</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4944</td>
<td>Action Research</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4961</td>
<td>Program Development &amp; Evaluation</td>
<td>3</td>
</tr>
</tbody>
</table>

#### C. Dissertation

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFSP 5995</td>
<td>Dissertation Research</td>
<td>10</td>
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</table>

### D. Learning Theory, Educational Foundations, and Special Education Leadership

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFSP 4303</td>
<td>Psychopathology: Prevention, Diagnosis, Treatment</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4305</td>
<td>Exceptionalities in Education: High Incidence in Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4336</td>
<td>Preschool Interventions</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4338</td>
<td>Exceptionalities in Education: Low Incidence Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4342</td>
<td>Crisis Intervention and Prevention</td>
<td>3</td>
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</table>

### E. Evaluation and Assessment

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CFSP 4363</td>
<td>Child, Family, School Psychology Program Development and Evaluation</td>
<td>3</td>
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</tbody>
</table>

### F. Collaborative Consultation with Families and Schools

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFSP 4330</td>
<td>Family-School Partnering and Consultation</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4332</td>
<td>School Psychology Consultation and Collaboration</td>
<td>4</td>
</tr>
</tbody>
</table>

### G. Applied Coursework

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFSP 4351</td>
<td>School Psychology Practicum: Clinic Assignment (taken in 3 quarters for 1 credit each)</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4353</td>
<td>School Psychology Practicum II (taken in 3 quarters for 2 credits each)</td>
<td>6</td>
</tr>
<tr>
<td>CFSP 4354</td>
<td>School Psychology Advanced Practicum (taken in 3 quarters for 2 credits each)</td>
<td>6</td>
</tr>
<tr>
<td>CFSP 4355</td>
<td>School Psychology Internship - Specialist Level (1 yr full-time or 2 yrs half-time; 1500 hours (taken three times consecutively)</td>
<td>3</td>
</tr>
</tbody>
</table>
CFSP 4361  Supervision in School Psychology (take during one quarter)  2

**H. Psychology Specialization Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CNP 4705</td>
<td>History and Systems of Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4768</td>
<td>Counseling Psychology: Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CNP 4788</td>
<td>Physiological Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4999</td>
<td>Advanced Seminar in School Psychology (Optional)</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Total Credits  90

1. **In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.**

A minimum of 90 credit hours is required beyond the MA degree. No credit hours from the earned MA can be transferred into the PhD. All MA CFSP courses are prerequisites for the PhD.

**Non-coursework Requirements**

- Passing of Praxis Exam
- Comprehensive Examination
- Dissertation
- Oral defense of Dissertation

### Doctor of Philosophy in Child, Family, and School Psychology with a Concentration in School Psychology (Pathway for EDS Professionals)

**Degree Requirements**

**Coursework Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Research, Measurement, Program Evaluation</td>
<td>22 credits</td>
<td></td>
</tr>
<tr>
<td>RMS 4930</td>
<td>Quantitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
<td>4</td>
</tr>
</tbody>
</table>

Select a minimum of 15 credits from the following Intermediate/Advanced Courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS 4911</td>
<td>Correlation and Regression</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4912</td>
<td>Analysis of Variance</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4920</td>
<td>Educational Measurement</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4921</td>
<td>Psychometric Theory</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4931</td>
<td>Survey and Design Analysis</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4932</td>
<td>Meta-Analysis Social Science Research</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4942</td>
<td>Qualitative Data Collection and Analysis</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4959</td>
<td>Topics in Research Design</td>
<td>1-5</td>
</tr>
<tr>
<td>SOWK 5405</td>
<td>Qualitative Data Analysis</td>
<td>4</td>
</tr>
<tr>
<td>STAT 4810</td>
<td>Nonparametric Statistics</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4913</td>
<td>Multivariate Analysis</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4914</td>
<td>Structural Equation Modeling</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4915</td>
<td>Hierarchical Linear Modeling</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4916</td>
<td>Latent Growth Curve Modeling</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4919</td>
<td>Topics in Statistics</td>
<td>1-5</td>
</tr>
<tr>
<td>RMS 4922</td>
<td>Item Response Theory</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4929</td>
<td>Topics in Psychometrics</td>
<td>1-3</td>
</tr>
<tr>
<td>RMS 4945</td>
<td>Community-Based Research</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4946</td>
<td>Advanced Qualitative Research</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4947</td>
<td>Arts-Based Research</td>
<td>3</td>
</tr>
</tbody>
</table>
RMS 4951 Mixed Method Research Design 4

B. Dissertation 10 credits

CFSP 5995 Dissertation Research 1 10 credits

C. Field Experience 8 credits

CFSP 4361 Supervision in School Psychology 2
CFSP 4354 School Psychology Advanced Practicum (3 courses taken quarterly for 2 credits each) 6
CFSP 4355 School Psychology Internship - Specialist Level (OPTIONAL, not required - 1 yr internship - must be taken Optional for further PhD licensing)

D. Cognate Courses 12 credits

Possible concentrations include: Data-based Decision Making; Assessment and Evaluation; Prevention, Intervention, and Consultation; Advanced Developmental Theory; Advocacy, Policy and Leadership; Clinical Psychology (APA)

Total Credits 52

In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 52 credit hours is required beyond the earned EdS degree. No credit hours from the earned EdS can be transferred into the PhD.

Non-coursework Requirements

• Comprehensive Exam
• Dissertation
• Oral Defense of Dissertation

Doctor of Philosophy in Curriculum and Instruction

Degree Requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Required Courses</td>
<td></td>
<td>15 credits</td>
</tr>
<tr>
<td>CUI 4020</td>
<td>Introduction to Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4039</td>
<td>Transformational Teaching and Learning</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4160</td>
<td>Race, Class and Gender in Education</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4035</td>
<td>Critical Perspectives in Education</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4022</td>
<td>Curriculum Theory into Practice</td>
<td>3</td>
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<tr>
<td>B. Foundations</td>
<td></td>
<td>6 credits</td>
</tr>
<tr>
<td>Select two of the following courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUI 4180</td>
<td>History of Education in the United States</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4130</td>
<td>Philosophy of Education</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4131</td>
<td>Spirituality in Education</td>
<td>3</td>
</tr>
<tr>
<td>C. Specialization</td>
<td></td>
<td>18 credits</td>
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<tr>
<td>See advisor for courses</td>
<td></td>
<td></td>
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<tr>
<td>D. Electives</td>
<td></td>
<td>12 credits</td>
</tr>
<tr>
<td>See advisor for courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Research</td>
<td></td>
<td>39 credits</td>
</tr>
<tr>
<td>Introductory Research</td>
<td></td>
<td>12 credits</td>
</tr>
<tr>
<td>RMS 4941</td>
<td>Introduction to Qualitative Research</td>
<td>4</td>
</tr>
</tbody>
</table>
RMS 4930  Quantitative Research Design  3
RMS 4910  Introductory Statistics  5
Intermediate Research  8

Select from the following courses for a minimum total of 8 credits:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS 4911</td>
<td>Correlation and Regression</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4912</td>
<td>Analysis of Variance</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4922</td>
<td>Item Response Theory</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4932</td>
<td>Meta-Analysis Social Science Research</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4942</td>
<td>Qualitative Data Collection and Analysis</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4944</td>
<td>Action Research</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4961</td>
<td>Program Development &amp; Evaluation</td>
<td>3</td>
</tr>
</tbody>
</table>

Advanced Research  3

Select from the following courses for a minimum total of 3 credits:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>RMS 4913</td>
<td>Multivariate Analysis</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4914</td>
<td>Structural Equation Modeling</td>
<td>5</td>
</tr>
<tr>
<td>RMS 4915</td>
<td>Hierarchical Linear Modeling</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4916</td>
<td>Latent Growth Curve Modeling</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4919</td>
<td>Topics in Statistics</td>
<td>1-5</td>
</tr>
<tr>
<td>RMS 4929</td>
<td>Topics in Psychometrics</td>
<td>1-3</td>
</tr>
<tr>
<td>RMS 4939</td>
<td>Topics in Quantitative Research Methods</td>
<td>1-5</td>
</tr>
<tr>
<td>RMS 4945</td>
<td>Community-Based Research</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4946</td>
<td>Advanced Qualitative Research</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4947</td>
<td>Arts-Based Research</td>
<td>3</td>
</tr>
<tr>
<td>RMS 4949</td>
<td>Topics in Qualitative Research</td>
<td>1-5</td>
</tr>
<tr>
<td>RMS 4951</td>
<td>Mixed Method Research Design</td>
<td>4</td>
</tr>
<tr>
<td>RMS 4959</td>
<td>Topics in Research Design</td>
<td>1-5</td>
</tr>
<tr>
<td>RMS 4969</td>
<td>Topics in Program Evaluation</td>
<td>1-5</td>
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Dissertation Research  16

<table>
<thead>
<tr>
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<th>Title</th>
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<tbody>
<tr>
<td>CUI 4050</td>
<td>Curriculum &amp; Instr Rsch Sem</td>
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<tr>
<td>CUI 4051</td>
<td>Seminar in Dissertation Organization and Design</td>
<td>3</td>
</tr>
<tr>
<td>CUI 5995</td>
<td>Dissertation Research</td>
<td>10</td>
</tr>
</tbody>
</table>

Total Credits  90

1  In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 90 credit hours is required beyond the earned master's degree. No credit hours from the earned master's degree can be transferred into the PhD.

Non-coursework Requirements

- Doctoral Applied Experiences (in at least two areas)
- Doctoral Comprehensive Examination
- Dissertation
- Oral Defense of Dissertation
## Doctor of Education in Curriculum and Instruction

**Degree Requirements**

### Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Required Courses</strong></td>
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<td><strong>12 credits</strong></td>
</tr>
<tr>
<td>CUI 4020</td>
<td>Introduction to Curriculum</td>
<td>3</td>
</tr>
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<td>CUI 4039</td>
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<td>RMS 4930</td>
<td>Quantitative Research Design</td>
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<td>RMS 4911</td>
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<td>Survey and Design Analysis</td>
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<td>CUI 5981</td>
<td>Research as Intervention</td>
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<td>CUI 5982</td>
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1. In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

*Note: If you seek a CDE endorsement, you must follow the specialization plan outlined in the C&I Certificate handbook.

Please note: the numbers in each category above are either a minimum or range of credit hours required. The 65 minimum credit requirement is only for students with an earned master’s degree. No credit hours from the earned Master’s degree can be transferred into the EdD.

**As part of Required Research Coursework, a recommended prerequisite is RMS 4920 Educational Measurement.**

### Non-coursework Requirements
• Doctoral Applied Experiences (in at least two areas)
• Doctoral Comprehensive Exam
• Doctoral Research Paper
• Oral Defense of Dissertation

**Education Specialist in Child, Family, and School Psychology**

**Degree Requirements**

**Coursework Requirements**

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Minimum number of credits required for degree: 90

Non-coursework Requirements

- Passing score on PRAXIS exam

**Education Specialist in Child, Family, and School Psychology with a Concentration in Early Childhood School Psychology**

Degree Requirements

Coursework Requirements

J. Final Assessment

Praxis II/NASP Exam (score of 165 or greater) PASS

Total Credits 90
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Minimum number of credits required for degree: 102

Non-coursework Requirements

- Passing score on PRAXIS exam

**EDUCATION SPECIALIST IN CHILD, FAMILY, AND SCHOOL PSYCHOLOGY WITH A CONCENTRATION IN ADDICTIONS**

**Degree Requirements**

**Coursework Requirements**

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Master of Arts in Child, Family, and School Psychology

Degree Requirements

Coursework Requirements

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Minimum number of credits required for degree: 102

Non-coursework Requirements

- Passing score on PRAXIS exam
CFSP 4337  School Age Academic Competencies and Interventions  3
CFSP 4340  Counseling Children and Adolescent  4
CFSP 4343  School Mental Health Counseling II  4
E. Applied Coursework  6
CFSP 4349  Community Practicum (taken in 3 quarters for 2 credits each)  6
Total Credits  45

Minimum number of credits required for degree: 45

Non-coursework Requirements

• Capstone

Master of Arts in Curriculum and Instruction

Degree Requirements

Coursework Requirements

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<td></td>
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<tr>
<td>CUI 4020</td>
<td>Introduction to Curriculum</td>
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</tr>
<tr>
<td>CUI 4039</td>
<td>Transformational Teaching and Learning</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4160</td>
<td>Race, Class and Gender in Education</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4035</td>
<td>Critical Perspectives in Education</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4022</td>
<td>Curriculum Theory into Practice</td>
<td>3</td>
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<tr>
<td>CUI 4180</td>
<td>History of Education in the United States</td>
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</tr>
<tr>
<td>CUI 4130</td>
<td>Philosophy of Education</td>
<td>3</td>
</tr>
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<td>CUI 4131</td>
<td>Spirituality in Education</td>
<td>3</td>
</tr>
<tr>
<td>C. Specialization</td>
<td></td>
<td>24 credits</td>
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<tr>
<td>See advisor for courses*</td>
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<td>D. Research</td>
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<td>Choose one of the following courses:</td>
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<tr>
<td>RMS 4900</td>
<td>Education Research and Measurement</td>
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<tr>
<td>RMS 4920</td>
<td>Educational Measurement</td>
<td>3</td>
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<td>RMS 4910</td>
<td>Introductory Statistics</td>
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</table>

Minimum number of credits required for degree: 45

*Note: If you seek a CDE endorsement, you must follow the specialization plan outlined in the C&I Certificate handbook.

In addition, you must complete the following non-coursework requirement: Comprehensive Portfolio. If you seek a CDE endorsement, you must also complete the Praxis.

Non-coursework Requirements

• Comprehensive Paper
Master of Arts in Curriculum and Instruction with A Concentration in Teacher Education Program-Elementary

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>A. TEP Field Experience</td>
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<tr>
<td>TEP 4690</td>
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<tr>
<td>TEP 4690</td>
<td>Field Experience</td>
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<td>TEP 4690</td>
<td>Field Experience</td>
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</tr>
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<td>Teaching and Learning</td>
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<tr>
<td>CUI 4540</td>
<td>Curriculum, Instruction and Assessment: Theory and Practice I</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4541</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice II</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4542</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice III</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4010</td>
<td>Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4411</td>
<td>Wkshp: Gifted &amp; Talented Educ</td>
<td>3</td>
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<tr>
<td>CUI 4502</td>
<td>Elementary Science and Social Studies Methods for Cultural Linguistic Diversity</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4503</td>
<td>Elementary Math Methods for Cultural Linguistic Diversity</td>
<td>4</td>
</tr>
<tr>
<td>CUI 4529</td>
<td>Foundations of Education for Culturally and Linguistically Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4590</td>
<td>Literacy Instruction I</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4591</td>
<td>Literacy Instruction II</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4520</td>
<td>Art Methods K-12 (required for K-12 art students only)</td>
<td>3-4</td>
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<tr>
<td>C. Cognate Requirement</td>
<td>9</td>
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<tr>
<td>Complete 3 courses from one of the approved TEP cognates listed below. Choose courses in consultation with your advisor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math Theory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aesthetics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gifted Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culturally and Linguistically Diverse</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 52

Minimum number of credits required for degree: 52

Non-coursework Requirements

- Comprehensive Portfolio for M.A. degree
- 840 hours of field experience in diverse public school classrooms

Master of Arts in Curriculum and Instruction with a Concentration in Teacher Education Program-Secondary

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>A. TEP Field Experience</td>
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<tr>
<td>TEP 4690</td>
<td>Field Experience</td>
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<td>TEP 4690</td>
<td>Field Experience</td>
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### B. TEP Coursework, Curriculum & Assessment

<table>
<thead>
<tr>
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<th>Title</th>
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<td>CUI 4031</td>
<td>Teaching and Learning</td>
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<tr>
<td>CUI 4411</td>
<td>Wkshp: Gifted &amp; Talented Educ</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4529</td>
<td>Foundations of Education for Culturally and Linguistically Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4505</td>
<td>Mathematics across the Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4540</td>
<td>Curriculum, Instruction and Assessment: Theory and Practice I</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4541</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice II</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4542</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice III</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4010</td>
<td>Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4590</td>
<td>Literacy Instruction I</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4591</td>
<td>Literacy Instruction II</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4610</td>
<td>English in Secondary School</td>
<td>4</td>
</tr>
<tr>
<td>or TEP 4620</td>
<td>Social Science in Secondary School</td>
<td></td>
</tr>
<tr>
<td>or TEP 4630</td>
<td>Science in Secondary School</td>
<td></td>
</tr>
<tr>
<td>or TEP 4640</td>
<td>Math in Secondary School</td>
<td></td>
</tr>
</tbody>
</table>

### C. Cognate Requirement

Complete 3 courses from one of the approved TEP cognates listed below. Choose courses in consultation with your advisor.

- Math Theory
- Aesthetics
- Gifted Education
- Special Education
- Culturally and Linguistically Diverse

**Total Credits: 52**

**Minimum number of credits required for degree: 52**

**Non-coursework Requirements**

- Comprehensive Portfolio for M.A. degree
- 840 hours of field experience in diverse public school classrooms

---

**Master of Arts in Curriculum and Instruction with a Concentration in Teacher Education Program-K-12 Art-Music-Spanish**

**Degree Requirements**

**Coursework Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>A. TEP Field Experience</td>
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<tr>
<td>TEP 4690</td>
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<td>Field Experience</td>
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</tr>
<tr>
<td>TEP 4690</td>
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</tr>
<tr>
<td>B. TEP Coursework, Curriculum &amp; Assessment</td>
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<td>34</td>
</tr>
<tr>
<td>CUI 4031</td>
<td>Teaching and Learning</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4505</td>
<td>Mathematics across the Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4529</td>
<td>Foundations of Education for Culturally and Linguistically Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4540</td>
<td>Curriculum, Instruction and Assessment: Theory and Practice I</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4541</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice II</td>
<td>3</td>
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<tr>
<td>CUI 4542</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice III</td>
<td>3</td>
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<tr>
<td>TEP 4010</td>
<td>Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4590</td>
<td>Literacy Instruction I</td>
<td>3</td>
</tr>
</tbody>
</table>
### C. Cognate Requirement

Complete 3 courses from one of the approved TEP cognates listed below. Choose courses in consultation with your advisor.

| Math Theory                  | 3 |
| Aesthetics                  | 3 |
| Gifted Education            | 3 |
| Special Education           | 3 |
| Culturally and Linguistically Diverse | 3 |

Total Credits: 52

Minimum number of credits required for degree: 52

### Non-coursework Requirements

- Comprehensive Portfolio for M.A. degree
- 840 hours of field experience in diverse public school classrooms

## Master of Arts in Early Childhood Special Education

### Degree Requirements

#### Coursework Requirements

The M.A. in Early Childhood Special Education program requires a minimum of 55 quarter hours depending on prior individual experiences and coursework.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CFSP 4304</td>
<td>Diversity in School and Community Settings</td>
<td>3</td>
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<tr>
<td>CFSP 4305</td>
<td>Exceptionalities in Education: High Incidence in Disabilities</td>
<td>3</td>
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<tr>
<td>CFSP 4310</td>
<td>Early Childhood Development (Early Childhood Development)</td>
<td>3</td>
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<tr>
<td>CFSP 4311</td>
<td>Child and Adolescent Development</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4312</td>
<td>Learning Theories &amp; Behavioral Analysis</td>
<td>3</td>
</tr>
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<td>CFSP 4338</td>
<td>Exceptionalities in Education: Low Incidence Disabilities</td>
<td>3</td>
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<td>CFSP 4302</td>
<td>Special Education &amp; Gifted Education Legal Issues</td>
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<td>CFSP 4315</td>
<td>Professional, Leadership and Ethical Issues in Special Education: Birth to 21</td>
<td>3</td>
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<tr>
<td>CFSP 4320</td>
<td>Early Childhood Assessment: Formal &amp; Standardized</td>
<td>3</td>
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<tr>
<td>CFSP 4326</td>
<td>Early Childhood Assessment: Informal &amp; Play-Based</td>
<td>3</td>
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<tr>
<td>CFSP 4308</td>
<td>Early Academic Competencies and Interventions</td>
<td>3</td>
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<td>RMS 4900</td>
<td>Education Research and Measurement</td>
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<tr>
<td>CFSP 4330</td>
<td>Family-School Partnering and Consultation</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4335</td>
<td>Infant &amp; Family Interventions</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4336</td>
<td>Preschool Interventions</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4337</td>
<td>School Age Academic Competencies and Interventions</td>
<td>3</td>
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<tr>
<td>E. Applied Courses</td>
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</table>
CFSP 4357  |  Early Childhood Practicum (600 minimum hours taken over three quarters covering infant, toddler, preschool, and/or kindergarten-3rd grade; 2 credit hours each)  |  6
Praxis ECSE Exam  |  PASS
Total Credits  |  55

Minimum number of credits required for degree: 55

Non-coursework Requirements

• Pass PRAXIS Exam - Special Education: Preschool/Early Childhood.

Certificate in Curriculum and Instruction with a Concentration in Teacher Education Program-Elementary

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>TEP 4690</td>
<td>Field Experience (Three quarters)</td>
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<tr>
<td>CUI 4540</td>
<td>Curriculum, Instruction and Assessment: Theory and Practice I</td>
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<tr>
<td>CUI 4541</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice II</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4542</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice III</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4031</td>
<td>Teaching and Learning</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4010</td>
<td>Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4590</td>
<td>Literacy Instruction I</td>
<td>3</td>
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<tr>
<td>CUI 4502</td>
<td>Elementary Science and Social Studies Methods for Cultural Linguistic Diversity</td>
<td>3</td>
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<tr>
<td>CUI 4503</td>
<td>Elementary Math Methods for Cultural Linguistic Diversity</td>
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</tr>
<tr>
<td>TEP 4591</td>
<td>Literacy Instruction II</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4529</td>
<td>Foundations of Education for Linguistically Diverse Learners</td>
<td>3</td>
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<tr>
<td>CUI 4411</td>
<td>Wkshp: Gifted &amp; Talented Educ</td>
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</table>

Total Credits 43

Minimum number of credits required for degree: 43

Certificate in Curriculum and Instruction with a Concentration in Teacher Education Program-Secondary

Program Requirements

<table>
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<tbody>
<tr>
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<td>Field Experience (Three quarters)</td>
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<tr>
<td>CUI 4540</td>
<td>Curriculum, Instruction and Assessment: Theory and Practice I</td>
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<tr>
<td>CUI 4541</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice II</td>
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<tr>
<td>CUI 4542</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice III</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4031</td>
<td>Teaching and Learning</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4010</td>
<td>Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities</td>
<td>3</td>
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<td>Literacy Instruction I</td>
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<tr>
<td>TEP 4591</td>
<td>Literacy Instruction II</td>
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<tr>
<td>CUI 4529</td>
<td>Foundations of Education for Linguistically Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4610</td>
<td>English in Secondary School</td>
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<tr>
<td>or TEP 4620</td>
<td>Social Science in Secondary School</td>
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<td>or TEP 4630</td>
<td>Science in Secondary School</td>
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<tr>
<td>or TEP 4640</td>
<td>Math in Secondary School</td>
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<tr>
<td>CUI 4411</td>
<td>Wkshp: Gifted &amp; Talented Educ</td>
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<td>CUI 4505</td>
<td>Mathematics across the Content Areas</td>
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Total Credits 43
Minimum number of credits required for degree: 43

Certificate in Curriculum and Instruction with a Concentration in Teacher Education
Program-K-12

Program Requirements

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<tr>
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<tr>
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<td>Curriculum, Instruction and Assessment: Theory and Practice I</td>
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<tr>
<td>CUI 4541</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice II</td>
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<tr>
<td>CUI 4542</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice III</td>
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<td>CUI 4031</td>
<td>Teaching and Learning</td>
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<td>TEP 4010</td>
<td>Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4590</td>
<td>Literacy Instruction I</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4591</td>
<td>Literacy Instruction II</td>
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<tr>
<td>CUI 4529</td>
<td>Foundations of Education for Linguistically Diverse Learners</td>
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<tr>
<td>CUI 4505</td>
<td>Mathematics across the Content Areas</td>
<td>3</td>
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<tr>
<td>TEP 4520</td>
<td>Art Methods K-12</td>
<td>4</td>
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<td></td>
<td>or TEP 4650 Foreign Language Methods in K-12 Schools</td>
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<td>Wkshp: Gifted &amp; Talented Educ</td>
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Certificate in Early Childhood Special Education

Program Requirements

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<tr>
<td></td>
<td><strong>A. Developmental and Psychological Foundations</strong></td>
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<tr>
<td>CFSP 4305</td>
<td>Exceptionalities in Education: High Incidence in Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4338</td>
<td>Exceptionalities in Education: Low Incidence Disabilities</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>B. Legal, Ethical and Professional Foundations</strong></td>
<td>3</td>
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<td>CFSP 4315</td>
<td>Professional, Leadership and Ethical Issues in Special Education: Birth to 21</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>C. Evaluation and Assessment</strong></td>
<td>9</td>
</tr>
<tr>
<td>CFSP 4320</td>
<td>Early Childhood Assessment: Formal &amp; Standardized</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4326</td>
<td>Early Childhood Assessment: Informal &amp; Play-Based</td>
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</tr>
<tr>
<td>CFSP 4308</td>
<td>Early Academic Competencies and Interventions</td>
<td>3</td>
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<tr>
<td></td>
<td><strong>D. Collaborative Consultation with Families and Schools</strong></td>
<td>3</td>
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<td>(Choose one of the following courses)</td>
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<tr>
<td>CFSP 4335</td>
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<td>Preschool Interventions</td>
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<tr>
<td></td>
<td><strong>E. Applied Coursework</strong></td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4357</td>
<td>Early Childhood Practicum (300 minimum hours taken over three quarters covering infant, toddler, preschool, and/or kindergarten-3rd grade; 1 credit hour each) (^2)</td>
<td>3</td>
</tr>
<tr>
<td>Pass PRAXIS Exam - Special Education: Preschool/Early Childhood</td>
<td>PASS</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

\(^1\) Students have a choice of taking either of these courses to meet Colorado Department of Education competencies depending on their previous coursework. This is subject to faculty approval.
The ECSE Practicum has flexibility based on student needs and should be distributed between infant (200 hours), toddler (200 hours), and preschool (200 hours) ages across a number of quarters.

Certificate in Gifted Education

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUI 4160</td>
<td>Race, Class and Gender in Education</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4401</td>
<td>Psychological Aspects of Giftedness</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4402</td>
<td>Curriculum for Gifted Learners</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4403</td>
<td>Instructional Strategies for Gifted Learners</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4404</td>
<td>Twice-Exceptional Students</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4407</td>
<td>Current Issues in Gifted Education: Identification</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4408</td>
<td>Creativity: Theory &amp; Practice</td>
<td>3</td>
</tr>
<tr>
<td>CUI 4410</td>
<td>Prog Dev/Ldrshp/Comm Gifted Ed</td>
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</tr>
</tbody>
</table>

Total Credits: 24

Minimum number of credits required: 24

Certificate in Special Education Generalist

Program Requirements

A. Overview of Special Education

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>TEP 4010</td>
<td>Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4305</td>
<td>Exceptionalities in Education: High Incidence in Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>CFSP 4315</td>
<td>Professional, Leadership and Ethical Issues in Special Education: Birth to 21</td>
<td>3</td>
</tr>
</tbody>
</table>

B. Assessment & Identification of Students with Disabilities

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUI 4542</td>
<td>Curriculum, Instruction, and Assessment: Theory and Practice III</td>
<td>3</td>
</tr>
</tbody>
</table>

C. Understanding Behavior & Affective Needs

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFSP 4312</td>
<td>Learning Theories &amp; Behavioral Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

D. Reading, Oral & Written Language

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEP 4590</td>
<td>Literacy Instruction I</td>
<td>3</td>
</tr>
<tr>
<td>TEP 4591</td>
<td>Literacy Instruction II</td>
<td>3</td>
</tr>
</tbody>
</table>

E. Mathematics

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUI 4503</td>
<td>Elementary Math Methods for Cultural Linguistic Diversity</td>
<td>3</td>
</tr>
<tr>
<td>or CUI 4505</td>
<td>Mathematics across the Content Areas</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 24

Minimum number of credits required: 24

Other Requirements:

- Praxis exam for CDE Endorsement for Special Education Generalist.

Child, Family School Psych Courses

CFSP 3900 Child Guidance (5 Credits)

Students in this class explore effective child guidance theories and factors that impact their classroom application with young children from birth to age 8. Empirically-based positive guidance techniques and strategies are reviewed and applied to everyday practice, especially as they relate to establishing prosocial environments, classroom management, and meeting the needs of children and families from diverse backgrounds.
CFSP 3910 Early Childhood Nutrition (3 Credits)
Young children have specific nutritional and physical needs. This course covers the nutritional needs of children, such as how to ensure that they get all the nutrients they need to stay healthy. The course explores what consists of safe foods at various stages in childhood, especially when not all foods can be eaten by infants and toddlers. Learn about the best practices in the field of early education regarding what foods to serve young children that promote positive health, hygiene and physical development.

CFSP 3991 Independent Study (1-10 Credits)

CFSP 3992 Directed Study (1-10 Credits)

CFSP 4000 Assessment for Non-Psychologists (2 Credits)
Foundation and methodology of assessment are considered in the context of informing practices of professionals who construct a variety of test formats including assessment of cognitive abilities, achievement testing, vocational assessment, and assessment of personality.

CFSP 4301 Professional, Legal and Ethical Issues in School Psychology (4 Credits)
This course examines professional, legal, and ethical issues pertinent to working with birth to age 21 populations in school and community settings. Attention is focused on federal and state education legislation, special and regular education case law, and psychological practice case law. Professional issues and contemporary service models are reviewed, including an introduction to ethical issues, federal mandates, professional training, and roles and responsibilities. Students engage in casework discussion regarding delivery of assessment, intervention, and consultation services. Special emphasis is given to current mental health and education regulations and reforms. Differential issues facing school psychology professionals in urban and rural settings are discussed, and students become acquainted with a variety of legal and ethical issues affecting practice in public schools, private settings, and higher education. Students learn about ethical standards, reasoning processes, and conduct in applied settings.

CFSP 4302 Special Education & Gifted Education Legal Issues (3 Credits)
This course is designed to provide students with foundational knowledge regarding the legal issues affecting special education and gifted education in early childhood and K-12 educational settings. Attention is focused on federal and state education legislation, special education case law and gifted statutes specific to Colorado. Consideration also is given to the interaction of ethical standards of practice as they relate to legal mandates and court decisions to meet the educational and psychological needs of all students, especially those with disabilities and twice exceptionalities. Students will be exposed to legal issues affecting practice in the public schools community agencies and early childhood environments.

CFSP 4303 Psychopathology: Prevention, Diagnosis, Treatment (3 Credits)
This course is designed to provide students with knowledge of mental health disorders, the diagnostic criteria as well as culturally-relevant prevention and intervention strategies. Participants obtain practical information regarding the assessment, identification, amelioration, facilitative responses, and intervention in school and community settings. Using a strengths-based approach, prevention principles, curriculum, and policy agendas are discussed. Additionally, this course explores implications for school psychologists and other school-based practitioners working with those at risk for or suffering from mental health disorders. Prerequisites: CFSP 4322, 4323, 4324, 4340, 4343.

CFSP 4304 Diversity in School and Community Settings (3 Credits)
This course explores diversity in children and families, and the impact of culture on personal and family development. Emphasis is placed on the intersection of school and community settings' cultures and those of children and families, and how this affects learning and development for individuals and groups of children. Attention is given to students' cultures and cultural experiences, and how these affect the work they do with children and families in school and community settings.

CFSP 4305 Exceptionalities in Education: High Incidence in Disabilities (3 Credits)
This course provides a broad survey of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional educational needs. Biomedical and psychosocial etiologies are reviewed. Implications for child and family interventions and supports also are addressed. Prerequisites: CFSP 4310, 4311, 4312.

CFSP 4308 Early Academic Competencies and Interventions (3 Credits)
This course provides an overview of early language and literacy development across diverse settings and stakeholders, such as families, teachers/providers, programs, and communities. A comparative analysis of evidence-based early literacy strategies, environments, curriculum, and a review of current evaluation and instructional language and literacy practices for working with teachers, families, and young children are undertaken. Play-based and other informal methods of assessment and intervention are covered, including the integration of technology and strategies to promote early language and literacy with infants, toddlers, and preschoolers in natural environments. Prerequisite: CFSP 4310; None for ECSE CERT Students.

CFSP 4310 Early Childhood Development (3 Credits)
This course focuses on early childhood development during, from the prenatal period to approximately five years of age. Major theories of early childhood development and research methods for studying infant and early childhood behavior will be discussed. Emphasis will be on the physical, cognitive, communicative, social, and emotional aspects of development, for children who are typically developing, at risk or with special needs. All-inclusive issues, as well as health, risk and protective factors will be addressed. The importance of investing in early childhood programs, fostering nurturing relationships during the early years, and addressing the diverse needs of families will be emphasized.

CFSP 4311 Child and Adolescent Development (3 Credits)
This course provides an overview of growth and development from age five through 21 years of age. We will explore theories and research in developmental psychology to provide a context for typical child development. Attention will be given to the social, emotional, cognitive, and biological development of the child, with a particular focus on attachment as a framework for healthy development in these domains. Case studies will allow for the application and integration of child development theory and counseling practice.
CFSP 4312 Learning Theories & Behavioral Analysis (3 Credits)
This course examines learning theories and applied behavioral principles. Students learn to apply theories to case studies and fieldwork relating to children along the developmental spectrum and across cultural contexts. Students work to investigate and analyze concepts relating to learning and behavior at home and school, and to develop positive behavioral support and effective learning plans.

CFSP 4315 Professional, Leadership and Ethical Issues in Special Education: Birth to 21 (3 Credits)
This course provides students with an understanding of the roles & responsibilities of an Early Childhood Special Education Specialist and Special Education Generalist. This course serves as the foundation for students who are interested in pursuing a profession in special education and working with children with disabilities from birth to 21 years. This course includes the ethical and professional practice standards and understanding of the multiple roles and complex situations across wide age and developmental ranges. This course also briefly covers the historical laws and legal issues associated with the profession. The course also highlights why special educators engage in professional activities and learning communities that benefit individuals with developmental disabilities and their families, colleagues, and their own professional growth. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice.

CFSP 4317 Topics in Special Education: Learning Differences (1-3 Credits)
This course reviews the challenges that arise in special education settings related to children who exhibit academic and behavioral differences and delays. Academic and behavioral interventions and differentiation strategies will be addressed. Additionally, the course will cover the approaches for addressing children who require additional academic and behavioral support in the classroom.

CFSP 4320 Early Childhood Assessment: Formal & Standardized (3 Credits)
This course is designed to teach students how to assess young children (birth to 5 years) using a variety of formal and standardized methods. Assessment will focus on normed-referenced, standardized measures of cognitive, communication, emotional, social, sensory and physical development. Students will gain experience in administering assessments to young children, interpreting assessment results, writing assessment reports, and reporting the results to families and professionals. A variety of assessment tools will be studied for their appropriate use with young children and their families. Prerequisite: CFSP 4310.

CFSP 4322 Psycho-Educational Assessment I (4 Credits)
This course is one of two required courses designed to provide students in School Psychology with expertise in individual intelligence and achievement test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive and achievement measures, with particular emphasis on the Wechsler Scales. Contemporary issues pertinent to the assessment of intelligence are covered. Emphasis is placed synthesizing and integrating information from cognitive and achievement assessment with other sources to produce effective educational recommendations. In addition, the role of these tools in the special education qualification process is highlighted. Important issues regarding the use of such tests are discussed, as well as the use of tests in schools and clinical practice. The focus of the class is primarily on the assessment of school-aged children. Lab fee required. Prerequisites: RMS 4920, CFSP 4301.

CFSP 4323 Psycho-Educational Assessment II (4 Credits)
This course is the second of two required courses designed to provide students in School Psychology with expertise in individual intelligence and achievement test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive and achievement measures, with particular emphasis on the Woodcock Johnson Scales. Nontraditional forms of assessment, as well as adaptive behavior measures, are also covered. Integrating results of assessments with other data to provide effective educational recommendations continues to be an emphasis. The focus of the class is on the assessment of school-aged children. Lab fee required. Prerequisites: CFSP 4312, 4322.

CFSP 4324 Assessment III (4 Credits)
This course is designed to teach students how to assess young children (birth to 5 years) using a variety of formal and standardized methods. This course reviews the challenges that arise in special education settings related to children who exhibit academic and behavioral differences and delays. Academic and behavioral interventions and differentiation strategies will be addressed. Additionally, the course will cover the approaches for addressing children who require additional academic and behavioral support in the classroom.

CFSP 4326 Early Childhood Assessment: Informal & Play-Based (3 Credits)
This course is designed for students to learn informal and play-based assessment processes for young children (birth-6 years) using a variety of non-standardized, informal and play-based assessment methods. The entire assessment process, including screening, evaluation, interpreting results, writing an integrated report, and providing feedback to families and professionals, will be the focus. Assessment measures will be examined with consideration for when and why specific instruments should be used, in addition to the benefits and disadvantages of the instruments. Students will be trained in-depth in the administration and interpretation of a variety of instruments for assessment of the whole child including the cognitive, language, social-emotional, and sensorimotor developmental domains. Prerequisite: CFSP 4310.
CFSP 4330 Family-School Partnering and Consultation (3 Credits)
This course is designed to familiarize educational, mental health, and early childhood service providers with essential attitudes, approaches, and actions necessary to form successful family-school-community partnerships that can foster development and learning, especially for children with disabilities. Ecological, family systems, and family-centered theory and principles serve as the foundation for working collaboratively with families from diverse cultural and social backgrounds within school and community settings. Students gain skills in family interviewing; consultation to identify family strengths, needs, and resources; collaborative problem-solving; and multi-systemic learning. Evidence-based family involvement, education, and intervention strategies contribute to positive family-school partnering relationships are reviewed within a multi-tiered, school-based service delivery framework. Prerequisite: CFSP 4332; None for ECSE Students.

CFSP 4332 School Psychology Consultation and Collaboration (4 Credits)
This course is designed to acquaint students with current directions in classroom management and school-based consultation. Covered are issues related to consultant and consultee characteristics, consultation practices and processes, models and stages of consultation, facilitating desired outcomes in consultation, and evaluation of consultation outcomes. Special emphasis is also given to problems of classroom management and collaboration with parents, teachers and other educational and community personnel. Case analysis and practice are required. Prerequisites: All first year courses as listed in the handbook.

CFSP 4335 Infant & Family Interventions (3 Credits)
This course will describe various models for intervention with infants and toddlers with disabilities, emphasizing intervention within natural environments. Working with children and families in home, childcare, and other community settings will be emphasized and contrasted with intervention in more clinical settings. Students learn how to consult with parents and community professionals in providing coordinated transdisciplinary services when working with children in home and community settings. All areas of development will be addressed. Field experiences with children and families are expected to practice the skills addressed in class. Families will be asked to share their experiences to enable students to gain the "human" side of theory and practice.

CFSP 4336 Preschool Interventions (3 Credits)
This course covers early childhood interventions applicable within community, preschool and home environments. A hierarchy of intervention strategies is addressed including universal, targeted, and intensive approaches. There is a focus on building supportive networks, routine-based intervention strategies, and collaboration to enhance family resources. Students review empirically validated early interventions and curriculum for young children exhibiting both normal and delayed development. Prerequisite: CFSP 4310, 4312; None for ECSE Students.

CFSP 4337 School Age Academic Competencies and Interventions (3 Credits)
The purpose of this course is to review current theories of learning disability and practices that can support the diverse learning needs of school-aged students with and without disabilities. An integrated response to intervention model will be reviewed to identify difficulties, delays, and disabilities in the domains of literacy (oral, writing, speaking, listening), mathematics, and self-regulation. Students will learn to: a) evaluate differentiated instructional environments and adaptations that can support learning; b) employ focused assessments to identify academic strengths and weaknesses; c) formulate instructional hypotheses and learning goals; and d) link assessment results to evidence-based intervention approaches or instructional strategies designed to address phonemic awareness, decoding/phonics, reading fluency, listening/reading comprehension, spelling, written expression, vocabulary, mathematical calculation, mathematical problem-solving, and study/organization/test-taking skills. Effective practices will be reviewed to reduce learning barriers and increase learning supports across school, home, and community settings. Students will collaborate on the development of instructional hypotheses and learning goals that respect cultural diversity and language differences and will develop plans to monitor instructional fidelity and students' progress over time. These goals are accomplished through critical readings, classroom discussion, homework assignments, demonstrations, modeling, video analysis, and practice with hypothetical and authentic cases referred for learning and academic issues. Prerequisite: CFSP 4312.

CFSP 4338 Exceptionalities in Education: Low Incidence Disabilities (3 Credits)
This course reviews a wide range of neurodevelopmental disorders and low incidence disabilities such as blindness/visual impairment, deafness/hearing impairment, deaf blindness, traumatic brain injury, Fragile X syndrome, Fetal Alcohol Syndrome, traumatic brain injury, and syndromes associated with chromosomal deletions. Implications for assessment and intervention will be outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology will be addressed. Community experts on specific disabilities will be used as guest lecturers.

CFSP 4339 Introduction to Play Therapy (3 Credits)
This course examines the history and theoretical bases of major theories of play to enhance children's social-emotional and adaptive functioning. Child-centered, interpretive, and structured play therapy models are reviewed. Information is covered regarding preparation, selection of materials and toys, playroom characteristics, facilitative responses, and how to adapt play therapy in school, home and clinical settings. The play therapy process is illustrated from the initial referral and contact through termination, including observing and responding during sessions, facilitation and interpretation, therapeutic limit setting, and group play therapy strategies. Case studies, role play, video and script analysis are incorporated as is brief play therapy and applications with special populations. Efficacy, evaluation and future areas for professional development are reviewed. This course is designed as an introductory experience to prepare students for further supervised practica in play therapy. Prerequisite: CFSP 4310.
CFSP 4340 Counseling Children and Adolescent (4 Credits)
School Mental Health Counseling I is designed to provide in-depth knowledge of major theories behind contemporary school-based mental health counseling approaches for children and adolescents. Students will learn developmentally informed and empirically driven individual and group counseling strategies to enhance interpersonal, emotional, and social functioning within a multi-tiered system of support. Guidelines and ethical principles are reviewed to guide school-based practice and to help build collaborative partnerships between school, home, and community settings. These goals are accomplished through self and peer reflection, critical analysis of therapy research, evaluation of case studies, video modeling, and in-vivo practice and feedback. This course and its contents are a prerequisite to prepare students for School Mental Health Counseling II, an advanced class that incorporates supervised counseling experience. Prerequisite: CFSP 4301, 4304.

CFSP 4342 Crisis Intervention and Prevention (3 Credits)
This course provides knowledge about crisis prevention and intervention theory and effective strategies for use in direct and indirect services for children and staff in schools and in practice with children. Emphasis is on application to child-centered and school-based crises such as bullying, child abuse, death, loss and grief, trauma, community and school-based violence, threats, and suicide. The course provides students with basic knowledge and skills for crisis intervention in school settings. Prerequisites: CFSP 4301, 4304, 4310, 4311, 4340, 4343.

CFSP 4343 School Mental Health Counseling II (4 Credits)
School Mental Heath Counseling II is designed as an advanced counseling class that incorporates supervised counseling experiences to improve interpersonal, emotional and social functioning in young children to adolescents. Students learn to design, deliver and evaluate evidence-based prevention and intervention approaches and consultative mental health services. By working alongside a field site supervisor, students engage in case review, analysis, and delivery of counseling services designed to mirror expectations placed on mental health professionals in school and community settings. Self-reflection, transcript analysis, and peer, instructor, and supervisor feedback are employed to develop professional and personal individual and group counseling skills within a multi-tiered system of support. Prerequisites: CFSP 4310, 4311, 4340.

CFSP 4349 Community Practicum (2 Credits)
Taken during the first year of entry, the Practica is a supervised initial year field experience designed to expose students to a variety of home, community- and school-based settings that serve families with children who have developmental and special needs, and in the CFSP Clinic. Each week for up to four hours, students are expected to attend, observe, and participate in a range of site-specific team meetings and services offered to families and children. For the MA in Educational Psychology degree, students, during the fall or winter quarter, identify, develop and initiate a research project with input from the faculty. The MA project culminates during the fourth quarter (summer) and serves as the final project in lieu of a comprehensive exam. Prerequisites: CFSP 4310, 4311, 4340.

CFSP 4351 School Psychology Practicum: Clinic Assignment (1 Credit)
CFSP Clinic is a supervised field experience in the Morgridge College of Education's Counseling and Educational Services Clinic. Through all experiences, Clinic students will work with students and families within the zero to college age range. Casework may include: interview, assessment, data analysis, report writing for different audiences, diagnostics, data presentation, intervention, and consultation for a variety of psychoeducational and developmental concerns of children and families. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4351 - prior quarters.

CFSP 4353 School Psychology Practicum II (2 Credits)
This is a 500 hour supervised field experience taken after the successful completion of core courses and Practica I experience. Practica is considered a critical professional transition year to help consolidate learning and professional competencies in preparation for a subsequent Internship. Students work throughout the year with Clinic Faculty and a licensed Field Supervisor within the University of Denver psycho-educational clinic and infant, preschool, elementary, middle or high school settings and also attend weekly Practicum seminars or individual supervision sessions with a University Faculty member. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, continued professional development pertinent to the successful practice of School Psychology in urban and rural settings. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4353 - prior quarters.

CFSP 4354 School Psychology Advanced Practicum (2 Credits)
This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeateable). Prerequisite: PhD students only; Pass first year courses and CFSP 4353.

CFSP 4355 School Psychology Internship - EdS (1 Credit)
This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

CFSP 4356 School Psychology Pre-Doctoral Internship (4-8 Credits)
Meets 12-month internship requirement in school psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.
CFSP 4357 Early Childhood Practicum (1-4 Credits)
This course provides students with a field experience in an Early Childhood environment for students who are interested in pursuing a profession in Early Childhood Special Education. Field Practicum in Early Childhood Special Education is an off-campus, 600-hour minimum supervised experience taken throughout your coursework. Field Practicum is designed to broaden one's professional skills and is considered a critical transition of substantial growth. Each student is required to successfully complete 3 practica; an infant/toddler, (Birth to 3 years) a preschool (3-5 years) and an early elementary focused (Kindergarten through 3rd grade). Practicum seminar is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practice. The field practicum is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students work with a licensed Field Supervisor. Students will be placed in infant, preschool, elementary school settings. During practicum, students provide direct and indirect services that support children and/or families in a variety of settings. All students attend weekly practicum seminars facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback; case analysis; peer consultation; and continued professional development and experiences pertinent to successful practice. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice. Restricted to ECSE students only.

CFSP 4359 School Psychology Pre-Doctoral Internship (1 Credit)
This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

CFSP 4361 Supervision in School Psychology (2 Credits)
This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeatable). Prerequisites: PhD Students only; CFSP 4351, 4353.

CFSP 4363 Child, Family, School Psychology Program Development and Evaluation (3 Credits)
This course focuses on theory and practice of program development and evaluation in school and community agency settings. Both qualitative and quantitative methods of program evaluation are discussed. Students have the opportunity to collaborate on a comprehensive evaluation of a specific educational, health, or mental health program. Prerequisites: RMS 4910, CFSP 4332.

CFSP 4365 School Psychology EdS Terminal Internship (1-8 Credits)
Meets 9-24 month internship requirement in school psychology. Prerequisites: Completion of all Practica and Program Permission. Students can only enroll in this course if they’re also enrolled in CFSP 4355.

CFSP 4369 School Psychology Pre-Doctoral Terminal Internship (1-8 Credits)
This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 2000 clock hours of supervised field experience across an academic year in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. The student will be closely supervised by a licensed psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisites and Restrictions: Students must be enrolled in the CFSP doctoral program. They must have successfully completed Practicum I, Practicum II and Advanced Practicum. Additionally, they must have successfully passed comprehensive exams and dissertation proposal. All other students must obtain instructor permission. Corequisite: CFSP 4355.

CFSP 4991 MA Independent Study (1-10 Credits)
This course allows MA or EdS Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.

CFSP 4992 Directed Study (1-10 Credits)

CFSP 4995 Research - M.A. Thesis (1-10 Credits)
This course is for students whose program requires completion of a masters level thesis.

CFSP 4999 Advanced Seminar in School Psychology (1-3 Credits)
This course is designed as an advanced topical seminar in which students will focus on the professional literature and research relevant to important topics in the field of School Psychology. There will be analysis and discussion of theses advanced topics with consideration of the implications for research and practice in School Psychology. Required meeting time and assignments would be commensurate with number of credits. (Repeatable).

CFSP 5991 PhD Independent Study (1-10 Credits)
This course allows PhD Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.
CFSP 5992 Directed Study (1-10 Credits)
CFSP 5995 Dissertation Research (1-20 Credits)
This course is for PhD Child, Family, and School Psychology students engaged in completing their doctoral dissertation. Advisor permission required.

Curriculum and Instruction Courses
CUI 3055 Human Rights & Education (3 Credits)
Emphasis on human rights, both domestic and international, for the field of education; study of writings and research of leading educators encompassing concepts of human rights; focus on educational issues involving human rights, the Right of the Child, work of UNICEF, and implications of human rights for educational practice. Cross listed with CUI 4055.

CUI 3801 Current Issues in K-12 Education (3 Credits)
This course introduces prospective K-12 educators to the contemporary social, political, pedagogical and curricular context of schooling. Major areas of analysis and discussion will include: gender, social class, cultural competency, linguistically diverse education, funding, sexual orientation, educational policy, and diversity. The course will attempt a critical, reflective, and balanced view of schooling for the purpose of helping students develop the ability to interpret and respond to the challenges associated with teaching in modern schools. Coursework will be paired with a service-learning field experience in an urban educational setting characterized as linguistically and culturally diverse.

CUI 3802 Teacher Identity (3 Credits)
The most effective teachers combine the outer technical aspects of teaching (lesson plans, differentiated instruction, culturally responsive pedagogy, and content knowledge) with the inner non-technical elements (passion, heart, beliefs, and calling). In this course we examine the “inner-life” of the teacher with an emphasis on how understanding the themes of teacher selfhood impact the technical aspects of teaching. Key questions to examine include the following: How do the gifts, talents, and inner capacities of the teacher impact and influence communication and learning in the classroom; why do I teach; what will continue to fuel my passion for teaching; and what vision of the future do I hold for schools? Students should expect to complete 10-20 hours per week of service learning in area education settings.

CUI 3990 Service Learning in Community (1-4 Credits)
This course provides students with the opportunity to serve in the community and to reflect on their service experiences in a classroom setting through structured and meaningful reflection sessions. Students will examine a variety of topics, including the nature and significance of service-learning, motives for service, community action as a means for positive social change, and the relationship between service-learning, social justice, and civic responsibility. Cross-listed with AH 3580, SS 3580.

CUI 3991 Independent Study (1-10 Credits)
CUI 3992 Directed Study (1-10 Credits)
CUI 3995 Urban Education (5 Credits)
Historical, political and sociological influences that shape and socially construct urban schools. Characteristics, opportunities, and needs of students in urban schools and examples of current effective practice.

CUI 3996 Urban Youth Development (5 Credits)
This course examines urban youth development from several perspectives, including the social-psychological, the cognitive/creative, the physical and health-related, and the philosophical. Cross listed with CUI 3996.

CUI 4020 Introduction to Curriculum (3 Credits)
Introduces curriculum theory and curriculum as a field of study; includes study of issues such as standards, cognition, diversity, ecology, and social justice, among others.

CUI 4021 Models of Curriculum (3 Credits)
Reflects on ways various curriculum orientations may resolve modern issues or problems, with students’ independent pursuit of one or two orientations in depth; orientations examined include cognitive pluralism, developmentalism, rational humanism and reconceptualism, among others. Recommended prerequisite: CUI 4020.

CUI 4022 Curriculum Theory into Practice (3 Credits)
Helps students move from theoretical concepts and decisions involved in curriculum development to actual construction of curricula; survey of potential components encompassed in a variety of curricula followed by participation in designing a curriculum as a member of a student team; final facet requires students to develop a curriculum. Prerequisites: CUI 4020 and 4021 or instructor’s permission.

CUI 4027 Implementing Curriculum: A Practicum (3 Credits)
Opportunity to experience authentic role of curriculum on site; work at the Denver Zoo, the Denver Museum of Nature and Science, other museums and school sites; to develop and implement curriculum.

CUI 4028 Literacy Instruction and Assessment (3 Credits)
Organized around a developmental continuum for literacy acquisition. Addresses best research-based practices that allow teachers to assess students’ abilities and to select appropriate instructional strategies leading to communicative competence for all children.

CUI 4029 Issues in Literacy (3 Credits)
Prepares educators to participate thoughtfully and critically in often-contentious discourse about literacy. Examines the research base that supports sound policy and practice regarding literacy instruction for all children.
CUI 4031 Teaching and Learning (3 Credits)
Takes a disciplinary approach (e.g., sociological, historical, philosophical, and anthropological) to the analysis of teaching and learning environments in response to broad questions such as: What are effective teaching and learning environments? For whom and under what circumstances? How can we create such environments?

CUI 4032 Analysis of Teaching (3 Credits)
Provides a systematic introduction to the research base that characterizes effective practice and to the array of research methods that can be employed to study teaching and teacher development.

CUI 4033 The Practice of Teaching (3 Credits)
Course explores personal, conceptual, and empirical understandings of "teaching practice." Topics addressed have included: metaphors for teaching practice, best practices for equity and social justice, professional development practices.

CUI 4034 Curriculum & Cultural Context (3 Credits)
This course will address the influence of cultural, political, sociological, and economic factors on curriculum at the instructional, situational, societal, and ideological levels. Students should be interested and willing to explore these issues through readings and discussion. We will be exploring various perspectives, including our own, which inform the discussion on this critical area of education.

CUI 4035 e (3 Credits)
In this course, students will examine issues related to democracy, power, and privilege in public education. Specifically, students will learn about how anti-democratic groups are working to undermine public education in the U.S. Students will explore White privilege, racism, classism (and other "isms") and the impact they have had and continue to have in public school settings, particularly at schools that serve historically marginalized and oppressed students. Theoretical frameworks such as Critically Relevant Teaching and Critical Race Theory will be introduced in this class as well.

CUI 4038 Urban Youth Development (3 Credits)
This course examines urban youth development from several perspectives, including the social-psychological, the cognitive/creative, the physical and health-related, and the philosophical. We will explore the emerging field of youth development in an urban context, integrate theory and practice, and analyze youth policies and their implications. Cross listed with CUI 3996.

CUI 4039 Transformational Teaching and Learning (3 Credits)
This course takes an exploratory approach to the analysis of transformation teaching and learning. It asks questions such as "What are effective teaching and learning environments?" "For whom and under what circumstances?" "How can we create such environments?" We will explore how patterns of activities in the classroom can be designed to achieve simultaneously all of the major goals of educational reform. The term classroom is not restricted to the physical classroom space but "classroom" in the sense of the organized instructional activities that can extend outside of the school building into the community.

CUI 4041 School and Curricular Reform (3 Credits)
A look into school reform movements, why most fail and only a few succeed.

CUI 4042 Instructional Design & Web Development for Educators (3 Credits)
Introduces presentation software, basic HTML, and web page development software. Focuses on various Learning, Instructional Design, and Learning Style Theories and how they relate to the development of technology supported pedagogy. Students will create individualized instructional web pages for use in practice.

CUI 4043 Development of Technology Enhanced Educational Environments (3 Credits)
Utilizing emerging Learning Theories and complex Instructional Design Theories, students will move into advanced educational web page development including designing with style sheets and layers. Several customized technology mediated lessons or professional projects will be created for use in practice. Various tools, designed to enhance learning environments, will be explored.

CUI 4045 Technology Practicum (2 Credits)
Under the supervision of the professor, students will generate technological applications relevant to their own work settings using ideas and concepts learned in CUI 4040.

CUI 4046 Technology Leadership (3 Credits)
Explores the role of ethics, values, social, legal, and power issues associated with technology in education. Analyzes how technology is transforming learning, equitable distribution of information, and the implications for providing optimal education to diverse learning populations.

CUI 4050 Curriculum & Instr Rsrch Sem (0-3 Credits)
Students write proposals and learn about current relevant research in curriculum. Students learn about the proposal and dissertation process as well as current research in curriculum.

CUI 4051 Seminar in Dissertation Organization and Design (1-5 Credits)
Individualized assistance in developing the dissertation topic, issue, problem; guidance in preparation for proposal orals and application to the Institution Review Board (IRB), direction for dissertation chapter organization, writing and completion. This seminar is targeted for the student who needs support in completing the dissertation.

CUI 4055 Human Rights & Education (3 Credits)
Emphasis on human rights, both domestic and international, for the field of education; study of writings and research of leading educators encompassing concepts of human rights; focus on educational issues involving human rights, the Rights of the Child, work of UNICEF; and implications of human rights for educational practice. Cross listed with CUI 3065.
CUI 4058 Teacher as Researcher (3 Credits)
Emerging philosophical and methodological issues that arise when school practitioners undertake research within their own sites; range of research traditions including quantitative, statistical research and qualitative methodologies; mastering relevant skills and accessing resources for students to be better prepared to conduct their own inquiries and understand and solve problems.

CUI 4070 Clinical Internship (1-9 Credits)

CUI 4100 Sociocultural Foundation of Education (3 Credits)
Examination of the expanded conceptions of diversity to include difference based on ethnicity, biethnicity, and multiethnic identity; social class, differently-abled, age, gender, and sexual orientation; implications of terrorism on America for ethnically diverse populations in our schools and on educational establishments around the world; attention to the interactions of ethnicity with social class and gender identifications in the school setting; implications of the learning of another language as well as the impact of language diversity in our schools; consideration of new conceptual frameworks for multicultural and diversity education for educators for the 21st century.

CUI 4130 Philosophy of Education (3 Credits)
Focuses on 3-4 philosophers and examines the contributions their philosophical ideas have on education. Philosophers studied have included John Dewey, Cornel West, Nel Noddings and Maxine Greene.

CUI 4131 Spirituality in Education (3 Credits)
This course will explore the role of spirituality in education from both the student and educator point of view through an examination of the big questions that are held close to the heart; the ones that guide us toward meaning making in the world. The primary goal of the course is to plumb the depths of spirituality, a deep sense of inner meaning making, that calls us toward a particular profession. The course will focus on the interface between spirituality in education through the lenses of curriculum and instruction.

CUI 4150 Sociology of Education (3 Credits)
Sociology of education emphasizes the importance of the process of socialization on education, the interactions of ethnicity, gender, and social class in education, the formal roles and statuses within the bureaucracy of the school, the informal or "hidden" curriculum, the system of higher education and comparative views of educational systems around the world, and the impact on teaching and schools in an era of terrorism. Objectives of this course: to apply major concepts and theories in sociology to the institution of education; to interpret the applications of sociological theory to the school and the broader educational enterprise; and for personal expansion of philosophy and worldview through humanistic and social science perspectives.

CUI 4153 Practicum: Curriculum and Instruction (1-5 Credits)
Designed to fit the educational needs of the individual student who may choose from a wide variety of practicum (internship) experiences, including teaching, curriculum development, museum internships or research projects in curriculum and instruction.

CUI 4155 Special Topics (1-10 Credits)
Special topics in the field of education.

CUI 4159 Educating Multiethnic Populations (3 Credits)
Emphasizing a worldwide view in considering how education should be delivered to children and youth for life in the 21st century, especially since the World Trade Center Disaster of September, 2001. It is incumbent on those in teaching to find creative policies for working together with those in government and business, strategies that acknowledge our human diversity within and overall context of equality and peacefulness. This begins with raising social justice issues in the classroom in ways that encourage students to openly examine difficult and personally challenging materials, facilitating communication and understanding between members of diverse and unequal social groups.

CUI 4160 Race, Class and Gender in Education (3 Credits)
Ethnicity, Class & Gender in Education applies the concepts and theories of social science disciplines - sociology, social psychology, anthropology, historical perspectives and philosophical orientations - to the inclusive examination of the issues of racism, classism, sexism, and homophobia in education. This course seeks to conceptualize ethnicity, gender and social class as interactive systems, not as separate and independent variables, that impact students, teachers, school systems and the educational enterprise. We examine educational systems and practices that historically have disadvantaged women and peoples of color and discuss strategies and techniques for empowerment of the members of these groups.

CUI 4161 Ethnicity, Gender & Diversity in the Curriculum (3 Credits)
The focus of this course is to examine and explore the complexities of teaching in contemporary educational settings in which the forces of sexism, racism and classism are found. In our society where wide diversity characterizes our student population, it has become an imperative to recognize difference and relate effective teaching to these conditions. Major trends and influences that are impacting the school curriculum are explored.

CUI 4170 Engaging Learners through the Arts (3-5 Credits)
This seven day institute is designed to engage participants in a challenging exploration of the creative process through workshops with professional artists in the disciplines of dance, visual arts, creative writing, music, and theatre, and to provide a greater understanding of the theory and practical applications of school reform.

CUI 4171 The Arts in Education: Stage II (3-5 Credits)

CUI 4172 Aesthetic Foundation in Education (3 Credits)
Educational enterprise from aesthetic viewpoints; examination of a number of aesthetic theories and exploration of implications for curriculum, teaching, and evaluation.
CUI 4180 History of Education in the United States (3 Credits)
Traces historical context and development of K-12 schools in the United States from initial discovery of North and South America by Europeans to the present; understanding through examination of central issues that strongly influenced our current educational systems - evolution of schools, religion, social and political reform, women's issues, nationalism and ethnicity, industrialization of the nation and world.

CUI 4400 Nature and Needs of Gifted Learners (3 Credits)
This course is designed to provide participants with an understanding of 1) conceptual foundations and definitions of giftedness, 2) how intelligence, creativity, and non-intelligence factors are related to giftedness, 3) the nature, development, types, and needs of gifted individuals, 4) principles and issues in the identification of gifted individuals, and 5) the major issues and tensions in the education of gifted and talented individuals. Lectures, discussions, and other class activities and assigned readings and projects will include topics such as the history and nature of the giftedness construct; theories of intelligence and creativity and their relationship to conceptions of giftedness; types of giftedness; the diversity of gifted individuals and their personal and educational needs; the role of identification in the education and development of gifted children and youth; and purposes and perspectives in gifted education.

CUI 4401 Psychological Aspects of Giftedness (3 Credits)
The psychological development of gifted children is examined through a study of current theories, models, research, and case histories. Understanding of psychological development creates a foundation for applications and practices that nurture the psycho-social-emotional development of gifted individuals. Specific topics include the psychological nature and needs of the gifted; perfectionism, stress, and underachievement; special issues for gifted boys and gifted girls; highly gifted; and pertinent theories of psychological development. Emphasis is placed on synthesis of theories and application to specific situations.

CUI 4402 Curriculum for Gifted Learners (3 Credits)
This course is designed to provide participants with an understanding of the conceptual foundations in the design and development of curriculum for gifted and talented students. Includes theories, models and processes for curriculum modification and curriculum design; strategies for adapting educational content, process, product, and learning environment based on the educational characteristics and needs of gifted learners; and curriculum design and development approaches that are effective in the intellectual and personal growth of gifted and talented learners. Content in this course is aligned with appropriate instructional strategies and techniques recommended for use with gifted and talented learners. Lectures, discussions, class activities, assigned reading and projects include topics such as a general overview of curricular principles and perspectives; critical analysis of general curriculum; issues of diversity in curriculum development and modification including cultural congruence; recommended models of curriculum development for gifted and talented learners; and national trends in gifted education.

CUI 4403 Instructional Strategies for Gifted Learners (3 Credits)
This course provides a basic understanding of how to adapt curriculum for gifted learners through various instructional strategies. Strategies studied include: acceleration, enrichment, differentiation, compacting, grouping, independent study, and service learning. By selecting instructional strategies based on assessed learner needs, educators can reach many types of gifted learners in their classrooms including gifted students of poverty and gifted learners of cultural and ethnic diversity. The objectives of this class are that participants: know about and be able to define instructional strategies that meet assessed academic and affective needs of gifted learners and be able to adapt curriculum for gifted learners using learned instructional strategies.

CUI 4404 Twice-Exceptional Students (3 Credits)
The purpose of this course is to acquaint the student with the various areas of exceptionalities typically encountered with gifted students and to provide classroom related techniques to assist the teacher in identifying and working with twice-exceptional children in an effective manner. Environmental, behavioral, motivational, emotional and educational needs are addressed. Legal responsibilities, parent communication and staff development will be emphasized.

CUI 4405 Practicum in Gifted Education (1-3 Credits)
Students wishing to earn credit for the Practicum in Gifted Education must complete an experience in three of the five areas (Teaching, Assessment, Administration, Research, or Policy). Students must submit a Practicum Proposal outlining the intended practicum experiences. This Proposal must be approved by the practicum faculty supervisor when the practicum experiences are begun.

CUI 4407 Current Issues in Gifted Education: Identification (3 Credits)
This course focuses on the screening and selecting of gifted and talented students. It is designed for practicing professionals - teachers, counselors, psychologists, and administrators - who must make decisions about the identification and serving of gifted and talented students. Course uses multiple assessments, both quantitative and qualitative, to identify gifted students within an increasingly diverse population (including culturally- and ethically-diverse, high-potential, linguistically-different students with unique affective needs as well as high-potential economically-disadvantaged students). Students will use data to diagnose educational needs, prescribe appropriate educational strategies and to incorporate appropriate identification strategies for identifying gifted and talented students. Legal responsibilities and parent communication as well as staff development are emphasized. Students are required to develop an identification model based on relevant theory and current practices to be used in their particular setting. Enforced Prerequisites: CUI 4400 with a minimum grade of C- OR CUI 4401 with a minimum grade of C-.
CUI 4408 Creativity: Theory & Practice (3 Credits)
The essence of innovation is creativity, in thought, process and outcome. Classic and current theories provide a foundation for analysis of the concept of creativity. This course is designed to provide participants with an understanding of 1) the conceptual foundations and definitions of creativity; 2) how intelligence, creativity, and non-intellective factors are related to the constructs of giftedness; 3) documented brain research underlying exceptional cognition and/or creativity; 4) principles and issues in the identification and appropriate programming for creative individuals; and 5) the multiple perspectives and manifestations of creativity. Salon discussion groups, lectures, class activities and assigned readings and projects focus on the history and nature of the construct of creativity, theories of creativity, the role of innovation and transformation, assessment and measurement tools, environmental support of the creative process and creativity, and teaching and learning applications.

CUI 4410 Prog Dev/Ldrshp/Comm Gifted Ed (3 Credits)
This course emphasizes the concepts and practices involved in development and management of school- and district-based programs for the special education of gifted and talented children and youth. The course leads to in-depth understanding of program components and systems, program planning and evaluation, program leadership, advocacy in gifted education, and communications. In addition, emphasis is placed on planning and development of staff development in relation to gifted children. This course includes extensive in-class discussion and field applications.

CUI 4411 Wkshp: Gifted & Talented Educ (2-3 Credits)
This course is designed to provide participants with an overview of the education of gifted and talented students. Areas of focus within the course include definitions of gifted and talented students, characteristics, educational and psycho/social needs, common identification methods and concepts and common practices in curriculum and instructional differentiation.

CUI 4417 Independent Study: Gifted Educ (1-3 Credits)

CUI 4450 Education and Psychology of Exceptional Children (3 Credits)
Characteristics of students with moderate needs and state criteria used to determine eligibility for special education population.

CUI 4451 Teaching the Exceptional Child (3 Credits)
This course provides a broad overview of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional education needs. This course also explores the characteristics of students with various disabilities, the history of Special Education, The Individuals with Disabilities Education Act (IDEA) and its current implications, the Response to Intervention Model (RtI) and the Individualized Education Plan (IEP). Prerequisite: CUI 4450.

CUI 4452 Low Incidence Disabilities and Behavior Intervention (3 Credits)
This course reviews a wide range of neurodevelopmental disorders and low-incidence disabilities including fragile X syndrome and Fetal Alcohol Syndrome, along with syndromes associated with chromosomal deletions. Implications for assessment and intervention are outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology are addressed. This class also addresses theories, research, effective practices, and background information needed to implement successful behavior intervention programs for whole classroom management and for students identified with behavioral needs. Prerequisites: TEP 4010 and CUI 4451.

CUI 4453 Curriculum Adaptations and Assessments for Children with Disabilities (3 Credits)
This course applies theories, research, effective practices, and background information for assessment for students with disabilities, monitoring student academic progress, and transition planning for students exiting K-12 schools.

CUI 4455 Assessment of Students with Special Needs (3 Credits)
Theories, research, effective practices and background information needed to develop, implement, analyze, and apply assessment data for mild/moderate-needs students.

CUI 4457 Behavior Intervention (3 Credits)
Theories, research, effective practices, and background information needed to implement successful behavior intervention programs for mild/moderate-needs students.

CUI 4459 Curriculum, Collaboration, and Transitions in K-12 Schools (3 Credits)
Knowledge, techniques to develop independent skills for K-12 moderate/mild-needs students and transitions across grade levels.

CUI 4500 Elementary Literacy: Theory and Practice I (1-3 Credits)
This course provides an introduction and overview to the many components that make up a quality balanced literacy program. During the course students will analyze current research and theory in reading and writing instruction. This course will use students’ classroom placements to create a foundational understanding on which to build solid literacy philosophy as well as instructional ideas and strategies.

CUI 4501 Elementary Literacy: Theory and Practice II (1-3 Credits)
This course is an extension of Elementary Literacy I and concentrates on the continued development of theories and practical strategies for teaching literacy in diverse classrooms. This course will supply K-6 teachers with the skills to assess student abilities, select appropriate instructional strategies, and design effective instructional programs that lead to increased listening, speaking, reading and writing achievement of all children.
CUI 4502 Elementary Science and Social Studies Methods for Cultural Linguistic Diversity (3-4 Credits)
This course will enable students to develop a deeper understanding of science and social studies content and curriculum in the elementary classroom. Students will explore a range of instructional materials and develop teaching strategies with the guidance of state content standards and research on effective classroom instruction for culturally and linguistically diverse students. This course will revolve around discussion of key questions in the following eight areas: The Role of Social Studies and Science; Instruction; Standards; Content Knowledge; Curriculum Integration; Technology; Culturally Responsive Pedagogy; Sheltered Instruction.

CUI 4503 Elementary Math Methods for Cultural Linguistic Diversity (3,4 Credits)
This course will prepare pre-service elementary teachers to engage students in mathematical learning activities guided by Colorado State Mathematics Content Standards and research. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful activities. In addition, students will develop an understanding of infusing best practice for culturally and linguistically diverse students into the math curriculum in terms of culturally relevant pedagogy and sheltered instruction. This course will revolve around the discussion of key questions in the following seven areas: Content Standards; Instruction; Assessment; Differentiated Instruction; Technology; Culturally Responsive Pedagogy; and Sheltered Instruction.

CUI 4504 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity I (3 Credits)
This course is the first of a two-course study that will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.

CUI 4505 Mathematics across the Content Areas (2,3 Credits)
In this class, prospective secondary and k-12 teachers study fundamental mathematical ideas. Students learn about the five fraction sub-constructs and solve problems in all five areas. In addition, students study ideas that are fundamental to understand algebra. For instance, students learn how to build rules to represent functions. Finally, students learn about inquiry-based approaches to teaching that they can use in their secondary classrooms with their students.

CUI 4506 Mathematics for Elementary School Teachers I (2,3 Credits)
In this class, prospective elementary school teachers experience an in-depth look at the representations of rational numbers, including base-ten and decimal numbers, integers, fractions, and arithmetic operations on these sets. Problem solving is emphasized throughout. Students also learn about inquiry-based approaches to teaching that they can use in their classrooms with their students.

CUI 4507 Mathematics for Elementary School Teachers II (3 Credits)
In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisite: CUI 4506.

CUI 4508 Mathematics for Elementary School Teachers III (3 Credits)
In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisites: CUI 4506.

CUI 4509 Mathematics for Middle School Teachers (3 Credits)

CUI 4510 Adolescent Literacy (3 Credits)
This course provides secondary teacher candidates an understanding of the essential elements of adolescent literacy. Students learn how literacy develops in reading, writing, and oral language and will be able to relate this information to teaching reading and writing in all content areas for both middle school and high school students.

CUI 4511 Secondary Literacy: Reading and Writing Across Content Areas I (3 Credits)
This course is the first of a two-course study that is designed to give secondary Residents an introduction to best practices in content area literacy instruction for in 6-12 classrooms. In support of the instructional shifts presented by the Common Core State Standards, Residents will explore the rationale behind instructional strategies for literacy instruction in the content area classrooms, as well as examine tools and techniques for teaching students to become strategic readers and writers as they model their own thinking and scaffold students' use of strategies for content area literacy.

CUI 4512 High School Mathematics from an Advanced Perspective (3 Credits)
High school mathematics education. Meets Common Core State Standards.

CUI 4513 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity II (3 Credits)
This course is an extension of the Autumn quarter session and will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards, Next Generation Science Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.
CUI 4514 Secondary Literacy: Reading and Writing Across Content Areas II (3 Credits)
This course is an extension of the Autumn quarter session. In this course, Residents will deepen their knowledge of the English language and linguistics, through an analysis of socio and psycholinguistics, as well as rigorous practice in grammar, syntax and semantics. As Residents gain a more practical understanding of the complexities of the English language, they will be better able to support their English Language Learners. This course addresses the following Common Core State Standards: L1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking L3: Apply knowledge of language to understand how language functions in different context to make effective choices for meaning or style, and to comprehend more fully when reading or listening. W4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CUI 4520 Urban Education I: Diversity and Social Justice (1 Credit)
This class will address questions about multicultural and social diversity in the classrooms, curricular and pedagogical theories and practices, access and equity, and the politics of education.

CUI 4521 Urban Education II: School, Student, Family and Community Influences on Student Learning (2-4 Credits)
This course will consider how teachers are able to foster meaningful connections between the educational goals of the schools and the personal and cultural experiences of young people. Students will study the child in relation to family, school, and community, as well as the relationships between teacher and pupil. We will emphasize the cultural complexity of an urban society and pay special attention to ways that curriculum, language, and literacy affect school success.

CUI 4522 Urban Education III: Sources of Pressures and Possibilities in High Poverty Schools (2,3 Credits)
This course will focus on the sources of problems in high poverty schools and examine educational reform efforts that attempt to transform high poverty schools and classrooms.

CUI 4527 Supporting English Language Learners and Students with Special Needs Across Content Areas (3 Credits)
This course evaluates similarities and differences in theory, methods, approaches, and techniques in meeting the needs of diverse learners including English Language Learners, special needs, and/or gifted. Differentiated instruction, Sheltered instruction, and Response to Intervention (RTI) are key methodologies in meeting needs of diverse learners.

CUI 4529 Foundations of Education for Culturally and Linguistically Diverse Learners (3 Credits)
This course will examine the essential knowledge and orientations educators must possess to effectively meet the needs of culturally and linguistically diverse (CLD) learners through the analysis of historical, political, ethical, and legal foundations of language education in the United States. This course will explore the immigrant experience and the experience of CLD learners in schools in order to understand how the psychosocial aspects of the immigrant experience can impact second language learning.

CUI 4530 Second Language Acquisition (1-3 Credits)

CUI 4531 Language Development and Strategies for Culturally and Linguistically Diverse Learners (3,4 Credits)
This course will evaluate methods, approaches, and techniques in language teaching. This course will also explore classroom strategies and practices for content-area instruction through sheltered instruction, and socio-cultural context of second language acquisition in U. S. public schools including how teachers can support bilingualism, multilingualism, biculturalism, and multiculturalism in the mainstream classroom. Furthermore, this course will explore the needs of special education and gifted culturally and linguistically diverse learners.

CUI 4532 Culturally Responsive Pedagogy (3,4 Credits)
This course examines the intricate web of variables that interact in the effort to create culturally responsive pedagogy. It examines the need and establishes a definition for culturally responsive pedagogy; and includes an examination of one’s conception of self and “others,” conception of social relations; and conception of knowledge teaching and learning in a culturally diverse context. Furthermore, it cultivates the practice of culturally responsive teaching as well as explores the reality of implementing cultural responsive pedagogy in an era of standardization. In sum, this course helps practicing teachers acquire the dispositions, cultural knowledge, and competencies to adapt their curriculum and instructional skills for culturally responsive classroom practice.

CUI 4533 Research Issues in the Education of Culturally and Linguistically Diverse Learners (3,4 Credits)
In this course, students will act as teacher-researchers in order to explore issues that impact the achievement of culturally and linguistically diverse learners. This course will allow students to use functional research tools that can inform practice and lead to better teaching and learning in urban schools, and access resources to enable educators to define and address challenges in their teaching. More importantly, classrooms will become sites for educational reform in that, essentially, educators will act as advocates for change.

CUI 4534 Language Teaching Lab (1 Credit)
This course will critically examine elements of best practice for culturally and linguistically diverse learners through formal observations of three exemplary teachers and evaluate their classroom practices, instructional strategies, assessment practices, and communication strategies. This course will apply our conceptual knowledge of first and second language acquisition and our knowledge of the foundations of the English language to critically analyze each classroom context.

CUI 4535 Language in Society and Schools (3,4 Credits)
This course will introduce students to the discipline of sociolinguistics, including ways language and society impact one another, and how this interaction is reflected in schools. The focus of this course will be on current sociolinguistic theory and research on language variation and its social, political, and cultural significance. Topics include bilingualism and multilingualism in society; formal and informal types of language discourse: language and dialect; cross-cultural communication; and ways language both reflects and creates such constructs as power, culture, gender, ethnicity, and social class. In addition, this course will explore language ideology and language policy and planning.
CUI 4536 Language and Cultural Issues in Assessment and Instruction (3-4 Credits)
This course expands the educators’ knowledge of the connection between data-based instruction and assessment. Educators assess student learning by utilizing strategies that provide continuous feedback on the effectiveness of instruction. Educators learn informal and formal assessment practices that promote student learning and achievement. Educators develop knowledge and understanding of initial assessment of culturally and linguistically diverse learners’ skills and abilities in order to provide appropriate placement and instruction. Educators utilize native language tests to promote adequate placement/transition of students. This course also helps educators develop a framework to analyze and develop culturally responsive assessment practices in order to improve student achievement. Finally, this course integrates Response to Intervention (RTI) strategies to improve student assessment.

CUI 4537 Seminar & Practicum in LDE (1-6 Credits)
This course is to provide students with the opportunity to merge theory and practice in real classroom situations. This course is organized around two main components. The seminar consists primarily of discussions on connections between theory and practice. The practicum centers on educators’ own respective teaching contexts. Students in this course are required to "log" 200 hours of direct teaching with linguistically diverse learners. Under the supervision of a practicum advisor, students will be evaluated for evidence of mastery of LDES standards.

CUI 4538 Literacy and Language Development for Culturally and Linguistically Diverse Learners (3,4 Credits)
Attaining age-appropriate English literacy skills poses many challenges to culturally and linguistically diverse (CLD) learners. Educators must therefore develop proficiency in effective literacy instruction for CLD learners. Effective literacy instruction includes a repertoire of teaching practices designed to scaffold literacy and language across the content areas, and culturally relevant curriculum as an essential component to support the achievement of CLD learners. This course will focus on helping educators gain the necessary skills, orientations, and competencies to advance the literacy of CLD learners through linguistic and cultural knowledge.

CUI 4540 Curriculum, Instruction and Assessment: Theory and Practice I (1-3 Credits)
This is the first quarter of an academic year-long weekly seminar to foster reflective, research-based classroom practice. Teacher candidates will deepen their understanding of teaching and learning in contemporary schools through a guided teaching apprenticeship with a trained mentor teacher, focused observations of a myriad of classrooms, readings, interviews, discussions, critical writing, and presentations.

CUI 4541 Curriculum, Instruction, and Assessment: Theory and Practice II (1-4 Credits)
This is the second quarter of an academic year-long weekly seminar to foster reflective, research-based classroom practice. Teacher candidates will deepen their understanding of teaching and learning in contemporary schools through a guided teaching apprenticeship with a trained mentor teacher, focused observations of a myriad of classrooms, readings, interviews, discussions, critical writing, and presentations.

CUI 4542 Curriculum, Instruction, and Assessment: Theory and Practice III (1-4 Credits)
This is the third and final quarter of an academic year-long weekly seminar to foster reflective, research-based classroom practice. Teacher candidates will deepen their understanding of teaching and learning in contemporary schools through a guided teaching apprenticeship with a trained mentor teacher, focused observations of a myriad of classrooms, readings, interviews, discussions, critical writing, and presentations.

CUI 4543 Educational Psychology: Learning and Development (1-3 Credits)
This course focuses on theories of learning and development, including behaviorism, cognition in context, and sociocultural perspectives, among others, as well as practical application of those theories. Issues of classroom management and student motivation are explored within the context of these theories.

CUI 4544 Ed Psych: Exceptional Child (1-3 Credits)
The focus of this course is on educating children and adolescents with special needs in the general education classroom. The intent is to enable future educators to better serve the needs of these children in their classrooms. Topics such as the special education process, information on specific disabilities, accommodations and modifications, behavior issues, mental health, and communicating with parents will be addressed.

CUI 4545 Perspectives on American Education I (1-3 Credits)
We expect that students will complete this 2-quarter-long class with an appreciation for and commitment to critical reflection, collegiality, ongoing professional growth, and educational reform. Through readings, reflective writing and activities, role-plays, case discussions, community-based field work, visits to a myriad of schools and classrooms, and guest presentations, we expect students to recognize and wrestle with the complexity that characterizes teaching in American society. Four central and recurring themes for this course include: democratic foundations of public schools, apprenticeship of observation, teaching as vocation, and the moral dimensions of teaching.

CUI 4546 Perspectives on American Education II (2 Credits)
We expect the students will complete this 2-quarter-long class with an appreciation for and commitment to critical reflection, collegiality, ongoing professional growth, and educational reform. Through readings, reflective writing and activities, role-plays, case discussions, community-based field work, visits to a myriad of schools and classrooms, and guest presentations, we expect students to recognize and wrestle with the complexity that characterizes teaching in American society. Four central and recurring themes for this course include: democratic foundations of public schools, apprenticeship of observation, teaching as vocation, and the moral dimensions of teaching.

CUI 4600 History and Philosophy in Mathematics Education (3 Credits)
Introduction to the effective integration of history and philosophy of mathematics into mathematics education.

CUI 4610 Learning and Teaching of Mathematics (3 Credits)
Introduction to foundational research literature on learning and teaching in mathematics education.

CUI 4620 Research on Diversity, Equity, and Social Justice in Mathematics Education (3 Credits)
Introduction to research related to issues of diversity, equity, and social justice in P-16 mathematics curriculum, instruction, and assessment.
CUI 4630 Learning Mathematics: Early Childhood (3 Credits)
Development of theories, materials, and methods used to teach mathematics in preschool to grade two and develop abilities in their use.

CUI 4640 Improving Elementary Math Instruction (3 Credits)
Teacher development of elementary mathematical content, pedagogy, curriculum, attitudes and power, and collaboration.

CUI 4690 Field Experience: Curriculum & Instruction (3 Credits)
This course provides students with an authentic field experience for those pursuing a degree in Curriculum & Instruction. Field Experience in Curriculum & Instruction is an off-campus, experience taken throughout the coursework plan. Field Experience is designed to broaden one's professional skills and is considered a critical transition of substantial growth. Field Experience is a hybrid on-line and face-to-face seminar that is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practices. The Field Experience is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students engage in weekly experience seminars (either on-line or face-to-face) facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, and continued professional development and experiences pertinent to successful practice. This course promotes the idea that educators are lifelong learners and regularly reflect on and adjust their practice.

CUI 4700 Foundations of Education: Cognitive Theory I (3 Credits)
Introduction to cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula.

CUI 4710 Foundations of Education: Cognitive Theory II (3 Credits)
Second course in cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula. Prerequisite: CUI 4700.

CUI 4720 Discourse in the Mathematics Classroom (3 Credits)
The study of discourse as it relates to mathematics teaching and student learning.

CUI 4730 Mathematics and Instructional Technology (3 Credits)
Introduction to the principles of effective use of technology in mathematics instruction.

CUI 4740 Policy and Mathematics Education (3 Credits)
Introduction to educational politics and how those policies have influenced and continue to influence mathematics education.

CUI 4790 Seminar on Race in Mathematics Education (3 Credits)
Seminar course for advanced doctoral students on issues of race and mathematics education in the US.

CUI 4870 Education in International Settings (3 Credits)
Objectives of this course include: viewing education in the 21st century as cross-cultural and international; examining the role of schooling in shaping national identity and citizenship in nation-states around the globe; and identifying promising practices and exemplary curriculum material for teaching cross-cultural perspectives and world awareness.

CUI 4991 MA Independent Study (1-10 Credits)

CUI 4992 Directed Study (1-10 Credits)

CUI 4995 Research - M.A. Thesis (1-10 Credits)

CUI 5980 Research as Problem Analysis (3 Credits)
This course is the first of three culminating research courses for students in the Ed.D. in Curriculum and Instruction. This course is designed to guide candidates through the doctoral proposal process and introduce the initial stages of data collection and analysis.

CUI 5981 Research as Intervention (3 Credits)
This course is the second of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates finish collecting their data and analyze their data. This course will also introduce and develop the evaluation or analysis section of the doctoral paper and the beginning steps of the dissemination of the research project.

CUI 5982 Applied Research (3 Credits)
This course is the final of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates disseminate their project, reflect on their project, and defend their project. This course is specifically focused on writing the quasi-practical section of the doctoral paper and the dissemination of the research project to the community partner.

CUI 5983 Defense of Research (1 Credit)
This course will build on the "persistent problems of practice" and research questions identified in CUI: 5980, data collection and analysis in CUI 5981, and applied research skills in CUI 5982. By the end of the course you will be able to schedule and present your doctoral research project for defense. Completion of CUI: 5982 "Research as Applied Research" or permission of the instructor.

CUI 5991 PhD Independent Study (1-10 Credits)

CUI 5992 Directed Study (1-10 Credits)

CUI 5993 Doctoral Research Project (1-4 Credits)
Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in C&I; must have completed C&I doctoral research courses (CUI 5980, CUI 5981, CUI 5982, and CUI 5983).
CUI 5994 Seminar in Dissertation Organization and Research (1-5 Credits)
Individualized assistance in developing the dissertation topic, issue, problem; guidance in preparation for proposal orals and application to the Institution Review Board (IRB), direction for dissertation chapter organization, writing and completion. This seminar is targeted for the student who needs support in completing the dissertation.

CUI 5995 Dissertation Research (1-10 Credits)

Teacher Ed Prep Courses

TEP 4010 Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities (2-4 Credits)
This course serves as the foundation for understanding children with disabilities and dis/abilities, as well as the philosophies, laws and policies that support the students. To be responsive to the diverse strengths, needs, and experiences children bring to the classroom, educators need a foundational knowledge of special education and opportunities that can influence student learning. We emphasize a strengths-based perspective and provide pedagogy for supporting for all learners. We introduce the classroom teacher’s role in understanding the Individual Education Program (IEP) process, designing lesson plans and inclusive practices based on differentiated and universal design learning instructional strategies and working collaboratively with families and interdisciplinary teams. In addition, we introduce potential commonalities of students with high-incidence disabilities, the history and legal aspects of Special Education and the Response to Intervention Model (RtI)/Multi-Tiered System of Supports (MTSS).

TEP 4520 Art Methods K-12 (3-4 Credits)
Throughout this course, Apprentice Teachers will analyze the following essential questions about teaching and learning in the visual arts field: 1) What type of visual arts classroom environment best supports student learning and skill development in a 21st century classroom?, 2) How do the Colorado Academic Standards guide arts instruction?, 3) What is the role of descriptive feedback in the reflective practice of teaching and learning?, 4) How can visual arts instruction enhance positive-identity development for diverse learners?, and 5) How can visual arts educators use arts assessment in curriculum planning and to gauge student learning?.

TEP 4561 Elementary Curriculum I (4-6 Credits)
Focuses on teaching and learning in the K-6 classroom and prepares teachers to design and implement effective classroom instruction. Frequently covered topics include: standards-based instruction, approaches to assessment, effective teaching strategies, sound lesson/unit planning, interdisciplinary instruction, individualizing instruction, technology, multicultural curriculum. Prerequisite: enrollment in the Teacher Education Program.

TEP 4562 Elementary Curriculum II (4-6 Credits)
Continuation of TEP 4561. Both must be completed for students planning to teach in elementary schools. Prerequisite: enrollment in the Teacher Education Program.

TEP 4572 Art Methods for K-12 (4 Credits)
In this course, Apprentice Teachers will gain an understanding of how the Colorado Academic Standards for Visual Arts and the Backward Design process are used in the development of curriculum for the arts. The course will culminate with a portfolio presentation consisting of the Apprentice Teacher’s philosophy of teaching, a lesson plan and artifact, and a teaching presentation to peers.

TEP 4581 Elementary Music Methods (3-6 Credits)
Prepares K-12 music teachers to design and implement effective instruction in the elementary school music classroom. Course introduces full array of sound teaching and assessment strategies for all aspects of music. Prerequisite: enrollment in the Teacher Education Program.

TEP 4582 Secondary Music Methods (3-4 Credits)
Prepares K-12 music teachers to design and implement effective instruction in the secondary school music classroom. Course introduces full array of sound teaching and assessment strategies for all aspects of music instruction. Prerequisite: enrollment in the Teacher Education Program.

TEP 4590 Literacy Instruction I (3,4 Credits)
Introduces developmental continuum for literacy. Prepares to assess students' abilities, to select appropriate instructional strategies and to design effective instructional programs leading to increased listening, speaking, reading and writing competencies for all children. At the elementary level, focuses on balanced approach to literacy instruction. At the secondary level, emphasizes reading and writing in the content areas and assistance of the struggling reader/writer. Prerequisite: enrollment in the Teacher Education Program.

TEP 4591 Literacy Instruction II (3-4 Credits)
Introduces developmental continuum for literacy. Prepares to assess students' abilities, to select appropriate instructional strategies and to design effective instructional programs leading to increased listening, speaking, reading and writing competencies for all children. At the elementary level, focuses on balanced approach to literacy instruction. At the secondary level, emphasizes reading and writing in the content areas and assistance of the struggling reader/writer. Prerequisite: enrollment in the Teacher Education Program and TEP 4590: Literacy Instruction I.

TEP 4600 Introduction to Secondary Methods (3-6 Credits)
Provides general introduction to principles of effective secondary instruction curriculum design and assessment. Frequently covered topics include: design of classroom environments, comparison of different instructional practices, purposes for and approaches to assessment, comparison of middle and high school philosophies, introduction to instructional unit plan development, and theories of instructional approach and design. Course lays a foundation for more specialized subject-matter methods courses. Prerequisite: enrollment in the Teacher Education Program.
Division of Natural Sciences and Mathematics

The Division of Natural Sciences & Mathematics offers graduate students the chance to collaborate with our faculty scholars to apply new knowledge and research which will change lives as well as challenge long-held ideas. Although not an inclusive list of opportunities, we offer access to resources such as the innovative geospatial software, a collection of high resolution fluorescence imaging systems as well as an ability to perform electron paramagnetic resonance. From the mystery of the blinking binary star system Epsilon Aurigae to the movement of an individual molecule inside a cell, the Division of Natural Sciences & Mathematics offers the expertise and resources to support your investigative journey.
Why study biology at the University of Denver?
The department of biological sciences offers graduate programs at the doctoral (PhD) or master's (MS) level. Students earn a degree in biological studies with a concentration in either cell and molecular biology or biology, ecology and evolution. Both program tracks involve a combination of course work, lab or field research and a defended thesis or dissertation. Students begin their research under the direction of a faculty member during the first year. All students are expected to present their work at scientific meetings and publish their work in peer-reviewed scientific journals. Doctoral students also have the opportunity to participate in teaching undergraduate courses.

Research areas
The PhD and MS programs are centered on primary research that coincides with faculty experience and expertise. Students will conduct their research in a university environment using state-of-the-art techniques and facilities. The current research emphases of the department are

• Cell and molecular biology is supported by major research facilities that include real-time PCR instruments, a DNA WAVE HPLC, a Hitachi transmission electron microscope and an Olympus Fluoview 1000 confocal microscope and other advanced imaging systems.
• Biology, ecology and evolution takes advantage of unique field study sites that include an alpine research station on Mt. Evans in the Arapaho National Forest and collaborative research opportunities with the Denver Botanic Gardens.

Career opportunities
A student who completes the MS degree is in a strong position to pursue a range of postgraduate opportunities, including a career in biotech, academic or government lab or agency, or continued studies in a professional or PhD program. The doctoral degree carries the credential for a professional career in research or academics.

Doctor of Philosophy in Biological Sciences with a Concentration in Biology, Ecology and Evolution

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

Prerequisites:
• Students with an undergraduate major in chemistry, physics or mathematics and minimal preparation in biological sciences also will be considered but may be required to take undergraduate courses when the prerequisites are lacking. Course prerequisites include: one year of general chemistry, one year of calculus (recommended), one year of physics, two years of biology and one year of organic chemistry.

Standardized Test Scores
• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based): 80
• Minimum TOEFL Score (Paper-based): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169
English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Doctor of Philosophy in Biological Sciences with a Concentration in Cell and Molecular Biology

Degree and GPA Requirements

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

Prerequisites:

- Students with an undergraduate major in chemistry, physics or mathematics and minimal preparation in biological sciences also will be considered but may be required to take undergraduate courses when the prerequisites are lacking. Course prerequisites include: one year of general chemistry, one year of calculus (recommended), one year of physics, two years of biology and one year of organic chemistry.

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The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Biological Sciences with a Concentration in Biology, Ecology and Evolution

Degree and GPA Requirements

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

Standardized Test Scores

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Biological Sciences with a Concentration in Cell and Molecular Biology

Degree and GPA Requirements
• Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

Standardized Test Scores
• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Graduate studies in the department of biological sciences provide graduate students with a set of structured core classes that establish a strong foundation of basic knowledge in cell and molecular biology or ecology and evolution and that allow the knowledge to be built upon in subsequent specialized courses and independent research. Research areas are usually linked to the interest of the supervising faculty member. The department's current research strengths center around the two areas: cell and molecular biology (biophysics, neuroscience, neuroendocrinology, cell signaling and physiology, developmental biology, aging, molecular forensics and molecular evolution) and ecology and evolution (biogeochemistry, conservation biology, restoration ecology, molecular evolution). To complete research commitments, MS students generally work with a major professor of choice in the laboratory and/or field for about two years, while PhD students generally work for five years.

DOCTOR OF PHILOSOPHY IN BIOLOGICAL SCIENCES WITH A CONCENTRATION IN BIOLOGY, ECOLOGY AND EVOLUTION

Degree Requirements
The major requirements for completion of the PhD degree are 90 quarter hours of graduate course work and research credit, completion of all candidacy exams, and successful defense of the PhD dissertation. Graduate Students must maintain a minimum GPA of 3.0 and make adequate progress on research as assessed by their adviser and dissertation committee.

Coursework Requirements
The course work includes the following graduate core curriculum:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 4220</td>
<td>Grad Sem: Ecology &amp; Evolution</td>
<td></td>
</tr>
<tr>
<td>BIOL 4091</td>
<td>Ecology and Evolution Research Methods</td>
<td></td>
</tr>
<tr>
<td>BIOL 4090</td>
<td>Biostatistics</td>
<td></td>
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<tr>
<td>or BIOL 4085</td>
<td>Accelerated Biostatistics</td>
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</tr>
</tbody>
</table>
Non-coursework requirements

Additional requirements are attendance at departmental seminars, passing performance in the qualifying examination and the research proposal examination, presentation of one departmental seminar per year, completion of a research dissertation of publishable quality, and successful oral defense of the dissertation. PhD students are required to pass both a qualifying exam and research proposal exam to advance to candidacy.

Up to 10 quarter hours of graduate credit (or a blanket transfer of 45 quarter hours from a previous master's program) may be accepted as transfer credit with approval of the departmental graduate committee and the Office of Graduate Studies.

DOCTOR OF PHILOSOPHY IN BIOLOGICAL SCIENCES WITH A CONCENTRATION IN CELL AND MOLECULAR BIOLOGY

Degree Requirements

The major requirements for completion of the PhD degree are 90 quarter hours of graduate course work and research credit, completion of all candidacy exams, and successful defense of the PhD dissertation. Graduate Students must maintain a minimum GPA of 3.0 and make adequate progress on research as assessed by their adviser and dissertation committee.

Coursework Requirements

The course work includes the 20-credit graduate core curriculum:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 4211</td>
<td>Advanced Cell Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL 4212</td>
<td>Advanced Molecular Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL 4213</td>
<td>Advanced Cell Signaling</td>
<td></td>
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<tr>
<td>BIOL 4310</td>
<td>Foundations in Literature: Cell and Molecular Biology (3 terms required)</td>
<td></td>
</tr>
<tr>
<td>BIOL 4150</td>
<td>Special Topics in Adv Biology</td>
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<tr>
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<tr>
<td>BIOL 4231</td>
<td>Responsible Conduct in Rsrch</td>
<td></td>
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<tr>
<td>BIOL 5991</td>
<td>Independent Study (*)</td>
<td></td>
</tr>
<tr>
<td>or BIOL 5995</td>
<td>Independent Research PhD</td>
<td></td>
</tr>
</tbody>
</table>

• Courses that the dissertation committee judges to complement the student’s major field also may be used.

TOTAL CREDITS 0

Non-coursework requirements

Additional requirements are attendance at departmental seminars, passing performance in the qualifying examination and the research proposal examination, presentation of one departmental seminar per year, completion of a research dissertation of publishable quality, and successful oral defense of the dissertation. PhD students are required to pass both a qualifying exam and research proposal exam to advance to candidacy.

Up to 10 quarter hours of graduate credit (or a blanket transfer of 45 quarter hours from a previous master's program) may be accepted as transfer credit with approval of the departmental graduate committee and the Office of Graduate Studies.

MASTER OF SCIENCE IN BIOLOGICAL SCIENCES WITH A CONCENTRATION IN BIOLOGY, ECOLOGY AND EVOLUTION

Degree Requirements

The major requirements for completion of the MS degree are 45 quarter hours of course work and research credit, and successful defense of the MS thesis. Graduate Students must maintain a minimum GPA of 3.0 and make adequate progress on research as assessed by the major adviser and thesis committee.
Coursework Requirements
The course work includes the following graduate core curriculum:

<table>
<thead>
<tr>
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</tr>
<tr>
<td>BIOL 4991</td>
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<td></td>
</tr>
<tr>
<td>or BIOL 4995</td>
<td>Independent Research</td>
<td></td>
</tr>
</tbody>
</table>

* Courses the thesis committee judges to complement the student’s major field also may be used.

Non-coursework Requirements
Additional requirements are attendance at all departmental seminars, a thesis based on a research project approved by the thesis committee, and a successful oral defense of the thesis.

MASTER OF SCIENCE IN BIOLOGICAL SCIENCES WITH A CONCENTRATION IN CELL AND MOLECULAR BIOLOGY

Degree Requirements
The major requirements for completion of the MS degree are 45 quarter hours of course work and research credit, and successful defense of the MS thesis. Graduate Students must maintain a minimum GPA of 3.0 and make adequate progress on research as assessed by the major adviser and thesis committee.

Coursework Requirements
The course work includes the 16-credit graduate core curriculum:

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<tr>
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<td>Foundations in Literature: Cell and Molecular Biology (3 terms required)</td>
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<td>BIOL 4231</td>
<td>Responsible Conduct in Rsrch</td>
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<td>BIOL 4090</td>
<td>Biostatistics</td>
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<td>or BIOL 4085</td>
<td>Accelerated Biostatistics</td>
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<td>BIOL 4212</td>
<td>Advanced Molecular Biology</td>
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<td>BIOL 4213</td>
<td>Advanced Cell Signaling</td>
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<td>BIOL 4991</td>
<td>Independent Study (*)</td>
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<td>or BIOL 4995</td>
<td>Independent Research</td>
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* Courses the thesis committee judges to complement the student’s major field also may be used.

Non-coursework requirements
Additional requirements are attendance at all departmental seminars, a thesis based on a research project approved by the thesis committee and a successful oral defense of the thesis.

Courses

**BIOL 3010 Evolution and Speciation (4 Credits)**
Theories and supporting evidence explaining evolution from origin of universe to complex interrelationships of species. Prerequisites: BIOL 1010, BIOL 1011 and BIOL 2510.

**BIOL 3020 Aquatic Ecology (4 Credits)**
An introduction to the ecology of fresh-water and marine organisms including aquatic adaptations, community organization, food chains, nutrient cycling and man's impact on aquatic ecosystems. Prerequisite: BIOL 2010 or instructor's permission.
BIOL 3030 Alpine Ecology (4 Credits)
Ecology of alpine and subalpine regions of Colorado; organization and distribution of communities and populations, succession, energy flow, nutrient cycling, population adaptations in life-history physiology, behavior and morphology. Prerequisite: BIOL 2100.

BIOL 3035 Invasive Species Ecology (4 Credits)
This course investigates those plants and animal species that have dramatically expanded their ranges and cause ecological harm. Topics covered include the mechanisms of ecological impacts across the globe, how invasive species are used to test basic ecological theory, the application of this research for managing real species, and related issues such as the debate within the scientific community about the term "invasive." We use a case-study approach, and students have the opportunity to go into the field as a class to observe the real invasions and learn sampling methods.

BIOL 3044 Coral Reef Ecology (3 Credits)
Ecology of coral reefs; organization and distribution of reefs; review of reef organisms and their interactions with each other and their physical environment; threats to coral reef reef conservation. Prerequisite: (BIOL 2100 or BIOL 2105) OR (GEOG 1201, GEOG 1202, and GEOG 1203).

BIOL 3045 Coral Reef Ecology Lab (1 Credit)
Ecology of coral reefs laboratory to supplement lecture material; travel to the Caribbean over spring break to observe coral reefs firsthand; introduction to research methods. SCUBA certification and permission of instructor required. A travel and dive fee is associated with this course.

BIOL 3055 Ecology of the Rockies (4 Credits)
A week in residence at the Mt. Evans Field Station prior to the start of fall quarter includes field projects dealing with ecology and environmental issues. On campus classes involve data analysis and interpretation and formal scientific communication. Themes include terrestrial and aquatic ecosystems, taxonomic groups ranging from conifer stands to aquatic insects and mountain goats. Lab fee associated with this course. Prerequisite: BIOL 2100 or permission of instructor.

BIOL 3060 Tropical Ecology (3 Credits)
Biological composition of tropical ecosystems; biodiversity, biogeochemistry; causes and biological consequences of tropical deforestation; ecologically based approaches toward sustainable tropical forest use. Includes laboratory. Prerequisite: BIOL 2100.

BIOL 3070 Ecological Field Methods (4 Credits)
Series of field exercises for students to learn principles and procedures of field methodology, data analysis and technical writing in ecology; problems drawn from population, community and ecosystem ecology. Lab fee associated with this course. Prerequisite: BIOL 2100.

BIOL 3085 Insect Ecology (4 Credits)
A general introduction to insect biology and the science of entomology. Arthropods are the most diverse group of animals on Earth and insects account for more than half of all known living organisms. This course explores the biodiversity of insects on Earth, insect morphology and physiology. The evolutionary history and taxonomy of key orders of insects is emphasized as well as the importance of insects to our everyday lives. Prerequisites: BIOL 1010, BIOL 1011, and BIOL 2100.

BIOL 3090 Microbial Ecology (4 Credits)
Interactions among microorganisms and their environment. Impact of ecological principles on microbial diseases, pollutant degradation, nutrient cycles and global change. Prerequisites: BIOL 1010, BIOL 1020, AND BIOL 2100.

BIOL 3100 Histology: Medical Microanatomy (4 Credits)
Microscopic organization of tissues and organs; correlation of organization of organs with functions and pathologies; emphasis on mammalian systems. Includes laboratory. Lab fee associated with this course. Prerequisite: BIOL 2100.

BIOL 3110 Special Topics: Biology (1-5 Credits)
Topics of special interest to teaching/research faculty of department presented as needed to complement and expand existing curriculum. May be repeated for credit. PREREQUISITES: BIOL 1010.

BIOL 3120 General Microbiology (4 Credits)
Fundamental principles of microorganisms in the world and in disease; role of bacteria in biological phenomena. Includes laboratory. Lab fee associated with this course. Prerequisite: BIOL 2100.

BIOL 3130 Molecular Evolution (4 Credits)
Evolution of macromolecules and reconstruction of evolutionary history of genes and organisms. Prerequisite: BIOL 2510 or permission of instructor.

BIOL 3135 Topics in Cell Motility (4 Credits)
Fibrous elements of the cytoskeleton and associated proteins and their role in cellular motility is examined in detail. The physical forces involved in cellular motile function is applied in understanding cellular motile behavior. Prerequisite: BIOL 2110.

BIOL 3150 Intracellular Dynamics (4 Credits)
Focuses on spatial and temporal control of intracellular processes with an emphasis on neuronal and endocrine cells. Topics include vesicular traffic, protein targeting, dynamics and spatial organization of signaling complexes. Emphasis on modern techniques of cell and molecular biology with examples from primary literature. Prerequisite: BIOL 2120.

BIOL 3160 Biophysics: Ion Channels & Disease (4 Credits)
Examines ion channel structure and function and the ways in which this information provides insight into human disease. The focus is on the use of biophysical techniques in combination with molecular and genetic analysis of channel genes. General Physics recommended. Prerequisite: BIOL 2100.
BIOL 3200 Invertebrate Evolution (4 Credits)
Introduction to remarkable diversity of invertebrate life, both in terms of numbers of species, novel body plan and physiological adaptations. Includes laboratory. Prerequisites: BIOL 1010, BIOL 1011.

BIOL 3230 Nutrition (3 Credits)
Investigation of metabolism, all nutrients and various applications of nutrition to sports and healthy living. Prerequisite: BIOL 3250.

BIOL 3250 Human Physiology (5 Credits)
Functional relationships of human organ systems with coordinated laboratory activities and experiments that demonstrate and test physiological principles. Lab fee associated with this course. Prerequisites: BIOL 1010.

BIOL 3260 Nutrition (3 Credits)
From physiological and biochemical perspectives, this course explores the relationships of energy metabolism, nutrients, vitamins and minerals to human health. Prerequisite: BIOL 3250.

BIOL 3300 Biodiversity-Flowering Plants (4 Credits)
Basic techniques and principles of systematics with application to the origin, evolution, radiation, classification and biodiversity of flowering plants (angiosperms). Lab fee associated with this course. Prerequisites: (BIOL 1010 AND BIOL 1011) or (GEOG 1201, GEOG 1202, AND GEOG 1203), OR instructor’s permission.

BIOL 3400 Ornithology (4 Credits)
Biology of birds with emphasis on ecology and behavior; field and laboratory work to stress bird identification and ecological relationships of birds. Lab fee associated with this course. Prerequisites: BIOL 1010, BIOL 1011.

BIOL 3410 Animal Behavior (4 Credits)
This class examines animal behavior from an evolutionary and ecological perspective. The course provides the background needed to understand behavioral evolution, including a focus on the inheritance of behavior, natural selection, sexual selection, and kin selection. This class studies the evolution of a variety of behaviors, including communication and displays, mate choice, parental care, cooperation, mating systems, social behavior, habitat selection, foraging, and anti-predator behavior. The emphasis is on theoretical principles, design of experiments, and interpretation of data. Prerequisites: BIOL 1010 and BIOL 1011, AND BIOL 2010. RECOMMENDED PREREQUISITE: BIOL 2090.

BIOL 3560 Molecular Biology Laboratory (4 Credits)
Laboratory based course that covers techniques in gene excision, cloning and reinsertion and gene sequencing. Lab fee associated with this course. Prerequisite: BIOL 2510, or permission of instructor.

BIOL 3570 Proteins in Biological Systems (3 Credits)
Proteins considered in their biological setting; protein synthesis and degradation; survey of protein functions in vivo; evolution of proteins; introduction to protein biotechnology. Prerequisites: BIOL 2120, CHEM 2451, CHEM 2452 and CHEM 2453.

BIOL 3610 Developmental Biology (4 Credits)
Processes and mechanisms of development, exemplified by higher animal embryogenesis, with consideration of microbial model systems. Prerequisite: BIOL 2510 and BIOL 2120.

BIOL 3620 Vertebrate Embryology (4 Credits)
Development processes in placental mammals; analysis of vertebrate cyto-differentiation and morphogenesis. Laboratory on embryonic anatomy of amphibians, birds and mammals. Prerequisites: BIOL 1010, BIOL 1011 and BIOL 2120. Corequisites: BIOL 1010.

BIOL 3630 Cell Biology of Development (4 Credits)
Every organism has a stereotypical shape, but how does this shape arise? This course examines the cellular and molecular mechanisms that direct the forming of body and tissue shape. Prerequisite: BIOL 2120.

BIOL 3640 Introductory Neurobiology (4 Credits)
Organization and function of vertebrate central nervous system; nature of action potential, biochemistry of neurotransmitters, neuropeptides, functional anatomy of nervous system, phylogeny of nervous system. Prerequisite: BIOL 2120.

BIOL 3641 Systems Neuroscience (4 Credits)
Structure and function of the brain and spinal cord, emphasis on functional systems including sensory perception, motor control and consciousness. Prerequisite: BIOL 3640.

BIOL 3642 Neuropharmacology (4 Credits)
How psychoactive drugs exert their effects on the nervous system; drugs of abuse and drugs used in the treatment of psychotic and neurodegenerative disorders. Prerequisite: BIOL 2120. Recommended prerequisites: BIOL 3640.

BIOL 3643 Developmental Neurobiology (4 Credits)
This course investigates the mechanisms involved in the maturation of neurons, and signals that direct neurons to their proper position in the central nervous system. Prerequisite: BIOL 3640.

BIOL 3644 Neuromuscular Pathophysiology (4 Credits)
Cellular and molecular basis for normal nerve and muscle functions and the alteration of these functions by toxins, trauma and diseases of the brain, nerves and muscles; how specific insults produce clinical symptoms and pathology. Prerequisite: BIOL 2120. Recommended Prerequisite: BIOL 3640 or BIOL 3250.
BIOL 3646 Seminar: Cognitive Neuroscience (2 Credits)
This seminar is the capstone course for the neuroscience portion of the cognitive neuroscience program. Seminar topics include but are not limited to neurological disorders, model systems in neuroscience and sensory systems.

BIOL 3650 Endocrinology (4 Credits)
Mechanisms of hormone action, evolution of vertebrate endocrine systems, analysis of function integration of hormonal responses in maintenance of homeostasis. Prerequisite: BIOL 2120.

BIOL 3655 Molecular Neuroendocrinology (4 Credits)
Advanced laboratory course that uses anatomical/immunological, biochemical and molecular approaches to analyze neuroendocrine pathways in the hypothalamus/pituitary system. Lab fee associated with this course. Prerequisites: BIOL 3650 and instructor's permission.

BIOL 3670 Molecular Immunology (4 Credits)
The ability to distinguish self from non-self is crucial to all organisms. In humans Organs, cells and other higher animals, this task fall to the immune system. Suppression of this system is key to numerous pathogenic viruses including Ebola and human immunodeficiency virus. The failure to adequately regulate immune response underlies allergic reactions, arthritis and diabetes. This course will introduce students to the organs, cells and molecules that underlie mammalian immune response; immunogenetics and the fundamental mechanisms of cell mediated and humoral immune response; and the relationship of immune system to human disease. Prerequisite: BIOL 2510.

BIOL 3680 Advanced Techniques in Cell Biology (4 Credits)
Advanced laboratory course that covers current techniques used in cell biology research. Lab fee associated with this course. Prerequisite: BIOL 2120.

BIOL 3700 Topics in Ecology (1-4 Credits)
Topics vary; may include plant, animal, biochemical, alpine or aquatic; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: one quarter of undergraduate ecology and/or instructor's permission.

BIOL 3701 Topics in Genetics (1-4 Credits)
Topics vary; may include genetic methods, molecular genetics, human genetics, chromosomes or population genetics; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: varies with topic and instructor; instructor's permission usually required.

BIOL 3702 Advanced Topics in Regulatory Biology (1-4 Credits)
Topics vary; may include endocrinology, physiology or immunology; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: varies with topic and instructor; instructor's permission usually required.

BIOL 3703 Advanced Topics in Developmental Biology (1-4 Credits)
Topics vary; may include gene expression in development, developmental immunogenetics, developmental biochemistry or aging; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: instructor's permission.

BIOL 3704 Advanced Topics in Cell Biology (1-4 Credits)
Topics vary; may include supramolecular structure, microscopy, membranes and techniques. May be repeated for credit. Taught from original literature. Prerequisites: BIOL 2120.

BIOL 3705 Advanced Topics in Molecular Biology (1-4 Credits)
Topics vary, but may include biochemistry, supramolecular structure and function, molecular genetics, membrane biology. May be taken more than once for credit. Taught from original literature. Prerequisite: varies with course and instructor; instructor's permission usually required.

BIOL 3706 Topics in Evolution (1-4 Credits)
Topics vary, but may include molecular evolution, plant evolution and animal evolution. Prerequisite: BIOL 2120 and BIOL 2510.

BIOL 3707 Advanced Topics in Conservation Biology (1-4 Credits)
BIOL 3800 Human Molecular Biology (4 Credits)
Medical Genetics is the 24th member of the American Board of Medical Specialties. This course will introduce students to the fundamentals of molecular biology with an emphasis on understanding of how the field is applied in the context of medical diagnostics, personalized/precision medicine and other commercial applications. Students will be introduced to published research reports and provided with opportunities to critically examine the application of molecular biology to central questions in such areas as oncology, inherited diseases and genetically engineered organisms. Prerequisite: BIOL 2510.

BIOL 3910 Viruses & Infectious Human Diseases (4 Credits)
From sexually transmitted viruses to bacterial pneumonia, infectious pathogens are the number one threat to human health. This course will introduce students to prions, viruses and bacterial pathogens with an emphasis on those commonly encountered in clinical medical practice. Through the use of technical/scientific research journals students will be encouraged to investigate the etiology, pathogenesis and treatment of human infectious disease with an emphasis on the clinical, molecular diagnostic and therapeutic aspects of the disease. Prerequisite: BIOL 2510. Recommended prerequisite: BIOL 3800.

BIOL 3950 Undergraduate Research (1-10 Credits)
Participation in faculty research programs by agreement between student and faculty member. Maximum of 5 quarter hours of BIOL 3950 and/or BIOL 3991 may be applied to the 45-quarter-hour requirement for a major in biological sciences.

BIOL 3991 Independent Study (1-10 Credits)
Topic in biology studied under faculty supervision. Student's responsibility to identify faculty supervisor before registering for class. Maximum of 5 quarter hours of BIOL 3991 and/or BIOL 3950 may be applied toward the 45-quarter-hour requirement for a major in biological sciences.
BIOL 3992 Directed Study (1-10 Credits)
BIOL 3995 Independent Research (1-10 Credits)
BIOL 4010 Cellular Motile Function (2 Credits)
Current literature in area of cell motility; role of cytoskeletal elements as motile agents.
BIOL 4020 Microbial Genetic Model Syst (2 Credits)
BIOL 4030 Current Concepts in Evolution (2 Credits)
New ideas and theories in field of evolutionary biology.
BIOL 4040 Current Concepts-Animal Phys (2 Credits)
Selected topics in animal physiology.
BIOL 4050 Topics in Plant Biology (2 Credits)
Varying topics; areas of plant-animal interactions, co-evolution, plant ecology, plant biochemistry/physiology.
BIOL 4060 Gene Expression-Development (2 Credits)
Varying aspects of gene control in developing systems, a different aspect each time course is offered.
BIOL 4070 Hormone-Receptor Interaction (2 Credits)
Series of lectures; understanding molecular, cellular basis of hormone action; experimental analysis of binding of hormones with their receptors; structure-function relationships of hormone-receptor interactions; nature and action of mediators generated by hormone-receptor interaction.
BIOL 4080 Biological Membranes (2 Credits)
BIOL 4085 Accelerated Biostatistics (2 Credits)
This is an accelerated online statistics course for graduate students in Biology. Basic probability and hypothesis testing is the foundation of teaching applied statistics, including simple statistics (t-tests, F-tests, and chi square) and more advanced procedures (regression, correlation, analysis of variance). In addition, students learn more complex tools (multiple regression, multi-classification ANOVA, Student-Newman-Keuls tests), including non-parametric Tests (Mann-Whitney U, Sign test, Wilcoxon Rank Sum).
BIOL 4090 Biostatistics (4 Credits)
Statistic on biological research; emphasis on procedures, applications of regression, correlation, analysis of variance, and nonparametric tests. Include instruction on computer aided (Mac and PC) statistical analysis and presentation of results. Cross listed with BIOL 2090.
BIOL 4091 Ecology and Evolution Research Methods (1 Credit)
This course builds upon the concepts in BIOL 4090, Biostatistics, by covering in more detail and specificity issues involved in designing one's experiment to adequately test the hypotheses or describe the data of interest. Students bring and discuss their specific research projects as case studies to maximize the utility of the course.
BIOL 4100 Microbial Structure & Function (2 Credits)
BIOL 4110 Essentials of Immunology (2 Credits)
BIOL 4120 Human Chromosomes and Mutagenesis (2 Credits)
BIOL 4130 Microevolution (2 Credits)
Microevolution, the change of gene frequencies within populations; examination of forces that cause it, evaluation of its contribution to process of speciation.
BIOL 4140 Protein Biosynthesis (2 Credits)
Processes of protein synthesis in cells; emphasis on posttranslational modifications that occur to secretory proteins prior to secretion.
BIOL 4150 Special Topics in Adv Biology (1-4 Credits)
Topics of special interests to teaching and research faculty presented as needed to complement and expand existing curriculum. May be taken more than once for credit.
BIOL 4155 Leadership in Science (1 Credit)
This course addresses the basic leadership skills necessary to succeed in the dynamic professional environment of the biomedical sciences. Topics covered include leadership strategies and professional negotiation, conflict resolution, and team-building. Students will determine leadership strengths and weaknesses and use case studies to strengthen their leadership practices.
BIOL 4190 Biometry (3 Credits)
BIOL 4210 Grad Sem: Cell Biology (2 Credits)
A series of student presentations focusing on varied topics involving cell biology. May be taken more than once for credit.
BIOL 4211 Advanced Cell Biology (3 Credits)
Students study the subcellular structure and organization of the cell. Organelle structure and function are examined in detail as well as biogenesis and degradation (turnover) of these subcellular structures. Cytoskeletal dynamics are also a major focus. Specific topics covered include cell division, macromolecular synthesis, membrane transport, cell-matrix and cell-cell communication, cell migration, cell differentiation, and mechanisms of cell death. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students. Cross listed with BIOP 4150.
BIOL 4212 Advanced Molecular Biology (3 Credits)
This course focuses on a detailed analysis of regulated gene expression. The topics include lectures and readings of relevant literature in areas covering gene regulation at multiple steps, including transcription, RNA processing, and translation. In particular, the logic of experimental design and data analysis are emphasized.

BIOL 4213 Advanced Cell Signaling (3 Credits)
Students in this course investigate a large array of cellular signal transduction cascades. Specific signaling pathways to be covered include growth factor receptors, cytokine receptors, steroid receptors, integrin-extracellular matrix, heterotrimeric G-protein coupled receptors, monomeric G-proteins, transcription factors, lipids, cytoskeleton, cell cycle, and apoptosis. Each of these topics is examined in the context of normal cell physiology as well as their roles in specific disease processes. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students.

BIOL 4220 Grad Sem: Ecology & Evolution (2 Credits)
A series of student presentations focusing on varied topics involving ecology and evolution. May be taken more than once for credit.

BIOL 4230 Grad Sem: Molecular Biology (2 Credits)
A series of student presentations focusing on varied topics involving ecology and evolution. May be taken more than once for credit.

BIOL 4231 Responsible Conduct in Rsrch (1 Credit)
This course covers several topics regarding guidelines for ethical practices in research. Topics include: data ownership, conflict of interest and commitments, human subjects, animal welfare, research misconduct, authorship, mentoring, peer review, and collaboration. The course includes an online training component and meets one hour each week to discuss these topics.

BIOL 4300 Fall Graduate Reviews in Biol (1 Credit)
Students participate in a required review session that precedes selected departmental seminar presentations by faculty and outside speakers, and participate in a discussion session with the seminar speaker.

BIOL 4301 Wntr Graduate Reviews in Biol (1 Credit)
Students participate in a required review session that precedes selected departmental seminar presentations by faculty and outside speakers, and participate in a discussion session with the seminar speaker.

BIOL 4302 Spng Graduate Reviews in Biol (1 Credit)
Students participate in a required review session that precedes selected departmental seminar presentations by faculty and outside speakers, and participate in a discussion session with the seminar speaker.

BIOL 4303 Reviews in Biology (1 Credit)
The experience is built around the departmental seminar series offered every quarter.

BIOL 4310 Foundations in Literature: Cell and Molecular Biology (2 Credits)
Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Cell and Molecular Biology.

BIOL 4311 Wntr Selected Top: Reg Bio (2 Credits)
Students participate in a weekly discussion group that focus on recent papers from the primary literature in regulatory biology.

BIOL 4312 Spng Selected Top: Reg Bio (2 Credits)
Students participate in a weekly discussion group that focus on recent papers from the primary literature in regulatory biology.

BIOL 4322 Selected Tpcs: Molecular Biol (2 Credits)
The syllabus for the Selected Topics series varies each quarter. Each quarter a faculty member sets the theme for the quarter and identify a set of review articles to introduce the topic. The instructor leads the first session and provide important background material on the topic. Students select a paper from the primary literature to present to the class on the topic designated for the quarter.

BIOL 4330 Foundations in Literature: Ecology (2 Credits)
Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Ecology.

BIOL 4331 Foundations in Literature: Evolution (2 Credits)
Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Evolution.

BIOL 4332 Foundations in Literature: Conservation Biology (2 Credits)
Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Conservation Biology.

BIOL 4440 Current Concepts-Animal Phys (2 Credits)

BIOL 4610 Developmental Biology (4 Credits)
The processes and mechanisms of development, exemplified by higher animal embryogenesis, with consideration of simpler model systems. Laboratory sessions use live materials; course finishes with individual projects. Prerequisite: BIOL 2510 or equivalent.

BIOL 4700 Human Molecular Biology (4 Credits)
Molecular basis of heredity and genetic control, using in-vitro systems and microbial and eukaryotic models; molecular basis of heredity and genetic regulation considering in-vitro systems as well as prokaryotic and eukaryotic models. Restricted to MBA Bioenterprize students.
BIOL 4710 Endocrinology: Chemical Communication Systems (4 Credits)
Mechanisms of hormone action, evolution of vertebrate endocrine systems, analysis of function integration of hormonal responses in maintenance of homeostasis. Restricted to MBA Bioenterprize students.

BIOL 4720 Neuropharmacology (4 Credits)
How psychoactive drugs exert their effects on the nervous system; drugs of abuse and drugs used in the treatment of psychotic and neurodegenerative disorders. Restricted to MBA Bioenterprize students.

BIOL 4730 Molecular Lab Techniques (4 Credits)
Techniques in gene excision, cloning and reinserterion; gene sequencing. Restricted to MBA Bioenterprize students.

BIOL 4731 Cell and Molecular Techniques (4 Credits)
Analysis of neuroendocrine systems using a multidisciplinary approach. Anatomical/immunological, biochemical and molecular approaches used to analyze neuroendocrine pathways in the hypothalamus/pituitary system. Restricted to MBA Bioenterprize students.

BIOL 4740 Microbiology (4 Credits)
Fundamental principles; role of bacteriology in biological phenomena. Includes laboratory. Restricted to MBA Bioenterprize students.

BIOL 4750 Immunology (4 Credits)
Organs, cells and molecules that underlie mammalian immune response; relationship of immune system to disease. Restricted to MBA Bioenterprize students.

BIOL 4760 Advanced Cell Biology (4 Credits)
Focuses on spatial and temporal control of intracellular processes with an emphasis on neuronal and endocrine cells. Topics include vesicular traffic, protein targeting, dynamics and spatial organization of signaling complexes. Emphasis on modern techniques of cell and molecular biology with examples from primary literature. Restricted to MBA Bioenterprize students.

BIOL 4850 Laboratory Skills for Forensic Serological Analysis (5 Credits)
This course is designed to provide students with two major educational skills. First, is a thorough understanding of the fundamental science behind the identification and serological analysis of biological evidence in a forensic context. Second, is a rigorously developed set of practical hands-on proficiencies with the major commercial assay systems used by forensic laboratories for the identification of blood, saliva, semen, and other biological material with potential probative value to a criminal investigation.

BIOL 4860 Laboratory Skills for Forensic Genetic Analysis (4 Credits)
This course is designed to provide students with two major educational skills. First, is a thorough understanding of the fundamental science behind the molecular genetic analysis of biological evidence in a forensic context. Second, is a rigorously developed set of practical hands-on proficiencies with the major commercial assay systems and software used by forensic laboratories for the determination and analysis of DNA profiles.

BIOL 4870 Medical Ethics (4 Credits)
This course presents knowledge and discussion of ethical issues that arise from advances in the biomedical sciences and medicine. Several specific ethical issues and policies related to methodologies and procedures, emerging medical technologies, treatment decisions, doctor-patient relationship, informed consent, medical experimentation/clinical research, and health care reform.

BIOL 4880 Capstone in Biomedical Sciences (4 Credits)
This is the capstone course for students enrolled in the Professional Science Master’s program. In this course, students integrate advanced knowledge in science and math along with courses taken outside traditional science and math courses as their electives. This course incorporates lectures, guest speakers, and class discussions focusing on current issues or concerns in the chosen concentration. PSM students only. Requires instructor approval.

BIOL 4991 Independent Study (1-17 Credits)
BIOL 4992 Directed Study (1-10 Credits)
BIOL 4995 Independent Research (1-8 Credits)
BIOL 5991 Independent Study (1-17 Credits)
BIOL 5995 Independent Research PhD (1-8 Credits)

Chemistry and Biochemistry

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Why study chemistry at the University of Denver?
Consider the advantages:
• Excellent, research-active faculty
• Small classes, personal attention
• First-rate teaching facilities
• Modern, state-of-the-art equipment

At the University of Denver, we offer the training and activities to energize your graduate experience and help you develop into a professional scientist.

The Department of Chemistry and Biochemistry at the University of Denver offers programs leading to MA, MS or PhD degree in chemistry.

Our faculty members actively involve students in research programs supported with more than $1.5 million in annual funding from federal agencies, state governments and private industries. In our programs, you will enjoy the benefits of a friendly, personalized learning environment that offers nationally competitive and extremely productive research opportunities.

The Department of Chemistry and Biochemistry has much to offer a graduate student: close and frequent student-faculty interaction; an integrated program of courses; and excellent equipment and facilities including 500 MHz NMR, single-crystal X-ray diffraction, multiple EPR spectrometers, ICP-mass spectrometer, Raman microscope, photon counting lifetime fluorescence, nanosecond laser flash photolysis, aerosol particle monitoring spectrometer, and fluorescence microscopy.

Faculty research interests encompass biophysical, organic, analytical and environmental chemistry, and biochemistry. The department’s relatively small size allows a broader, more interdisciplinary approach than in large departments. Our instructional format merges traditional disciplines into interdisciplinary courses that more closely reflect current trends in chemistry.

The department of Chemistry and Biochemistry also participates in an interdepartmental PhD program in Molecular and Cellular Biophysics at the University of Denver. See the molecular and cellular biophysics bulletin (p. 660) for more specific details.

**Doctor of Philosophy in Chemistry**

**Degree and GPA Requirements**

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

**Prerequisites:**

• Applicants must earn and submit proof of earning the equivalent of a baccalaureate degree in chemistry, biochemistry or a related field from a regionally accredited institution prior to beginning graduate coursework at DU.

**Standardized Test Scores**

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842. There is no minimum GRE score; the GRE is only one of multiple factors considered.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

**Master of Arts in Chemistry**

**Degree and GPA Requirements**

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

Standardized Test Scores
• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

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

Prerequisites:
• Applicants must earn and submit proof of earning the equivalent of a baccalaureate degree in chemistry, biochemistry or a related field from a regionally accredited institution prior to beginning graduate coursework at DU.

Standardized Test Scores
• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842. There is no minimum GRE score; the GRE is only one of multiple factors considered.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Doctor of Philosophy in Chemistry
The PhD is the highest degree awarded and is intended for students seeking a career in scientific research. The ultimate aim of this degree is to train a scientist who can independently design and supervise a research project. To facilitate the educational process, each student has an advisory committee that functions to both advise the student and monitor the student's progress.
Degree Requirements
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Required Courses</td>
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<tr>
<td>Chemical systems (three-quarter sequence)</td>
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<tr>
<td>CHEM 3110</td>
<td>Chemical Systems I</td>
<td>3</td>
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<td>CHEM 3120</td>
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<td>Molecular structure and energetics (two-quarter sequence)</td>
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<td>CHEM 3320</td>
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<tr>
<td>Biochemistry (two-quarter sequence)</td>
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<tr>
<td>CHEM 3831</td>
<td>Advanced Protein Biochemistry</td>
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<tr>
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<td>Topics in Biochemistry</td>
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<tr>
<td>CHEM 3220</td>
<td>Advanced Analytical Chemistry</td>
<td>3</td>
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<tr>
<td>Independent research (repeats allowed)</td>
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<tr>
<td>CHEM 4995</td>
<td>Independent Research</td>
<td>1-10</td>
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<tr>
<td>Additional Coursework</td>
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<tr>
<td>Advanced topics</td>
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<td>CHEM 4XXX or others if pre-approved by the graduate committee</td>
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<tr>
<td>Total Credits</td>
<td>90</td>
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Minimum credits required for degree: 90 (of which a minimum of 75 hours must be earned at the University of Denver)

Because a PhD in chemistry is primarily a degree in which competence in research is learned and demonstrated, a large percentage of these hours are earned as credit for research (CHEM 4995 Independent Research). A minimum of 70 graduate level quarter hours must be in CHEM courses; a maximum of 20 quarter hours may be outside of CHEM courses, but must remain within natural sciences (e.g., courses with BIOL, MATH, GEOG and/or PHYS prefixes). The formal or classroom course requirements are the same as those for the MS degree.

The graduate core curriculum must be completed with a GPA of 3.0 or better.

Non-coursework Requirements

• Qualifying Examinations

All students in the PhD program are required to take a qualifying examination at the end of the spring quarter in their first academic year. This examination covers the material presented in the core curriculum, with each course contributing 100 points. To qualify for continuance in the program, the student must score at least 500 (out of 800 points). The faculty will meet to discuss exam results and decide whether the candidate will continue in the PhD program.

• Cumulative Examinations

The PhD candidate must complete the cumulative examination requirement by the seventh quarter in residence. These examinations are prepared from topics appearing in the current literature and fundamental materials found in review articles.

• Research Proposal Examination

By the end of the eighth quarter in residence, the student should give an oral presentation of a scholarly proposal developed by the student concerning a topic that is within the scope of the adviser’s research program. It is possible to propose a topic that is unrelated to the research program, but only with the prior approval of the adviser. After the public presentation, the student will defend the proposal before a committee of four faculty members (the advisory committee and one additional member). A written version of the proposal will also be required one week prior to the public presentation.

• Dissertation

A dissertation of publishable quality based on the student’s original research must be completed. A summary of the dissertation is presented in a public seminar and later defended in a private oral examination. The dissertation examination committee will consist of the three members of the student’s advisory committee, one additional member of the chemistry faculty to be selected by the advisory committee and an outside chair.

• Seminars
All students in the PhD program are expected to present a departmental “non-thesis” seminar. This seminar should be presented fairly early in the degree program. In addition, the student must present public seminars as part of the proposition oral exam and final thesis defense.

**Master of Arts in Chemistry**

The MA degree is intended primarily to meet the needs of students, such as those working full time in local industry or secondary education, who are seeking an advanced degree with only a small research component. The primary difference between the MA degree and the MS degree is that a research thesis is required for the MS degree. The research required for the MS degree is often not feasible for students who work full time or is not of interest to those preparing for a career, for example, in secondary education. To facilitate the educational process, each student has an advisory committee that functions to both advise the student and monitor the student’s progress.

**Degree Requirements**

**Coursework Requirements**

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<tr>
<td>Biochemistry (two-quarter sequence)</td>
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<tr>
<td>CHEM 3811</td>
<td>Biochemistry-Proteins</td>
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<tr>
<td>or CHEM 3831</td>
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<td>CHEM 4900</td>
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<td>CHEM 4991</td>
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<td>CHEM 4995</td>
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<td>One advanced topic course or additional research credits</td>
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<td>Total Credits</td>
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Minimum credits required for degree: 45 (of which a minimum of 35 credit hours must be earned at the University of Denver)

The graduate core curriculum must be completed with a GPA of 3.0 or better. If it is appropriate, and approved by the graduate committee, other graduate courses may be substituted for part of the graduate core curriculum.

**Independent Study and/or Research**

A minimum of six credit hours of independent study and/or independent research approved by the student’s advisory committee must be completed.

**Courses in Other Departments**

A minimum of 35 credit hours must be taken in courses offered by the Department of Chemistry and Biochemistry. As many as 10 credit hours may be taken in science-related 3000- to 4000- graduate level courses approved by the student’s advisory committee.

**Seminars**

All students in the MA degree program must present a technical seminar (CHEM 4900 Chemistry Seminar).

**Master of Science in Chemistry**

The MS degree is intended for students who wish an advanced degree in chemistry primarily for the purpose of better preparation to conduct research work in chemistry or biochemistry. To facilitate the educational process, each student has an advisory committee that functions to both advise the student and monitor the student’s progress.
Degree Requirements

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Minimum credits required for degree: 45 (of which a minimum of 35 credit hours must be earned at the University of Denver)

The graduate core curriculum must be completed with a GPA of 3.0 or better.

Seminars

All students in the MS program must present one departmental “non-thesis” seminar, in addition to the thesis seminar.

Non-coursework Requirements

Thesis- A thesis of publishable quality must be completed. A summary of the thesis is presented in an oral defense. The thesis defense committee will consist of a minimum of two faculty members from the Department of Chemistry and Biochemistry and an outside chair.

Courses

CHEM 3110 Chemical Systems I (3 Credits)
Advanced discussion of modern concepts of organic chemistry; bonding, stereochemistry, reaction mechanisms. Prerequisites: CHEM 2453 and equivalent of one year of physical chemistry.

CHEM 3120 Chemical Systems II (3 Credits)
Interpretation of trends in the chemistry of the elements in terms of orbital interactions. Most examples will be taken from the third row transition metals and the boron and carbon groups. Prerequisites: CHEM 2131, CHEM 3310 and CHEM 3110.

CHEM 3130 Chemical Systems III (3 Credits)
Advanced-level physical biochemistry course intended for advanced-level undergraduates and graduate students. Focuses on kinetic, thermodynamic and dynamic aspects of biopolymers; delineates the relationship of these properties to the mechanism and function of biological macromolecules. Prerequisites: CHEM 3811, CHEM 3812, CHEM 3813, CHEM 3610 or the equivalent.

CHEM 3220 Advanced Analytical Chemistry (3 Credits)
Principles of chemical instrumentation applied to analytical measurements; principles, instrumentation and applications of spectrometric and chromatographic measurements. Prerequisites: CHEM 3210 and CHEM 3621, or the equivalent.

CHEM 3310 Structure and Energetics I (3 Credits)
Fundamentals of quantum chemistry, and introduction to symmetry and molecular structure of small and large systems. Prerequisite: one year of physical chemistry.

CHEM 3320 Structure and Energetics II (3 Credits)
Computational methods in chemistry. Prerequisites: CHEM 3310, one year of physical chemistry.

CHEM 3410 Atmospheric Chemistry (3 Credits)
The concepts of equilibrium thermodynamics, kinetics, and photochemistry will be applied to understanding atmospheric processes. Covers urban air pollution in detail with focus on primary pollutants. Also covers stratospheric chemistry with focus on ozone chemistry and the chemistry of climate change. Prerequisites: (CHEM 2270 or CHEM 2011) and CHEM 2453.
CHEM 3411 Aquatic Chemistry (3 Credits)
The circulation of the oceans and their chemical make-up. 'Classical water pollution problems' like biological oxygen demand and turbidity are discussed. Also presented: aquifer structure and flow, ground water chemistry, pollutant partitioning between stationary and mobile phases, heterogeneous surface chemistry, and the detection of trace contaminants. Prerequisites: (CHEM 2270 or CHEM 2011) and CHEM 2453.

CHEM 3412 Environmental Chemistry & Toxicology (3 Credits)
A survey of environmental toxicology concepts: animal testing, dose-response data, epidemiology, risk assessment. The course includes ecotoxicology, focusing on the alteration of biological and chemical systems beyond the simple response of an individual to an environmental chemical. Prerequisites: (CHEM 2270 or CHEM 2011) and CHEM 2453.

CHEM 3610 Physical Chemistry I (3 Credits)
Fundamentals of thermodynamics, including phase and reaction equilibria, properties of solutions, and electrochemistry needed for advanced study in life sciences and for Physical Chemistry II and III. May be taken for graduate credit by nonchemistry majors. Prerequisites: CHEM 2453, calculus and physics.

CHEM 3620 Physical Chemistry II (3 Credits)
Fundamentals of quantum chemistry, including theories of atomic and molecular structure and spectroscopy. May be taken for graduate credit by nonchemistry majors. Prerequisite: CHEM 3610.

CHEM 3621 Physical Chemistry III (3 Credits)
Fundamentals of kinetic theory and statistical mechanics. May be taken for graduate credit by nonchemistry majors. Prerequisite: CHEM 3620.

CHEM 3703 Topics in Organic Chemistry (3 Credits)
May include organic photochemistry, organic synthesis, organic electrochemistry or natural products. May be repeated for credit. Prerequisites: CHEM 3110 or equivalent and others depending on topic.

CHEM 3705 Topics in Biochemistry (3,4 Credits)
May include physical techniques for exploring biological structure, biological catalysis, and selected fields within biochemistry taught from original literature. May be repeated for credit. Prerequisites: CHEM 3831 and 3813.

CHEM 3811 Biochemistry-Proteins (3 Credits)
Protein structure and function, starting with the building blocks and forces that drive the formation of protein structure and the basic concepts of protein structure, and continuing with enzyme catalysis, kinetics, and regulation. Prerequisites: CHEM 2453 or instructor permission.

CHEM 3812 Biochemistry-Membranes/Metabolism (3 Credits)
Membranes and membrane mediated cellular processes, energy and signal transduction, and metabolic/biosynthetic pathways. Prerequisite: CHEM 3811 or CHEM 3831.

CHEM 3813 Biochemistry-Nucleic Acids (3 Credits)
Molecular processes underlying heredity, gene expression and gene regulation in prokaryotes and eukaryotes. Prerequisites: CHEM 2453 and CHEM 3811.

CHEM 3831 Advanced Protein Biochemistry (3 Credits)
This course provides fundamental insights into the chemistry and physics of proteins. It investigates how amino acids form proteins with highly complex three-dimensional structures and how these structures mediate function. We examine key research articles and their contribution to our current understanding of proteins. Topics range from protein folding to enzyme kinetics and emphasize basic principles. Prerequisites: CHEM 2453 and instructor permission.

CHEM 3991 Independent Study (1-10 Credits)
May be repeated for credit.

CHEM 3992 Directed Study (1-10 Credits)

CHEM 3995 Research in Chemistry (1-10 Credits)
Research project conducted under guidance of a faculty member. Credit hours and projects arranged on an individual basis. May be repeated for credit.

CHEM 4400 Adv. Topics: Organic Chemistry (3 Credits)
Physical organic chemistry; reaction mechanisms, structure reactivity relationships, kinetics, photochemistry, molecular orbital theory, etc.; current literature. May be taken for credit more than once. Prerequisite: CHEM 3110.

CHEM 4900 Chemistry Seminar (1 Credit)
A weekly presentations of research in progress and of current literature by outside speakers. faculty and graduate students.

CHEM 4991 Independent Study (1-10 Credits)

CHEM 4992 Directed Study (1-10 Credits)

CHEM 4995 Independent Research (1-10 Credits)

CHEM 5991 Independent Study (1-10 Credits)

CHEM 5995 Independent Research (1-10 Credits)
Geography and the Environment

Office: Boettcher Center West, Room 120  
Mailing Address: 2050 E. Iliff Avenue, Denver, CO 80208  
Phone: 303-871-2513  
Email: geog-info@du.edu  
Website: http://www.du.edu/geography

Why study geography at the University of Denver?
Consider these advantages:

• Engaged and research-active faculty
• Small classes and personal attention
• State-of-the-art geospatial technology laboratories
• Strong and exciting field orientation
• Excellent location for applied research in physical and human geography

Situated at the foot of the Rocky Mountains in the dynamic city of Denver, the University of Denver is an ideal laboratory for physical and human geographers, as well as those studying human-environment interaction and geographic information science.

Since it was founded in 1945, the University of Denver’s department of geography has offered excellent opportunities for graduate students in teaching, research, academia, government and the private sector.

We have state-of-the-art facilities and resources:

• Fully networked labs with frequent upgrades in hardware, specialized equipment and software
• Four Geographic Information Science (GIS) labs which include most industry standard GIS software (All ESRI products, ERDAS Imagine, E-cognition, ENVI, Web Mapping and Geovisualization products)
• USDA-approved soil and sediment lab and the Hoyt Mineral Collection
• Multimedia teaching classrooms
• National and international field trips
• The Mount Evans field station (elevation 10,600 feet), is just 45 minutes from campus

Come visit our facilities, meet our faculty and students and see the advantages for yourself.

The Department of Geography and the Environment at the University of Denver offers programs leading to the MA in Geography, MS in Geographic Information Science (GISc) (on-campus and online programs) and PhD in Geography. Areas of teaching and research include biogeography, climatology, computer-assisted cartography, cultural geography, development, economic geography, environmental geology, geographic information science, geovisualization, geomorphology, global change, hydrology, land use/land cover analysis, Latin America, natural resources, paleoenvironmental change, political ecology, Quaternary studies, remote sensing, soils, spatial analysis, sustainability, transportation, and urban geography and planning. With 12 tenure-line faculty and five full-time teaching faculty, our faculty is very active in research, publishing numerous journal articles and presenting many conference papers every year. Our faculty members also are known for their excellence as instructors, with several faculty having earned major teaching awards.

Doctor of Philosophy in Geography

Degree and GPA Requirements

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
• Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master’s degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master’s degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
• Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 3.5 on a 4.0 scale.

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 88
- Minimum TOEFL Score (Paper-based test): 570
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

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

Standardized Test Scores
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
- This program has minimum GRE score requirements. The minimum overall score for the GRE is 300.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 88
- Minimum TOEFL Score (Paper-based test): 570
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

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

Standardized Test Scores
- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
- This program has minimum GRE score requirements. The minimum overall score for the GRE is 300.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 88
• Minimum TOEFL Score (Paper-based test): 570
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Geographic Information Science (Online Program)

Degree and GPA Requirements

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

Standardized Test Scores

• The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842. Applicants who have completed at least 12 hours in the University’s GIS certificate program, with a GPA of 3.5 or better, could waive the GRE requirement or the undergraduate GPA requirement, but not both. Students who have completed the certificate program can automatically waive the GRE requirement.
• This program has minimum GRE score requirements. The minimum overall score for the GRE is 300.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 88
• Minimum TOEFL Score (Paper-based test): 570
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Doctor of Philosophy in Geography

Degree Requirements

Coursework Requirements

A minimum of 117 quarter hours of credit is required for the doctoral degree, up to 45 hours of which may be transferred from an earned master's degree from a regionally accredited university.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GEOG 3000</td>
<td>Advanced Geographic Statistics</td>
<td></td>
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<tr>
<td>GEOG 4000</td>
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<tr>
<td>GEOG 4020</td>
<td>Geographic Research Methodology</td>
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</tr>
<tr>
<td>GEOG 4900</td>
<td>Graduate Colloquium in Geog</td>
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</tbody>
</table>

Geography courses

Complete at least 32 additional credits in geography courses (at least 3000 or higher level) directed toward the dissertation research

Cognate courses

Complete at least 12 additional credits in cognate coursework in a related field

Additional coursework

0-16
Complete 2 graduate seminar courses and 2 research tools to reach the number of minimum credits required for the degree

Transfer Credit

A maximum of 45 credits may be accepted as transferred in from a MA or MS program, including credits substituting core coursework requirements

Total Credits

Minimum number of credits required for the degree: 117 credits

Non-coursework requirements:

- Two Research Tools Requirement
- PhD Research Proposal Presentation
- Comprehensive Examination
- Dissertation
- Oral Defense

Two Research Tools Requirement

The options to meet the tool requirement include languages, geographic information systems, computer cartography, remote sensing and geographic statistics.

PhD Research Proposal Presentation

Each student is required to prepare and present a dissertation proposal and have it formally approved by the student’s faculty committee. This should be completed by the end of the second year for a full-time PhD student.

Comprehensive Exam

This exam, which includes both written and oral parts, is designed to evaluate the student's work at the University of Denver.

This exam is usually scheduled after all substantive course work has been completed and the dissertation proposal has been approved. It must be taken at least three quarters prior to expected graduation. Students should consult with their adviser and committee members to achieve a greater understanding of what will be on the exam. The written portion of the exam can be taken in one of two formats: a written examination conducted in the department usually taken over two days, lasting four hours each day, or a take-home examination in which the student has five days to complete the exam. An oral examination is held two weeks after the written exam has been completed. A candidate who fails one or all parts of the comprehensive exam may petition the department for re-examination. Re-examination, if granted by the department, may not be scheduled until the succeeding quarter and cannot be retaken more than once.

Dissertation and Oral Defense

Upon completion of course work, approved proposal, comprehensive exam and the dissertation, each student will undergo a final oral defense. An oral defense may not be scheduled until at least the second quarter following the quarter in which the comprehensive exam was successfully completed (the summer may count as a quarter, though no examinations should be scheduled during the summer). The final oral defense is to be conducted at least two weeks before the end of the quarter in which the degree is to be awarded. This defense is usually about two hours in length, and is composed of a 20–25 minute presentation by the student followed by questions from the committee. The examining committee is comprised of at least four members: an advisor and three other committee members. The advisor must be a full-time tenure-line faculty member in the Department of Geography & the Environment with a research record and interest appropriate to the student’s proposed research area of specialization. All members of the committee must be full-time appointed faculty at DU and have research records appropriate to the student’s area of specialization. Faculty from appropriately-related units who hold the terminal degree in their field may serve on the committee as long as the candidate’s graduate unit has the majority representation and a two-thirds majority of the committee hold the earned doctorate. There is also a non-voting Oral Defense Committee Chair who must be a tenured faculty member from another department at the University of Denver serving as the university representative for the final oral defense.

For doctoral programs, research areas are limited to the fields of biogeography, climatology, cultural geography, economic geography, geographic information science, geomorphology, global change, human environment interaction, Latin America, paleoenvironmental change, Quaternary studies, transportation geography and urban geography in accordance with current faculty expertise.

Master of Arts in Geography

Requirements for students with prior degrees in geography:

For the MA degree, 45 quarter hours of course work and a thesis are required. Students can specialize in subfields within physical geography, human geography or human-environment interaction (please see the Department of Geography and the Environment Graduate Student Handbook for detailed information).
Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>GEOG 3000</td>
<td>Advanced Geographic Statistics</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 4000</td>
<td>Fundamental Geographic Perspectives</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 4020</td>
<td>Geographic Research Methodology</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 4900</td>
<td>Graduate Colloquium in Geog</td>
<td>0</td>
</tr>
<tr>
<td>Additional transfer, departmental, and other university courses</td>
<td>0-33</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>

Note: Students must take a minimum of 33 credits in GEOG courses

Minimum number of credits required for degree: 45 credits

Non-coursework requirements:
- Research proposal presentation
- Thesis
- Final Oral Defense

Research Proposal Presentation
Each student is required to prepare and present a thesis proposal and have it formally approved by the student's faculty committee.

Thesis Requirement
Original research of a geographic topic is required, the scope of which is determined by the thesis committee. The thesis should be of publishable quality.

Final Oral Defense
Upon completion of required course work, proposal approval and the thesis, each student will undergo a final oral defense. This defense is usually about two hours in length. The defense will address both course work and the thesis research. The final oral defense is to be conducted at least two weeks before the end of the quarter in which the degree is to be awarded. The oral defense committee is comprised of at least three members: an advisor and two other committee members. The advisor must be a full-time tenure-line faculty member in the Department of Geography & the Environment with a research record and interest appropriate to the student's proposed research area of specialization. All members of the committee must be full-time appointed faculty at DU and have research records appropriate to the student's area of specialization. DU faculty from appropriately-related units who hold the terminal degree in their field may serve on the committee as long as the candidate's graduate unit has the majority representation. There is also a non-voting Oral Defense Committee Chair who must be a tenure-line faculty member from another department at the University of Denver serving as the university representative for the final oral defense.

Master of Science in Geographic Information Science

Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>GEOG 3000</td>
<td>Advanced Geographic Statistics</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 3010</td>
<td>Geographic Information Analysis</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 3140</td>
<td>GIS Database Design</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 3150</td>
<td>GIS Project Management</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 3200</td>
<td>Remote Sensing</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 4020</td>
<td>Geographic Research Methodology</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 4900</td>
<td>Graduate Colloquium in Geog</td>
<td>0</td>
</tr>
<tr>
<td>GEOG 4993</td>
<td>Capstone or Project</td>
<td>0</td>
</tr>
<tr>
<td>Electives</td>
<td>A minimum of 8 quarter hours of electives must be taken in geography from any of the GEOG courses at 3000 level or above. It is strongly recommended that students take GEOG 4000 Fundamental Geographic Perspectives as one of their elective courses.</td>
<td>8-20</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>48</strong></td>
</tr>
</tbody>
</table>

Note: At least 24 quarter hours must be completed in courses taken within the Department of Geography & the Environment at the University of Denver. No more than 24 credits will be accepted in transfer from the GIS certificate program.
Minimum number of credits required for degree: 48 credits

Non-coursework requirements:
- Capstone project
- Capstone project presentation

Capstone Project

Students will be required to produce a final project of professional quality demonstrating their ability to apply geographic information science to their chosen area of specialization. The project is done for, and with, a company, agency, nongovernmental organization or faculty member who is referred to as the client. The project must be used by the client and may be predominantly technical in nature or may include a research component. The project must demonstrate a mastery of one or more of the several geospatial technologies. It must require the student to engage in all facets of a project, from design to implementation. At the completion of the project, students will present their work to their peers.

Master of Science in Geographic Information Science (Online Program)

This option is designed for people wishing to complete the degree via an online format.

Degree requirements

Coursework requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Core coursework requirements</td>
<td>20</td>
</tr>
<tr>
<td>GEOG 3000</td>
<td>Advanced Geographic Statistics</td>
<td></td>
</tr>
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<tr>
<td>GEOG 3150</td>
<td>GIS Project Management</td>
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<tr>
<td>GEOG 3200</td>
<td>Remote Sensing (Remote Sensing is elective in GIS certificate program)</td>
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</tr>
<tr>
<td>or GIS 4700</td>
<td>Remote Sensing I</td>
<td></td>
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</tbody>
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Geography/GIS Elective Courses

Complete a minimum of five elective courses from any University College GIS certificate program course (EXCEPT GIS 4101 and GIS 4110) and not already used to meet a required course, or choose from the courses below.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>GEOG 3040</td>
<td>GPS for Resource Mapping</td>
</tr>
<tr>
<td>GEOG 3410</td>
<td>Urban Applications in GIS</td>
</tr>
<tr>
<td>GEOG 3860</td>
<td>GIS Applications and Natural Resources</td>
</tr>
<tr>
<td>GEOG 3130</td>
<td>Advanced Geographic Information Systems</td>
</tr>
</tbody>
</table>

Acceptable University College GIS certificate electives can be found at the University College GIS certificate program website.  

Capstone courses

Complete both of the following courses:

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>GEOG 4020</td>
<td>Geographic Research Methodology</td>
</tr>
<tr>
<td>GEOG 4993</td>
<td>Capstone or Project</td>
</tr>
</tbody>
</table>

Total Credits

Note: At least 24 credits counted towards the degree must be taken within the Department of Geography & the Environment at the University of Denver. No more than 24 credits will be accepted in transfer from the GIS certificate program. GIS 4101 Introduction to GIS, and GIS 4110 Geographic Statistics are not transferable to the online MS-GISc degree program.

Minimum number of credits required for degree: 48 credits

Non-coursework requirements:
- Capstone project

http://universitycollege.du.edu/gis/degree/certificate/geographic-information-systems-online/degreeid/31#courses
**Geography Courses**

**GEOG 3000 Advanced Geographic Statistics (4 Credits)**
The second in a sequence of two courses that address general statistical applications particular to geography, environmental science and other disciplines dealing with a spatial dimension in the data they work with. The focus of this second course is on the more advanced multivariate statistical techniques. The course has a strong applied orientation as particular attention is given to which technique is the most appropriate to use for a given type of problem and how to interpret and apply the resulting statistics. Extensive use is made of computer statistics packages. Homework exercises involving such statistical techniques as multiple correlation and regression analysis, principle components analysis, discriminate analysis and canonical correlation. Prerequisite: GEOG 2000.

**GEOG 3010 Geographic Information Analysis (4 Credits)**
Reviews many basic statistical methods and applies them to various spatial datasets. In addition, several spatial statistical methods are applied to spatial datasets. This course is an in-depth study of the interface between GIS, spatial data, and statistical analysis. Preferred prerequisite: GEOG 2000. Prerequisite: GEOG 2100.

**GEOG 3030 Advanced Field Methods (4 Credits)**
Various field methods used by researchers in physical geography; techniques include field mapping, laboratory analyses, geologic field methods. Prerequisite: GEOG 1201 or equivalent.

**GEOG 3040 GPS for Resource Mapping (4 Credits)**
This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Assurance issues for data collection programs. Hands-on lab exercises include navigation, mission planning for a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, differential correction, and data integration into a GIS and map production.

**GEOG 3100 Geospatial Data (4 Credits)**
This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed. Cross listed with GEOG 2100.

**GEOG 3110 GIS Modeling (4 Credits)**
This course focuses on the concepts and procedures used in discovering and applying relationships within and among maps. It extends the mapping and geo-query capabilities of GIS to map analysis and construction of spatial models. The course establishes a comprehensive framework that addresses a wide range of applications from natural resources to retail marketing. Topics include the nature of spatial data introduction to spatial statistics and surface modeling in the first five weeks followed by spatial analysis operations and modeling techniques in the second five weeks. The lectures, discussions and independent exercises provide a foundation for creative application of GIS technology in spatial reasoning and decision making.

**GEOG 3130 Advanced Geographic Information Systems (4 Credits)**
This advanced course explores the more technical aspects of GIS functions and data structures. Students have hands-on access to both raster (grid-cell) and vector-based software packages in the form of lab exercises that culminate in a small student-designed GIS project. Prerequisite: GEOG 2100.

**GEOG 3140 GIS Database Design (4 Credits)**
Designing databases to provide a foundation for GIS functions and applications, including investigating techniques used for designing databases in non-spatial environments and learning the applicability to GIS problems. Building on concepts and techniques introduced in the first half to extend traditional techniques and methodologies to model the requirements of spatial problems. Students learn to translate the conceptual spatial model into a physical implementation specific to GIS products. Prerequisite: GEOG 2100 or GEOG 3100.

**GEOG 3150 GIS Project Management (4 Credits)**
This course provides graduate students seeking a career in GIS, or anyone managing a GIS project, with the knowledge, skill and abilities to take a GIS project or program past the design and implementation phase and into day-to-day operation. Students evaluate and analyze the role of GIS in an organization's overall information system strategy and communicate the importance of geography in an information system. Data sharing in the organization is examined to determine the benefits and costs of distributing data creation and maintenance activities throughout an organization. Finally, the role of GIS professionals and the skill sets required to manage GIS effectively are examined. Students review case studies of successful and not-so-successful GIS projects in North America. GIS management issues are addressed by a series of case studies focusing on various management aspects. Students are also expected to visit operational GIS programs in the metropolitan area and interview GIS managers. Students prepare case study evaluations for review in the classroom. Required for all MSGIS students because of the critical importance of GIS project management.
GEOG 3160 Web GIS (4 Credits)
With the development of internet technologies, the architecture of Geographic Information System (GIS) has evolved from the centralized desktop architecture to the distributed web architecture. Numerous web GIS applications are available (e.g., Google Map, Earth Explorer, and National Map). A web GIS application allows GIS analysts to access, manipulate, and visualize geospatial data from the web without the installation of GIS software. To facilitate the development of web GIS applications, geospatial technology vendors have provided application programming interfaces (APIs) through which GIS professionals can build customized web applications. This course focuses on the concepts and the development of web based GIS applications using industry-relevant geospatial APIs and core web technologies of HTML, CSS, and JavaScript. This is an upper-level undergraduate, to graduate-level course in GIS that introduces fundamental Web GIS concepts, applications and development kits. Concepts and techniques to be covered in this course include:

GEOG 3200 Remote Sensing (4 Credits)
This course acquaints students with the basic techniques of the collection, processing and interpretation of information about the character of the earth’s surface from remote locations. Students become familiar with the use of the visible, infrared, thermal and microwave portions of the electromagnetic spectrum as a means of determining land cover and/or land use. Both manual and computer-assisted techniques are discussed and include hands-on applications.

GEOG 3230 Advanced Remote Sensing (4 Credits)
This course will build on the basic remote sensing concepts presented in GEOG 3200. Students will explore more in-depth concepts relevant to satellite and airborne remote sensing, including radiative transfer and information extraction. In addition, students will be introduced to two cutting-edge sources of data about the Earth’s surface: hyperspectral and lidar (Light Detection and Ranging) sensors. Students will study specific applications of advanced digital image processing techniques for environmental monitoring, natural resource management, and land-use planning. Finally, students will integrate remote sensing and other spatial datasets in the context of Geographic Information System (GIS) analysis. Prerequisite: GEOG 3200.

GEOG 3300 Cultural Geography (4 Credits)
Themes and methods of cultural geography including cultural area, landscape, history and ecology.

GEOG 3310 Culture/Nature/Economics-Human Ecology (4 Credits)
Cultural adaptation, livelihood strategies and environmental modification among subsistence and peasant societies: responses of such groups to technological change and economic integration.

GEOG 3330 Political Geography (4 Credits)
GEOG 3340 Geographies of Migration (4 Credits)
This course examines politics and patterns of migration, transnational migration, and immigration to the United States.

GEOG 3350 Qualitative Methods in Geography (4 Credits)
This course focuses upon qualitative methods in the production of geographic knowledge. Qualitative methods are widely employed by geographers to understand patterns and underlying processes of human and human-environment issues in society. The course is designed to expose participants to the theories, purpose, scope, and procedures of qualitative research. Specific topics include: epistemological theories (ways of knowing); ethics and power in research; research design; data collection techniques in interviewing, participant observation and landscape interpretation, discourse and archive analysis, and case studies; data analysis; and writing and disseminating qualitative findings.

GEOG 3360 Web GIS (4 Credits)
Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

GEOG 3410 Urban Applications in GIS (4 Credits)
This course uses the tools of geographic information systems (GIS) to explore concepts of traditional urban geography, including defining cities/metropolis, internal urban structures, urban systems, industrial location, social and residential patterns, urban form, environmental problems, and urban planning. The course allows students to practice fundamental skills in GIS (e.g., working with attribute tables, spatial analysis, spatial queries) and cartography (map design, color theory, display of information). Depending on the quarter, students pursue individual projects of interest or client-based projects. Prerequisite: GEOG 2100 or GEOG 3100 or equivalent.

GEOG 3420 Urban and Regional Planning (4 Credits)
Historical evolution of planning theory and practices; comprehensive planning process; legal, political, economic, social, environmental aspects of urban planning; urban design; urban renewal and community development; transportation planning; economic development planning; growth management; environmental and energy planning; planning for metropolitan regions; national planning.
GEOG 3425 Urban Sustainability (4 Credits)
The 21st century is being called the 'century of the city.' Now more than ever, humans across the globe call the city their home. Many of the world's most pressing crises are manifest in cities, including: greenhouse gas emissions, land degradation, high mass production and consumption, widespread poverty and hunger, and expanding socio-economic disparities. As 'sustainability' becomes part of mainstream discourse, this course explores what sustainability means for urban contexts around the globe. Arguably, the city has the potential to be the most efficient, equitable, and environmental form of modern human settlement. Covering all dimensions of sustainability from a social science perspective, this course focuses on theoretical groundings, practices of urban sustainability, and new research agendas. Major topics include cities and nature; planning and land use; urban form; community and neighborhoods; transportation systems and accessibility; livelihood and urban economies; and social justice and the city.

GEOG 3440 Urban Transportation Planning (4 Credits)
A specialized course in the urban planning sequence focusing on issues, practices and policies of urban transportation planning. Recommended for anyone interested in timely transportation topics, such as the feasibility and impacts of light rail transit, the planning and implementation of highway projects, and the role of freight and passenger transportation companies in transportation planning.

GEOG 3445 Sustainability and Transportation (4 Credits)
Sustainable transportation aims at promoting better and healthier ways of meeting individual and community needs while reducing the social and environmental impacts of current mobility practices. Given the importance of transport for economic growth, the uncertainties surrounding the availability and price of future sources of energy for transport use, as well as the social and environmental externalities of currently-utilized transport modes, it is imperative that more sustainable ways of providing transportation be developed and utilized.

GEOG 3450 Transportation and Mobilities (4 Credits)
The geographical study of transport has grown considerably and become more diverse, encompassing new areas of inquiry generated from economic, urban, environmental, political, social, and cultural geography, as well as from transport geography itself. The most notable expansion has been in the area of 'mobilities' research, which is focused on the social aspects of mobility, including both the large-scale movements of people, objects, capital, and information across the world, as well as the more local processes of daily transportation, movement through public space and the travel of material things within everyday life.

GEOG 3460 Air Transportation & Tourism (4 Credits)
This course delves into the world of commercial air passenger transportation, studying the foundations of the industry, its role in the travel and tourism, and strategies for the future. Foundational topics include the history and geography of air transportation, air travel and tourism, the geography of tourism, airline corporate cultures, the role of government, aviation law, regulation, deregulation, and globalization. Study of the principal elements of airline economics, finance, planning, management, operations, pricing, promotion, cost containment, marketing, and policy provide the opportunity for consideration of strategic options within the contemporary airline industry. Further discussion focuses on the planning and management of airport and airway system infrastructure, the issue of sustainable air transportation, and the role of the airline industry within the context of intermodalism.

GEOG 3470 GIS & Environmental Health Geography (4 Credits)
This course is designed to acquaint students with the spatial distributions of populations and their relationships to environmental pollution sources and health outcomes. It utilizes real-life scenarios using population data from the U.S. census, EPA pollution data and various types of vital statistics data. The goal is to implement novel geographic techniques such as spatial analytical techniques and atmospheric modeling of pollutants to assess possible health risks and outcomes. This class requires basic GIS knowledge.

GEOG 3500 Reconstructing Quaternary Environments (4 Credits)
Nature, magnitude, sequence and causes of Pleistocene and Holocene climatic changes; effects of climatic change on plant/animal distributions and human populations; paleoclimatic research methods. Laboratory and field trips. Prerequisites: GEOG core, ENVI 3000.

GEOG 3510 Biogeography (4 Credits)
Biogeography focuses on present and past distributions of plants and animals. In this course we consider a number of themes central to biogeography, including plate tectonics and biogeography, the effects of climate change on plant and animal distributions, biogeographic realms, island biogeography, biodiversity, human impacts on plants and animals, and the origins of agriculture.

GEOG 3520 Geography of Soils (4 Credits)
Spatial variation in soil characteristics; soil processes, soil morphology, their application in soil studies. Prerequisite: GEOG 1201-1203 Environmental Systems or instructor's permission.

GEOG 3550 Topics in Physical Geography (1-5 Credits)
Investigations into various aspects of physical environment.

GEOG 3560 Fluvial Geomorphology (4 Credits)
Examines how water and sediment interact at Earth's surface to create a variety of landforms ranging from small rills to continental-scale river systems. Introduces fundamental fluvial processes or channel hydraulics and sediment transport. Examines common alluvial streams, bedrock streams, floodplains and alluvial fans. Combines traditional lectures and in-class discussions with numerous field excursions to rivers in the Rocky Mountains and Great Plains. Prerequisite: GEOG 1203, GEOG 1218, or GEOG 1266.

GEOG 3600 Meteorology (4 Credits)
The basic theory and skills of weather forecasting. Topics include thorough coverage of atmosphere dynamics and thermodynamics, the evolution of various weather types, the mechanics of storm systems (cyclones, severe storms, hurricanes), creation and interpretation of weather maps, and forecasting techniques.
GEOG 3610 Climatology (4 Credits)
Climatology is the study of the processes that result in spatial and temporal variation of weather. This course introduces the student to the processes responsible for the transfer of matter and energy between the Earth’s surface and the atmosphere and the average weather conditions that result. In addition, topics of global concern, such as greenhouse effect, El Nino, urban heat islands and acid rain, are discussed. Laboratory exercises provide an opportunity to investigate climate variation and climatic change through the use of a variety of computer simulations.

GEOG 3620 Applied Climatology (4 Credits)
Climatic impact on environmental systems and human behavior; techniques to investigate climatic characteristics of environmental extremes (floods, blizzards), urban climatology and socioeconomic impacts of climate. Prerequisite: GEOG 1201. Recommended Prerequisite: GEOG 3600 or GEOG 3610.

GEOG 3630 Dendroclimatology (2-4 Credits)
Systematic variations in tree ring width and/or density can be used to reconstruct changes in precipitation or temperature well before humans were around to record the variability. This class utilizes hands on methods to introduce the fundamental principles of dendroclimatology. Through readings and lectures, students will learn how tree ring growth can be correlated to climate change. Students will then undertake several research projects to reconstruct past climate variability in the Denver metro area using tree rings. Prerequisite: permission of instructor.

GEOG 3640 Climate Change and Society (4 Credits)
The science of anthropogenic climate change will be presented with an emphasis on critical evaluation of the evidence of climate change and future scenarios and migration strategies. Students will be introduced to the latest climate change research, including the Intergovernmental Panel on Climate Change report, and the most recent literature from the field. The societal and cultural implications of climate change will also be discussed. Prerequisites: GEOG 1201, GEOG 1216, or GEOG 1264.

GEOG 3700 Environment & Development (4 Credits)
Course examines interrelated nature of environmental and development issues in the Third World; addresses the place of environment in development theory and practice and the political ecology of Third World environmental problems and sustainable development approaches.

GEOG 3701 Topics in Geographic Information Science (1-4 Credits)
Topics vary by instructor.

GEOG 3710 Environmental Change in the Eastern Mediterranean (2 Credits)
We tend to associate environmental problems with modern societies and high technology. However, humans have had impacts on the environment, and have had to cope with challenges brought by the environment, throughout their history. Western cultures are intimately linked to the eastern Mediterranean, where some of the earliest centralized governments arose, agriculture developed, and humans first began living in permanent settlements, so the region has a long history of human-environment interaction. This class focuses on historical, archaeological, and paleoenvironmental records from the region to investigate the impacts of human activities, including deforestation, intensive agriculture, and urban development, on the environment, and the ways in which societies in the region responded to natural environmental perturbations, including drought, earthquakes, and volcanic eruptions.

GEOG 3720 Mountain Environments and Sustainability (4 Credits)
Mountain Environments and Sustainability explores the unique physical and cultural aspects of high relief and/or high altitude environments. Covering one quarter of the Earth's land surface, mountains directly or indirectly impact the lives of millions of people. We examine the significance of mountains to climate, water resources, and human activities, and discuss the sustainability of these environments and communities in light of rapid changes in many mountain regions resulting from anthropogenic factors and global change. GEOG 1201, 1202, and 1203 or instructor approval.

GEOG 3730 International Environmental Policy (4 Credits)
This course acquaints students with the global perspective on current problems of environmental protection and resource use. Population growth, food production, industrialization, technology and cultural change are considered, with heavy emphasis on the social dynamics of environmental problems. A variety of political views are studied, and an attempt is made to develop a perspective useful to students in personal and political decisions.

GEOG 3740 Environmental Justice in the City (4 Credits)
This course is designed to acquaint students with environmental justice in the urban environment. This class focuses on the City of Denver as a laboratory to explore the disproportionate impacts of social justice issues, particularly urban pollution, healthy food sources, gentrification, light rail, and employment opportunities, on neighborhoods and communities. A variety of views are studied, and an attempt is made to develop a perspective useful to students to explain urban social justice conditions.

GEOG 3750 Topics in Human-Environment Interactions (1-4 Credits)
This course investigates various aspects of the relationships between human societies and the natural environment.

GEOG 3755 Geography of Health (4 Credits)
The geography of health is a thriving area of study that considers the impact of natural, built, and social environments on human health. This course introduces students to three geographical contributions to health studies. First, it emphasizes the importance of ecological approaches to health, which consider interactions between humans and their environments, including topics such as how climate change might influence disease distributions, and how the built environment can influence patterns of physical activity. A second focus is social theory, exploring how aspects such as race, socioeconomic status, and identity play a critical role in influencing human health. A third section of the course considers how spatial methods (cartography, GIS, and spacial statistics) can help answer health-related questions.
GEOG 3760 Health & Environment, England (4 Credits)
This field course meets in England, visiting several sites in the Midlands. It focuses on ecological approaches to health, which emphasize the relationship between humans and their environment as a critical influence on the health status of populations. This environmental influence may come from the natural, built, or social environment. The course will use a case study approach to emphasize i) the importance of the natural, built, and social environment to human health, and ii) how the relationship between humans and their environments and its sustainability has changed over time. We will explore eight different time periods, asking in each case how people’s relationships with their natural, built, and social environments have influenced health at the population scale, and how these influences can inform sustainable health and environment in the future.

GEOG 3800 Geography of Colorado (4 Credits)
This course focuses on the physical and human geography of Colorado, a state that includes the western Great Plains, the southern Rocky Mountains, and the eastern Colorado Plateau. Colorado’s varied natural landscapes provide equally varied settings for human settlement and resource use. Recommended Prerequisites: GEOG 1201, GEOG 1202, and GEOG 1203.

GEOG 3830 Natural Resource Analysis & Planning (4 Credits)
Natural resources provide the basis for all human agricultural and industrial activities. This course discusses our resource distribution, conservation, management and sustainable use.

GEOG 3840 Water Resource Analysis (4 Credits)
The focus of this course is on complex policy, economic and local, national and international, and political issues surrounding resource use in the western U.S. Issues include exploitation of nonrenewable and renewable energy and mineral resources; and flexible responses to changing public policy.

GEOG 3850 International Comparison of Economic and Social, Positive and Negative Aspects of Urban Systems (4 Credits)
An advanced course that examines how Earth’s landforms are created by a range of physical processes. Most landforms can be viewed as a result of some combination of erosion, transport and deposition of rock, soil and sediment. The most common agents causing these geomorphic processes are water, wind, ice and waves. This course examines the processes responsible for eroding, transporting and depositing earth materials and compares these processes with the resulting landforms. Prerequisites: GEOG 1202 or GEOG 1217 or instructor’s permission.

GEOG 3910 Geomorphology (4 Credits)
An advanced course that examines how Earth’s landforms are created by a range of physical processes. Most landforms can be viewed as a result of some combination of erosion, transport and deposition of rock, soil and sediment. The most common agents causing these geomorphic processes are water, wind, ice and waves. This course examines the processes responsible for eroding, transporting and depositing earth materials and compares these processes with the resulting landforms. Prerequisites: GEOG 1202 or GEOG 1217 or instructor’s permission.

GEOG 3920 Remote Sensing Seminar (4 Credits)
Special topics in advanced remote sensing.

GEOG 3930 Cultural Geography Seminar (4 Credits)
Topics, methods and current research in cultural geography.

GEOG 3940 Urban Geography Seminar (4 Credits)
International comparison of economic and social, positive and negative aspects of urban systems.
GEOG 3950 Physical Geography Seminar (2-4 Credits)
GEOG 3955 Pollen Analysis Seminar (3 Credits)
Pollen grains preserved in sediment provide long-term records of vegetation conditions. Changing proportions of pollen types may reflect climatic fluctuation or human impacts. We review important recent research in pollen analysis (palynology), pollen sampling, laboratory techniques and pollen identification. Students are responsible for counting a number of samples and contributing data for a pollen diagram.

GEOG 3990 Undergraduate Research Seminar (1 Credit)
This course is designed to prepare students who will participate in faculty-supervised summer research projects. Students are introduced to research design, use of the scientific method, research expectations and reporting of results. Preparation of formal research proposal with adviser.

GEOG 3991 Independent Study (1-5 Credits)
GEOG 3992 Directed Study (1-10 Credits)
GEOG 3995 Independent Research (1-5 Credits)

GEOG 4000 Fundamental Geographic Perspectives (4 Credits)
A foundation course for persons in the community, without a degree in geography, who want to pursue an education in or make use of computer-based geographic technology but who need a foundation in geographic concepts and perspectives.

GEOG 4020 Geographic Research Methodology (4 Credits)
This class prepares students to undertake creative geographic research leading to the generation of new knowledge. Students produce a NSF proposal by the end of the class. In class, students focus on methods rather than philosophy. This does not mean students go through a laundry list of the many methods employed by geographers (they can do this on their own). Students, however, focus on the methods that are appropriate for their research questions and, at the same time, maintain a healthy awareness and respect for methods employed by geographers in other fields. The class does not focus on the philosophy of the discipline or a particular field. However, these concerns should be apparent in your proposals. Indeed, various philosophical frameworks guide research questions and how students choose to answer those questions.

GEOG 4030 Advanced Field Research (1-5 Credits)
GEOG 4040 Research Topic Identification (0-5 Credits)

GEOG 4100 Application/Design/ProductionI (4 Credits)
First of a two quarter sequence designed to be a culminating educational experience. Primarily lab-based with some lecture material, the various application requirements and guidance on how to go about accomplishing Application Design and Production tasks is provided. Prerequisites: GEOG 2000, GEOG 2100, GEOG 3100 or equivalent.

GEOG 4105 Application/Design/ProductionII (4 Credits)
This course places emphasis on programming and producing technical reports and/or papers that will be published in the Geography Department's on-line applications library. Prerequisite: GEOG 4100.

GEOG 4110 Geospatial Data (4 Credits)
This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed.

GEOG 4400 Urban Landscapes (4 Credits)
Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

GEOG 4410 Economic Geography (4 Credits)
The study of the location and spatial organization of economic activities at the local, national, and global scales. Concerned with the spatial configuration of firms, networks, industries, and regions within the emerging global economy. Cross listed with INTS 4410.

GEOG 4460 Air Transportation & Tourism (4 Credits)
This course will be cross listed with GEOG 3460 Air Transportation & Tourism.

GEOG 4584 Geographic Information Systems for Humanitarian Assistance (4 Credits)
This class prepares students for future employment and enables them to bring more wisdom and expertise to the practice of their professions. Geographic Information Systems (GIS) technology is critical to support decision making throughout the process of response, assistance, and development – key stages in any humanitarian action. Much of the information practitioner’s encounter is spatial in nature and GIS provides a toolbox from which to better understand and utilize this type of information. This class introduces students to GIS technology functionality and information management, and examines GIS’ usefulness in humanitarian response. Today, GIS is an essential technology for emergent managers which support decision making on various levels during preparedness, mitigation, response and recovery. One of the main reasons for that is that much of the information is spatial by nature. Additionally, geospatial and geospatial-temporal analysis of data allows us to quickly access and display relevant information through the creation of maps and reports. This course introduces students to the theoretical principles of geographic information systems and examines its potential for humanitarian assistance through case studies and hands-on training with GIS software. Prerequisite: INTS 4056.
GEOG 4701 Topics in Geography (4 Credits)
Topics vary by instructor.

GEOG 4810 Geography of Latin America (4 Credits)
In this course, we examine how past and present cultural preferences and political economies affect changes in Latin American landscapes. Cross listed with GEOG 2810.

GEOG 4825 Geographies of International Development in Africa (4 Credits)
What are the historical roots of (under)development in sub-Saharan Africa? How is sub-Saharan Africa typically depicted in the media? How can we explain the fact that the Niger Delta provides the bulk of Nigeria’s revenue, and yet, it remains the poorest part of the country? Is climate change the major cause of persistent food insecurity in the drylands of Ethiopia and Burkina Faso? How can we make sense of the uneven geography of poverty in Ghana? What explains urban food insecurity in Cape Town, or land struggles in rural South Africa? What are the social processes underlying the spatial disparity in health status in Malawi, or gender differences in HIV rates in Nyanza province, Kenya? And why do land users often resist state conservation efforts in Tanzania? These are some of the critical questions explored in this course. The primary aim is to provide a critical introduction to the geography of sub-Saharan Africa. We will begin by exploring how “the Africa story” is told by the media, scholars and policymakers. Attention will then shift to understanding the key historical processes that shape (under)development in the region. We will cover a broad range of topics, including governance, colonial history, debt and structural adjustment, foreign aid, food and agriculture, gender, climate change, land grabbing, health, poverty growth, migration, remittances, and resource extraction. We cannot possibly cover all these topics in greater detail; indeed, some are too vast and complex. We will however use specific case studies to illustrate and discuss each of the topics.

GEOG 4880 Geographies of South Africa (4 Credits)
This travel course is designed to give students a first-hand look at the physical and cultural landscapes of South Africa. We will study the varied natural landscapes that produce the commodities (e.g., gold, diamonds, wine, and agriculture) that have attracted the interest of outsiders for centuries and that have influenced the cultural landscapes particular to South Africa. A systematic presentation of the geology of South Africa, and its human history, will unfold throughout our travels.

GEOG 4900 Graduate Colloquium in Geog (0 Credits)
Solid foundation in history and philosophy of the discipline of geography; basis for further exploration of major research specialization.

GEOG 4930 Nicaragua: Development Dilemmas (4 Credits)
This class takes students to post-revolutionary Nicaragua to examine the consequences of recent land grabs by foreigners and transnational companies. Students learn to operate in a country with minimal "western" infrastructure. They learn to examine developing landscapes (that is, resorts and tourism infrastructure) with new eyes and from the perspective of locals who have been left out of the development loop. By the end of the class, students begin to understand the "development game", begin to question the role of tourism in developing economies, begin to know how to interact with other cultures, and finally learn to question the landscapes we "see" and begin to peel back the layers to understand the social and physical evolution of the landscape before their eyes. This class takes an experiential approach and requires students to participate in a service learning experience. Service learning is defined as a course-based, credit bearing educational experience in which faculty, students, and community members participate in an organized service activity that addresses a self-identified community need. We work with several community-based and non-governmental organizations to ensure a good fit between community needs and student expertise.

GEOG 4950 Advanced Field Research (1-17 Credits)

GEOG 4991 Independent Study (1-5 Credits)

GEOG 4992 Directed Study (1-10 Credits)

GEOG 4993 Capstone or Project (1-4 Credits)
Includes technical design and development for MA geotechnical track project and MS-GIS capstone project.

GEOG 4994 Report (1-5 Credits)

GEOG 4995 Independent Research (1-5 Credits)
Includes field research for doctoral dissertation.

GEOG 4999 Geographic Internship (0-5 Credits)
Supervised internship in a government office at local, state or federal level or within private sector. Prerequisite: Permission of instructor.

GEOG 5991 Independent Study (1-5 Credits)

GEOG 5992 Directed Study (1-5 Credits)

GEOG 5995 Independent Research (1-10 Credits)

Geology Courses

GEOL 3010 Process Geomorphology (4 Credits)
The land surface of Earth is continuously altered by geomorphic processes. This class focuses upon the nature of these processes, the work that they perform and the resulting landforms. In addition, the student becomes familiar with various methods of geomorphic analysis through the laboratory component of the class. Cross listed with GEOG 3910. Prerequisite: GEOL 1010, GEOG 1202 or permission of instructor.
**GEOL 3100 Environmental Geology (4 Credits)**
Environmental geology examines geologic hazards, both natural and those attributable to human impacts on the environment from urban and regional development. Specific topics may include disposal of municipal solid waste and radioactive waste; flood, earthquake, volcanic hazards; groundwater pollution and withdrawal; mass-wasting phenomena; and energy-related issues. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission.

**GEOL 3200 Sedimentology/Stratigraphy (4 Credits)**
This course reviews the origin, geologic history, and depositional environments of sediments and sedimentary rocks. Course work concentrates on the identification of sedimentary rocks and depositional environments by first-hand observations of rocks in the Denver area. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission.

**GEOL 3300 Petroleum Geology (4 Credits)**
This class examines the geological occurrences of petroleum including the origin, migration, and accumulation of oil and natural gas. This class differs from traditional petroleum geology classes by offering an examination of the economics and politics underlying the oil and gas industry and by considering alternatives to traditional hydrocarbon resources. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission.

**GEOL 3520 Erosion Process & Measurement (4 Credits)**
Soil erosion is arguably the most serious environmental problem worldwide. This course focuses upon the significance of this problem, the factors affecting erosion rates, the nature of the processes themselves, methods of measurement, estimation of erosion rates and erosion control practices. Prerequisites: GEOG 1203, GEOG 1218, or GEOG 1266.

**GEOL 3540 Hydrology (4 Credits)**
This course provides an overview of the hydrologic cycle with emphasis placed on the study of applied hydrology. Discussions include the fundamental characteristics of precipitation, runoff processes, calculation of flood hazards, aquifers (porosity and permeability), the geologic settings of groundwater, the basic physics of groundwater flow, and water supply and use. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission. Recommended prerequisite: one introductory statistics course.

**GEOL 3900 Geomorphology Seminar (1-5 Credits)**
Hill slopes comprise the vast majority of the Earth’s land surface. It is upon these surfaces that nearly all of the human population must exist and, hopefully, flourish. Hill slopes assume various forms, and their shape influences their utility for various human endeavors. Numerous geomorphic processes operate upon hill slopes to determine their form, and human activities strongly influence the frequency and magnitude of these geomorphic processes. Consequently, hill slopes are an interface between the Earth and the human population. Prerequisite: GEOL 3010 or permission of instructor.

**GEOL 3991 Independent Study (1-5 Credits)**

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**Mathematics**

Office: C.M. Knudson Hall, Room 300  
Mailing Address: 2390 S. York St, Denver, Colorado 80208  
Phone: 303-871-2911  
Fax: 303-871-3173  
Email: math-info@math.du.edu  
Web Site: http://www.math.du.edu

The Department of Mathematics at the University of Denver offers MA, MS and PhD degrees in mathematics. Our graduate programs enroll about 30 students and provide a personalized, congenial and rewarding educational atmosphere where you will interact with faculty from the start. We have an extraordinarily active faculty of accomplished teachers and researchers with expertise in algebraic logic, computational geometry, dynamical systems, functional analysis, nonassociative mathematics, ordered structures, probabilistic combinatorics, quantum structures, and set theory.

The MS and MA degrees prepare students for careers in which mathematics plays a central role. The PhD is a research degree that prepares students to advance the frontiers of knowledge within a specific area of mathematics.

Our graduates are highly sought, not only for their knowledge of mathematics, but also for their ability to solve problems, to think abstractly, to see the big picture, and to articulate their ideas with clarity and precision. Our graduates have been successful in a remarkably diverse collection of careers, including industry, business, education and academia.

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**Doctor of Philosophy in Mathematics**

**Degree and GPA Requirements**

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

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

**Standardized Test Scores**

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

**Master of Arts in Mathematics**

**Degree and GPA Requirements**

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

**Degree and GPA Requirements**

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
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English Language Proficiency Test Score Requirements
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• Minimum TOEFL Score (Internet-based test): 80
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• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Doctor of Philosophy in Mathematics
This degree requires completion of at least 135 graduate-level credits beyond the BA or BS degree; passing of preliminary examinations; completion of a tool requirement; and completion of a written dissertation.

Although a master's degree is not a prerequisite for acceptance into the PhD program, each student is required to obtain a master's degree in mathematics before completing 80 credits in the PhD program.

Degree Requirements
Course Requirements
Students are required to pass both of the sequences MATH 3161, MATH 4165, MATH 4110 and MATH 3170, MATH 4166, MATH 4176 in their first year. Based on performance in preliminary examinations or other considerations, students may be allowed to replace some courses in a sequence by other offerings.

Every student’s course of study must be approved in consultation with a designated departmental advisor.

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<tr>
<th>Code</th>
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<td>MATH 4XXX courses (minimum of 36 credits)</td>
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<tr>
<td>Additional Coursework (Chosen in consultation with the student’s academic advisor.)</td>
<td>Up to 35 credits may be taken in other relevant disciplines, as approved by the mathematics department graduate committee.</td>
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<td>Total Credits</td>
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Minimum credits required for degree: 135

Non-coursework Requirements
• Preliminary Examinations

Every student admitted to the PhD program is expected to pass a written preliminary examination in analysis and a written preliminary examination in algebra. Both preliminary examinations are designed to test whether students in the PhD program have the adequate undergraduate preparation to continue in the program with a reasonable chance of success.

Both examinations are offered twice per year: during the week immediately preceding the first week of the fall quarter, and during the first week of the winter quarter. A student must pass both exams by no later than the end of the winter quarter of his/her second year in the program unless the graduate committee grants an extension of this deadline for exceptional and documented reasons.

• Tool Requirement

It is strongly recommended that students satisfy their tool requirement by demonstrating the ability to use a modern computer typesetting system. Other options include: reading competency in two languages selected from French, German and Russian; a series of outside courses in another discipline; a significant laboratory experience involving mathematics.

• Dissertation and Oral Defense

The dissertation must make a significant contribution to the research literature in mathematics.

After the dissertation has been completed, the student must defend it in a final examination, as specified by the Office of Graduate Education.
Master of Arts in Mathematics

Degree Requirements

Coursework Requirements
Every student’s course of study must be approved in consultation with a designated departmental advisor.

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<td>Approved cognate area (up to 15 credits)</td>
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<td>Additional graduate-level MATH courses</td>
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Minimum credits required for degree: 45

This degree requires completion of 45 credits of graduate-level MATH courses, including at least 12 credits of approved MATH courses at the 4000 level. Students are required to pass at least one of the sequences MATH 3161, MATH 4165, MATH 4110 or MATH 3170, MATH 4166, MATH 4176.

Up to 15 credits may be in an approved cognate area. At most 10 credits from another university may count toward the degree, and such credits must be approved in writing by an advisor from the Mathematics faculty.

Non-coursework Requirements

- Students are required to give an oral presentation in mathematics. This will typically occur after the completion of at least 24 credits of coursework, and should be scheduled after approval from a Mathematics faculty advisor.

No thesis is required.

Master of Science in Mathematics

Degree Requirements

Coursework Requirements
Every student’s course of study must be approved in consultation with a designated departmental advisor.

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<td>45</td>
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</table>

Minimum credits required for degree: 45

This degree requires completion of 45 credits of graduate-level MATH courses, including at least 12 credits of approved MATH courses at the 4000 level. Students are required to pass both of the sequences MATH 3161, MATH 4165, MATH 4110 and MATH 3170, MATH 4166, MATH 4176.

Up to 15 credits may be in an approved cognate area. At most 10 credits from another university may count toward the degree, and such credits must be approved in writing by an advisor from the Mathematics faculty.

Non-coursework Requirements

- Tool requirement- Demonstrated competency in a tool is required and may be chosen from among the following: proficiency in the use of a modern computing typesetting system; approved outside courses; laboratory experience; or reading competency in French, German or Russian.

- Students are required to give an oral presentation in mathematics. This will typically occur after the completion of at least 24 credits of coursework, and should be scheduled after approval from a Mathematics faculty advisor.

No thesis is required.

Courses

MATH 3000 The Real World Seminar (1 Credit)
Lectures by alumni and others on surviving culture shock when leaving the University and entering the job world. Open to all students regardless of major. Cross listed with COMP 3000.

MATH 3040 Lattices and Order (4 Credits)
Ordered sets, lattices as relational and as algebraic structures, ideals and filters, complete lattices, distributive and modular lattices, Boolean algebras, duality for finite distributive lattices. Prerequisite: MATH 2200.

MATH 3050 Set Theory (4 Credits)
Zermelo-Fraenkel axioms, axiom of choice, Zorn's Lemma, ordinals, cardinals, cardinal arithmetic. Prerequisite: MATH 2200.
MATH 3060 Mathematical Logic (4 Credits)
Classical propositional calculus (deductive systems and truth-table semantics), first-order logic (axiomatization and completeness), elements of recursion theory, introduction to nonclassical logics. Prerequisite: MATH 2200.

MATH 3090 Mathematical Probability (4 Credits)
Limit theorems for independent random variables, multivariate distributions, generating functions. Prerequisites: MATH 2080 and MATH 3080.

MATH 3151 Advanced Linear Algebra (4 Credits)
Vector spaces, linear mappings, matrices, inner product spaces, eigenvalues and eigenvectors. Prerequisite: MATH 2060 and MATH 2200.

MATH 3161 Introduction to Real Analysis (4 Credits)
A theoretical introduction to the structure of real numbers, to convergence of sequences and series, and to the topology of the real line, including limits and continuity. Prerequisites: MATH 2080 and MATH 2200.

MATH 3162 Introduction to Real Analysis II (4 Credits)
A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisite: MATH 3161.

MATH 3166 Group Theory (4 Credits)
Groups and homomorphisms, isomorphism theorems, symmetric groups and G-sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 4166. Prerequisite: MATH 3170.

MATH 3170 Introduction to Abstract Algebra (4 Credits)
Examples of groups, permutations, subgroups, cosets, Lagrange theorem, normal subgroups, factor groups, homomorphisms, isomorphisms, rings, integral domains, quaternions, rings of polynomials, Euclid algorithm, ideals, factor rings, maximal ideals, principal ideals, fields, construction of finite fields. Prerequisite: MATH 2060 and MATH 2200.

MATH 3260 Metric Spaces (4 Credits)
Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 4260. Prerequisite: MATH 3161 or equivalent.

MATH 3311 Linear Programming (4 Credits)
Linear optimization models, simplex algorithm, sensitivity analysis and duality, network models, dynamic programming, applications to physical, social and management sciences. Prerequisite: MATH 2060.

MATH 3312 Markov Chains (4 Credits)
Discrete-time and continuous Markov Chains, ergodic theorems, random processes, elementary queueing theory, applications. Prerequisite: MATH 2060 and MATH 3080.

MATH 3340 Introduction to Geometry (4 Credits)
Specific geometrical systems including finite, Euclidean, non-Euclidean and projective geometries. Prerequisite: MATH 2200.

MATH 3451 Chaos, Dynamics & Fractals (4 Credits)
Introduction to one-dimensional dynamical systems, fractals; fixed and periodic points; sources and sinks; period doubling and tangent node bifurcations; chaotic dynamical systems; Sarkovskii’s Theorem. Prerequisite: MATH 3161.

MATH 3550 Introduction to Theory of Numbers (4 Credits)
Concepts of nonanalytic number theory and its history; prime numbers, divisibility, continued fractions, modular arithmetic, Diophantine equations and unsolved conjectures. Prerequisites: MATH 2200.

MATH 3651 Ordinary Differential Equations (4 Credits)
Modeling of phenomena by ordinary differential equations; techniques of analysis and solution of such equations; oscillation theory and boundary value problems, power series methods, special functions, Laplace transforms and difference equations. Prerequisites: MATH 2060 and MATH 2070.

MATH 3661 Partial Differential Equations (4 Credits)
First and second order linear equations, Fourier series, the wave equation, the Cauchy problem, the heat equation, maximum principles, Laplace’s equation, Green’s functions. Prerequisites: MATH 2070 and MATH 2080.

MATH 3701 Combinatorics (4 Credits)
The principle of inclusion and exclusion, elementary counting techniques, systems of distinct representatives, partitions, recursion and generating functions, Latin squares, designs and projective planes. Prerequisite: MATH 2200.

MATH 3705 Topics in Mathematics (4 Credits)
Varying selected advanced topics in mathematics, depending on student demand and instructor interest.

MATH 3710 Graph Theory (4 Credits)
Paths, cycles, trees, Euler tours and Hamilton cycles, bipartite graphs, matchings, basic connectivity theorems, planar graphs, Kuratowski’s theorem, chromatic number, n-color theorems, introduction to Ramsey theory. Prerequisite: MATH 2200.

MATH 3720 Coding Theory (4 Credits)
Goals of coding theory and information theory, instantaneous and Huffman codes, Shannon theorems, block and linear codes, generating and parity-check matrices, Hamming codes, perfect codes, binary Golay code, Reed-Muller codes, cyclic codes, BCH codes, Reed-Solomon codes, ideas of convolutional and turbo codes. Prerequisite: MATH 3170.
MATH 3851 Functions Complex Variable (4 Credits)
Complex numbers, analytic functions, complex integration, series expansions, residue theory, conformal maps, advanced topics and applications. Prerequisites: MATH 2060 and MATH 2080 and MATH 2200.

MATH 3900 Mathematics Internship (0-1 Credits)
Graduate students in mathematics may receive elective credit for mathematically related work performed for employers with the approval of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned.

MATH 3991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in regular course schedule for that particular year.

MATH 3992 Directed Study (1-10 Credits)

MATH 4050 Combinatorial Set Theory (4 Credits)
Beginning with a quick review of ZFC, the standard axioms of set theory, the course covers advanced ordinal and cardinal arithmetic and infinitary combinatorics, including Ramsey theory. Additional axioms such as the Continuum Hypothesis, Martin's Axiom, and combinatorial principles such as Diamond and their consequences for mathematics are studied. Prerequisite: MATH 3050.

MATH 4060 Descriptive Set Theory (4 Credits)
Descriptive Set Theory is one of the main branches of modern set theory. Set theory provides techniques for the precise study of real analysis. This course covers trees as tools for analyzing sets of real numbers, Polish spaces, the Borel hierarchy, Baire-measurability, extensions of continuous functions, separation theorems, and more. Prerequisite: MATH 3050.

MATH 4070 Proof Theory (4 Credits)
Hilbert-style systems, Natural deduction, (simply typed) lambda calculus, combinatory logic, the Curry-Howard correspondence, normalization, cartesian closed categories, Sequent calculi, cut elimination and applications, structural rules; logical systems: classical, intuitionistic, relevance, linear, algebraic semantics. Recommended prerequisite: MATH 2200.

MATH 4080 Algebraic Logic (4 Credits)
Elements of universal algebra, lattice theory and first-order logic; elements of abstract algebraic logic (deductive systems, algebraization, deduction filters, deduction theorems, matrix semantics); sequent calculi for substructural logics, residuated lattices, structure theory for congruences and deductive filters; subvariety lattices (atomic varieties, axiomatizations of joins, translations); algebraic cut elimination; (un)decidability and finite model property. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

MATH 4110 Topology (4 Credits)
Point set topology including topological spaces, connectedness, compactness and separate axioms; preparation for advanced courses in analysis. Prerequisite: MATH 3161. Cross listed with MATH 3110.

MATH 4120 Algebraic Topology (4 Credits)
Fundamental groups, simplicial homology, Euler characteristic classification of surfaces, manifolds. Prerequisites: MATH 3170 and MATH 3110/4110.

MATH 4162 Rings and Modules (4 Credits)
Ideals, left and right R-modules, simple modules, totally decomposable modules, Wedderburn-Artin theorems, Artinian and Noetherian rings and modules, Hopkins theorem, Hilbert basis theorem, free modules, projective and injective modules, Kaplanski theorem. Prerequisites: MATH 3176 or MATH 4176.

MATH 4163 Universal Algebra (4 Credits)
Universal algebras, congruences, lattices, distributive lattices, modular lattices, Boolean algebras, subdirectly irreducible algebras, Maľcev theorems, varieties, Birkhoff theorem. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

MATH 4164 Galois Theory (4 Credits)
The fundamental theorem of algebra, field extensions, ruler and compass constructions, normal and separable extensions, field automorphisms, Galois correspondence, solvability and simplicity, calculating Galois groups. Prerequisite: MATH 3176/MATH 4176 and MATH 3166/MATH 4166.

MATH 4165 Introduction to Real Analysis II (4 Credits)
A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisites: MATH 3161.

MATH 4166 Group Theory (4 Credits)
Groups and homomorphisms, isomorphism theorems, symmetric groups and G-sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 3166. Prerequisite: MATH 3160.

MATH 4168 Lie Groups and Lie Algebras (4 Credits)
Lie groups and Lie algebras, fundamental theorems of Lie, general structure theory; compact, nilpotent, solvable, semisimple Lie groups; classification of semisimple Lie algebras; representation theory of compact and semisimple Lie algebras and Lie groups. Additional topics as time permits: universal enveloping algebras, symmetric spaces. Prerequisites: MATH 3161 and MATH 3170.

MATH 4176 Rings and Fields (4 Credits)
Rings, domains, fields; ideals, quotient rings, polynomials; PIDs, UFDs, Euclidean domains; maximal and prime ideals, chain conditions; extensions of fields, splitting fields, algebraic and transcendental extensions; brief introduction to Galois theory. Cross listed with MATH 3176. Prerequisite: MATH 3170 or equivalent.
MATH 4181 Loop Theory (4 Credits)
Quasigroups, loops, latin squares, 3-nets, isotopy, multiplication groups, inner mapping groups, nuclei, commutant, center, associator subloop, inverse properties, power-associative loops, Bruck loops, Bol loops, Moufang loops, octonions. Prerequisites: MATH 3166 or MATH 4166.

MATH 4260 Metric Spaces (4 Credits)
Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 3260. Prerequisite: MATH 3161 or equivalent.

MATH 4270 Hilbert Spaces (4 Credits)
Schwarz and triangle inequalities, Reisz lemma, subspaces and orthogonal projections, orthonormal bases, spectrum of bounded linear operators, compact, self-adjoint, normal and unitary operators, spectral theorem and, if time permits, unbounded operators. Also, if time permits, applications to partial differential equations, physics and engineering. Prerequisites: MATH 3260 or MATH 4260 or MATH 3110 or MATH 4110.

MATH 4280 Measure Theory and Applications (4 Credits)
Definition of Measure spaces; Lebesgue measure; limit theorems; Raydon-Nikodym Theorem; introduction to L_p spaces. Prerequisite: (MATH 3260 with a minimum grade of D- or MATH 4260 with a minimum grade of C-) or (MATH 3110 with a minimum grade of D- or MATH 4110 with a minimum grade of C).

MATH 4290 Dynamical Systems (4 Credits)
Topological and measure theoretic dynamical systems; properties and invariants of systems; symbolic dynamics; Ergodic Theorems; applications. Prerequisites: MATH 3110/4110 or MATH 3260/4260.

MATH 4300 Graduate Seminar (1-4 Credits)
Students research a topic of their choosing with the aid of a faculty member, and then prepare and present a formal lecture on the subject. Prerequisite: graduate standing or consent of the instructor.

MATH 4400 Differential Geometry (4 Credits)
Planar and spatial curves, global properties of curves, surfaces in three dimensions, the first fundamental form, curvature of surfaces, Gaussian curvatures, geodesics, Theorema Egregium, hyperbolic geometry. Prerequisites: MATH 3170 and either MATH 3110/4110 or MATH 3260/4260.

MATH 4501 Functional Analysis (4 Credits)
Advanced topics in structure of linear spaces; Banach spaces; Hahn-Banach Theorem and Duality; Uniform Boundedness Theorem; Open Mapping and Closed Graph Theorems; Stone-Weierstrass Theorem; Topics in Hilbert Spaces. Prerequisite: MATH 4280.

MATH 4700 Special Topics in Mathematics (1-4 Credits)
MATH 4701 Combinatorial Algorithms (4 Credits)
Basic enumeration techniques; representations of combinatorial objects; algorithms for searching, sorting, generating combinatorial objects, graph algorithms. Prerequisites: MATH 3701 or MATH 3710.

MATH 4705 Special Topics Applied Math (1-5 Credits)
Varying selected advanced topics in mathematics, depending on student demand. Possible alternatives include of variations, partial differential equations, algebraic topology, differential manifolds, special functions.

MATH 4991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in course schedule for that particular year.

MATH 4992 Directed Study (1-10 Credits)
MATH 4995 Independent Research (1-10 Credits)
Research projects undertaken in conjunction with a faculty member.

MATH 5000 Doctoral Seminar (3 Credits)
Techniques, methods used in mathematical, computing research. Includes proofs, bibliographic searching, writing styles, what constitutes an acceptable dissertation.

MATH 5991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in the regular course schedule for that particular year.

MATH 5995 Independent Research (1-10 Credits)
Research leading to a dissertation.

Natural Sciences General
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Mailing Address: 2050 E. Iliff Avenue, Denver, CO 80208
Phone: 303-871-4866
Email: kirsten.norwood@du.edu
Website: http://www.du.edu/nsm/
**Professional Science Master in Biological Sciences**

The Professional Science Master's (PSM) with a concentration in Biomedical Sciences offers rigorous academic training and professional practical skills to prepare students for challenging careers in the biomedical sciences and allied health sciences. The program strives to provide strong scientific knowledge and promote global-awareness, ethics, communication and other important professional skills through acquiring knowledge within and across disciplines at DU. Students will gain an awareness and knowledge of the many current issues and concerns facing the fields of allied health and biomedical sciences industries.

This multi- and inter-disciplinary program is designed to be very individualized with one-on-one advising to customize the curriculum and capstone internship in order to complement and expand on the student’s past academics and experiences and to prepare them for their future career goals.

The student is matched with a capstone mentor whose professional experiences aligns with the student’s future career goals. The overall goal of the capstone experience is for the student to gain advanced disciplinary knowledge and professional skills by applying the appropriate modes of inquiry, research and professional skills to address a specific current problem or concern in the biomedical sciences.

The PSM program emphasized active communication with an external Advisory Board to ensure that the curriculum and capstone experiences are relevant and beneficial to both students and the bioscience and healthcare industries. The advisory board, comprised of leaders in biomedical research, biotechnology, clinical healthcare, health institutes and hospital administration, provides input regarding the knowledge and skill set and professional competencies most sought by employers and academic graduate programs in biomedical fields. This Master’s program is recognized and approves as an affiliated PSM program with the National Professional Science Association.

**Molecular and Cellular Biophysics**

The Molecular and Cellular Biophysics PhD (MCB) program provides opportunities for doctoral studies in the interdisciplinary field of biophysics. Participation of faculty from the Departments of Biological Sciences, Chemistry & Biochemistry, and Physics & Astronomy enhances the strength and breadth of our program by incorporating cross-disciplinary and collaborative approaches to research. The MCB PhD program is centered on research activities that coincide with faculty experience and expertise. Areas of research in the MCB program include cellular physiology, developmental dynamics, protein folding and aggregation, protein network analysis, signal transduction cascades, synthetic biology, systems biology and the development of novel imaging techniques. Projects at the interface of traditional disciplines of physics, biology and chemistry as well as methods of mathematical analysis and computer modeling are particularly encouraged.

The MCB PhD program offers both a core foundation in biophysical theory and practice yet provides flexibility and individualized attention such that students with diverse scientific backgrounds will have the opportunity to be trained in molecular and cellular biophysics. During their first year in the program, students conduct lab rotations, take a year-long course sequence that covers foundations of molecular and cellular biophysics and take additional graduate courses to supplement their undergraduate training. At the end of their first year, students will join the lab in which they will conduct their thesis research.

Students with strong quantitative undergraduate backgrounds (e.g., undergraduate degrees in physics, chemistry, mathematics, computer science/engineering) who desire to apply these skills to various biological problems, as well as students with a background in cell or molecular biology with a solid foundation in mathematics and physics are particularly encouraged to apply. Financial aid is usually offered in the form of Graduate Teaching or Graduate Research Assistantships, which cover tuition costs and provide a stipend for living expenses.

**Doctor of Philosophy in Molecular & Cellular Biophysics**

**Degree and GPA Requirements**

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

**Prerequisites:**

- A minimum of one year of calculus and one year of college physics (preferably calculus-based), regardless of undergraduate major, are required.

**Standardized Test Scores**

- The Graduate Record Examination (GRE) is required and a subject test is recommended. Competitive subject GRE scores will strengthen a candidate’s application. Applicants can report subject GRE scores in any of the following disciplines: Physics, Chemistry, Biology, Biochemistry, Cell and Molecular Biology. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Professional Science Master in Biological Sciences with a Concentration in Biomedical Sciences

Degree and GPA Requirements

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

Prerequisites:

- Students with an undergraduate major in chemistry, physics or mathematics and minimal preparation in biological sciences also will be considered but may be required to take undergraduate courses when the prerequisites are lacking. Course prerequisites include: one year of chemistry, one year of calculus (recommended), one year of physics, and two years of biology.

Standardized Test Scores

- Application to the PSM program requires the Graduate Record Examination (GRE) general test or the MCAT. The GRE subject test is not required. Scores must be received directly from the appropriate testing agency by the program's stated deadline. The institution code for the University of Denver is 4842.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Doctor of Philosophy in Molecular and Cellular Biophysics

Graduate studies in the program are highly individualized; programs should fit each student's unique needs and interests. Students are required to perform original, publishable research and to present a thesis based on research to the faculty of the molecular and cellular biophysics program.

A student qualifies for the PhD degree after demonstrating growth as an independent investigator—identifying a significant research question; proposing a hypothesis or model to answer the question; testing the hypothesis with appropriate experiments; and writing a dissertation acceptable to the department.

The structure of the PhD program in Molecular and Cellular Biophysics is as follows:

- required core courses and elective courses during the first year
- required lab rotations during the first year
- required seminar/special topics courses during the second year
- qualifying exams first year and second year
- thesis research second year to completion
### Degree Requirements

#### Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>First Year</strong></td>
<td></td>
</tr>
<tr>
<td>BIOP 4100</td>
<td>Foundations in Biophysics</td>
<td>3</td>
</tr>
<tr>
<td>BIOP 4150</td>
<td>Cellular Biophysics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 3130</td>
<td>Chemical Systems III</td>
<td>3</td>
</tr>
<tr>
<td>BIOP 4995</td>
<td>Independent Research</td>
<td>1-9</td>
</tr>
<tr>
<td></td>
<td><strong>Second Year</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 quarters of BIOP 4210 are required</td>
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</tr>
<tr>
<td>BIOP 4210</td>
<td>Current Topics in Biophysics</td>
<td>2</td>
</tr>
<tr>
<td>BIOP 4210</td>
<td>Current Topics in Biophysics</td>
<td>2</td>
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<tr>
<td>BIOP 4210</td>
<td>Current Topics in Biophysics</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Electives</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>During the first two years electives can be chosen from existing 3000- or 4000-level courses in the Division and must be chosen with consultation and the approval of the Steering committee. This use of electives is critical given the interdisciplinary nature of this PhD program and scientific discipline and the fact that incoming students will come from a range of disciplines in the physical sciences and life sciences. The remainder of the credit hours required for the degree may include:</td>
<td></td>
</tr>
<tr>
<td>BIOP 4992</td>
<td>Directed Study</td>
<td></td>
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<tr>
<td>BIOP 4995</td>
<td>Independent Research</td>
<td></td>
</tr>
<tr>
<td>BIOP 5995</td>
<td>Independent Research</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td>90</td>
</tr>
</tbody>
</table>

**Minimum credits required for the degree: 90 (must be approved by the program Steering committee)**

#### Non-coursework Requirements

- passing performance in the qualifying examinations
- completion of a research dissertation of publishable quality
- successful oral defense of the dissertation

#### Additional requirements:

- successful completion of research rotations during the first year
- maintaining a minimum GPA of 3.0
- passing performance in the qualifying examinations
- attendance at departmental seminars and the presentation of one seminar per year
- completion of a research dissertation of publishable quality
- successful oral defense of the dissertation

A complete description of the program’s official requirements and details of qualifying examinations are available on the Natural Sciences & Mathematics (http://www.du.edu/nsm/departments/molecularandcellular) website.

### Master of Science in Molecular and Cellular Biophysics

The MS in Molecular and Cellular Biophysics is a terminal master’s degree for students who enter the PhD in Molecular and Cellular Biophysics but demonstrate a mastery in the program that indicates an MS degree is more suitable.

#### Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOP 4100</td>
<td>Foundations in Biophysics</td>
<td>3</td>
</tr>
<tr>
<td>BIOP 4150</td>
<td>Cellular Biophysics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 3130</td>
<td>Chemical Systems III</td>
<td>3</td>
</tr>
<tr>
<td>BIOP 4210</td>
<td>Current Topics in Biophysics</td>
<td>2</td>
</tr>
<tr>
<td>BIOP 4210</td>
<td>Current Topics in Biophysics</td>
<td>2</td>
</tr>
<tr>
<td>BIOP 4210</td>
<td>Current Topics in Biophysics</td>
<td>2</td>
</tr>
</tbody>
</table>
BIOP 4995 | Independent Research (Student must reach a minimum of 45 credit hours with approved independent research coursework.) | 1-9

**Minimum Number of Credits Required**

45

**Minimum credits required for the degree: 45**

**Non-coursework requirements**

- Thesis
- Oral Defense

**Professional Science Master in Biological Sciences**

**Degree Requirements**

**Coursework Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4085</td>
<td>Accelerated Biostatistics</td>
<td>2</td>
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<tr>
<td>BIOL 4155</td>
<td>Leadership in Science</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 4211</td>
<td>Advanced Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4212</td>
<td>Advanced Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4231</td>
<td>Responsible Conduct in Research</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 4310</td>
<td>Foundations in Literature: Cell and Molecular Biology</td>
<td>2</td>
</tr>
</tbody>
</table>

must be taken 2 times

| BIOL 4870 | Medical Ethics                                         | 4       |
| BIOL 4880 | Capstone in Biomedical Sciences                       | 4       |
| BIOL 4995 | Independent Research                                   | 1-8     |

**Elective Courses**

Electives can be chosen from the approved list of existing elective courses in consultation with the Program Director. Additional upper level (3000- or 4000-level) elective courses will be considered with approval of the Program Director.

**Natural Sciences**

<p>| BIOL 3025 | Science and the Law                                    | 2,4     |
| BIOL 3110 | Special Topics: Biology                                | 1-5     |
| BIOL 3120 | General Microbiology                                   | 4       |
| BIOL 3145 | Cellular and Molecular Biology of Cancer               | 2-4     |
| BIOL 3150 | Intracellular Dynamics                                 | 4       |
| BIOL 3160 | Biophysics: ion Channels &amp; Disease                     | 4       |
| BIOL 3230 | Nutrition                                               | 3       |
| BIOL 3250 | Human Physiology                                       | 5       |
| BIOL 3410 | Animal Behavior                                        | 4       |
| BIOL 3560 | Molecular Biology Laboratory                           | 4       |
| BIOL 3610 | Developmental Biology                                  | 4       |
| BIOL 3630 | Cell Biology of Development                            | 4       |
| BIOL 3640 | Introductory Neurobiology                              | 4       |
| BIOL 3641 | Systems Neuroscience                                   | 4       |
| BIOL 3642 | Neuropharmacology                                      | 4       |
| BIOL 3644 | Neuromuscular Pathophysiology                          | 4       |
| BIOL 3656 | Cellular Aspects of Diabetes and Obesity               | 4       |
| BIOL 3670 | Molecular Immunology                                   | 4       |
| BIOL 3675 | Virology                                                | 4       |
| CHEM 3831 | Advanced Protein Biochemistry                          | 3       |
| BIOL 3704 | Advanced Topics in Cell Biology                        | 1-4     |
| BIOL 3705 | Advanced Topics in Molecular Biology                   | 1-4     |
| BIOL 3800 | Human Molecular Biology                                | 4       |
| BIOL 3910 | Viruses &amp; Infectious Human Diseases                    | 4       |
| BIOL 3920 | Forensic Pathology                                     | 2-4     |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4213</td>
<td>Advanced Cell Signaling</td>
<td>3</td>
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<td>CHEM 3130</td>
<td>Chemical Systems III</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 3811</td>
<td>Biochemistry-Proteins</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 3812</td>
<td>Biochemistry-Membranes/Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 3813</td>
<td>Biochemistry-Nucleic Acids</td>
<td>3</td>
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<tr>
<td>CHEM 3820</td>
<td>Biochemistry Lab</td>
<td>3</td>
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<tr>
<td>CHEM 3831</td>
<td>Advanced Protein Biochemistry</td>
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<tr>
<td>GEOG 3755</td>
<td>Geography of Health</td>
<td>4</td>
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<tr>
<td>INTS 4056</td>
<td>Information Management in Humanitarian Crises</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 4370</td>
<td>GIS &amp; Environmental Health Geography</td>
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<tr>
<td>INTS 4367</td>
<td>Global Health Affairs</td>
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<tr>
<td>INTS 4483</td>
<td>Practical Applications in Global Health</td>
<td>4</td>
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<tr>
<td>INTS 4362</td>
<td>Gender and Health</td>
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</tr>
<tr>
<td>INTS 4368</td>
<td>HIV &amp; AIDS in International Affairs</td>
<td>4</td>
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<tr>
<td>INTS 4423</td>
<td>Introduction to Epidemiology</td>
<td>4</td>
</tr>
<tr>
<td>INTS 4435</td>
<td>Health and Development</td>
<td>4</td>
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<tr>
<td>INTS 4465</td>
<td>Population and Society</td>
<td>4</td>
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<tr>
<td>INTS 4492</td>
<td>Health and Humanitarian Aid</td>
<td>4</td>
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<tr>
<td>INTS 4516</td>
<td>Major Diseases in Global Health (From Pathophysiology to Action)</td>
<td>4</td>
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### Global Health

<table>
<thead>
<tr>
<th>Course Code</th>
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<tr>
<td>ANTH 3320</td>
<td>Medical Anthropology</td>
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<tr>
<td>CNP 4707</td>
<td>Introduction to Integrated Health</td>
<td>3</td>
</tr>
<tr>
<td>COMN 3270</td>
<td>Health Communication</td>
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<tr>
<td>COMN 4701</td>
<td>Topics in Communication</td>
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<tr>
<td>COMN 4703</td>
<td>Topics in Communication</td>
<td>1-4</td>
</tr>
<tr>
<td>PSYC 4002</td>
<td>Prosem in Memory and Cognition</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4011</td>
<td>Proseminar in Emotion</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4021</td>
<td>Prosem in Social Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4031</td>
<td>Developmental Proseminar: Cognition &amp; Perception</td>
<td>4</td>
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<tr>
<td>PSYC 4032</td>
<td>Developmental Proseminar: Social-Emotional</td>
<td>4</td>
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<tr>
<td>PSYC 4045</td>
<td>The Developing Brain</td>
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<tr>
<td>PSYC 4932</td>
<td>Psychology Practicum-Research</td>
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<tr>
<td>PSYC 4033</td>
<td>Devel Proseminar: Biological</td>
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<tr>
<td>PSYC 4085</td>
<td>Stress &amp; Health</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4254</td>
<td>Intro to Neural Network Models</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4255</td>
<td>Imaging the Mind</td>
<td>4</td>
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<tr>
<td>PSYC 4256</td>
<td>Seminar:Cognitive Neuroscience</td>
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<tr>
<td>PSYC 4258</td>
<td>Social Neuroscience</td>
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<tr>
<td>PSYC 4262</td>
<td>Affective Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4511</td>
<td>Prosem in Psychopathology</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4525</td>
<td>Prosem in Develop Neuropsych</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4526</td>
<td>Prosem in Cog Neuroscience</td>
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### Social Sciences

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<tbody>
<tr>
<td>ENBI 4510</td>
<td>Biomechanics</td>
<td>4</td>
</tr>
<tr>
<td>ENBI 4520</td>
<td>Introduction to Cardiovascular Engineering</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4571</td>
<td>Multicult Issues &amp; Mental Health</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 4660</td>
<td>Perception: A Cognitive Neuroscience Approach</td>
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### Engineering

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>INFO 4000</td>
<td>Foundations of Business</td>
<td>4</td>
</tr>
<tr>
<td>ACTG 4610</td>
<td>Financial Accounting and Reporting</td>
<td>4</td>
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<tr>
<td>FIN 4630</td>
<td>Managerial Finance</td>
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<tr>
<td>Course Code</td>
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<tr>
<td>-------------</td>
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</tr>
<tr>
<td>INFO 4000</td>
<td>Foundations of Business</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4100</td>
<td>Survey of Business Analytics</td>
<td>4</td>
</tr>
<tr>
<td>INFO 4280</td>
<td>Project Management</td>
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<tr>
<td>MGMT 4620</td>
<td>Organizational Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>MGMT 4630</td>
<td>Strategic Human Resources Management</td>
<td>4</td>
</tr>
<tr>
<td>MKTG 4100</td>
<td>Marketing Concepts</td>
<td>4</td>
</tr>
<tr>
<td>Public Policy</td>
<td>Analytical &amp; Critical Skills</td>
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<tr>
<td>PPOL 3230</td>
<td>Analytical &amp; Critical Skills</td>
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</tr>
<tr>
<td>PPOL 4400</td>
<td>Analytical &amp; Critical Skills</td>
<td>4</td>
</tr>
<tr>
<td>PPOL 4501</td>
<td>Great Issues Forum</td>
<td>2</td>
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<tr>
<td>PPOL 4502</td>
<td>Issues Forum II</td>
<td>2</td>
</tr>
<tr>
<td>PPOL 4600</td>
<td>Regulatory Policy</td>
<td>4</td>
</tr>
<tr>
<td>PPOL 4700</td>
<td>Public Management &amp; Budgeting</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credits**: 45

1. Students may take ENBI 4800 Advanced Topics: Bio-Fluid Mechanics or ENBI 4800 Advanced Topics: Computational Biomechanics.

**Minimum credits required for degree**: 45

**Non-coursework Requirements**
- Capstone project: The capstone project includes a written and public oral presentation of the project. The program requires a capstone project which involves interactions with health or biomedical professions from outside of the DU community. The capstone experience will be culminated in a formal scholarly work (both written and orally presented) that reflects a student’s individual interest and the integration of science with strong professional skills.

**Additional requirements**:
- Maintain a minimum GPA of 3.0
- Successful completion of capstone project
- Completion of capstone paper
- Successful oral defense of capstone project

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**Physics and Astronomy**

Office: Physics Building, Room 211
Mailing Address: 2112 East Wesley Ave., Denver, CO. 80208
Phone: 303-871-2238
Email: Faun.Lee@du.edu
Website: https://physics.du.edu/

The Department of Physics and Astronomy at the University of Denver combines a tradition of individualized instruction with a contemporary research focus. The department underwent a strong expansion with eight tenure-track and two teaching professor positions filled in the last 12 years. Our diverse and dynamic faculty of 12 includes four women and come from seven different countries. We provide an attentive, hands-on research and learning community for undergraduate and graduate students up through the PhD level. The department also offers a low student-to-faculty ratio in all advanced and graduate physics and astronomy courses and stresses individualized attention to each student. The program is recognized by the APS among US PhD-granting departments for our high percentage (50%) of female graduates: placing second nationally at the undergraduate level and third at the graduate level (APS data for the period 2011-2013).

The department has major research thrusts in stellar astronomy/astrophysics, biophysics, and condensed matter/materials physics. Our faculty members are internationally recognized and accomplished researchers. The department is a part of the University of Denver’s interdisciplinary Molecular and Cellular Biophysics program (http://www.du.edu/nsm/departments/biophysics). Major state-of-the-art instrumentation is available both in the department and through collaborations with nearby national institutes in the region (NIST and NREL). Also, the University of Denver maintains our own Linux cluster for in-house high-performance computational needs.

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**Doctor of Philosophy in Physics**

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

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

**Standardized Test Scores**

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

**Master of Arts in Physics**

**Degree and GPA Requirements**

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

**Standardized Test Scores**

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

**Master of Science in Physics**

**Degree and GPA Requirements**

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

**Standardized Test Scores**

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.
English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Doctor of Philosophy in Physics
The Department of Physics and Astronomy offers PhD degree in physics that prepares students for careers across a spectrum of scientific pursuits. At the conclusion of your degree, you'll be equipped with the experience and knowledge necessary to build a career in the advancement of scientific knowledge or education at the highest levels, which can open doors to careers in research and development in academia, government, and private industry.

Our department offers research opportunities in theoretical, experimental and computational astronomy and astrophysics, biophysics, and condensed matter and materials physics. PhD candidates in the program will work closely with faculty advisors to create a path of study that culminates in a dissertation defense based on independent research of a publishable quality.

Degree Requirements
Coursework Requirements
Both 4000- and 3000-graduate level courses may be applied toward the degree, with the approval of the Graduate Committee or the Dissertation Committee.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHYS 4611</td>
<td>Adv Electricity &amp; Magnetism I</td>
<td>3</td>
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<tr>
<td>PHYS 4612</td>
<td>Adv Electricity &amp; Magnetism II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4111</td>
<td>Quantum Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4112</td>
<td>Quantum Mechanics II</td>
<td>3</td>
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<td>PHYS 4811</td>
<td>Statistical Mechanics I</td>
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<td>PHYS 4001</td>
<td>Introduction to Research I</td>
<td>1,2</td>
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<tr>
<td>PHYS 4002</td>
<td>Introduction to Research II</td>
<td>1-3</td>
</tr>
<tr>
<td>PHYS 4003</td>
<td>Introduction to Research III</td>
<td>1,2</td>
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<tr>
<td>Additional Coursework</td>
<td></td>
<td>71-67</td>
</tr>
</tbody>
</table>

Minimum credits required for the degree: 90 of which a minimum of 60 must be in Physics and Astronomy including the Graduate Core Courses, which constitute 19-23 quarter hours.

Non-Course Requirements
- Regular attendance at the Physics and Astronomy colloquia;
- Annual presentation at the Physics and Astronomy colloquia;
- Passing Comprehensive Examination at the PhD level;
- Advancement to Preliminary Candidacy at the PhD level;
- Formation of the Dissertation Committee;
- Passing Oral Dissertation Research Proposal;
- Advancement to Candidacy at the PhD level;
- Dissertation;
- Dissertation Defense. Three departmental faculty members and an Outside Chair are required for the Oral Defense.

Other Degree Requirements
- Good academic standing: a GPA of 3.0 or higher;
- No grades lower than C- are accepted toward the degree;
- No more than one-fourth of the hours accepted toward the degree may be of C+, C, or C- grade;
Master of ARTS in Physics

The Department of Physics and Astronomy offers a Master of Arts (MA) in Physics that prepares the student for a wide variety of jobs. The MA degree is intended primarily for students who are seeking an advanced degree without a significant research component. For instance, the MA degree is appropriate for students pursuing careers in pre-college or community college teaching, planetarium or museums, or as technical representatives of various organizations. With complementary courses in education, MA graduates are well qualified to teach at the secondary level. The main difference between the MA and MS degree is that a research thesis is not required for the MA degree. However, students pursuing the MA degree will get exposed to some research experience through Introduction to Research courses in their first year in the program.

Degree Requirements

Coursework Requirements
Both 4000- and 3000-graduate level courses may be applied toward the degree, with the approval of the Graduate Committee or the Master’s Committee.

<table>
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<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td></td>
<td>Graduate Core Courses</td>
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<tr>
<td></td>
<td>Physics &amp; Astronomy Graduate Core Courses are the following 8 courses (19-23 qtr hrs) that all students are expected to take during the first two years in the program:</td>
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<tr>
<td>PHYS 4611</td>
<td>Adv Electricity &amp; Magnetism I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4612</td>
<td>Adv Electricity &amp; Magnetism II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4111</td>
<td>Quantum Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4112</td>
<td>Quantum Mechanics II</td>
<td>3</td>
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<tr>
<td>PHYS 4811</td>
<td>Statistical Mechanics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 4001</td>
<td>Introduction to Research I</td>
<td>1,2</td>
</tr>
<tr>
<td>PHYS 4002</td>
<td>Introduction to Research II</td>
<td>1-3</td>
</tr>
<tr>
<td>PHYS 4003</td>
<td>Introduction to Research III</td>
<td>1,2</td>
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<td>Additional Coursework</td>
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</tr>
<tr>
<td></td>
<td>Minimum credits required for the degree</td>
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</table>

Minimum credits required for degree: 45 including the Graduate Core Courses, which constitute 19-23 quarter hours

Non-course requirements:
- Good academic standing: a GPA of 3.0 or higher;
- No grades lower than C- are accepted toward the degree;
- No more than one-fourth of the hours accepted toward the degree may be of C+, C, or C- grade;
- Regular attendance at the Physics and Astronomy colloquia.

Master of Science in Physics

The Department of Physics and Astronomy offers a Master of Science (MS) in Physics that prepares the student for a wide variety of jobs in industry, government and educational institutions. Our graduates have obtained industrial or governmental laboratory research positions, entered pre-college or community college teaching, joined planetarium or museum staffs, and become technical representatives of various organizations. With complementary courses in education, MS graduates are well qualified to teach at the secondary level. The MS in Physics is also a popular course of study and professional improvement for people already working in industry. For those currently employed, research projects can usually be matched to the employer’s programs, and often someone from the industry can serve as co-advisor so that the continuing education benefits both the student and the employer.

Degree Requirements

Coursework Requirements
Both 4000- and 3000-graduate level courses may be applied toward the degree, with the approval of the Graduate Committee or the Master’s Committee.

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<tr>
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<tr>
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<td>19-23</td>
</tr>
<tr>
<td></td>
<td>Physics &amp; Astronomy Graduate Core Courses are the following 8 courses (19-23 qtr hrs) that all students are expected to take during the first two years in the program:</td>
<td></td>
</tr>
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<td>3</td>
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<td>Adv Electricity &amp; Magnetism II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4111</td>
<td>Quantum Mechanics I</td>
<td>3</td>
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<tr>
<td>PHYS 4112</td>
<td>Quantum Mechanics II</td>
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</table>
PHYS 4811 Statistical Mechanics I 4
PHYS 4001 Introduction to Research I 1,2
PHYS 4002 Introduction to Research II 1-3
PHYS 4003 Introduction to Research III 1,2

Additional Coursework 26-22

Minimum credits required for the degree 45

Minimum credits required for degree: 45 including the Graduate Core Courses, which constitute 19-23 quarter hours

Non-Course Requirements
- Regular attendance at the Physics and Astronomy colloquia;
- Annual presentation at the Physics and Astronomy colloquia;
- Passing Comprehensive Examination at the MS level;
- Advancement to MS Candidacy;
- Formation of the Master’s Committee;
- Thesis;
- Thesis Defense. Two departmental faculty members and an Outside Chair are required for the Oral Defense.

Other Degree Requirements
- Good academic standing: a GPA of 3.0 or higher;
- No grades lower than C- are accepted toward the degree;
- No more than one-fourth of the hours accepted toward the degree may be of C+, C, or C- grade;

Courses

PHYS 3111 Quantum Physics I (4 Credits)
First of a two-quarter sequence. The Schrödinger equation: interpretation of wave functions; the uncertainty principle; stationary states; the free particle and wave packets; the harmonic oscillator; square well potentials. Hilbert space: observables, commutator algebra, eigenfunctions of a Hermitian operator; the hydrogen atom and hydrogenic atoms. Prerequisites: PHYS 2252, PHYS 2260, PHYS 2556, PHYS 3612 and MATH 2070.

PHYS 3112 Quantum Physics II (4 Credits)
Second of a two-quarter sequence. Angular momentum and spin; identical particles; the Pauli exclusion principle; atoms and solids: band theory; perturbation theory; the fine structure of hydrogen; the Zeeman effect; hyperfine splitting; the variational principle; the WKB approximation; tunneling; time dependent perturbation theory; emission and absorption of radiation. Scattering: partial wave analysis; the Born approximation. Prerequisite: PHYS 3111.

PHYS 3251 Astrophysics: Radiative Processes (4 Credits)
Because light is the primary means by which astronomers learn about the Universe, understanding the production and subsequent behavior of light is key to interpreting astronomical observations. This course introduces students to the physics of astrophysical radiation and its interaction with matter as it travels from its source to our detectors. Topics may include radiative transfer, emission and absorption processes, Compton processes, synchrotron radiation, thermodynamic equilibrium, radiative and collisional excitation, and spectroscopy of atoms and molecules. The course is aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. Credit can apply toward physics or astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor’s permission.

PHYS 3252 Astrophysics: Observations (4 Credits)
Astronomy is fundamentally an observational science and as such it is important for practitioners to understand how their data are collected and analyzed. This course is therefore a comprehensive review of current observational techniques and instruments, aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. This class introduces students to the capabilities and limitations of different types of instruments while exploring the sources and types of noise and providing statistical tools necessary for interpreting observational data. Credit can apply toward physics or astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor’s permission.

PHYS 3270 Workshop: Practical Astronomy (1-5 Credits)
Capstone coursework featuring studies in experimental, computational, and/or theoretical work in astronomy and astrophysics. Credit can apply toward physics or astrophysics minor.

PHYS 3311 Advanced Laboratory I (1 Credit)
First of a three-quarter sequence. Advanced experimental techniques in physics. Meets with PHYS 2311. Prerequisite: instructor’s permission.

PHYS 3312 Advanced Laboratory II (1 Credit)
Second of a three-quarter sequence. Advanced experimental techniques in physics. Meets with PHYS 2312. Prerequisite: instructor’s permission.

PHYS 3313 Advanced Laboratory III (1 Credit)
Third of a three-quarter sequence. Advanced experimental techniques in physics. Meets with PHYS 2313. Prerequisite: instructor’s permission.

PHYS 3510 Analytical Mechanics I (4 Credits)
Lagrangian and Hamiltonian mechanics. Prerequisites: PHYS 1113, PHYS 1213, or PHYS 1214 and MATH 2070 and consent of instructor.
PHYS 3611 Electromagnetism I (4 Credits)
First of a two-quarter sequence. Vector algebra; differential vector calculus (gradient, divergence and curl); integral vector calculus (gradient, divergence and Stokes' Theorems); line, surface and volume integrals; Electrostatics: the electric field, electric potential, work and energy in electrostatics; method of images, boundary value problems and solutions to Laplace's equation in Cartesian, spherical and cylindrical coordinates; multipole expansion of the electric potential; electric fields in matter: polarization; the electric displacement vector; boundary conditions, linear dielectrics. Magnetostatics: magnetic fields and forces. Prerequisites: PHYS 1113, PHYS 1213, or PHYS 1214 and MATH 2070.

PHYS 3612 Electromagnetism II (4 Credits)
Second of a two-quarter sequence. Magnetic vector potential; magnetic fields in matter: magnetization; fields of magnetized objects; linear and nonlinear magnetic materials; electromotive force, Ohm's law; electromagnetic induction; Faraday's law; Maxwell's equations; the displacement current; boundary conditions; the Poynting theorem; momentum and energy density of the fields; the Maxwell stress tensor; the wave equation and electromagnetic waves in vacuum and matter; absorption and dispersion; wave guides; the potential formulation and gauge transformations; retarded potentials; dipole radiation. Prerequisite: PHYS 3611.

PHYS 3700 Advanced Topics: General (3 Credits)
Offered irregularly, depending on demand. May be taken more than once for credit. Prerequisite: instructor's permission.

PHYS 3711 Optics I (4 Credits)
First of a two-quarter sequence. Gaussian optics and ray tracing; matrix methods and application to optical design; elementary theory of aberrations; light as electromagnetic wave, diffraction and interference; interferometers and their applications. Elementary theory of coherence; selected topics. May include laboratory work as appropriate. Prerequisites: PHYS 1113, PHYS 1213 or PHYS 1214, and MATH 2070.

PHYS 3781 Thermal Physics I (4 Credits)
First of a two-quarter sequence. Laws of thermodynamics; thermal properties of gases and condensed matter; kinetic theory of gases, classical and quantum statistics. Prerequisites: PHYS 1113, PHYS 1213 or PHYS 1214 and MATH 2070.

PHYS 3991 Independent Study (1-10 Credits)
PHYS 3992 Directed Study (1-10 Credits)
PHYS 3995 Independent Research (1-10 Credits)

PHYS 4001 Introduction to Research I (1,2 Credit)
This course is the first of the 3-course sequence designed to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students review essential material in mathematical physics, learn basic programming techniques and improve upon their skills in literature search and scientific writing, especially proposal writing. Special in-class seminars in collaboration with the Penrose Library and Writing and Research Center are scheduled. Student are introduced to research conducted by Physics and Astronomy faculty so that they can choose a faculty member with whom to take on a Winter Research Project during the winter interterm and winter quarter as part of Introduction to Research II. Students must prepare and submit a research proposal before the end of the fall quarter.

PHYS 4002 Introduction to Research II (1-3 Credits)
This is the second of the 3-course sequence to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students conduct an independent research or study project that they have outlined in the research proposal they submitted as part of Introduction to Research I under supervision of a faculty advisor of their choosing. At the same time, students have time to review issues that we face as researchers. Prerequisites: PHYS 4001 and consent of a faculty research advisor.

PHYS 4003 Introduction to Research III (1,2 Credit)
This is the third of the 3-course sequence to provide students with the opportunity of learning fundamental skills to conduct independent research in any physical science disciplines. In this course, students complete their Winter research project conducted as part of Introduction to Research II and present the results in writing as a term paper and in oral presentation as part of the Departmental Colloquia. Special in-class sessions in collaboration with the Writing and Research Center are included. Prerequisite: PHYS 4002.

PHYS 4100 Foundations of Biophysics (3 Credits)
Focus of the course is on application of basic physics principles to the study of cells and macromolecules. Topics include diffusion, random processes, thermodynamics, reaction equilibriums and kinetics, computer modeling. Must be admitted to the MCB PhD program or related graduate program with instructor approval. Cross listed with BIOP 4100.

PHYS 4111 Quantum Mechanics I (3 Credits)
PHYS 4112 Quantum Mechanics II (3 Credits)
PHYS 4251 Intro to Astrophysics I (3 Credits)
PHYS 4252 Intro to Astrophysics II (3 Credits)
PHYS 4253 Intro to Astrophysics III (3 Credits)
PHYS 4411 Advanced Condensed Matter I (3 Credits)
Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4111.
PHYS 4412 Advanced Condensed Matter II (3 Credits)
Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4112.

PHYS 4413 Advanced Condensed Matter III (3 Credits)
Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4113.

PHYS 4511 Advanced Dynamics I (4 Credits)

PHYS 4611 Adv Electricity & Magnetism I (3 Credits)

PHYS 4612 Adv Electricity & Magnetism II (3 Credits)

PHYS 4720 Light-Matter Interaction (4 Credits)
This course will introduce the theory and applications of light-matter interactions. Fundamental theory will be explored from both semi-classical and quantum perspectives, and photon-carrier interactions will be studied in a variety of physical systems, including atoms, glasses, semiconductors, and metals. Experimental techniques will also be discussed, such as absorption, photoluminescence, and coherent spectroscopies, in addition to ultrafast nonlinear optical interactions. Students will also build their own demonstration and teaching module for elementary-age children, and will use their module to teach children at a local school.

PHYS 4750 Seminar in Physics (1 Credit)

PHYS 4811 Statistical Mechanics I (4 Credits)
Fundamentals of thermodynamics, microcanonical and canonical ensemble, quantum formulation noninteracting particle systems.

PHYS 4860 Numerical and Computational Methods in Physics (4 Credits)
The main goal of this course is to gain a better understanding of physical problems by solving them numerically; in the process, students learn about several numerical methods and computational techniques that have a very broad range of applications in many other scientific fields. Depending on the problem, students work with a software package (Mathematica), and also acquire coding experience in different programming languages. Graduate students carry out projects involving more complex simulation and numerical methods currently used in many areas of condensed matter physics, quantum chemistry and biophysics, such as Density Functional calculations, Monte Carlo and Molecular Dynamics methods.

PHYS 4910 Special Topics Physics (1-5 Credits)

PHYS 4991 Independent Study (M.S.) (1-10 Credits)

PHYS 4992 Directed Study (M.S.) (1-10 Credits)

PHYS 4995 Independent Research (M.S.) (1-10 Credits)

PHYS 6991 Independent Study (PhD) (1-10 Credits)

PHYS 6995 Independent Research (PhD) (1-10 Credits)

Sturm College of Law

At the University of Denver Sturm College of Law, we balance rigorous academics with the demands of the outside world and help you focus on things that matter to you: your career, your future, your life in law. Our nationally ranked specialty programs provide opportunities to pursue your interest in areas such as Corporate and Commercial Law, International Legal Studies, Environmental and Natural Resources Law, Workplace Law and Constitutional Rights and Remedies. Because we recognize that a legal education grounded in practical skills training is the key to a successful legal career, we created the Experiential Advantage Curriculum which allows you to spend an entire year in real or simulated practice settings. By the time you graduate, you will have a year's worth of legal practice experience – via clinics, externships, and in-depth course simulations, including our new Semester in Practice Externship – and be poised to distinguish yourself in a competitive job market. Your time at Denver Law will be well spent – reaching within yourself while reaching out to the world.

Law

Juris Doctor

Office: Ricketson Law Building
Mail Code: 2255 East Evans Avenue, Denver, CO 80208
Phone: 303-871-6000
Email: admissions@law.du.edu
Web Site: http://www.law.du.edu/

At the University of Denver Sturm College of Law, we balance rigorous academics with the demands of the outside world and help you focus on things that matter to you: your career, your future, your life in law. Our nationally ranked specialty programs provide opportunities to pursue your interest in areas such as Corporate and Commercial Law, International Legal Studies, Environmental and Natural Resources Law, Workplace Law and
Constitutional Rights and Remedies. Because we recognize that a legal education grounded in practical skills training is the key to a successful legal career, we created the Experiential Advantage Curriculum which allows you to spend an entire year in real or simulated practice settings. By the time you graduate, you will have a year’s worth of legal practice experience — via clinics, externships, and in-depth course simulations, including our new Semester in Practice Externship — and be poised to distinguish yourself in a competitive job market. Your time at Denver Law will be well spent — reaching within yourself while reaching out to the world.

Graduate Legal Studies

Office: Ricketson Law Building Suite 390
Mail Code: 2255 East Evans Avenue, Denver, CO 80208
Phone: 303-871-6249
Email: gradlegalstudies@law.du.edu
Web Site: http://www.law.du.edu/gls

Denver Law offers a number of advanced degrees (LLM and Master’s) that can supplement a student’s law degree with specialized knowledge, introduce foreign lawyers and those educated in other disciplines to the U.S. legal system, or train students in the unique rigors of tax or legal administration. It is the goal of each academic program to bridge the objectives of its students to the curriculum and the University of Denver’s mission to make a meaningful impact, both locally and globally.

Juris Doctor

Degree and GPA Requirements

• To be enrolled at the University of Denver Sturm College of Law, you must hold a bachelor of arts or a bachelor of science degree from a regionally accredited college or university. No undergraduate field of study is favored, based on evidence that a strong student in any major can develop the skills of writing, analysis and persuasion necessary for success in law school.

Standardized Test Scores

• Valid Law School Admissions Test (LSAT) score

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS test score requirements for this degree program are:

• TOEFL Paper-based test: 587
• TOEFL Internet-based test: 95
• IELTS: 7.0

Additional Requirements for International Students

• LSAC Credential Assembly Service (CAS)
  • If you have completed any post-secondary work outside the US (including its territories) or Canada, these transcripts must be submitted to the LSAC to be translated and evaluated. A foreign credential evaluation will be completed by the American Association of Collegiate Registrars and Admissions Officers and included with your CAS report.
  • We will not accept any other translation or evaluation services for the admissions process.
  • If you have questions, contact LSAC at LSACINFO@LSAC.org

Master of Laws in American Law Practice

Degree and GPA Requirements

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

Other Requirements

• A Juris Doctorate (JD) or equivalent is required.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Sturm College of Law may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Laws in Environmental/Natural Resource Law Policy

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

Other Requirements
• A Juris Doctorate (JD) or equivalent is required.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Sturm College of Law may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Laws in International Business Transactions

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

Other Requirements
• A Juris Doctorate (JD) or equivalent is required.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 85
• Minimum TOEFL Score (Paper-based test): 567
• Minimum IELTS Score: 0
• Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Sturm College of Law may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.
Master of Legal Studies in Legal Studies

Degree and GPA Requirements

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 85
- Minimum TOEFL Score (Paper-based test): 567
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Sturm College of Law may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Legal Studies in Environmental/Natural Resource Law Policy

Degree and GPA Requirements

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Sturm College of Law may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

Master of Science in Legal Administration in Legal Administration with a Concentration in Court Administration

Degree and GPA Requirements

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.
English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 100
- Minimum TOEFL Score (Paper-based test): 600
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

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

Master of Science in Legal Administration in Legal Administration with a Concentration in Law Firm Administration

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 100
- Minimum TOEFL Score (Paper-based test): 600
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

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

Master of Science in Legal Administration in Legal Administration - Advanced Standing with a Concentration in Court Administration

Degree and GPA Requirements

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

Other Requirements

- A Juris Doctorate (JD) or equivalent is required.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 100
- Minimum TOEFL Score (Paper-based test): 600
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: No, this program does not offer English Conditional Admission.
Master of Science in Legal Administration in Legal Administration - Advanced Standing with a Concentration in Law Firm Administration

Degree and GPA Requirements

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

Other Requirements

• A Juris Doctorate (JD) or equivalent is required.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 100
• Minimum TOEFL Score (Paper-based test): 600
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 176

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

Certificate in Corporate & Commercial Law

Degree and GPA Requirements

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

Other Requirements

• A Juris Doctorate (JD) or equivalent is required.

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 85
• Minimum TOEFL Score (Paper-based test): 567
• Minimum IELTS Score: 6.5
• Minimum CAE Score: 176

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

Certificate in Legal Administration with a Concentration in Court Administration

Degree and GPA Requirements

• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

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

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 100
- Minimum TOEFL Score (Paper-based test): 600
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

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

**Certificate in Legal Administration with a Concentration in Law Firm Administration**

**Degree and GPA Requirements**

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 100
- Minimum TOEFL Score (Paper-based test): 600
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

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

**Certificate in Legal Administration with a Concentration in Small Practice Management**

**Degree and GPA Requirements**

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 100
- Minimum TOEFL Score (Paper-based test): 600
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

- English Conditional Admission: No, this program does not offer English Conditional Admission.
Certificate in Natural Resources Law

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 169

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

Juris Doctor

Degree Requirements

The Sturm College of Law awards the degree of Juris Doctor to those students who successfully fulfill the following requirements:

- Completion of ninety [90] semester credit hours with passing grades. Only a grade of F constitutes a failing grade for purposes of this requirement. Students receive no credit hours toward graduation for courses in which they earn a grade of F.
- Maintenance of the required cumulative grade point average. For students who enter the Sturm College of Law in the 2007 Fall, or any subsequent, semester: a cumulative GPA of 2.3 or higher
- Successful completion of all required courses (as defined in the chart that follows this section). A student who receives a grade of F in a required course must retake the course and earn a passing grade. Both grades remain on the student's transcript and affect the student's cumulative GPA.
- Completion of the Upper Level Legal Writing requirement
- Completion of the Public Service requirement
- Completion of the Professional Skills Requirement. [All students entering the College of Law in Fall 2013 through Spring 2015 must successfully complete a curricular offering of two or more semester credit hours. A list of qualifying courses will be made available.]
- Completion of Experiential Coursework Requirement. [All students entering the College of Law in Summer 2015 or thereafter must successfully complete a curricular offering of six or more semester credit hours. A list of qualifying courses will be made available each semester prior to registration.]
- Completion of Career & Professional Development requirement
- Resolution of all financial obligations to the University of Denver
- Completion of all credit hours within a specified time period following initial matriculation at law school. The American Bar Association requires law students to complete their legal educations within seven years. Full-time day-division students at the Sturm College of Law normally meet all JD requirements by the end of their third year. Part-time evening-division students at the Sturm College of Law normally complete all JD requirements by the end of their fourth year.

Good Standing

All students who enter the Sturm College of Law in the 2007 Fall, or any subsequent, semester must maintain a cumulative grade point average of at least a 2.3 to remain in good standing.

Students may check their Degree Audit on MyWeb. Students have the responsibility to check MyWeb carefully and to contact the Registrar's Office if students note any discrepancy between their understanding of their degree requirements and their Degree Audit. Students have the sole responsibility to ensure that they have completed all graduation requirements.

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4385</td>
<td>Lawyering Process I</td>
<td>3</td>
</tr>
</tbody>
</table>
Public Service Requirement

All law students must satisfy the Public Service Requirement (PSR) in order to graduate. To satisfy the requirement, each student must perform a minimum of 50 hours of supervised, uncompensated, legal public service work. You must complete 22 academic credit hours prior to satisfying the requirement.

You can satisfy the requirement in one of the following ways:

1. Registering for, and passing, an externship for credit at a government agency, judicial chambers, nonprofit organization, or private firm (as long as the 50 hours is pro bono at the firm) via the Legal Externship Office (http://www.law.du.edu/index.php/legal-externship-program).
2. Registering for, and receiving a grade of C or better, in a clinic via the Student Law Office (http://www.law.du.edu/index.php/law-school-clinical-program).
3. Registering for, and receiving a grade of C or better, in an eligible course. Eligible courses currently include: Federal Appellate Advocacy, Homeless Advocacy Seminar, International Criminal Law Practicum, Live Client Lab, Low-Income Taxpayer Clinic Mediation Practicum, Poverty and Low Wage Work in America, Public Interest Lawyering Lab, Probate Practicum, Street Law, Trial Practice III: Instructor’s Practicum, Trial Practice III: Mentor’s Practicum, Wills Lab, and the Workplace Rights Project Lab.
4. Volunteering, and engaging in 50 hours of supervised, uncompensated legal work, at a government agency, judicial chambers, nonprofit organization, or private firm, as long as the work at the firm is pro bono. This is known as a Volunteer Legal Experience.

**In order to satisfy the requirement via option #4, a Volunteer Legal Experience, you must abide by all rules and regulations for the Public Service Requirement indicated on our website (https://www.law.du.edu/index.php/public-service-requirement). You must complete an online student certification and evaluation form about your volunteer experience. Your supervisor, who must be licensed to practice law for at least three years, must complete an online supervisor certification and evaluation form which asks for the number of hours worked (must be at least 50), the timeframe in which the work was completed, and an evaluation of the student’s work. When both of these forms are completed and submitted online, and it is confirmed that the work satisfies the requirement, at the conclusion of the relevant semester, your Academic Progress Report will reflect that you satisfied the PSR. Students engaging in this option are strongly encouraged to check in with the Public Interest Office prior to do the work to confirm it is eligible.

Please note: You are not required to complete the steps outlined above if you are satisfying the public service requirement via options #1, 2, or 3 above. For these options, your Academic Progress Report will reflect that you satisfied the PSR via a PUBL designation at the conclusion of the relevant semester.

Students are strongly encouraged to complete this requirement before their last semester of law school.

For more information about the PSR, visit this page (http://www.law.du.edu/index.php/public-service-requirement) and/or contact the Director of Public Interest at publicinterest@law.du.edu.

Upper Level Legal Writing Requirement

All law students must satisfy the Upper Level Legal Writing requirement prior to graduation. The requirement provides students additional instruction and practice in research, organization and expression.

To satisfy the requirement, each student must:

- Complete a written product of at least ten (10) pages on an appropriate legal subject determined by a professor and the student.
- Secure the professor’s written comments as to the substance and style of the student’s written project
- Prepare a second draft of the written project in response to the professor’s comments to the professor’s satisfaction.
Students may satisfy the Upper Level Legal Writing requirement in the following ways:

1. **Advanced Legal Writing Course**
   A student can enroll in and successfully complete the upper level legal writing course entitled "Advanced Legal Writing."

2. **Designated Seminar Classes or Clinics**
   A student can enroll in and successfully complete a seminar that satisfies the Upper Level Legal Writing requirement. The student also can enroll in and successfully complete a clinical course that satisfies the Upper Level Legal Writing requirement. Clinics and seminars do not necessarily satisfy the Upper Level Legal Writing requirement. Students must clarify with individual professors whether the seminar or clinic will satisfy the Upper Level Legal Writing requirement. A student who elects to fulfill the Upper Level Legal Writing requirement under this option must make certain that the Registrar's Office receives certification from the professor that the student successfully fulfilled the Upper Level Legal Writing requirement. Only after the Registrar's Office has received official certification has the student completed this graduation requirement.

3. **Directed Research Projects**
   The student may enroll in and successfully complete a 2-3 credit hour Directed Research Project with a full-time faculty member. If the student successfully completes a Directed Research project that fulfills the Upper Level Legal Writing requirement, the professor must certify to the Registrar that the student has completed the Upper Level Legal Writing requirement. A student who elects to fulfill the Upper Level Legal Writing requirement under this option must make certain that the Registrar’s Office receives certification from the professor that the student successfully fulfilled the Upper Level Legal Writing requirement. Only after the Registrar’s Office has received official certification has the student completed this graduation requirement.

4. **Certification by Professor**
   Any full-time or adjunct professor can offer a student the opportunity to complete the Upper Level Legal Writing requirement within the course taught by the professor or independently of the course taught by the professor. Upon successful completion of the Upper Level Legal Writing requirement, the professor must certify to the Registrar that the student has completed the requirement. A student who elects to fulfill the Upper Level Legal Writing requirement under this option must make certain that the Registrar's Office receives certification from the professor that the student successfully fulfilled the Upper Level Legal Writing requirement. Only after the Registrar's Office has received official certification has the student completed this graduation requirement.

**Professional Skills Requirement**

1. All law students entering the College of Law in the Fall 2013 or Fall 2014 Term must successfully complete a curricular offering of two or more semester credits hours that provides substantial instruction in professional skills generally regarded as necessary for effective and responsible participation in the legal profession beyond legal research, writing, and analysis.

2. Professional skills include pre-trial practice, trial advocacy, appellate advocacy, alternate dispute resolution processes, client communication, counseling, negotiation, legal document drafting, fact investigation, interaction with regulators (such as drafting of regulatory ruling requests), interviewing, law practice management, legal problem solving, recognizing and resolving ethical dilemmas, and similar skills.

3. To fulfill this requirement, a curricular offering must provide at least one credit (700 classroom minutes) of instruction in the performance of professional skills beyond legal research, writing, and analysis, and must engage each student in multiple (more than one) hands-on skills performances that are evaluated by the instructor.

4. The College of Law Registrar shall maintain a list of courses that satisfy the professional skills requirement on the College of Law webpage. The College of Law Modern Learning Committee and Curriculum Committee shall be responsible for approving courses that satisfy the professional skills requirement, and for periodically updating that list. Each course description for each class that satisfies the professional skills requirement shall indicate that it does so.

A student may not use the same curricular offering to satisfy both the upper level writing requirement and the professional skills requirement.

**Experiential Coursework Requirement**

1. All law students entering the College of Law in the Fall 2015 Term or thereafter must successfully complete a curricular offering of six or more semester credits hours of experiential coursework.

2. Experiential courses include simulations, clinics, and field placements. To satisfy this requirement, the course must be primarily experiential in nature and must (a) integrate doctrine, theory, skills, and legal ethics, and engage students in the performance of professional skills, which include knowledge and understanding of the law, legal analysis and research, problem-solving, written and oral advocacy, and the exercise of proper professional and ethical responsibilities to clients and the legal system; (b) develop the concepts underlying the professional skills being taught; (c) provide multiple opportunities for performance; and (d) provide opportunities for self-evaluation.

3. The College of Law Registrar shall maintain a list of courses that satisfy the experiential skills requirement on the College of Law webpage. The College of Law Modern Learning Committee and Curriculum Committee shall be responsible for approving courses that satisfy the experiential requirement, and for periodically updating that list. Each course description for each class that satisfies the experiential requirement shall indicate that it does so.

4. A student may not use the same curricular offering to satisfy both the upper level writing requirement and the experiential requirement.

**Career & Professional Development Requirement**
The Career & Professional Development Requirement ensures that Denver Law students will graduate with the knowledge and skills they need to thrive in the entry-level job market. Beginning in the summer of 2016, all incoming JD students will need to complete a total of seven Career & Professional Development experiences through a combination of qualifying programs and individual career advising appointments in order to graduate. The CPD requirement is administered and tracked by the Office of Career Development & Opportunities (“CDO”).

Master of Laws (LLM) in American Law Practice

Degree Requirements

Coursework Requirements

This customizable LLM degree introduces foreign-trained attorneys to the US Legal framework and allows for area specializations with a particular emphasis on College of Law's Experiential Advantage Curriculum. Course requirements vary based on individual student’s objectives. Sample concentrations are listed below.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4175</td>
<td>Contracts</td>
<td>4</td>
</tr>
<tr>
<td>LAWS 4190</td>
<td>Corporations</td>
<td>4</td>
</tr>
<tr>
<td>LAWS 4131</td>
<td>Commercial Law Survey</td>
<td>4</td>
</tr>
<tr>
<td>LAWS 4315</td>
<td>International Business Transactions: Survey Course</td>
<td>3</td>
</tr>
</tbody>
</table>

Litigation Track:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4460</td>
<td>Negotiation and Mediation</td>
<td>3</td>
</tr>
<tr>
<td>LAWS 4120</td>
<td>Civil Procedure</td>
<td>4</td>
</tr>
<tr>
<td>LAWS 4235</td>
<td>Evidence</td>
<td>4</td>
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</table>

Environmental and Natural Resources Law Track:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4490</td>
<td>Property</td>
<td>4</td>
</tr>
<tr>
<td>LAWS 4220</td>
<td>Environmental Law</td>
<td>3</td>
</tr>
</tbody>
</table>

The remaining credits are comprised of COL elective offerings. Additional specializations/course plans are available by program approval. **LLM students who received their first degree in law outside the United States must complete LAWS 4064 Introduction to the American Legal System.

Total Credits 24

Minimum Number of Credits Required: 24

Master of Laws (LLM) in Environmental and Natural Resources Law & Policy

Degree Requirements

Coursework Requirements

Core Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4064</td>
<td>Introduction to the American Legal System (**LLM students who received their first degree in law outside the United States must complete LAWS 4064 Introduction to the American Legal System.)</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Requirements

For the remaining elective course requirement students may customize their course of study, depending upon individual professional goals. The College of Law offers over forty courses in advanced degree programs, divided equally between international and domestic issues. Students may choose informal concentrations within the LLM.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>LAWS 4009</td>
<td>Community Expectations in Sustainable Development of Natural Resources</td>
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<tr>
<td>LAWS 4014</td>
<td>Emerging International Standards for Sustainable Development of Natural Resources</td>
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<tr>
<td>LAWS 4010</td>
<td>International Dispute Resolution</td>
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<tr>
<td>LAWS 4031</td>
<td>Mediation</td>
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<tr>
<td>LAWS 4035</td>
<td>Advanced Legal Research</td>
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<tr>
<td>LAWS 4132</td>
<td>Colorado Legal Research</td>
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<tr>
<td>LAWS 4250</td>
<td>Federal Courts</td>
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<tr>
<td>LAWS 4289</td>
<td>Legal Research Skills - International</td>
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<tr>
<td>LAWS 4341</td>
<td>International Commercial Arbitration</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>LAWS 4425</td>
<td>Legal Profession</td>
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<tr>
<td>LAWS 4351</td>
<td>International Mergers and Acquisitions</td>
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<tr>
<td>LAWS 5029</td>
<td>Semester in Practice</td>
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<tr>
<td>LAWS 4137</td>
<td>Comparative Environmental Law</td>
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<td>LAWS 4131</td>
<td>Commercial Law Survey</td>
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<td>LAWS 4133</td>
<td>Corporate Social Responsibility</td>
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<tr>
<td>LAWS 4347</td>
<td>International Environmental Law in Latin America</td>
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<tr>
<td>LAWS 4462</td>
<td>Negotiating Natural Resources Agreements</td>
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<tr>
<td>LAWS 4506</td>
<td>Energy &amp; Project Finance Law</td>
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<tr>
<td>LAWS 4527</td>
<td>School of Mines Exchange</td>
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<tr>
<td>LAWS 4802</td>
<td>Environmental Law Clinic Seminar</td>
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<td>LAWS 4889</td>
<td>Water Law Review</td>
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<td>LAWS 5025</td>
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<td>LAWS 4060</td>
<td>Alternative Dispute Resolution</td>
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<td>LAWS 4019</td>
<td>Animal Rights</td>
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<tr>
<td>LAWS 4700</td>
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<td>LAWS 4702</td>
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<td>LAWS 4706</td>
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<td>LAWS 4705</td>
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<tr>
<td>LAWS 4135</td>
<td>Comparative Law</td>
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<td>LAWS 4160</td>
<td>Conflict of Laws</td>
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<td>LAWS 4179</td>
<td>Construction Law Seminar</td>
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<tr>
<td>LAWS 4383</td>
<td>Doing Business-Latin America</td>
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<tr>
<td>LAWS 4452</td>
<td>Economics of Natural Resource and the Environment: Policy, Markets, and Economic Measurement</td>
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<tr>
<td>LAWS 4703</td>
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<tr>
<td>LAWS 4210</td>
<td>Energy Law</td>
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<tr>
<td>LAWS 4709</td>
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<tr>
<td>LAWS 4219</td>
<td>Environmental Ethics &amp; Justice</td>
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<tr>
<td>LAWS 4220</td>
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<tr>
<td>LAWS 4206</td>
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<td>LAWS 4037</td>
<td>European Union Environmental Law and Policy</td>
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<td>LAWS 4232</td>
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<td>LAWS 4300</td>
<td>Federal Indian Law</td>
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<td>LAWS 4251</td>
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<td>LAWS 4259</td>
<td>Global Climate Change Law and Policy</td>
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<td>LAWS 4380</td>
<td>Hazardous Waste and Toxic Substances</td>
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<td>LAWS 4290</td>
<td>Human Rights Law</td>
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<td>Government Contracts Seminar</td>
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<tr>
<td>LAWS 4342</td>
<td>International and Comparative Mining Law</td>
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<td>LAWS 4343</td>
<td>International and Comparative Petroleum Law</td>
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<td>LAWS 4706</td>
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<tr>
<td>LAWS 4315</td>
<td>International Business Transactions: Survey Course</td>
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<tr>
<td>LAWS 4317</td>
<td>International Environmental Law</td>
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<tr>
<td>LAWS 4288</td>
<td>International and Human Rights: Indigenous Peoples</td>
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<tr>
<td>LAWS 4315</td>
<td>International Business Transactions: Survey Course</td>
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<tr>
<td>LAWS 4318</td>
<td>International Business Transactions: Federal Regulation</td>
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<td>LAWS 4700</td>
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<td>LAWS 4317</td>
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<tr>
<td>Code</td>
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<tr>
<td>LAWS 4319</td>
<td>International Human Rights</td>
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<td>LAWS 4320</td>
<td>International Law</td>
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<td>LAWS 4379</td>
<td>International Trade Law</td>
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<td>LAWS 4672</td>
<td>International Water Law</td>
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<td>LAWS 4358</td>
<td>Land Conservation Transactions</td>
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<td>LAWS 4360</td>
<td>Land Use Planning</td>
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<tr>
<td>LAWS 4362</td>
<td>Latin American Law</td>
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<tr>
<td>LAWS 4365</td>
<td>Law and Economics</td>
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<td>LAWS 4701</td>
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<td>LAWS 4706</td>
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<tr>
<td>LAWS 4445</td>
<td>Mining Law</td>
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<td>LAWS 4703</td>
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<tr>
<td>LAWS 4704</td>
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<tr>
<td>LAWS 4464</td>
<td>Natural Resources Distinguished Practitioner Seminar</td>
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<td>LAWS 4450</td>
<td>Natural Resource Law</td>
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<tr>
<td>LAWS 4460</td>
<td>Negotiation and Mediation</td>
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<tr>
<td>LAWS 4455</td>
<td>Oil and Gas Law</td>
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<td>LAWS 4700</td>
<td>Special Topics</td>
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<tr>
<td>LAWS 4465</td>
<td>Oil and Gas Law</td>
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<tr>
<td>LAWS 4495</td>
<td>Public Land &amp; Resources Law</td>
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<tr>
<td>LAWS 4500</td>
<td>Public Utility Regulation</td>
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<td>LAWS 4095</td>
<td>Real Estate</td>
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<tr>
<td>LAWS 4508</td>
<td>Renewable Energy for the 21st Century: Law, Policy &amp; Markets</td>
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<tr>
<td>LAWS 4511</td>
<td>Renewable Energy Law</td>
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<tr>
<td>LAWS 4509</td>
<td>Renewable Energy: Project Development and Regulation</td>
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<tr>
<td>LAWS 4709</td>
<td>Special Topics</td>
<td></td>
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<tr>
<td>LAWS 4556</td>
<td>Subsustainable Dev &amp; Trade</td>
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<tr>
<td>LAWS 4605</td>
<td>Taxation of Natural Resource</td>
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<tr>
<td>LAWS 4670</td>
<td>Water Law</td>
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</tr>
<tr>
<td>LAWS 4999</td>
<td>Directed Research (Directed Research)</td>
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</tr>
</tbody>
</table>

**Total Credits:** 24

**Minimum Number of Credits Required:** 24

**Non-Coursework Requirements**

- Capstone: Students must complete a Capstone requirement by submitting a written product of at least 15-25 pages on an appropriate legal subject and with significant legal research component, approved by the ENRLP Program Director (either through an elective course taken after the first term of the program or by registering for a 2-3 credit Directed Research project).

Dual JD/ENRLP LLM degree available to those pursuing a JD at the Sturm College of Law. [http://www.law.du.edu/index.php/graduate-legal-studies/dual-degrees](http://www.law.du.edu/index.php/graduate-legal-studies/dual-degrees)

**Master of Laws in International Business Transactions (Roche IBT LLM)**

**Degree Requirements**

**Coursework Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Coursework Requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAWS 4315</td>
<td>International Business Transactions: Survey Course</td>
<td>3</td>
</tr>
<tr>
<td><strong>LLM students who received their first degree in law outside the United States must complete LAWS 4064 Introduction to the American Legal System.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Drafting/Negotiation Requirement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
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<td></td>
</tr>
<tr>
<td>LAWS 4012</td>
<td>Protecting Intellectual Property in International Business Transactions</td>
<td>3</td>
</tr>
<tr>
<td>LAWS 4178</td>
<td>Contracts Drafting</td>
<td></td>
</tr>
</tbody>
</table>
**Elective Requirements**

For the remaining elective course requirement students may customize their course of study, depending upon individual professional goals. The College of Law offers over forty courses in advanced degree programs, divided equally between international and domestic issues. Students may choose informal concentrations within the LLM.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4341</td>
<td>International Commercial Arbitration</td>
</tr>
<tr>
<td>LAWS 4131</td>
<td>Commercial Law Survey</td>
</tr>
<tr>
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<td>LAWS 4347</td>
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<td>LAWS 4425</td>
<td>Legal Profession</td>
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<tr>
<td>LAWS 4465</td>
<td>Oil and Gas Law</td>
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<tr>
<td>LAWS 4506</td>
<td>Energy &amp; Project Finance Law</td>
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<td>LAWS 4552</td>
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<tr>
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</tr>
<tr>
<td>LAWS 5031</td>
<td>Legal Externship Seminar</td>
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<td>International Dispute Resolution</td>
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<tr>
<td>LAWS 4139</td>
<td>Commercial Law for Foreign Investors in Guatemala</td>
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<tr>
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<td>LAWS 4351</td>
<td>International Mergers and Acquisitions</td>
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<td>Special Topics</td>
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<td>LAWS 4379</td>
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<tr>
<td>LAWS 4318</td>
<td>International Business Transactions: Federal Regulation</td>
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<tr>
<td>LAWS 4006</td>
<td>Accounting for Lawyers</td>
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<td>LAWS 4048</td>
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<td>LAWS 4070</td>
<td>Antitrust and Unfair Competition</td>
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<td>LAWS 4105</td>
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<td>LAWS 4185</td>
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<td>Business Mergers &amp; Acquisition</td>
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<td>LAWS 4110</td>
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<td>LAWS 4129</td>
<td>Comparative Corporate Law Seminar</td>
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<tr>
<td>LAWS 4137</td>
<td>Comparative Environmental Law</td>
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<td>Comparative Law</td>
</tr>
<tr>
<td>LAWS 4160</td>
<td>Conflict of Laws</td>
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<td>LAWS 4214</td>
<td>Copyright Law</td>
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<td>LAWS 4133</td>
<td>Corporate Social Responsibility</td>
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<td>LAWS 4186</td>
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<td>LAWS 4383</td>
<td>Doing Business-Latin America</td>
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<td>European Union Environmental Law and Policy</td>
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<td>LAWS 4232</td>
<td>European Union Law</td>
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</table>

**LAWS 4181** Corporate Drafting Seminar
**LAWS 4462** Negotiating Natural Resources Agreements
**LAWS 4700** Special Topics (Negotiation and Drafting in International Business Context)
**LAWS 4701** Special Topics (Pre-approved drafting course)
<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>LAWS 4707</td>
<td>Special Topics (American Legal Systems, Research, and Writing)</td>
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**Students must select one of the following courses:**

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<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>LAWS 4025</td>
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<tr>
<td>LAWS 4120</td>
<td>Civil Procedure</td>
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<td>LAWS 4164</td>
<td>Constitutional Law</td>
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<td>LAWS 4175</td>
<td>Contracts</td>
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<tr>
<td>LAWS 4195</td>
<td>Criminal Law</td>
</tr>
<tr>
<td>LAWS 4425</td>
<td>Legal Profession</td>
</tr>
</tbody>
</table>
Elective Requirements

For the remaining elective course requirements, students may customize their course of study, depending upon individual professional goals. Area concentrations include: finance and trade law and policy, intellectual property, international law, family law and workplace law; students may elect to pursue certain courses in the Legal/Court Administration curriculum.

Total Credits

30

Non-coursework Requirements

- Capstone: Students must complete a Capstone requirement by submitting a written product of at least 15-25 pages on an appropriate legal subject and with significant legal research component, approved by the MLS Program Director (either through an elective course taken after the first term of the program or by registering for a separate Directed Research project for 2-3 credits).

Formal Dual Master of Legal Studies-Master of Social Work (http://www.law.du.edu/index.php/graduate-legal-studies/dual-degrees) program and other flexible dual degree options are available.

Master of Legal Studies in Environmental and Natural Resources Law & Policy

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>LAWS 4009</td>
<td>Community Expectations in Sustainable Development of Natural Resources</td>
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<td>LAWS 4137</td>
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<td>LAWS 4014</td>
<td>Emerging International Standards for Sustainable Development of Natural Resources</td>
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<tr>
<td>LAWS 4015</td>
<td>Intermediate Legal Analysis</td>
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<tr>
<td>LAWS 4131</td>
<td>Commercial Law Survey</td>
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<td>LAWS 4132</td>
<td>Colorado Legal Research</td>
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<td>Negotiating Natural Resources Agreements</td>
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<tr>
<td>LAWS 4490</td>
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<tr>
<td>LAWS 4506</td>
<td>Energy &amp; Project Finance Law</td>
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<tr>
<td>LAWS 4527</td>
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<td>LLM and Master's Internship (non-JD Internship)</td>
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<td>Animal Rights</td>
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<td>LAWS 4705</td>
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<td>Economics of Natural Resource and the Environment: Policy, Markets, and Economic Measurement</td>
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<td>European Union Environmental Law and Policy</td>
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<td>Global Climate Change Law and Policy</td>
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<td>Hazardous Waste and Toxic Substances</td>
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<td>LAWS 4342</td>
<td>International and Comparative Mining Law</td>
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<td>International and Comparative Petroleum Law</td>
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<td>International and Human Rights: Indigenous Peoples</td>
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<td>International Business Transactions: Federal Regulation</td>
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<tr>
<td>LAWS 4495</td>
<td>Public Land &amp; Resources Law</td>
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<td>LAWS 4500</td>
<td>Public Utility Regulation</td>
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LAWS 4095  Real Estate
LAWS 4508  Renewable Energy for the 21st Century: Law, Policy & Markets
LAWS 4511  Renewable Energy Law
LAWS 4509  Renewable Energy: Project Development and Regulation
LAWS 4701  Special Topics
LAWS 4631  Space and Technology Law
LAWS 4709  Special Topics
LAWS 4556  Substainable Dev & Trade
LAWS 4700  Special Topics
LAWS 4605  Taxation of Natural Resource
LAWS 4670  Water Law
LAWS 4999  Directed Research (Directed Research)

Total Credits  24

Non-Coursework Requirements
- Capstone: Students must complete a Capstone requirement by submitting a written product of at least 15-25 pages on an appropriate legal subject and with significant legal research component, approved by the MLS in ENRLP Program Director (either through an elective course taken after the first term of the program or a separate Directed Research project for 2-3 credits).

Master of Science in Legal Administration with a Concentration in Court Administration

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
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<th>Credits</th>
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<tr>
<td>A. MSLA Core Courses-Required</td>
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<tr>
<td>MSLA 4151</td>
<td>Applied Leadership and Management Theory</td>
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<tr>
<td>MSLA 4410</td>
<td>Accounting and Financial Management in Legal Business</td>
<td></td>
</tr>
<tr>
<td>MSLA 4380</td>
<td>Communication, Writing, and Research in Legal Business</td>
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<tr>
<td>MSLA 5010</td>
<td>Capstone: Externship/Project</td>
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<td>B. MSLA Specialized Courses-Required</td>
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<tr>
<td>MSLA 4200</td>
<td>The Business of Courts</td>
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<tr>
<td>MSLA 4121</td>
<td>Human Res &amp; Performance Mgmt</td>
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<tr>
<td>MSLA 4300</td>
<td>Introduction to the United States Judicial System</td>
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<td>MSLA 4180</td>
<td>Court Case Flow and Load Management</td>
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<tr>
<td>C. Elective Courses (at least 7 credits from all concentrations)</td>
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</table>

Any MSLA course (from any one of the three concentrations) can be used as an elective.

Minimum Number of Credits Required for Degree  30

Dual JD/MSLA degree option is available. (http://www.law.du.edu/index.php/graduate-legal-studies/dual-degrees)

Advanced Standing Master of Science in Legal Administration with a Concentration in Court Administration

Degree Requirements

Coursework Requirements

<table>
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<tr>
<td>MSLA 4151</td>
<td>Applied Leadership and Management Theory</td>
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<tr>
<td>MSLA 4380</td>
<td>Communication, Writing, and Research in Legal Business</td>
<td></td>
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<tr>
<td>MSLA 4410</td>
<td>Accounting and Financial Management in Legal Business</td>
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<tr>
<td>B. MSLA Specialized Courses-Required</td>
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<td>MSLA 4950</td>
<td>Strategic Planning in Courts</td>
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<td>MSLA 4200</td>
<td>The Business of Courts</td>
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<tr>
<td>MSLA 4180</td>
<td>Court Case Flow and Load Management</td>
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### C. Elective Courses

Any MSLA course (from any one of the three concentrations) can be used as an elective.

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>MSLA 4100</td>
<td>Court Fiscal Management (Prerequisite: MSLA 4410)</td>
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<tr>
<td>MSLA 4215</td>
<td>Court Space, Facilities and Security</td>
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<tr>
<td>MSLA 4090</td>
<td>Court Information Technology</td>
</tr>
<tr>
<td>MSLA 4301</td>
<td>Judicial Performance and Evaluation</td>
</tr>
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<td>MSLA 4384</td>
<td>Court Comm &amp; Media Relations</td>
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<tr>
<td>MSLA 4330</td>
<td>Specialty Courts</td>
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<td>MSLA 4320</td>
<td>Fundamentals of Comparative Law</td>
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<td>Project Management</td>
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<td>MSLA 4310</td>
<td>World Judicial Systems</td>
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<td>MSLA 4385</td>
<td>Law Firm Communications and Technology</td>
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<td>MSLA 4386</td>
<td>Law Firm Client Services and Satisfaction</td>
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<td>MSLA 4205</td>
<td>Lawyer Recruitment, Development, and Advancement in Law Firms</td>
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<td>Inclusiveness in the Legal Profession - The Next Generation of Diversity Efforts</td>
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<td>Business Development: Marketing and Client Service</td>
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<td>The Impact of Court Governance</td>
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<td>Law Firm Administration</td>
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<td>MSLA 4999</td>
<td>Directed Research MSLA</td>
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<td>LAWS 4703</td>
<td>Special Topics (Law Firm Space and Facilities)</td>
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### Minimum Number of Credits Required for Degree

27

### Master of Science in Legal Administration with a Concentration in Law Firm Administration

#### Degree Requirements

#### Coursework Requirements

<table>
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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>A. MSLA Core Courses-Required</td>
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<td>Communication, Writing, and Research in Legal Business</td>
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<td>Capstone: Externship/Project</td>
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</tr>
<tr>
<td>B. MSLA Specialized Courses-Required</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>MSLA 4954</td>
<td>Project Management (Project Management)</td>
<td></td>
</tr>
<tr>
<td>MSLA 4385</td>
<td>Law Firm Communications and Technology</td>
<td></td>
</tr>
<tr>
<td>LAWS 4420</td>
<td>Legal Practice Seminar – Law as a Business</td>
<td></td>
</tr>
<tr>
<td>MSLA 4201</td>
<td>Law Firm Administration</td>
<td></td>
</tr>
<tr>
<td>C. Elective Courses (at least 6 credits from all concentrations)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any MSLA course (from any one of the three concentrations) can be used as an elective.

### Minimum Number of Credits Required for Degree

30

Dual JD/MSLA degree option is available to students currently pursuing a JD at the Sturm College of Law. ([link](http://www.law.du.edu/index.php/graduate-legal-studies/dual-degrees))
Advanced Standing Master of Science in Legal Administration with a Concentration in Law Firm Administration

Degree Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. MSLA Core Courses-Required</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>4</strong></td>
<td></td>
</tr>
<tr>
<td>MSLA 4151</td>
<td>Applied Leadership and Management Theory</td>
<td></td>
</tr>
<tr>
<td>MSLA 4380</td>
<td>Communication, Writing, and Research in Legal Business</td>
<td></td>
</tr>
<tr>
<td>MSLA 4410</td>
<td>Accounting and Financial Management in Legal Business</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>B. MSLA Specialized Courses-Required</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>5</strong></td>
<td></td>
</tr>
<tr>
<td>LAWS 4420</td>
<td>Legal Practice Seminar – Law as a Business</td>
<td></td>
</tr>
<tr>
<td>MSLA 4385</td>
<td>Law Firm Communications and Technology</td>
<td></td>
</tr>
<tr>
<td>MSLA 4201</td>
<td>Law Firm Administration</td>
<td></td>
</tr>
<tr>
<td>LAWS 4007</td>
<td>Business Development: Marketing and Client Service</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>D. Elective Courses</strong></td>
<td><strong>7</strong></td>
</tr>
<tr>
<td></td>
<td>Any MSLA course (from any one of the three concentrations) can be used as an elective.</td>
<td></td>
</tr>
<tr>
<td>MSLA 4215</td>
<td>Court Space, Facilities and Security</td>
<td></td>
</tr>
<tr>
<td>MSLA 4901</td>
<td>Law Firm Financial Management</td>
<td></td>
</tr>
<tr>
<td>MSLA 4080</td>
<td>Law Firm Information Technology</td>
<td></td>
</tr>
<tr>
<td>MSLA 4180</td>
<td>Court Case Flow and Load Management</td>
<td></td>
</tr>
<tr>
<td>MSLA 4050</td>
<td>The Impact of Court Governance</td>
<td></td>
</tr>
<tr>
<td>MSLA 4090</td>
<td>Court Information Technology</td>
<td></td>
</tr>
<tr>
<td>MSLA 4121</td>
<td>Human Res &amp; Performance Mgmt</td>
<td></td>
</tr>
<tr>
<td>MSLA 4301</td>
<td>Judicial Performance and Evaluation</td>
<td></td>
</tr>
<tr>
<td>MSLA 4384</td>
<td>Court Comm &amp; Media Relations</td>
<td></td>
</tr>
<tr>
<td>MSLA 4330</td>
<td>Specialty Courts</td>
<td></td>
</tr>
<tr>
<td>MSLA 4320</td>
<td>Fundamentals of Comparative Law</td>
<td></td>
</tr>
<tr>
<td>MSLA 4954</td>
<td>Project Management</td>
<td></td>
</tr>
<tr>
<td>MSLA 4310</td>
<td>World Judicial Systems</td>
<td></td>
</tr>
<tr>
<td>MSLA 4386</td>
<td>Law Firm Client Services and Satisfaction</td>
<td></td>
</tr>
<tr>
<td>MSLA 4205</td>
<td>Lawyer Recruitment, Development, and Advancement in Law Firms</td>
<td></td>
</tr>
<tr>
<td>MSLA 4181</td>
<td>Inclusiveness in the Legal Profession - The Next Generation of Diversity Efforts</td>
<td></td>
</tr>
<tr>
<td>LAWS 4007</td>
<td>Business Development: Marketing and Client Service</td>
<td></td>
</tr>
<tr>
<td>LAWS 4420</td>
<td>Legal Practice Seminar – Law as a Business</td>
<td></td>
</tr>
<tr>
<td>MSLA 4901</td>
<td>Law Firm Financial Management</td>
<td></td>
</tr>
<tr>
<td>MSLA 4999</td>
<td>Directed Research MSLA</td>
<td></td>
</tr>
<tr>
<td>LAWS 4703</td>
<td>Special Topics (Law Firm Space and Facilities)</td>
<td></td>
</tr>
</tbody>
</table>

Minimum Number of Credits Required for Degree **27**

Certificate in Corporate and Commercial Law-Advanced Standing

Certificate Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Choose two of the following:</strong></td>
<td></td>
</tr>
<tr>
<td>LAWS 4190</td>
<td>Corporations</td>
<td></td>
</tr>
<tr>
<td>LAWS 4131</td>
<td>Commercial Law Survey</td>
<td></td>
</tr>
<tr>
<td>LAWS 4048</td>
<td>Agency Partnership &amp; LLC</td>
<td></td>
</tr>
<tr>
<td>LAWS 4006</td>
<td>Accounting for Lawyers</td>
<td></td>
</tr>
<tr>
<td>LAWS 4528</td>
<td>Securities Law</td>
<td></td>
</tr>
<tr>
<td>LAWS 4090</td>
<td>Bankruptcy</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Complete one drafting course approved by the Program:</strong></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

1. Complete one drafting course approved by the Program.
LAWS 4181  Corporate Drafting Seminar
LAWS 4178  Contracts Drafting
LAWS 4701  Special Topics (Business Negotiation and Drafting)
LAWS 4701  Special Topics (Negotiating Business Transactions)

Complete one critical thinking course:
LAWS 4070  Antitrust and Unfair Competition
LAWS 4701  Special Topics (Business Negotiation and Drafting)
LAWS 4701  Special Topics (Negotiating Business Transactions)
LAWS 4700  Special Topics (Capital Formation: Procedure and Practice)
LAWS 4702  Special Topics (Corporate Compliance)
LAWS 4702  Special Topics (Corporate Compliance: Money Managers and Investment Advisers)
LAWS 4703  Special Topics (Private Equity Seminar)
LAWS 4351  International Mergers and Acquisitions
LAWS 4618  Representing Clients Before the SEC
LAWS 4529  Securities Litigation
LAWS 4351  International Mergers and Acquisitions
LAWS 4704  Special Topics (Comparative Corporate Law Seminar)
LAWS 4701  Special Topics (Commercial Paper)
LAWS 4701  Special Topics (Non-profit Organizations)

Directed Research
LAWS 4999  Directed Research

Minimum number of credits required: 16

1 Other classes that involve a significant amount of drafting may qualify. Consult the department for details.
2 Students are required to engage in directed research for one to four credit hours with the ultimate goal of producing a paper of publishable quality. The expectation is that some or all of the papers would be published by the Denver University Law Review.

Certificate in Legal Administration with a Concentration in Court Administration
Certificate Requirements
Coursework Requirements
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSLA 4950</td>
<td>Strategic Planning in Courts</td>
<td>2</td>
</tr>
<tr>
<td>MSLA 4100</td>
<td>Court Fiscal Management</td>
<td>3</td>
</tr>
<tr>
<td>MSLA 4180</td>
<td>Court Case Flow and Load Management</td>
<td>2</td>
</tr>
<tr>
<td>MSLA 4200</td>
<td>The Business of Courts</td>
<td>3</td>
</tr>
<tr>
<td>Other Courses</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Minimum number of credits required: 18

Certificate in Legal Administration with a Concentration in Law Firm Administration
Certificate Requirements
Coursework Requirements
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4420</td>
<td>Legal Practice Seminar – Law as a Business</td>
<td>3</td>
</tr>
<tr>
<td>MSLA 4901</td>
<td>Law Firm Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>LAWS 4007</td>
<td>Business Development: Marketing and Client Service</td>
<td>3</td>
</tr>
<tr>
<td>MSLA 4201</td>
<td>Law Firm Administration</td>
<td>3</td>
</tr>
<tr>
<td>Other Courses</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Minimum number of credits required: 18
Certificate in Legal Administration with a Concentration in Small Practice Management

Certificate Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAWS 4421</td>
<td>Introduction to Small Practice Management</td>
<td>3</td>
</tr>
<tr>
<td>LAWS 4002</td>
<td>Accounting for the Small Legal Practice</td>
<td>3</td>
</tr>
<tr>
<td>LAWS 4089</td>
<td>Business Development: Marketing &amp; Client Services</td>
<td>3</td>
</tr>
<tr>
<td>LAWS 4420</td>
<td>Legal Practice Seminar – Law as a Business</td>
<td>3</td>
</tr>
<tr>
<td>Elective courses:</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

Elective coursework must total 4 credit hours. Students may choose from either the courses listed below, or other JD or MSLA courses if approved by the Program Director or Associate Dean for Academic Affairs.

- LAWS 4425 | Legal Profession
- MSLA 4151 | Applied Leadership and Management Theory
- MSLA 4181 | Inclusiveness in the Legal Profession - The Next Generation of Diversity Efforts
- MSLA 4121 | Human Res & Performance Mgmt

Total Credits: 16

Minimum number of credits required: 16

Certificate in Law with a Concentration in Constitutional Rights and Remedies

Certificate Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAWS 4164</td>
<td>Constitutional Law</td>
<td>4</td>
</tr>
<tr>
<td>LAWS 4025</td>
<td>Administrative Law</td>
<td>3</td>
</tr>
<tr>
<td>LAWS 4250</td>
<td>Federal Courts</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete two of the following courses:

- LAWS 4200 | Criminal Procedure
- LAWS 4166 | Constitutional Law II: Individual Rights
- LAWS 4168 | Constitutional Litigation Seminar
- LAWS 4520 | Remedies
- LAWS 4700 | Special Topics (Habeas Corpus)

Complete at least one experiential learning opportunity from the following:

- LAWS 4809 | Civil Rights Clinic
- LAWS 4800 | Criminal Defense Clinic
- LAWS 5025 | Externship
- LAWS 4702 | Special Topics (Constitutional Rights & Remedies Capstone)

Minimum Number of Credits Required: 15

Certificate in Law with a Concentration in Corporate & Commercial Law

Certificate Requirements

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete the following three (3) courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAWS 4190</td>
<td>Corporations</td>
<td>4</td>
</tr>
<tr>
<td>LAWS 4131</td>
<td>Commercial Law Survey</td>
<td>4</td>
</tr>
<tr>
<td>LAWS 4006</td>
<td>Accounting for Lawyers</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one (1) of the following courses:

- LAWS 4090 | Bankruptcy

Minimum Number of Credits Required: 15
Complete one of the following options:

Option 1 – (1) Complete a Critical Thinking Seminar; (2) Meet the Upper Level Writing Requirement in an approved Corporate and Commercial Law Program course; and (3) Complete an approved Externship emphasizing Corporate or Commercial Law.

Option 2 - Community Economic Development Clinic (L4703) 12 (year long, 6 per semester)

Complete one (1) additional Business Law Course from a list provided by the Corporate and Commercial Law Program Faculty Director.

Minimum Number of Credits Required 26

Certificate in Law with a Concentration in Environmental and Natural Resource Law

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4025</td>
<td>Administrative Law</td>
<td>3</td>
</tr>
</tbody>
</table>

Students must complete a minimum of 15 credits in the ENRL curriculum including one of the following two courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4220</td>
<td>Environmental Law</td>
<td></td>
</tr>
<tr>
<td>LAWS 4450</td>
<td>Natural Resource Law</td>
<td></td>
</tr>
</tbody>
</table>

Complete for credit one of the following live-client experiences or simulations in the ENRL program:

- An ENRL-related experience through the Student Law Office
- An ENRL-related full semester externship through the legal externship program
- A simulated experience course such as the Natural Resources Distinguished Practitioner Seminar

Complete a research paper satisfying the upper-level writing requirement on an ENRL topic, either through a course or directed research.

Minimum Number of Credits Required 15

Certificate in Law with a Concentration in Intellectual Property Law

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4025</td>
<td>Administrative Law</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete two core courses from the list provided by the Intellectual Property Faculty Director.

Complete two advanced courses from the list provided by the Intellectual Property Faculty Director.

Complete an experiential learning opportunity, through:

i. A capstone course
ii. An externship approved by the one of the full time Intellectual Property Law Faculty and coordinated through the Denver Law externship office, or
iii. Another experiential learning opportunity as approved by the Intellectual Property Law Faculty Director.

Minimum Number of Credits Required 15

A minimum of 15 credits is required.

Certificate in Law with a Concentration in International Law

Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4025</td>
<td>Administrative Law</td>
<td>3</td>
</tr>
</tbody>
</table>

Students must complete a minimum of two courses from the list of core International and Comparative Law courses provided by the ILSP Director.

Minimum Number of Credits Required 6

A minimum of 15 credits is required.
The remainder of credits required for the certificate must be satisfied by taking electives chosen from either the list of core courses or the list of Elective International, Comparative, and Foreign Law Courses provided by the ILSP director.

Upper-Level Writing Requirement.

**Certificate in Law with a Concentration in International Law and Human Rights**

**Certificate Requirements**

**Coursework Requirements**

Completing the certificate requires 35 quarter hours (for Korbel students) or 24 semester hours of credit (for Sturm students). By its nature, the certificate also requires taking courses both on the quarter system (at Korbel) and on the semester system (at Sturm). These are the same courses, just taken for different numbers of credit because of the differences between the quarter and semester systems for Korbel and Sturm, respectively.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4320</td>
<td>International Law</td>
<td>3</td>
</tr>
<tr>
<td>INTS 4940</td>
<td>Introduction to Human Rights</td>
<td>4</td>
</tr>
<tr>
<td>LAWS 4319</td>
<td>International Human Rights</td>
<td>3</td>
</tr>
<tr>
<td>or LAWS 4290</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or INTS 4936</td>
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<td></td>
</tr>
</tbody>
</table>

**Electives**

Each student must complete 4 or 5 courses. A minimum of 2 from Korbel and 2 from Sturm must be completed.

**Korbel:** Complete a minimum of two of the following list of courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTS 4630</td>
<td>Civilian Protection in Armed Conflicts</td>
<td>3</td>
</tr>
<tr>
<td>INTS 4920</td>
<td>Conflict Resolution</td>
<td></td>
</tr>
<tr>
<td>INTS 4363</td>
<td>Discrimination, Minorities, and Rights of Indigenous People</td>
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</tr>
<tr>
<td>INTS 4987</td>
<td>Forced Labor and Human Trafficking</td>
<td></td>
</tr>
<tr>
<td>INTS 4364</td>
<td>Global Poverty and Human Rights</td>
<td></td>
</tr>
<tr>
<td>INTS 4379</td>
<td>Gender and Development</td>
<td></td>
</tr>
<tr>
<td>INTS 4650</td>
<td>Globalization and Economic Crime</td>
<td></td>
</tr>
<tr>
<td>INTS 4734</td>
<td>Homeland Sec &amp; Civil Soc</td>
<td></td>
</tr>
<tr>
<td>INTS 4875</td>
<td>Human Rights and Foreign Policy</td>
<td></td>
</tr>
<tr>
<td>INTS 4941</td>
<td>Human Rights and International Organizations</td>
<td></td>
</tr>
<tr>
<td>INTS 4935</td>
<td>International Humanitarian Law of Armed Conflict</td>
<td></td>
</tr>
<tr>
<td>INTS 4624</td>
<td>Private Actors and Conflict</td>
<td></td>
</tr>
<tr>
<td>INTS 4710</td>
<td>Topics in International Studies (Human Rights and the Middle East)</td>
<td></td>
</tr>
<tr>
<td>INTS 4928</td>
<td>Torture</td>
<td></td>
</tr>
<tr>
<td>INTS 4210</td>
<td>Multinational Corporations</td>
<td></td>
</tr>
<tr>
<td>INTS 4625</td>
<td>East African Development and Human Rights</td>
<td></td>
</tr>
</tbody>
</table>

**Sturm:** Complete a minimum of two of the following list of courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4133</td>
<td>Corporate Social Responsibility</td>
<td>3</td>
</tr>
<tr>
<td>LAWS 4135</td>
<td>Comparative Law</td>
<td></td>
</tr>
<tr>
<td>LAWS 4137</td>
<td>Comparative Environmental Law</td>
<td></td>
</tr>
<tr>
<td>LAWS 4168</td>
<td>Constitutional Litigation Seminar</td>
<td></td>
</tr>
</tbody>
</table>

**Minimum number of credits required**

- 35 quarter hours for Korbel students
- 24 semester hours for Sturm students
Certificate in Law with a Concentration in Workplace Law

Certificate Requirements
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4205</td>
<td>Employment Law Survey</td>
<td>6</td>
</tr>
<tr>
<td>LAWS 4227</td>
<td>Employment Discrimination Law</td>
<td></td>
</tr>
<tr>
<td>LAWS 4355</td>
<td>Labor Law</td>
<td></td>
</tr>
</tbody>
</table>

Complete two of the following three courses:

Complete a capstone experience in the Workplace Law curriculum. Capstone options include:

a. An employment/labor related clinical experience through the SLO.

b. A workplace-related externship approved by the Program Director.

c. Completion of a research paper satisfying the College of Law's upper-level writing requirement through a Workplace Law class or through directed research with a Workplace Law faculty member.

d. Publishing a note on a workplace law topic in the Denver University Law Review under the supervision of a Workplace Law faculty member.

e. In the event that the SCOL obtains or establishes a workplace law publication, serving as a student editor for the review or journal.

f. Completion of a designated experiential advantage course in the Workplace Law curriculum.

Minimum Number of Credits Required

12

A minimum of 12 credits is required.

Certificate in Natural Resources Law

Certificate Requirements
Coursework Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWS 4064</td>
<td>Introduction to the American Legal System (Required for International students with a primary law degree)</td>
</tr>
<tr>
<td>LAWS 4700</td>
<td>Special Topics (Environmental and Natural Resources Law: Concepts and Contexts - strongly recommended)</td>
</tr>
<tr>
<td>LAWS 4707</td>
<td>Special Topics (American Legal Systems, Research and Writing - required for students from non-law disciplines)</td>
</tr>
<tr>
<td>LAWS 4009</td>
<td>Community Expectations in Sustainable Development of Natural Resources</td>
</tr>
<tr>
<td>LAWS 4014</td>
<td>Emerging International Standards for Sustainable Development of Natural Resources</td>
</tr>
<tr>
<td>LAWS 4025</td>
<td>Administrative Law</td>
</tr>
<tr>
<td>LAWS 4037</td>
<td>European Union Environmental Law and Policy</td>
</tr>
<tr>
<td>LAWS 4137</td>
<td>Comparative Environmental Law</td>
</tr>
<tr>
<td>LAWS 4210</td>
<td>Energy Law</td>
</tr>
<tr>
<td>LAWS 4219</td>
<td>Environmental Ethics &amp; Justice</td>
</tr>
<tr>
<td>LAWS 4220</td>
<td>Environmental Law</td>
</tr>
<tr>
<td>LAWS 4232</td>
<td>European Union Law</td>
</tr>
<tr>
<td>LAWS 4251</td>
<td>Federal Wildlife Law</td>
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<td>LAWS 4259</td>
<td>Global Climate Change Law and Policy</td>
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<td>LAWS 4288</td>
<td>International and Human Rights: Indigenous Peoples</td>
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<tr>
<td>LAWS 4300</td>
<td>Federal Indian Law</td>
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<td>LAWS 4315</td>
<td>International Business Transactions: Survey Course</td>
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<tr>
<td>LAWS 4317</td>
<td>International Environmental Law</td>
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<td>LAWS 4318</td>
<td>International Business Transactions: Federal Regulation</td>
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<td>LAWS 4319</td>
<td>International Human Rights</td>
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<td>LAWS 4320</td>
<td>International Law</td>
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<tr>
<td>LAWS 4342</td>
<td>International and Comparative Mining Law</td>
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<td>LAWS 4343</td>
<td>International and Comparative Petroleum Law</td>
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<tr>
<td>LAWS 4347</td>
<td>International Environmental Law in Latin America</td>
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<td>LAWS 4358</td>
<td>Land Conservation Transactions</td>
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<td>LAWS 4360</td>
<td>Land Use Planning</td>
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<td>LAWS 4362</td>
<td>Latin American Law</td>
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<td>LAWS 4365</td>
<td>Law and Economics</td>
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<td>LAWS 4379</td>
<td>International Trade Law</td>
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<td>LAWS 4380</td>
<td>Hazardous Waste and Toxic Substances</td>
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<td>LAWS 4445</td>
<td>Mining Law</td>
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<tr>
<td>LAWS 4450</td>
<td>Natural Resource Law</td>
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<tr>
<td>LAWS 4452</td>
<td>Economics of Natural Resource and the Environment: Policy, Markets, and Economic Measurement</td>
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<tr>
<td>LAWS 4460</td>
<td>Negotiation and Mediation</td>
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<tr>
<td>LAWS 4462</td>
<td>Negotiating Natural Resources Agreements</td>
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<tr>
<td>LAWS 4464</td>
<td>Natural Resources Distinguished Practitioner Seminar</td>
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<tr>
<td>LAWS 4465</td>
<td>Oil and Gas Law</td>
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<td>LAWS 4495</td>
<td>Public Land &amp; Resources Law</td>
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<td>LAWS 4506</td>
<td>Energy &amp; Project Finance Law</td>
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<tr>
<td>LAWS 4508</td>
<td>Renewable Energy for the 21st Century: Law, Policy &amp; Markets</td>
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<tr>
<td>LAWS 4509</td>
<td>Renewable Energy: Project Development and Regulation</td>
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<tr>
<td>LAWS 4511</td>
<td>Renewable Energy Law</td>
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<tr>
<td>LAWS 4527</td>
<td>School of Mines Exchange</td>
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<tr>
<td>LAWS 4550</td>
<td>State &amp; Local Government</td>
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<tr>
<td>LAWS 4556</td>
<td>Subsustainable Dev &amp; Trade</td>
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<tr>
<td>LAWS 4605</td>
<td>Taxation of Natural Resource</td>
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<td>LAWS 4670</td>
<td>Water Law</td>
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<td>LAWS 4672</td>
<td>International Water Law</td>
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**Total Credits**: 16

**Law Courses**

**LAWS 4002 Accounting for the Small Legal Practice (3 Credits)**

This course will provide an introduction to basic accounting fundamentals, provide key concepts that apply to attorneys and solo practitioners, and explore situations where accounting plays a role in the practice of law. Topics include: understanding the balance sheet, income statement, statement accounting, partnership vs. LLC, income tax accounting; money management and cash flow in a law practice; retainers; trust accounts; income measurement; auditing; and billing/fees/timekeeping.

**LAWS 4003 Appellate Advocacy (3 Credits)**

This course focuses on developing skills necessary for effective appellate advocacy. It includes discussion of the critical differences between trial and appellate practice and techniques for presenting a persuasive case on appeal. Students will write appellate briefs and present oral argument to a panel of judges. Students will also observe oral arguments presented in Colorado appellate courts.

**LAWS 4006 Accounting for Lawyers (3 Credits)**

This class introduces students to accounting principles and practices to prepare them for the manner in which transactional and other lawyers will be presented with accounting, auditing, and financial matters that must be understood to enable them to provide effective legal representation to clients. The course includes an introduction to basic concepts of bookkeeping and financial accounting, reading and understanding traditional financial statements, financial statement analysis and the use of financial ratios, and legal issues involving accountancy. The class will also examine the role and responsibilities of the independent auditor and the concept of full and fair disclosure of financial information as required by generally accepted accounting principles.

**LAWS 4007 Business Development: Marketing and Client Service (3 Credits)**

This course provides students with the tools to effectively market a solo practice and connect with the client. Topics include: client relationship management; social media; building a brand; networking fundamentals; website development; managing client expectations; effective communications; and, referrals.

**LAWS 4008 Privacy Law (3 Credits)**

This Privacy Law seminar examines the development of privacy rights as a key consideration in the business and governmental policy debates within the U.S. and E.U. These debates range from the appropriate role of government collection retention and usage of personal identifiable information (PII) as well as regulating the private sectors’ usage of PII. The E.U. has taken the lead in establishing an all-encompassing privacy policy for both the public and private sectors, whereas the U.S. has established a sectorial approach to establishing privacy law and regulations. Lawyers will continue to play a significant role in shaping governmental privacy policy, drafting statues and regulations, as well as business drafting and negotiating technology contracts.
The spread of democracy, the rapid development of open information regimes, and the Internet means that it is increasingly important what local communities want, and how they view natural resource production. Sustainable development is a set of concepts that attempts to harmonize a number of seemingly competing goals. These include providing better conditions of life and more opportunities for people, especially the poor. They also include bringing production and consumption within limits that an ecosystem can tolerate in the long run. The new legal challenges need to be understood on a variety of levels: 1) the emerging set of international standards and requirements governing foreign direct investment; 2) changing national priorities in mineral legislation and the laws governing the extraction and use of mineral products; and 3) meeting community expectations for sustainable development.

This class addresses critical topics for the attorney representing clients in international business transactions, including the role of the international lawyer, performing international research and locating international and foreign law resources, jurisdiction, provisional relief, choice of law, proof of foreign law, choice of forum or arbitration, service of process, obtaining the evidence, act of state, sovereign immunity, law of the seas, and enforcement of judgments. The class will consider relevant treaties and U.S. law, including the Hague Convention on Choice of Courts Agreement, the Uniform Foreign Country Money-Judgments Recognition Act, and potential litigation under such laws as the U.S. Foreign Corrupt Practices Act. The course addresses topics relevant to both litigation and arbitration.

The goal of this class is for students to research and write a scholarly law review article of publishable quality. Students will select topics relating to current issues in labor and employment law and will write publishable articles based on independent research. Students will present their papers to the class toward the end of the semester. The top two papers will be selected for entry in the Jackson, Lewis National Labor and Employment Writing Competition.

The first portion of this seminar will cover topics such as general international conventions and treaties designed to protect intellectual property; conventions and treaties are designed specifically for patents, trademarks and copyrights. Students will determine what protections to try to seek for a variety of intellectual property examples and, in pairs, if possible, negotiate and draft a licensing agreement and a manufacturing agreement. Students will then choose a topic from a selection of hypothetical problems, such as filing for patent protection in various jurisdictions, service of process on a foreign corporation, enforcing an arbitral award, resolving conflicts of laws, pre-litigation options. Each student will prepare a presentation for the class on the topic. The students will use the class feedback their research for the presentation to complete a paper on their topic. The drafting and paper will take the place of the final exam.

A deposition is the most important pre-trial discovery tool for the litigator. A successful deposition requires technical skills and extensive preparation. Most cases are won or lost based upon deposition testimony. The objectives of this class are to understand the applicable rules of civil procedure and the rules of evidence, the fundamentals of taking and defending depositions, utilizing depositions in discovery, settlement and trial, preparing witness for depositions, and applying proven strategies and techniques for successful depositions. The class will be taught using actual cases, deposition transcripts and video depositions.

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This course will focus on emerging international standards, legal, and "law-like" instruments designed to form the "rules of the road" in the dealings among private investors, host country governments, local communities, and other actors involved with sustainably developing natural resources. We will look at the track record of development: to what extent have natural resource projects helped make the world's poor better off? And what is meant by "better off?" What is a "fair deal" between a corporation from, for example, Europe or North America and a developing country government in Africa? How are disputes resolved?

Intermediate Legal Analysis provides second year students with instruction in analytical skills in a particular substantive area taught in the first year curriculum, utilizing multiple short-writing assignments with no more than 30 students per section. The course is a skills-based course, designed to develop analytical strategies necessary for success in law school, including rule synthesis and application, statutory interpretation, case analysis and briefing, fact evaluation, discernment of legal principles and theories, and effectiveness in written communication. The course will provide multiple opportunities for practice and feedback with exercises designed to help students learn, understand, and recall course materials with a particular emphasis in developing writing approaches and strengths for solving hypothetical legal problems. This course satisfies the Upper Level Writing requirement (ULW).

This course examines actual criminal cases from around the world and the application of the law at the time and place of the crime. The students will then compare this to the law today in the same jurisdiction and the Model Penal Code as applied to the same facts. This course also reviews current Colorado Law as it relates to liability and punishment based on the same fact pattern. The course will encourage analysis of what the law is and should be, and the aftermath of each case will lead to discussion about what actually happened to the defendant and why.

Students who have participated in the Civil Litigation Clinic for one semester are eligible to enroll in the Advanced Civil Litigation Clinic. The purpose of the advanced clinic is to provide students who have developed fundamental trial skills in the areas of landlord-tenant, domestic violence, and workplace law to further develop those skills and to work on cases and matters with greater independence for an additional semester without repeating the seminar component of the clinic.
LAWS 4022 Criminal Clinic (Advanced) (3 Credits)

LAWS 4023 Civil Litigation Clinic (Adv.) (1-10 Credits)

LAWS 4025 Administrative Law (3 Credits)

This class provides an introduction to the administrative process of government. Topics include Constitutional issues of separation of powers; delegation of legislative and judicial power; legislative and judicial authority in government agencies; agency exercise of policy-making functions; and controls imposed on agencies by administrative procedure legislation, Constitutional principles, and judicial review of agency action.

LAWS 4026 Criminal Procedure (Adv.) (3 Credits)

From the commencement of formal proceedings to collateral attacks on convictions, this course guides students through the laws regulating criminal prosecutions. The course topics typically include pleas; trial rights; discovery; bail procedures; sentencing; double jeopardy; the death penalty; and habeas corpus. The focus of the course is on the federal constitutional rights and the federal rules of procedure that are applicable to each stage of a criminal proceeding. Prerequisite: LAWS 4200.

LAWS 4027 Trial Practice II: Voir Dire (3 Credits)

This course covers the practical process of jury selection including the court rules and statutes that apply as well as Constitutional issues including fair cross-section and discriminatory challenges. An exploration of the demographic, legal, and case-specific issues that can be addressed in jury selection. The course couples traditional lectures with emphasis on student exercises. The course culminates in a final voir dire where the student is given a case problem and required to incorporate persuasive introductions, law questions, case-specific questions, and conclusions. Student participation throughout the class is required as both the inquiring attorney and as a juror.

LAWS 4028 Civil Procedure (Advanced) (3 Credits)

Topics for this course include post-trial procedure, injunctions, and other advanced civil procedure matters.

LAWS 4030 Family Law (Adv.) (3 Credits)

Advanced Family Law is a practicum oriented class. This class has some lecture components, but there will be significant practicum aspects for students interested in learning about the practice of family law. Students will gain a general knowledge of family law, and more specifically the substantive and procedural aspects of dispute resolution oriented domestic relations practice. The subjects covered are divorce, custody and child support jurisdiction (intrastate and interstate); domestic case procedure, meeting with and managing your client; working with opposing counsel; temporary status conferences and agreements, Domestic Violence, discovery and use of experts, unbundled legal services, access to justice issues, and the permanent orders (final orders in the divorce); and attorney's fees. Prerequisite: LAWS 4240.

LAWS 4031 Mediation (3 Credits)

Students who have completed the basic Alternative Dispute Resolution course may enroll in this program that focuses on clients with more complex cases in both the civil and criminal arenas. Clients will be selected based on both public interest aspect and the propriety of the case as a learning vehicle for planning, pleading, negotiation, discovery, research and trial work. Prerequisite: LAWS 4060.

LAWS 4032 Legal Analysis Strategies (3 Credits)

This course provides last semester graduating students with instruction, guidance and feedback to develop foundational skills necessary to achieve success on both the bar exam and in the legal profession as skilled legal analysts. Substantively, the course will focus on core bar exam subjects (constitutional law, contracts, property, evidence, torts and criminal law/procedure) using practical problems in all three examination formats of the bar exam - essays, performance tests, and multiple-choice questions. Initially, the course provides a diagnostic evaluation of analytical and communicative strengths using a performance test and multiple-choice questions. Subsequent classes require submission of written practice exams with follow-up class presentations by students of analytical strategies used to solve hypothetical problems posed in essay questions, performance tests and multiple-choice questions. The course includes a final exam given during the final exam period designed to simulate bar exam protocols.

LAWS 4033 Representing the Spanish Speaking Client (3 Credits)

This course is a survey of the substantive law of matters likely to be encountered by attorneys representing Spanish-speaking clients in the United States. Topics may include, among others, immigration law, family law, criminal law, employment law, wills and estates, and consumer rights. The course will introduce vocabulary required to communicate with Spanish-speaking clients in the United States, as well as, survey the basic substantive law in each area. The course will be taught in Spanish.

LAWS 4035 Advanced Legal Research (3 Credits)

Students select an area of practice in which to explore all major legal research resources, formats, and costs, and refine their ability to formulate cost-effective research strategies. They will identify an issue of interest and formulate a Legal Research Plan for analysis on the issue; draft a Library Purchase Plan for the practice area; write and revise a legal analysis on the issue; draft a client letter on the legal analysis; consider potential ethical issues for the practice area and write a short paper on these concerns; give an oral presentation; and write a final reflection. This course does satisfy the Upper Level Writing requirement (ULW).

LAWS 4037 European Union Environmental Law and Policy (3 Credits)

The European Union (EU) has become a leading player in the context of European environmental legislation and policy making. Of particular interest has been the underpinning of the EU's single market, and environmental protectin, the importance of which is clearly set out in the European Community Treaty. Matters dealing with climate change, genetically modified organisms, and recycling are now dealt with on a regular basis at EU level.

LAWS 4042 Trial Practice (Advanced) (3 Credits)

This class is an advanced study of trial practice issues and skills. Prerequisite: LAWS 4635.
LAWS 4048 Agency Partnership & LLC (3 Credits)
This is a survey of legal doctrines and legislation that governs the Limited Liability Corporation (LLC). The course material also explores employment and agency relationships and partnerships.

LAWS 4050 Topics in Constitutional Law (3 Credits)
This course provides upper level exposure to constitutional issues not covered in the basic required Constitutional Law course. Topics vary from semester to semester and may include the following: Sexuality, Individual Rights, Causation, Poverty and First Amendment.

LAWS 4060 Alternative Dispute Resolution (3 Credits)
The course examines the full range of contemporaneous dispute resolution processes: negotiation, mediation, arbitration and formal litigation. Conceptual and functional similarities and distinctions between these processes are explored. Additionally, the processes; impacts upon disputants, role of the lawyer, the legal system and social order are reviewed.

LAWS 4064 Introduction to the American Legal System (3 Credits)
This course is designed for international LLM students who have not previously had exposure to either the US legal system or other common law systems. It focuses on the American legal system, include the three branches of government, federalism, the hierarchy of courts, and the anatomy of a law suit. Students will get a rigorous writing experience, drafting at least on legal document, such as a memorandum or a brief. In doing so, students will learn about legal research, analysis, writing, and Bluebooking. Students may also be asked to deliver and oral argument.

LAWS 4065 American Legal History (3 Credits)
This course concerns itself with the interaction between the legal system and social change in what is now the United States. Chronologically, the course materials run from the colonial period to the New Deal, although the nineteenth century will receive particular emphasis. A principal focus is the interrelationship of law, social life, economy, and ideology.

LAWS 4070 Antitrust and Unfair Competition (3 Credits)
The expansion of our economy over time has required the federal government and the courts to rethink their respective roles in regulating business conduct in the United States. The laws regulating business conduct are as dynamic as the notion of competition itself. This course teaches the history and fundamentals of antitrust and unfair competition laws in the United States. This course discusses the competitive problems which arise from monopolization, price and supply agreements, tying arrangements, exclusive dealings, cartel activity and mergers. The course also examines the interplay between federal, state and private enforcement of these laws.

LAWS 4080 Real Estate, Title and Finance (3 Credits)
This is an introduction to real estate transactions as they are encountered in the practice of law. We have shortened the course to a two-hour format to make it more accessible. Our emphasis will be on the representation of a client or an institution in the title and finance aspects of the real estate deal, which are central to every transaction. We will spend less time on contract formation and the role of brokers.

LAWS 4085 Trial Practice III: Trial Practicum (3 Credits)
Trial Practice III - The Trial Practicum (TP) is based upon the same educational platform as Trial Practice III - The National Trial Team (NTT). They are the same course, with the only difference being the TP students do not travel to compete against other schools, rather TP students compete in intra-school tournaments. TTP was created in response to the students who desire to benefit from the intensive study and simulated pre-trial and trial experience received by students on the National Trial Team course, and be "practice ready" upon licensure. This year-long, nine credit (three per semester), course is by invitation-only, and is demanding and intensive.

LAWS 4089 Business Development: Marketing & Client Services (3 Credits)
This course provides students with the tools to effectively market a solo practice and connect with the client. Topics include: client relationship management; social media; building a brand; networking fundamentals; website development; managing client expectations; effective communications; and referrals.

LAWS 4090 Bankruptcy (4 Credits)
This course introduces the federal bankruptcy system and Bankruptcy Code, including both the law of consumer bankruptcy and the law of corporate reorganizations. Topics include the rights of creditors in bankruptcy law and state law, the scope of the automatic stay, the treatment of executory contracts, the sale of assets in bankruptcy, the avoiding powers, bankruptcy planning, the restructuring of corporations in Chapter 11, and the procedure for confirming plans of reorganization.

LAWS 4095 Real Estate (3 Credits)
This course serves as an introduction to contractual, priority of right, and title assurance issues involved in transferring real estate. This is a highly recommended survey course for all law students regardless of specialization because much of the course material is heavily examined on the Multi-state, Colorado and other state Bar Exams. This class also serves as a gateway course for real estate specialists.

LAWS 4096 Patent Law (3 Credits)
This course review the major patent law doctrines. Topics include patentability requirements under 35 U.S.C. 101, 102, 103, and 112, claim construction, various infringement doctrines, affirmative defenses and remedies.

LAWS 4100 Basic Tax (4 Credits)
This course provides students with a general understanding of tax law. Materials cover topics from personal and business deductions, to property basis and depreciation.
LAWS 4105 Business & Commercial Law Sem (1-3 Credits)
Topical seminars scheduled periodically to afford students the opportunity for focused study of business and commercial law matters such as: consumer credit; mergers and acquisitions; corporate practice; bankruptcy; antitrust; quantitative evidence; representation of minority–and women–owned business firms. Prerequisite: LAWS 4190.

LAWS 4110 Business Planning (3 Credits)
The course introduces students to the transactional lawyering considerations involved in forming and representing an emerging growth business. The course examines the life cycle of a start-up company, including selecting the appropriate entity form, structuring the economic interests and managerial control among various owners, considering the lawyer's duties to the entity in dealing with its founders and management, and documenting various approaches to raising capital. Using a simulated deal format, students will draft, review and analyze documents typically used in organizing and financing a start-up business.

LAWS 4112 Trademark Law (Advanced) (2 Credits)
This seminar focuses on complex practical and legal issues confronted by today's trademark practitioners, ranging from brand protection strategies to litigating equitable relief claims for trademark infringement. The course also covers how trademark principles are being applied to the internet and e-Commerce. The course focuses on U.S. trademark law, but includes exposure to the aspects of international trademark law that are most frequently encountered by U.S. trademark practitioners. The course calls for students to participate in hands-on exercises, such as developing a new brand and arguing a preliminary injunction motion. The course requires a basic familiarity with trademark law, but the specific Trademark Law class is not a prerequisite. Prerequisite: LAWS 4310 or equivalent.

LAWS 4115 Trademark Law (3 Credits)
This course covers common law doctrines. Topics include the acquisition and preservation of trademark rights, false advertising claims, infringement doctrines, defenses, and remedies, with attention to internet issues and recent developments in the law. Recommended prerequisite: LAWS 4310.

LAWS 4117 Taxation of Property Transactions (3 Credits)
This course includes basis of property; capital expenditures and current expense comparison; depreciable status; amortization of intangible property; depreciation methods; property casualties and losses; profit or loss computation and characterization for taxable property dispositions; limitations on passive losses; lessor and lessee reporting; tax-deferred dispositions. Cross listed with TAX 4110.

LAWS 4120 Civil Procedure (4 Credits)
This required introductory course examines how Constitutional statutory and judicial rules frame the determination of court controversies. They also explore the doctrines, remedies, and other principles pertinent to judicial dispute resolution.

LAWS 4129 Comparative Corporate Law Seminar (2 Credits)
Comparative Corporate Law examines the system for forming and managing businesses in the United States and overseas. We examine the impact of culture and other factors on legal regimes and examine whether a uniform international system is developing. This course satisfies the Upper Level Writing requirement (ULW).

LAWS 4131 Commercial Law Survey (4 Credits)
This course provides an introduction to the concepts and methods of commercial law. As a survey course, it explores the major Articles of the Uniform Commercial Code, namely, Article 2 (Sales), Article 9 (Secured Transactions), Article 3 (Payment Systems), as well as Article 5 (Letters of Credit) and Article 7 (Documents of Title). In addition, the intersection of Article 9 and Bankruptcy Law will be discussed in some depth. The completion of this course gives students a firm footing for any advanced course in commercial law. Students taking only one course in commercial law receive broad exposure to the basics of commercial law.

LAWS 4132 Colorado Legal Research (2 Credits)
This course introduces students to legal materials generated by executive/administrative, legislative, and judicial branches of Colorado government. Students develop research strategies for answering legal questions using primary and secondary resources and learn to relate the various sources of authority to the structure of Colorado government. Students are required to bring laptop computers to class.

LAWS 4133 Corporate Social Responsibility (3 Credits)
Corporate Social Responsibility represents the integration of a various environmental, social, ethical, and even political considerations into basic business strategies to produce a positive impact on society while still earning profits. With increasing frequency, consumers and investors reward companies that embrace CSR by purchasing their products and stock. This seminar in Corporate Social Responsibility explores a variety of pressing legal issues involving corporate governance, sustainable development, shareholder activism, executive compensation, the role of religion in the boardroom, international regulation, and CSR certification, among other topics. Through the readings and discussions, students examine the American approach to CSR in light of international regulatory efforts and models of socially responsible business practices in various countries around the world. Students gain a greater sense of the special role lawyers play in the burgeoning CSR movement by examining some sophisticated examples of corporate strategy, planning, and litigation on CSR matters. This course satisfies the Upper Level Writing requirement (ULW).

LAWS 4135 Comparative Law (3 Credits)
Comparative Law is the study of the foundation of legal traditions and systems which exist in the world today. The major topics covered in this course are legal history and culture; legal structures; legal actors; and procedure and sources of law. The interactive course begins with an overview followed with coverage of each of the topics in relation to the United States legal system. We then cover the same topics in relationship to the common law tradition and the civil law tradition.
LAWS 4137 Comparative Environmental Law (3 Credits)
Comparative Environmental Law is an introduction to the growing network of international law (multilateral and bilateral treaties, customary law, adjudications, etc.) that govern environmental law. The course focuses on international legal issues including global climate change; trans boundary pollution; resource depletion; toxic waste export; biodiversity and wildlife/plant extinction; deforestation; desertification; ocean pollution; sustainable development; etc. (The internal domestic environmental laws of individual countries receive some attention as does trade law, but these are covered with more detail in Comparative Law and International Business Transactions, respectively).

LAWS 4139 Commercial Law for Foreign Investors in Guatemala (2 Credits)
This class uses the Dominican republic-Central America-United States Free Trade Agreement (CAFTA-DR) and the North American Free Trade Agreement (NAFTA) to examine the legal framework regulating foreign investment in Central America and Mexico. With Guatemala’s ratification of CAFTA-DR, Guatemala opened its doors not only to trade but also to foreign investment, including from U.S. companies looking to do business in Guatemala. While the CAFTA-DR includes norms that govern the relationship between foreign investors and Member States, the domestic laws of each Member State continue to provide the central regulatory structure that governs relations among the parties, including in the areas of commerce, intellectual property, labor and the environment. This is an introductory course that examines the principle commercial norms that would apply to foreign investors in Guatemala, with a special emphasis on the law of contracts. The course examines the comparable norms applicable under NAFTA and introduces the topic of how CAFTA’s ratification has promoted rule of law reforms in Guatemala in the areas of commerce, intellectual property, labor and the environment. This course is taught in Spanish.

LAWS 4143 Commercial Paper (2,3 Credits)
This course introduces students to Article 3 of the Uniform Commercial Code, Negotiable Instruments. After studying this part of the UCC at the beginning of the semester, students will engage in a simulated, complex business transaction for the remainder of the course. The simulation involves problem solving, extensive document drafting, client counseling and professionalism, among other topics. The simulation involves transactions in a business/banking context, but is not an overview of banking law.

LAWS 4144 Comparative Free Speech and Access to Information in the Americas (2 Credits)
This course looks at the history and text of the guarantees of free speech in the constitutions of the United States and Latin American countries, including Guatemala; at judicial decisions interpreting them; and at the actual scope of those guarantees of free speech in practice, with emphasis on the function of free speech in facilitating democracy. The course also looks at the impact of globalization on free speech guarantees, including the impact of international treaties, the activities of NGOs, and speech on the Internet. The course compares the systems for providing citizens access to government information in the U.S. and Latin America, particularly Guatemala, and looks closely at areas where interest in disclosure and secrecy conflict.

LAWS 4145 Computer and Internet Law (3 Credits)
Computers and Internet Law is designed to consider the areas in which computer technology and the legal environment intersect. This includes legal protection of computer software; contracting for computer services; computer data banks and privacy; the check-less society; and the relationships between Federal Communications Commission policies and computers.

LAWS 4160 Conflict of Laws (3 Credits)
Conflict of Laws is an analysis of legal problems arising in cases when at least one of the operative facts cuts across state or national boundaries. Topics covered include problems of interstate jurisdiction over parties and subject matter: the application of principles of full faith and credit and comity on the recognition and enforcement of interstate and multinational judgments; the comparison of various theories of law choice in the context of the Constitutional threshold constraints of the due process and full faith and credit clauses.

LAWS 4164 Constitutional Law (4 Credits)
This required introductory course examines the role of the United States Supreme Court and, in particular, the Court’s power in exercising judicial review in cases interpreting the U.S. Constitution. The course focuses primarily on two topics. First is the doctrine of Separation of Powers: examining the structure and interrelationship of the three branches of the federal government, Congress, the Executive Branch, and the federal judiciary. Second is the doctrine of Federalism: the relationship and power distribution between the federal government and state governments. In addition, all sections devote part of the course to an introduction to at least one aspect of the large field of individual constitutional rights. The specific rights covered vary by instructor. Among the possible topics are: the Equal Protection Clause and Due Process Clause of the Fourteenth Amendment, the First Amendment, and/or the Fifth Amendment’s Takings Clause. Students who wish to gain a deeper understanding of these topics are strongly encouraged to take Constitutional Law II.

LAWS 4166 Constitutional Law II: Individual Rights (3 Credits)
Topics vary from semester to semester and may include the following: Sexuality, Individual Rights, Causation, Poverty and First Amendment. This course provides upper level students exposure to constitutional issues not covered in the basic required Constitutional Law course.

LAWS 4168 Constitutional Litigation Seminar (3 Credits)
This course examines individual and class action litigation brought against government officials for the violation of constitutional rights under 42 U.S.C. section 1983, the primary federal civil rights statute, and other civil rights statutes. The historic interplay between substantive Constitutional law and traditional doctrines of tort liability has developed into an entire body of law under section 1983 that any civil rights or government lawyer must regularly confront. The seminar focuses on the most critical substantive issues in pursuing Constitutional litigation. This includes the history and purposes of section 1983; the elements of constitutional torts; rules governing liability of government officials and municipal liability; immunity doctrines; remedies; jurisdictional and procedural barriers to section 1983 litigation; and recovery of attorney’s fees. The class also discusses the availability and viability of alternative remedial mechanisms to section 1983. Prerequisites: LAWS 4165 and LAWS 4166.
LAWS 4169 Constitutional Law Writing Seminar (3 Credits)
This course satisfies the Upper Level Writing requirement (ULM). Permission by instructor only.

LAWS 4175 Contracts (4 Credits)
Consideration of the restatement of contracts and the relevant provisions of the Uniform Commercial Code. Legal protection accorded contracts: remedies and measure of recovery; damages; specific performance; restitution. Elements of agreement: preliminary negotiations; agreements unenforceable for indefiniteness; mutual assent. Consideration and the seal; bases of contractual liability; consideration; reliance and estoppel; mutualty. Problems of offer and acceptance; termination of offeree's power of acceptance; contracts concluded by correspondence; unilateral contacts—notice, knowledge, revocation of offer; contracts implied from conduct. Special problems of consideration. Third-party beneficiaries. Assignment. Effects of changes or unforeseen circumstances. Conditions in contracts—problems of craftsmanship; express and implied conditions; conditions precedent, subsequent and concurrent; severability of contract provisions. Procedures after default. The Statue of Frauds.

LAWS 4178 Contracts Drafting (3 Credits)
This course addresses the perspectives and skills that a lawyer must develop in order to assist clients with transactional work and aligning business objectives and contracts. In addition to delving deeper into selected areas of substantive contract law, students read materials that focus on writing and interpreting contractual provisions. Because a core focus of the class is writing for contracts, students regularly engage in drafting exercises to hone their drafting skills. The course also focuses on negotiation in a transactional setting, and how discussions with both clients and other parties can distill the key business terms that are to be reflected in a contract. Although substantive law and theory is utilized throughout the course, the primary objective of the course is exposing students to some of the practical, real-world skills essential to a transactional law practice.

LAWS 4179 Construction Law Seminar (3 Credits)
This course examines the legal relationships, obligations, rights, and remedies that govern the diverse parties to a construction project, including owners, lenders, contractors, material men, sureties, insurers, subcontractors, laborers, and others. A substantial portion of construction law (and accordingly, the primary focus of this class) is advanced contract law. Experience in the construction industry is not required, but those students who are unfamiliar with construction will benefit from spending a little extra time learning basic construction concepts and processes.

LAWS 4181 Corporate Drafting Seminar (3 Credits)
Corporate drafting focuses on writing responsive, lucid, unambiguous corporate documents. Students assume the role of the in-house counsel and other members of the corporate negotiating team as the team structures, negotiates, drafts, and implements corporate transactions. This course requires extensive writing. This course satisfies the Upper Level Writing requirement (ULW).

LAWS 4185 Business Entities (4 Credits)
The course provides an overview of the differences in the operation of a trade or a business as an LLC/LLP an S-Corporation and a C-Corporation. The class offers an overview of the state law requirements for the operation of each type of business (Model Business act and LLC/LLP state statutes) and the difference in the tax treatment for each type of business. The objective is to give students a basic understanding of some of the do's and don'ts for each business and how they might advise a client as to the preferred business form in typical factual situations. The class explores both the legal and tax effects during the life cycle of any business, including formation, operation, distribution, redemption, sale of an interest, liquidation, mergers and divisions, and the death of the owner. Prerequisite: LAWS 4100.

LAWS 4186 Corporate Taxation I (3 Credits)
The federal income taxation of corporations and their shareholders with emphasis on the creation of the corporation, establishment of its capital structure, operational alternatives, distribution to shareholders, stock dividends and redemptions, personal holding company, and accumulated earnings tax. Cross listed with TAX 4200.

LAWS 4187 Corporate Taxation II (3 Credits)
A continuation of Corporate Taxation I with emphasis on corporate reorganizations, operation, liquidation of subsidiary corporations and corporate division, and carryover of tax attributes. Cross listed with TAX 4300. Prerequisite: LAWS 4186.

LAWS 4188 Corporate Taxation III (3 Credits)
Advanced corporate taxation problems with emphasis on collapsible corporations; liquidations; detailed study of sections 305, 36, 307; loss carryovers and Subchapter S corporations. Cross listed with TAX 4330. Prerequisite: LAWS 4186.

LAWS 4190 Corporations (4 Credits)
Corporations provides students with a basic introduction to corporations, including the roles of shareholders and creditors. The instructor also covers the various duties and liabilities of offices and directors, and supplies a brief overview of the applicability of the federal securities laws.

LAWS 4195 Criminal Law (4 Credits)
The course explores the definition of crime and criminal liability.

LAWS 4197 Victim's Rights (3 Credits)
Victim's rights has emerged as an important arena for the criminal justice field in the 21st Century. Anyone planning a career in criminal justice will want to engage in this seminar class to learn about the law and its application to victim's rights. This class is designed to explore beyond advanced criminal procedure the role of the criminal justice system and its response to victim's. In-depth discussions will be held about victim's rights and criminal procedure.

LAWS 4200 Criminal Procedure (3 Credits)
Criminal Procedure outlines Constitutional and other rules regulating pretrial evidence acquisition by government officials in criminal matters. The course commonly includes the following topics: an overview of criminal justice administration; arrest; search and seizure; the exclusionary rule and its administration; wiretapping electronic eavesdropping; entrapment; interrogation; and confessions and lineup practices.
LAWS 4201 Death Penalty Jurisprudence (3 Credits)
The course is designed to make students aware of the substantive body of law surrounding the modern death penalty and the policy issues raised by the law. The course begins with the class constructing a fair death penalty. Students decide whether they, as the omnipotent legislature, want a death penalty. Then, students construct one that is fair, just and humane, and that achieves the goals that they have established for their death penalty.

LAWS 4202 Disability Law (3 Credits)
This course examines the growing area of disability law. Topics to be covered include discrimination based on disability in employment and public accommodations, as well as the requirement for educational institutions to provide special education services to disabled students. Relevant federal statutes are examined, including the Americans with Disabilities Act (with special emphasis on the ADA Amendments Act of 2009), Section 504 of the Rehabilitation Act, and the Individuals with Disabilities in Education Act.

LAWS 4203 Elder Law (3 Credits)
The course explores a range of issues relevant to legal counseling of elderly clients, such as mental and physical impairments, public assistance, Medicaid, social security, nursing homes, guardianships, trusts, and right to die issues.

LAWS 4205 Employment Law Survey (3 Credits)
This course provides a broad overview of the field of employment law. It begins with an exploration of the employer/employee relationship and the "at will" rule. It then addresses various constitutional, statutory, and common law doctrines that tend to be applied to the employer/employee relationship, often as exceptions to the "at will" rule. Contract, tort, and anti-discrimination doctrines will be covered, as well as constitutional doctrines addressing free speech and privacy in the workplace, and regulatory regimes addressing wages and hours. Finally, this course explores the post-employment relationship, including trade-secrets and non-competition agreements. These topics are addressed at both a theoretical and practical level.

LAWS 4206 Environmental Law Clinic (3-6 Credits)
The goal of the Environmental Law Clinic of the Student Law Office (SLO) is to protect the environment and public health, while teaching students practical legal skills that will translate into any practice area. Students applying for the Environmental Law Clinic are asked to select between two tracks: the Federal Wildlife Project or the Colorado Urban Project. Students who select the Federal Wildlife Project (FWP) track in the Environmental Law Clinic will work on the preservation of endangered species and their habitats throughout Colorado and the western United States. Students who select the Colorado Urban Project (CUP) track in the Environmental Law Clinic will work to address the emerging environmental issues along Colorado's urban Front Range. This course may satisfy the Upper Level Writing Requirement (ULW). Corequisite: LAWS 4802. Prerequisite: LAWS 4235 and LAWS 4425.

LAWS 4210 Energy Law (3 Credits)
Energy Law presents the regulation of production, conversion, transportation, distribution and pricing of fossil, hydro, nuclear, and other conventional sources of primary energy. It also offers insight into the regulation of renewable energy resources, including energy from the sun, wind, biomass, oceans, earth (geothermal), and rivers (including low-head hydro). There is an emphasis on new legislative and judicial development relating to these various energy sources. The course is taught in a seminar format, and students present and critique classmate papers as part of the class. This course satisfies the Upper Level Writing requirement (ULW).

LAWS 4212 Public Interest Capstone (0 Credits)
This is a zero-credit opportunity for JD students nearing graduation that will allow for the informal community building that is so critical for sustaining student commitment and public interest attorneys for the long term. It will be a time for sharing, refection, camaraderie, and connections, as well as advising and planning for a career in the public sector.

LAWS 4214 Copyright Law (3 Credits)
This course covers the major copyright law doctrines. Topics include the subject matter of copyright, the scope of protection, rights conferred, infringement doctrines, defenses, remedies, and attention to particular industries and recent development in the law. Recommended prerequisite: LAWS 4310.

LAWS 4215 Entertainment Law (3 Credits)
Entertainment Law focuses on issues that have an impact on the entertainment industry. Topics include copyright; service and trademark; licensing; publishing; unfair competition; antitrust; agency; and labor law. The class also explores publishing agreements.

LAWS 4218 Discovery Practicum (3 Credits)
Most civil litigations never get to trial. Instead, these cases are settled after the discovery period has revealed the strengths and weaknesses in the case. This course focuses on the instruments, rules, and case law governing discovery of information in litigation: interrogatories, document requests, requests for admissions, and depositions. It is taught in the form of a "whole-course simulation," which means students will represent a party and have an opposing counsel in a simulated litigation throughout the course. Students prepare and serve discovery documents (just as in practice), take, defend, and act as a witness in a deposition, and reach a settlement of the case at the end of the course. Because of the nature of the course and the many practice documents prepared during the semester, there is no final examination. This course will satisfy the Upper Level Writing requirement (ULW). This course is a "Carnegie Integrated Course."

LAWS 4219 Environmental Ethics & Justice (3 Credits)
This course provides a broad analytical consideration of ethical environmental policy-making. Students consider the historical aspect of environmental ethics as the various ethical approaches to making a decision concerning the environment. The class also explores the roles that the law, economics, and society's values play in environmental ethics.
LAWS 4220 Environmental Law (3 Credits)
Environmental Law covers the major federal laws and programs for environmental protection. These laws and programs include the National Environmental Policy Act; Clean Water Act; Clean Air Act; Resource Conservation and Recovery Act; and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Although the course focuses primarily on federal statutory law, it also incorporates some discussion of common law remedies. Recommended prerequisite: LAWS 4025.

LAWS 4224 Employment Law Benefits (3 Credits)
This course is a statute and case law course that introduces students to Employment Retirement Income Security Act (ERISA), the important federal law that controls the design and operation of virtually all employee benefit plans. The course offers students an understanding of the application of ERISA and how ERISA issues arise in business and private law practice. The classroom scenarios include lecture, problem solving and role playing to identify the kinds of experiences students are likely to experience in private practice.

LAWS 4225 Estate and Gift Taxation (3 Credits)
This class is a study of the federal estate tax; federal gift tax; and federal generation skipping transfer tax.

LAWS 4227 Employment Discrimination Law (3 Credits)
This course concerns federal constitutional and statutory law that prohibits discrimination in the workplace, including regulation of both private employers and the federal government. The course covers theoretical issues, such as the definition of equality, and practical problems that involve the complex procedural requirements of the applicable statutes.

LAWS 4229 Employment Law Seminar (3 Credits)
Students select topics relating to current issues in labor and employment law and will write publishable articles based on independent research. Students present their papers to the class toward the end of the semester. This course satisfies the Upper Level Writing requirement (ULW).

LAWS 4230 Estate Planning (2 Credits)
Estate analysis, including fact gathering and the analysis of data; the psychological aspects of “role playing” in estate planning; the members of the team (the attorney, the CPA, the life underwriter, the trust officer); life insurance in an estate and business planning context; planning with trusts, including revocable, short-term, and irrevocable; the transfer of a closely held business interest from one generation to the next, including full and partial stock redemptions, cross purchase agreements, private annuity, installment sale, retirement, recapitalization, qualified and nonqualified plans of deferred compensation; special estate planning considerations for the professional corporation, the highly paid executive, and the farmer and rancher; specific cases analyzed.

LAWS 4232 European Union Law (3 Credits)
The European Union (EU) has been described as the 21st century's newest superpower. Bearing in mind the rapidly growing importance of the EU, this course introduces EU law, and emphasizes its historical underpinnings, institutional framework, legal procedures, and internal market. Moreover, emerging policies (e.g. enlargement, environment) are considered. The course examines these topics in the context of European political integration and where appropriate, the ongoing tension in the trans-Atlantic relationship between the EU and United States.

LAWS 4233 Evidence (4 Credits)
This required course is an introduction to procedural rules that regulate the use of evidence at trial, including coverage of the mode of examination, relevance, impeachment, character evidence, hearsay, expert evidence, and privileges. Particular attention is paid to the Federal Rules of Evidence.

LAWS 4236 Election Law (3 Credits)
This course examines Federal Election Law, specifically the Voting Rights Act; federal legislative districting; federal regulation of political parties; and the evolution of federal campaign finance law. The course does not address state campaign finance issues, ballot initiatives, or term limits. However, it may touch on those topics if time permits.

LAWS 4237 Evidence Practicum (3 Credits)
This practicum is designed to help students build trial skills and make the transition from evidence law learned in the classroom to evidence used in the courtroom. It provides simulation-type experiences requiring students to understand the foundations required to admit different kinds of evidence, to anticipate evidentiary issues, to make and to respond to objections, and to prepare examinations designed to avoid objections. The course supplements Trial Practice by focusing heavily on the rules of evidence. Prerequisites: LAWS 4235.

LAWS 4238 Exempt Organizations (2 Credits)
The statutory exemption for “charities,” social welfare and social clubs, homeowners' associations, fraternal orders, employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, exempt organizations, property title companies, federally organized or chartered organizations, and political organizations' activities, funds, and lobbying activities; prohibited transaction rules; the private foundation; the unrelated business and debt-financed income tax exposures; excise tax exemptions; administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions. Crosslisted with TAX 4430.

LAWS 4240 Family Law (3 Credits)
This course is an examination of laws that involve and/or regulate families. Students learn the legal rights of families in cases incidental to marriage or without marriage. This includes child-parent relationships and the dissolution of marriage. This class also provides students with an understanding of new familial relationships.
LAWS 4250 Federal Courts (3 Credits)
This is an advanced public law course that examines the role of the federal courts in our constitutional system. It focuses on the federal courts' role and power in relation to the other branches of the national government (separation of powers) and in relation to state and local governments (federalism). Specific topics include: the organic judicial powers of the federal judiciary, including Article III's Case or Controversy requirement; congressional power to restrict or expand federal jurisdiction, the Supreme Court's power to review state court rulings on federal law by direct appeal and on collateral review (habeas corpus), federal question jurisdiction, federal civil rights law under 42 U.S.C. § 1983, and many of the doctrines that limit federal judicial power to provide remedies to parties whose federal constitutional and civil rights have been violated, including official immunity, state sovereign immunity, and the abstention doctrines. It is highly recommended for students interested in pursuing federal judicial clerkships and/or careers in federal civil rights litigation, government representation, or other federal litigation.

LAWS 4251 Federal Wildlife Law (3 Credits)
This course covers federal wildlife law beginning with the Constitutional underpinnings of federal wildlife law. It focuses on the Endangered Species Act with some coverage of the Migratory Bird Treaty Act. The course takes new approaches to species and habitat preservation, paying particular attention to Colorado species.

LAWS 4259 Global Climate Change Law and Policy (3 Credits)
As concern over the threat of global climate change spreads, action on greenhouse gas emissions (GHGs) is increasingly commanding attention. This seminar consists of supervised research and writing on the issue of climate change and the legal and policy responses. The course focuses on the effects of climate change on development and the environment in industrialized and developing countries and the laws in the international, regional and domestic arenas that address the problem.

LAWS 4260 Gender and the Law (3 Credits)
The course examines the role of gender in many areas of the law, including employment discrimination and reproductive rights. Provides perspectives on the effects of gender-based hierarchy on the structure of the law and legal processes. Explore contemporary feminist jurisprudence and the impact of women in the legal profession.

LAWS 4262 Sexual Orientation Law Seminar (3 Credits)
This seminar offers an opportunity for students of any or no sexual orientation to study the relationship between law and sexual orientation to study the relationship between law and sexual orientation. Historically, law in the United States consistently and pervasively regulated the realm of human identity and behavior we call sexuality. Questions and claims challenging traditional assumptions about sexual orientation surfaced in the last twenty-five years. Our study of sexual orientation and law allows us to view the relationship between law and society through a new lens, that of sexual orientation. Specifically, we examine issues of sexual orientation arising in areas ranging from constitutional law criminal law, employment law, family law, health law, immigration law, to tax law. We discuss some or all of the currently controversial issues relating to sexual orientation and law, including such topics as the proliferation of both nondiscrimination laws and anti-gay initiatives like amendment 2 in Colorado, the constitutionality of laws prohibiting specified sexual behavior between different-sex and same-sex adults, the constitutionality of laws limiting the right to speak about sexual identity, public and private employment discrimination against gays and lesbians including the military ban on persons who are openly gay or lesbian, and discrimination against same-sex couples with respect to marriage, parenting, health benefits, and taxes.

LAWS 4265 Government Contracts Seminar (3 Credits)
This seminar provides an in depth examination of the unique statutory, regulatory and administrative process used by the U.S. Government when it annually spends more than $1 trillion taxpayer dollars to contract for goods and services used by Federal departments and agencies. Topics include the contract award and contract administration processes, with an emphasis on practical solutions to issues which routinely confront attorneys who advise businesses that do business with the Government.

LAWS 4270 LLCs and Operating Agreements (1 Credit)
This course provides an overview of limited liability companies, including the attributes and characteristics of LLCs, the pros and cons of the LLC form, and a comparison of LLCs to other types of entities. The course also covers the structure and components of the operating agreement, including an in-depth examination of various provisions included in operating agreements. In conjunction with the course content, students will also be exposed to client interview techniques for in person client meetings, as well as client conference calls.

LAWS 4276 Health Law (3 Credits)
This survey course introduces students to the legal environment of health care shapes both its quality and its distribution. The course begins with a foundation in how health care is both provided and financed in the U.S., including managed care, Medicare, and Medicaid. This foundation sets the stage for studying the laws and policies that impact health law, including ERISA, antitrust, fraud and abuse, the False Claims Act, Stark, and HIPAA. This course does not focus on bioethics or medical malpractice. Students must submit a publishable quality paper on a health law topic approved by the professor. This course will satisfy the Upper Level Writing requirement (ULW).

LAWS 4277 Holocaust Seminar (3 Credits)
This class focuses on conceptions of individual and state accountability. By understanding how the Holocaust occurred, and how individual and collective acquiescence combined with affirmative conduct, we can begin to grasp the complex web that created a moment in time where morality and civilization were abdicated and almost eradicated. We examine how law, culture, power, ignorance and fear combined to create the Final Solution, and how conceptions of moral agency and accountability were forged in flames that marked the death camps. Students read narratives of resistance and collaboration and historical accounts of how the U.S., Europe and religious institutions interacted with the Third Reich. Through the readings and discourse that follow, students have the unique opportunity to question what constitutes moral agency and how individuals and cultural systems should be held accountable for circumstances that created the Third Reich and its ideology. This class is interdisciplinary thereby integrating law with literature, political theory and philosophy. Prerequisite: instructor's permission.
LAWS 4280 Huges Research Seminar (1-5 Credits)
Topic of Seminar to be determined by Hughes Research professor teaching the course.

LAWS 4285 Legal Research Skills - Advanced (0 Credits)
This zero-credit course introduces students to sources and methods for administrative law and legislative history research as well as subject-specific research on selected topics such as securities, natural resources, intellectual property, immigration, environmental and international law. Topics change each semester. Print and electronic materials are used throughout the course. Students must attend twelve (12) classes and pass the post-class assignments to complete the course successfully.

LAWS 4287 Legal Research Skills - Basic (0 Credits)
This zero-credit course introduces students to the basic primary sources of American law (cases and statutes), secondary sources, the Bluebook and citators and other tools for updating research. Print and electronic materials are used throughout the course. Students must attend eight (8) classes and pass the post-class assignments to complete the course successfully.

LAWS 4288 International and Human Rights: Indigenous Peoples (3 Credits)
This course explores some of the major contemporary legal issues facing indigenous peoples across the globe. The course covers issues as far ranging as: how indigenous groups are defined under the law; ethical and legal issues pertaining to indigenous self-governance including the tension between minority rights, individual rights, and democratic precepts; the uneasy application of self-determination law to indigenous self-governance; the implications of human rights, environmental, intellectual property, and international trade regimes for indigenous peoples; and international legal texts affecting indigenous peoples, such as the United Nations Declaration of the Rights of Indigenous Peoples. At the option of the individual student, this course can be used to satisfy the Upper Level Writing requirement (ULW).

LAWS 4289 Legal Research Skills - International (0 Credits)
This zero-credit course introduces students to sources and methods for international, comparative and foreign law research. Topics may include treaty research, international trade law, human rights law, international intellectual property law, customary international law and private international law. Topics change each semester. Print and electronic materials are used throughout the course. Students must attend twelve (12) classes and pass the post-class assignments to complete the course successfully.

LAWS 4290 Human Rights Law (2 Credits)
The course provides an introduction to international civil and political rights and economic, social, and cultural rights in the international arena. It also covers the means available to protect such rights of the individual and groups. The focus is on the implementation part at the United Nations and other international, regional and national settings. Prerequisite: LAWS 4320.

LAWS 4292 Individual Tax Problems (3 Credits)
Using the Internal Revenue Code and the Federal Income Tax Regulations as a basis, substantive issues relating to individual taxation are covered. Areas included are general concepts of gross income, individual employee benefits and deductions, charitable deductions, alternative minimum tax, deductibility and classes of interest, office in home and vacation homes, and a general overview of the interrelationships of various statutory and non-statutory principles. Cross listed with TAX 4020.

LAWS 4295 Immigration Law (3 Credits)
This is a study of the historical development and current jurisprudence in American immigration law. The course examines such concepts as sovereign authority, exclusion, expulsion and asylum, and current developments in the area.

LAWS 4299 Immigration Law Advanced (3 Credits)
This course provides theoretical and practical approaches to the representation of non-citizens in removal proceedings. This course is designed for students who have an interest in practicing immigration law with a focus on deportation and removal practice before the Department of Homeland Security, the Executive Office for Immigration Review, and the federal courts. The goal of this course is to give students a theoretical framework for identifying and assessing immigration issues, including immigration consequences of criminal convictions, and for formulating strategies for effective prosecution and representation of non-citizens in removal proceedings. The instructor also teaches the practical tools and procedures, which students may apply to actual case representation. Prerequisite: LAWS 4295 or an immigration related externship.

LAWS 4300 Federal Indian Law (3 Credits)
This introductory course surveys the body of “Federal Indian Law,” focusing on the legal relationship between Indian nations and the United States, including implications of this relationship for states and individual citizens. The course covers the historical origins of federal Indian common law, the development of federal Indian policy, and tribal sovereignty in the modern era (tribal property, jurisdiction, criminal and civil governance, and economic development including gaming). It may provide a brief introduction to the Indian Child Welfare Act, religious and cultural freedoms, tribal law, and indigenous peoples in international law, if time allows.

LAWS 4303 International Criminal Law Practicum (3 Credits)
In this course, the class collectively analyzes the genocide, war crimes and crimes against humanity charges against an accused in a major international tribunal prosecution. Each student is assigned witnesses in the case and is expected to analyze that testimony and record their work in the case database using Casemap software meticulously following previously established protocols. The work involves the students learning the nature of the conflict generally, thoroughly learning the indictment against Taylor, getting up to speed on the law of war crimes and crimes against humanity, and finally assessing the witness testimony for relevant facts and attributing those facts to the legal outline in the case.
LAWS 4304 Insurance Law (3 Credits)
A comprehensive overview of laws, standards, concepts and remedies related to Insurance, including: interests protected by Insurance; selection and control of risks; insurable interest; the principle of indemnity; types and classifications of Insurance; making, dealing with and termination of insurance contracts; underwriting and claims handling; regulation of Insurance and insurers; subrogation; and extra-contractual liability. This course will satisfy the Upper Level Writing requirement (ULW).

LAWS 4309 International Law and the Use of Force (3 Credits)
This course deals with the two aspects of the use of force by countries: the initial decision to resort to force and then the regulation of that force once the conflict begins. In 1945, the United Nations Charter set out to prohibit the resort to force by its member states except in two limited situations: self-defense or where authorized by the Security Council. The Geneva Conventions and its protocols, as well as customary international law, regulate how that force is applied. The subject of this course is how these provisions have been interpreted since 1945 and trends in the law that will guide us in the future.

LAWS 4310 Introduction to Intellectual Property (3 Credits)
This survey course covers the basics of United States intellectual property law, including patents, copyrights, trademarks, and trade secrets. The course addresses the policies underlying the protection of intellectual property and compares the different ways organizations and individuals can use intellectual property to protect their interests. This course is intended both for students who want an introduction to intellectual property and for those who intend to pursue a career in intellectual property law.

LAWS 4315 International Business Transactions: Survey Course (3 Credits)
This course provides students with a general overview of international business transactions. The course examines the legal framework of international sales transactions including the commercial terms of the sales agreements, shipping contracts, insurance, financing arrangements and customs documentation. The course also examines the foreign direct investment transaction, international franchise and distribution agreements. The regulation of international business is reviewed, with special attention to the World Trade Organization agreements and regional trade areas.

LAWS 4317 International Environmental Law (3 Credits)
This is an introduction to International Environmental Law -- the expanding field of multi-nation treaties, laws, judicial decisions, policies, practices, and politics governing the global environment. IEL backgrounds students on the 21st century's hottest international law topics -- sustainable development, climate change, transboundary air and water pollution, natural resources development, international trade, toxic waste and recycling, and protection of wildlife, ecosystems, human life, and human rights.

LAWS 4318 International Business Transactions: Federal Regulation (3 Credits)
IBT: Federal regulation examines the ability of the federal government to control international trade. The focus of the course is US export controls, embargoes, anti-terrorism regulations that apply to international commerce, and the Foreign Corrupt Practices Act. Students prepare a compliance program integrating these regulations into a workable framework for a company.

LAWS 4319 International Human Rights (3 Credits)
The seminar begins with a general overview of international human rights as put forth in the International Bill of Rights. The second part of the course focuses on the emerging area of corporate social responsibility and human rights. The last part of the seminar consists of student presentations on the topics of the research papers required for the course. This course will satisfy the Upper Level Writing requirement (ULW).

LAWS 4320 International Law (3 Credits)
International Law is the foundational course in public law, treaties, systems, and policies that bind nations into a world community of law. The class places special emphasis on the origins of international law; statehood; international responsibility and claims; use of force; and human rights.

LAWS 4341 International Commercial Arbitration (3 Credits)
This course uses the Willem C. Vis International Commercial Arbitration Moot Competition to give students practical skills-based training in the most important aspects of international commercial arbitration and international sales law. The Vis Moot is based on a problem governed by the U.N. Convention on Contracts for the International Sale of Goods (the “CISG”).

LAWS 4342 International and Comparative Mining Law (3 Credits)
The course deals with basic concepts of mineral law, as practiced in various jurisdictions. This includes exploration, mining and environmental protection and reclamation issues. It then focuses on the current evolution and legal and policy status of mining legislation, mineral investment agreements, and major actors. Students completing this course develop a basic understanding of the general approaches, legal frameworks, policies and agreements used to regulate the mining industry in key jurisdictions outside the United States. This course is taught in English.

LAWS 4343 International and Comparative Petroleum Law (3 Credits)
The course deals with basic concepts of international law relating to petroleum investment, current elements of petroleum legislation, and petroleum investment agreements (production-sharing, concession, joint venture, service, management contracts). Also, students explore such aspects of petroleum law as dispute settlement and legal status. The instructor will discuss the major actors (international petroleum companies, state petroleum enterprises, Ministries of Energy) and their legal and policy status. Students completing the course leave with a basic understanding of the general approaches, policies, and agreements used to regulate the petroleum industry in key selected jurisdictions outside the United States.
LAWS 4344 International Tax (3 Credits)
Introduction to U.S. international taxation with an equal emphasis on inbound and outbound transactions. Resident and nonresident alien taxation, withholding taxes, effectively connected (business) income, foreign investment in U.S. real estate, tax treaties, branch taxes, earnings stripping, conduit financing rules, foreign earned income exclusion, classification of foreign entities, foreign tax credit, foreign personal holding companies, controlled foreign corporations, passive foreign investment companies, export transactions, Subpart F manufacturing rules, outbound property transfers, and transfer pricing. Cross listed with TAX 4420.

LAWS 4345 Jurisprudence (3 Credits)
The course is designed to introduce several contemporary modes of legal thought. The course is an exploration and critical evaluation of these differing perspectives on law are pursued to foster an understanding of the interdependency between legal philosophy and legal decision process, the role law plays in our culture, and the social and philosophical impediments to law's effectiveness.

LAWS 4347 International Environmental Law in Latin America (2 Credits)
This course examines the role of international law in promoting cooperative solutions to some of the most pressing environmental problems confronting the planet. The course begins with an introduction to the international law framework within which international environmental law has developed, and emphasizes the relationship between international environmental law and international human rights law. The course then uses several case studies to analyze the legal regimes that have developed to address environmental problems of particular relevance to Latin America, including protection of biodiversity, climate change adaptation and mitigation, and protection of water resources. This course is taught in Spanish.

LAWS 4348 International Criminal Procedure and Practice (3 Credits)
The International Criminal Court and the various international and internationalized tribunals such as the International Criminal Tribunal for Rwanda and for the former Yugoslavia prosecute a unique and evolving set of international criminal laws designed to end the impunity of military and political leaders engaged in mass violence. The post-World War II Nuremberg trials were the first attempt to use tribunals to hold individuals criminally responsible. Later, the Nuremberg present was the basis of the creation of ad hoc war crimes tribunals for the former Yugoslavia and Rwanda in the early 1990s, which then opened the door to other tribunals such as the Special Court for Sierra Leone, the Extraordinary Chambers for Cambodia and the International Criminal Court. The practitioners of the tribunals represent the range of cultures, mores and legal traditions of the world. These varied experiences create different expectations as to the conduct of proceedings and what amounts to procedural fairness. This course studies the rules of procedure and practice that have developed at the international tribunals in the multi-cultural context.

LAWS 4350 Juvenile Law (3 Credits)
This course examines the legal parameters surrounding juveniles. Students gain a basic understanding of juvenile law, such as the legal definition of who is considered a child and the allocation of power between the state, parent(s), and the children. The class examines what protection the Constitution provides children and the historical development and philosophy of juvenile justice to understand the foundation of juvenile law. The focus of the class also includes an examination of rights of abused children and children who are delinquents and status offenders.

LAWS 4351 International Mergers and Acquisitions (3 Credits)

LAWS 4355 Labor Law (3 Credits)
Labor Law provides a background of modern labor relations law and union pressures with an historical review of the laws that shape this field. Laws covered include the National Labor Relations Act; National Labor Management Relations Act; Labor-Management Reporting and Disclosure Act of 1959; Civil Rights Act of 1964; employer unfair labor practices; union unfair labor practices; internal affairs of labor organizations; collective bargaining and settlement of labor disputes; and state labor legislation. Also, it explores employer and union labor practices and manners in which disputes concerning these practices may be resolved.

LAWS 4358 Land Conservation Transactions (3 Credits)
This course covers the fundamental law and principles related to land conservation. It is a research based class, and students are responsible for researching, presenting information and drafting regarding a specific conservation project. This course provides all the background necessary to allow students to conduct a meaningful research foray in and to create conservation easements for land conservation.

LAWS 4360 Land Use Planning (3 Credits)
This course examines government controls used in the regulation of land use and development and the urbanization of the built environment in cities and metropolitan areas in the United States. The course includes an analysis of state and local laws and federal constitutional issues related to the use of master plans, zoning and land development codes, growth management and smart growth development techniques, as well as the topics of subdivision regulation, eminent domain and urban renewal. Special problems in land use planning studied include exclusionary zoning, regulation of aesthetics, design controls and visual beauty, signs and billboard, religious land use, protection of natural lands and wildlife habitat, regulation of natural resources development, fair housing laws, and the protection of private property rights in the urban regulatory process.

LAWS 4362 Latin American Law (3 Credits)
This course seeks to provide students with a basic understanding of Latin American legal traditions. Intended for students who will come into contact with Latin American law in their work as lawyers, international civil servants, business executives and diplomats. The course examines the civil law tradition and constitutional law issues and current developments, such as Latin American economic integration, reform of the public sector, and the emergence of the Inter-American system for the protection of human rights.

LAWS 4365 Law and Economics (3 Credits)
This course is an examination of selected common law, regulatory law, and Constitutional law issues from the perspective of economic efficiency analysis.
LAWS 4370 International Investments (3 Credits)
The global investor is faced with a complicated task. He must deal with multiple currencies, multiple markets, multiple cultures, and multiple regulatory environments. However, the most important aspect of international investment is the use of multiple currencies. Accordingly, the first module of this course lays the foundation of foreign exchange rates: the basic facts of foreign exchange quotations, international parity conditions and arbitrage implications, and exchange rate forecasting. The second module covers the various assets and markets available for global investing: international bonds, equities, alternative investments, and optimal international portfolio selection. The third and final module develops risk control techniques available with derivatives: forwards, futures, options, and swaps. Overall, this course will emphasize conceptual understanding and applications, rather than lengthy theoretical exposition and mathematical analysis.

LAWS 4375 Law and Society (3 Credits)
The primary focus of this seminar is on law as a product of the structure of society. The subject matter can be divided into four distinct sections: 1) What factors affect the development of substantive law? This section examines the influence of values, beliefs and norms. 2) Given the existence of substantive law, what organizations develop to carry out the administration of law? Here concentration is on the phenomena classified as legal roles, organizations, institutions, and inter-institutional relations - e.g., juries, the legal profession, courts, legislature, etc. 3) How does law affect social behavior? and 4) What is the role of law in social change?.

LAWS 4378 Race, Class & Reproductive Justice (3 Credits)
This course examines how race and class status affect women's reproductive rights and how both legal rules and medical practices in this area rely on stereotypes and enforce norms of "good motherhood" on women. Topics covered include some or all of the following: abortion, contract parenthood ("surrogacy"), cloning, sterilization, embryo freezing, pregnancy-based employment discrimination, criminal prosecutions of women for prenatal substance abuse, and court-ordered Cesarean sections.

LAWS 4379 International Trade Law (3 Credits)
This course examines the law of international trade in goods and services, focusing principally on the law of the World Trade Organization and the General Agreement on Tariffs and Trade. We examine the trading system's rules restraining national restrictions on trade that address, among other things, tariff and non-tariff barriers, discrimination, regionalism, anti-dumping, countervailing duties, and safeguards. The course also spends time considering the relationship between trade and other regulatory areas or social values, such as environmental protection, health and safety standards, human rights, intellectual property protection, and other facets of globalization. This course satisfies the Upper Level Writing requirement (ULW).

LAWS 4380 Hazardous Waste and Toxic Substances (3 Credits)
This practical, hands-on course reviews the major federal environmental protection programs, with an emphasis on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") and the Resource Conservation and Recovery Act (RCRA). It also covers Toxic Torts, Underground Storage Tanks, the Clean Water Act, Safe Water Drinking Act, and the Clean Air Act. Other materials may be distributed by the instructor on OSHA, NEPA, TSCA, OPA, the Colorado state voluntary cleanup program (VCUP), toxicology, and immunity issues. The course emphasizes practical application of major environmental laws. Students become familiar with statutory and regulatory schemes, and are expected to be able to identify environmental legal issues and apply environmental laws and regulations to hypothetical problems. JD student prerequisites: LAWS 4220, LAWS 4450, or LAWS 4495. LLM and MRLS student prerequisites: LAWS 4220, LAWS 4450, or LAWS 4495, or be registered to take any of these.

LAWS 4382 Legislative Process: Institutions & Interpretations (3 Credits)
This course is designed to be a three credit introductory course on the legislative process. This course focuses on theories of the process through an examination of theories of representation, theories of deliberation, direct democracy, and due process of lawmaking. Finally, this course will also explore legisprudence. Legisprudence explores theories of statutory interpretation and constitutional/statutory provisions which govern the political process and its participants. This course is intended to serve very practical goals. Students considering careers as legislative drafters, legislative staffs, elected officials, lobbyists or activists should emerge from this course with an understanding of the legislative process and a sense of how courts, agencies, and the executive branch are likely to interpret statutes. This course provides litigators with the tools to convince the courts that their interpretation of a statute is the correct one. For those students whose careers will require advising others about the meaning of statutes, this course helps provide the skills needed to perform that task.

LAWS 4383 Doing Business-Latin America (3 Credits)
Taught in Spanish, this course acquaints students with the legal framework of business transactions in Latin America. The course exposes students to the civil law system used in most Latin American countries and covers selected topics of importance to lawyers advising clients doing business, or seeking to do business in Latin America. Topics may include the development of Latin American law, types of corporate and partnership organization, trade law, foreign investment, intellectual property, taxation of foreign income, environmental and labor standards, and dispute resolution.

LAWS 4385 Lawyering Process I (3 Credits)
The Lawyering Process Course provides first-year law students with a foundation in the essential lawyering skills that are necessary to be an effective, ethical, and professional member of the legal community in a rigorous, supportive learning environment that uses a client-centered approach. The first semester focuses on introducing students to the legal system, legal research, and providing client advice through written analysis.

LAWS 4386 Lawyering Process II (3 Credits)
The Lawyering Process Course provides first-year law students with a foundation in the essential lawyering skills that are necessary to be an effective, ethical, and professional member of the legal community in a rigorous, supportive learning environment that uses a client-centered approach. The first semester focuses on introducing students to the legal system, legal research, and providing client advice through written analysis. The second semester builds on students' research, writing, analytical, and oral presentation skills in the context of advocating for a client.
LAWS 4390 Law and Neuroscience (3 Credits)
In this survey course, we will cover some neuroscience basics, including a brief history of neuroscience, how neurons and neurotransmitters work, what is currently known about how the brain is organized, both structurally and functionally, how modern neuroscience views the so-called Cartesian dichotomy between emotion and cognition, and the basics of the most common types of neuroimaging. We will then explore the law and neuroscience of pain, memory, lie detection and criminal responsibility, discussing how neuroscientific discoveries might or might not change how the law handles these discrete problems, and the related evidentiary issues of how to get neuroscientific evidence admitted or excluded in cases involving these problems. We will finish, time permitting, with some speculations about artificial intelligence and neuropsychotics.

LAWS 4395 Military Law (3 Credits)
This course will review the history, nature and sources of military law; the Uniform Code of Military Justice and the functions and procedures of military courts-martial, including the rights and status of military personnel. It will also cover an overview of the laws of armed conflict; national security and domestic application of operational military law; and the policies and international treaties affecting the detention and prosecution of enemy combatants and other foreign nationals. The course materials will rely on primary sources including statutes, cases, treaties, and selected law review and other articles, which will be provided electronically to each student. The course will review these military law topics with an emphasis on cases studies and policy discussions in the context of recent current events.

LAWS 4400 Lobbying Law (3 Credits)
This course will focus on the role and nature of advocacy and lobbying before state and federal legislative and regulatory bodies. The areas will include but are not limited to the role of financing with emphasis on Citizens United, the issues involved in Department of Interior Policy and public lands, the structure and lobbying of new tax legislation, high frequency trading in securities markets, Dodd-Frank and the new regulations, the JOBS Act and crowdfunding, immigration law and border security, state legislative lobbying and healthcare lobbying. Some guest lecturers will be invited, including former cabinet members at the federal level, judges, former White House counsel, financial analysts who are lawyers, members of Congress and Senators. Students will be required to develop a lobbying and advocacy program in an area assigned by the Professor.

LAWS 4410 Public Sector Employment Law (2 Credits)
In Public Sector Employment Law, students will learn the law unique to public employment. Particular emphasis will be placed on constitutional legal claims brought under 42 USC Sec. 1983, including claims for violation of the freedoms of speech and association, equal protection, due process, and privacy. The class will also cover public administrative remedies, various governmental immunities, and open records laws. The course materials will be taught through a combination of traditional Socratic method and practical real world exercises, including the drafting of pleadings, interviewing of parties, and arguing of substantive legal motions.

LAWS 4411 Mergers & Acquisitions (4 Credits)
This course investigates the legal framework and strategies for structuring mergers and acquisitions ("M&A"). The class will be taught in the "modern learning" format to help students develop practical skills that will improve their readiness upon graduation for the practice of law in diverse business contexts. Among other topics, the course will address structuring various acquisition transactions, negotiating terms of the deal, drafting deal documents, conducting due diligence, advising boards on fiduciary obligations, interpreting relevant state law and federal securities laws, and exploring litigation to thwart potential business combinations. Throughout the course, students will engage in a variety of research, drafting, interviewing, counseling, and advocacy exercises. Through those exercises, group reflections on various assignments, and class discussions of other assigned readings, students will enhance their ability to think critically about a variety of M&A issues from both transactional and litigation perspectives.

LAWS 4412 Sustainable Cities Practicum (3 Credits)
Communities around the west are increasingly working to accommodate population growth without promoting sprawl. From transit oriented development in the suburbs to urban infill projects in the city center, cities are exploring ways of promoting new, more sustainable forms of development – sometimes in places that are not ready to accept increased density and amidst changing notions of what Americans really want. This course will explore issues of sustainability, as they relate to land use, and will help prepare students to work in the field of urban planning and development. Partnering with a local organization and utilizing the concept of "Action Learning," students will work in teams as they engage in real-time problem solving of a complex issue involving land use and sustainability. It is anticipated the course will include a field trip and work with practitioners engaged in the issue of concern. A research paper and final presentation will be required.

LAWS 4413 Trail Tactics (3 Credits)
This course is intended for those who truly desire to be a trial lawyer. It is an advanced, hands-on course which is designed to teach you how to be successful in trial – not just trial practice, but overall trial strategy. This course will teach you not just what to do in trial, but will also answer the question as to why you do what you do. It involves the strategy of trying cases, including trial themes, as well as preparation and participation in doing voir dire, opening statements, direct and cross examination of witnesses, when to make objections and when not to make objections, as well as closing. You will learn to use various trial techniques included in the text Rules of the Road, and will learn all the ins and outs of trying a case in front of a jury.

LAWS 4414 Private Equity Seminar (3 Credits)
In this course students will learn legal doctrine and practical skills through the examination of various aspects of private equity groups. The class will focus on legal issues arising in private equity investment cycles, including raising a fund, investing the fund, managing the investment, and exiting the investment. Students will consider the legal foundations of fund formation, business law, and structuring investments, including state and federal laws affecting business associations and corporate transactions. The class will also highlight tax and regulatory considerations of private equity groups and their investments. The class will have a heavy emphasis on practical skills, including critical thinking, and best practices for beginning lawyers, including structuring transactions, drafting transactional documents, and negotiating deals.
LAWS 4415 Protecting Intellectual Property in International Business Transactions (3 Credits)
The first portion of this seminar will cover topics such as general international conventions and treaties designed to protect intellectual property; conventions and treaties designed specifically for patents, trademarks and copyrights. Students will determine what protections to try to seek for a variety of intellectual property examples and, in pairs, if possible, negotiate and draft a licensing agreement, a manufacturing agreement, an employment agreement or some other agreement that embodies international intellectual property issues. Students will then choose a topic, such as patent, trademark or copyright issues in a particular region or particular industry. Each student will prepare a presentation for the class on the topic. Then the student will use the class feedback in conjunction with research for the presentation to complete a paper on the topic. The drafting and paper will take the place of a final exam. The paper qualifies for the Upper Level Writing Requirement.

LAWS 4416 Representing the Marijuana Client (3 Credits)
This class is designed to provide students with an understanding of the realities of representing a marijuana client (either private or public) in the current turbulent legal environment. We will study the background of marijuana regulation at the state and federal levels in the United States, with particular attention paid to the federalism implications of the dispute between state and federal law in this area. We will then turn to specific areas of law impacted by marijuana law reform in the states, from legal ethics, to regulatory compliance, to criminal law enforcement, to the financial and tax aspects of running a marijuana business in the current legal regime.

LAWS 4417 Representing the Spanish Speaking Client (3 Credits)
This course is a survey of the substantive law of matters likely to be encountered by attorneys representing Spanish-speaking clients in the United States. Topics may include, among others, immigration law, family law, criminal law, employment law, wills and estates, and consumer rights. The course will introduce vocabulary required to communicate with Spanish-speaking clients in the United States, as well as, survey the basic substantive law in each area. The course will be taught in Spanish.

LAWS 4418 Workplace Law Practicum: Sports & Entertainment Law (3 Credits)
This course will expose students to contemporary sports law practice as an aspect of general entertainment law from a labor and employment perspective. Students will learn relevant doctrine regarding such matters as collective bargaining, individual contract rights, administrative law, interest and grievance arbitration and the impact of the anti-trust laws on labor and employment relations at the professional and collegiate levels. They will have the opportunity to develop practical skills by drafting documents for a simulated NLRB union organizing or unfair labor practice proceeding, reading and interpreting actual transcripts of NLRB or arbitration proceedings, acting as an advocate in a mock baseball arbitration, and engaging in simulated negotiations by drafting bargaining proposals and arguing for those proposals in a bargaining session among classmates.

LAWS 4421 Introduction to Small Practice Management (3 Credits)
This course provides an introduction to the administrative needs necessary to open and operate a solo or small legal practice. Topics include: administrative needs specific to various types of legal practice; space and facilities; technology; document management systems; malpractice insurance; outsourcing; health insurance; conflicts; and human resources issues.

LAWS 4423 Legal Databases Research (3 Credits)
This course introduces students to a variety of legal databases, both fee-based and free, that can be utilized for conducting effective legal research as a student and practicing lawyer. Students learn to analyze and critically evaluate whether or not a database provides accurate information and resources. Students learn to determine which legal databases are most useful for specific types of information and resource needs. Students learn to construct successful search strategies that can be employed to search a database and find the information required. This course equips students to become expert searchers in the online environment.

LAWS 4424 Legal Spanish for Lawyers (2 Credits)
This course prepares students with basic Spanish proficiency to represent Spanish-speaking clients in the U.S. legal system or to work in Spanish on transnational matters involving Latin America. It combines one-on-one Spanish immersion instruction with a structured classroom component. The Spanish immersion component introduces and builds on each student’s legal Spanish vocabulary in areas of law likely to require lawyering in Spanish or in areas identified as priorities by the student. The structured classroom component allows students to practice skills in Spanish, such as client interviewing, intake, and client counseling, through simulations and group exercises. This course is taught in Spanish.

LAWS 4425 Legal Profession (3 Credits)
This required course is the study of the legal profession in American society. Topics include the history, structure, and function of the legal profession; the role of lawyers in the delivery of legal services; standards of professional ethics (including the Code of Professional Responsibility and the Rules of Professional Conduct); professional responsibility problems that confront the legal profession; developments in the delivery of legal services; disciplinary procedures; and admission to the practice of law.

LAWS 4430 Mediation and Arbitration Clinic (3 Credits)
This is a course offering clinical experience in both mediation and arbitration. The student learns mediation skills, performs mediation simulations, and mediates actual cases. Students are oriented to the role of arbitrator, perform arbitration simulations, and attend actual arbitrations. By gaining experience in both roles, students learn which process to choose for resolving a particular dispute. In addition, students learn lawyering skills such as communication, negotiation, problem solving, and drafting agreements. Application must be sent to the Student Law Office for admission to this course. Students will earn 3 out of class credits for this course and 2 in class credits through the corequisite course L4803, Mediation and Arbitration Clinic Seminar. Corerequisite: LAWS 4803. Prerequisite: permission of faculty supervisor.
LAWS 4433 Media Law (3 Credits)
This course addresses the First Amendment, statutory, and common law regimes under which the news media operate in the United States, ranging from the seminal New York Times v. Sullivan to the recent decisions on anonymity for online bloggers. This course is designed to provide opportunities for serious study/discussion of legal issues affecting the news media, as well as opportunities for practical experience in the tasks confronted by today's media lawyers. This course satisfies the Upper Level Writing requirement (ULW).

LAWS 4436 Litigation Technology (3 Credits)
Litigation Technology gives students up-close, hands-on learning to prepare and effectively use electronic illustrative aids and demonstrative exhibits in trial and alternative dispute settings. Each student prepares opening statements, closing arguments, and direct and cross-examinations, utilizing litigation software. Students learn to create their own presentations, and how to advocate most effectively using technology.

LAWS 4441 Business Mergers & Acquisition (3 Credits)
This is a transactions based course that focuses on teaching future junior associates practical deal skills in the context of M&A law. The course covers how M&A deals (e.g. asset sales and triangular mergers) are structured, how lawyers interact with various parties to engineer a transaction, the basics of a negotiated document, allocation of value and risk, drafting techniques, advising boards, and due diligence concerns. We work with statutes relevant to M&A transactions (with a focus on Delaware law and the MBCA), federal securities laws (the Act, proxy rules and the Williams Act), and survey tax and antitrust laws. Finally, the course also covers anti-takeover defenses, deal protection devices, and board fiduciary obligations. While the course includes theory and policy discussions, it also incorporates practical assignments, a drafting exercise, and a team presentation. Prerequisite: LAWS 4190.

LAWS 4442 Trial Practice III: Mentors Practicum (3 Credits)
Advanced Trial Practice: Mentors Practicum is a year-long, skills-based course for law school students seeking to refine their trial skills, and improve their understanding and application of evidence and criminal procedure, through teaching these skills to local area high school mock trial students. The course consists of two classes a week. The first takes place at the law school. This weekly class involves case analysis and evidentiary discussion, resulting in the law students preparing their lesson plans to be taught to the high school students. Lesson plans include trial topics such as case analysis and evidentiary discussions, direct and cross-examination, objections and the rules of evidence, opening statements, closing arguments, and development of theme and theory. The second weekly class takes place at a local area high school, where the law students act as mentor-coaches to high school mock trial teams.

LAWS 4444 Multiculturalism, Race and the Law Seminar (3 Credits)
This course is designed to examine the interstices of cultures, race, identity and the law as manifested in legislation and jurisprudence. Through case law and articles, we uncover and examine the ways in which legal systems define and promote certain racial and cultural activities, identities, and classifications and discourage others. Some are advanced as legitimate, and deserving of protection, and others not so. These endorsements have a significant impact on the makeup of American society. We see ourselves as a melting pot of cultures and peoples from all over the world, but do our laws really promote this vision? Have our laws evolved to promote racial and cultural harmony, or to discourage it? While most discussion focuses on these issues as they appear in the United States, we also discuss cases and materials from other nations, including Australia, Canada, India, Israel, Europe and Africa. Race and culture have played a pivotal role in historical and current political events and these will also be examined from a global perspective. There is no final exam, but written work is assigned throughout the term, and a final research paper is required.

LAWS 4445 Mining Law (3 Credits)
This course provides the basic framework of mining law. It begins with the acquisition of title to and development of deposits of hard minerals and energy resources under the mining and mineral leasing laws of the federal and state governments in the western United States. Next, it emphasizes the practices and procedures of the various proprietary and regulatory agencies responsible for the management and administration of public lands. Finally, students learn how to resolve competitive demands for exclusive and multiple use of public lands for mineral production and conservation.

LAWS 4446 Multiculturalism, Race and the Law Seminar (3 Credits)
This course is designed to examine the interstices of cultures, race, identity and the law as manifested in legislation and jurisprudence. Through case law and articles, we uncover and examine the ways in which legal systems define and promote certain racial and cultural activities, identities, and classifications and discourage others. Some are advanced as legitimate, and deserving of protection, and others not so. These endorsements have a significant impact on the makeup of American society. We see ourselves as a melting pot of cultures and peoples from all over the world, but do our laws really promote this vision? Have our laws evolved to promote racial and cultural harmony, or to discourage it? While most discussion focuses on these issues as they appear in the United States, we also discuss cases and materials from other nations, including Australia, Canada, India, Israel, Europe and Africa. Race and culture have played a pivotal role in historical and current political events and these will also be examined from a global perspective. There is no final exam, but written work is assigned throughout the term, and a final research paper is required.

LAWS 4450 Natural Resource Law (3 Credits)
The course is designed primarily for students who wish to have an introduction to and an overview of the entire natural resources law area in one course. Students survey the primary natural resources subject matter areas: water law; mining law; oil and gas law; public land law; environmental law; and energy law.

LAWS 4452 Economics of Natural Resource and the Environment: Policy, Markets, and Economic Measurement (3 Credits)
This course deals with the basic concepts of financial evaluation of a natural resources project. The emphasis is on financial evaluation topics and issues relevant to a lawyer's participation in a project. Students are introduced to the time-value of money; spreadsheet analysis; discounted cash flow; and spreadsheets, with relevancy to negotiations. Students are encouraged to consult with the director of this program before enrollment.
LAWS 4454 Psychiatry and the Law (3 Credits)
This course explores the relationships between psychiatry, psychology, medicine and the law. Subjects to be covered include: DSM-IV diagnoses and psychopharmacology; sanity and competency determinations; role of mental health experts in the court; special issues involving the mentally ill and death penalty; issues particular to juvenile offenders; third party protections and reporting requirements in child abuse and danger to third parties; civil commitment and involuntary treatment of the mentally ill; malpractice including professional misconduct and sexual boundary violations, and standards of mental health care; professional ethics in medicine and the law; law of informed consent and proxy decision making for medical treatment; confidentiality; clinical and legal aspects of end of life care; and prisoners’ rights in correctional settings including sex offender treatment. Readings include landmark state and federal decisions shaping each of these areas, along with readings from legal and mental health literature.

LAWS 4460 Negotiation and Mediation (3 Credits)
The course examines principles of negotiation, bargaining and dispute problem solving. Builds the development of skills in negotiation and later mediation. Principles of problem solving introduced in negotiation are further developed in an exploration of mediation, it’s legal, economic, skills context and its propriety as a process to resolve disputes in varying circumstances.

LAWS 4462 Negotiating Natural Resources Agreements (3 Credits)
Students completing this course leave with an understanding of the general approaches, and primary issues and motivations pertaining to the negotiation of large, internationally funded petroleum and mining projects. They particularly gain a perspective on the negotiation of first-tier agreements between trans-national companies and governments, and joint venture agreements between private parties.

LAWS 4463 Qualified Pension and Profit Sharing Plans (3 Credits)
An in-depth study of ERISA, labor department rules, and Internal Revenue Code provisions relating to qualified deferred compensation. The course is geared toward an understanding of all the pension and profit sharing rules required for plan qualification, with emphasis on qualified plan planning for both incorporated and unincorporated forms of business. Cross listed with TAX 4120.

LAWS 4464 Natural Resources Distinguished Practitioner Seminar (3 Credits)
The Distinguished Natural Resources Practitioner in Residence Seminar is a “capstone seminar” taught each year in the Spring Semester by a different but prominent natural resources or environmental law lawyer who has extensive experience in energy, resources, or environmental law work. The focus of the Seminar is on skills training, where the skills taught are those that all lawyers need in order to have a successful career in the practice of law. Among the “how-to” skills typically addressed are: (1) how to open a job, either as a lawyer or as a law-trained worker; (2) how to obtain and retain clients; (3) how to work in the private sector, government sector, business sector, and in-house sector; (4) how to write; (5) how to work with associates and colleagues; (6) how to deal with technical or scientific matters in a legal context; (7) how to work in the litigation arena, before trial and appellate courts; (8) how to practice or appear before administrative agencies; (9) how to organize and refine a mass of complicated information so that a decision-maker can make sense of it. There is no final exam or paper expected; the grade is usually by class participation and small writing exercises. Prerequisite: permission of instructor.

LAWS 4465 Oil and Gas Law (3 Credits)
This course surveys the various characteristics of oil and gas interests. Topics include mineral rights, and how ownership leases and transfers of these rights should be handled. The instructor also distinguishes the field of oil and gas law on private lands from those in the public domain.

LAWS 4466 Pre-Trial and Discovery Practicum (3 Credits)
This “hands-on” course provides students with a practical understanding of the pretrial process and how discovery procedures shape and impact civil litigation today. The progression of class topics mirror the pretrial process within the context of a hypothetical case. Starting with initial client interviews, class topics include interrogatories, requests for production, electronic discovery, depositions, and expert discovery. Students also consider ethical issues relating to discovery and the pretrial process, and what remedies or sanctions are available for discovery abuses. This course will satisfy the Upper Level Writing requirement (ULW).

LAWS 4470 Banking Law (3 Credits)
This course provides an overview of the banking system, including the economic function of banks, the role of the central bank, and U.S. banking history. This course will cover the evolution of banking regulation, as well as recent developments that have intensified scrutiny on banks. Additionally, a “Real Deal” Workshop will provide students with an opportunity to a) gain hands-on training in transactional practice, b) experience a “deal” from a lawyer’s perspective and learn about what transactional practice entails and c) learn to draft stock purchase agreements, credit documents and other fundamental transactional agreements. Topics that will be covered include permissible activities of banks, the role of the FDIC, the Federal Reserve Board, and the Comptroller of Currency; and the regulatory response to crises in the banking system.

LAWS 4474 Patent Prosecution (2 Credits)
This course explores more than a dozen advanced topics in patent law. These issues include claim drafting; international patent applications; opinion letters; remedies in patent cases; security interests; patent ability of software; and patent ability of genetic sequences. While Patent Law is not a formal prerequisite for this course, students who have not taken Patent Law should be prepared to do extra reading in the first few weeks of the semester to familiarize themselves with the basic concepts of patent law.

LAWS 4480 Professional Ethics Seminar (3 Credits)
This seminar begins with brief introductions to ethics in general and professional ethics specifically, and then turns to in-depth consideration of theoretical perspectives on lawyer's ethics. For the remainder of the semester the seminar focuses on: (1) Comparative professional ethics: comparing the ethics of other professions--medicine, journalism and business, for example--with the ethics of lawyering. (2) Narrative ethics: stories (from literature, biography, or tradition) and how they inform ethical perception and choice. (3) Topics chosen by students for research and presentation.
LAWS 4481 Partnership Taxation (3 Credits)
Tax treatment of partnership income in the hands of the partner; the conduit rule; problems associated with the formation, operation, and dissolution of the partnership; sale of the partnership interest; withdrawal and retirement of partners; basis adjustments, unrealized receivables, and substantially appreciated inventory. Cross listed with TAX 4320.

LAWS 4483 Patent Litigation (3 Credits)
This is an in-depth study of laws, strategies and tactics of patent litigation. Topics include legal principles, procedures and strategies associated with patent claim construction, infringement, invalidity and unenforceability. Also, students cover patent trial practice with a focus on both the knowledge and practical skills necessary to litigate patent cases.

LAWS 4485 Business & Commercial Law Seminar (3 Credits)
Topical seminars scheduled periodically to afford students the opportunity for focused study of business and commercial law matters such as: consumer credit; mergers and acquisitions; corporate practice; bankruptcy; antitrust; quantitative evidence; representation of minority--and women--owned business firms.

LAWS 4487 Prosecutor as Protagonist (3 Credits)
This seminar is an in depth examination of the role of the prosecutor in our justice system. Attorney General Suthers leads wide ranging discussions about crime and punishment. Topics discussed and debated include the purpose of criminal sentencing, minimum mandatory sentences, the death penalty, the juvenile justice system, plea bargaining, prosecutor ethics, special prosecutors, criminal justice interest groups, prosecution oversight of police, forensic science, federalization of crime, attorney general activism, jury reform, reform of drug laws, and mental illness in the criminal justice system. Some of the top experts in Colorado on these subjects speak to the seminar participants.

LAWS 4489 Civil and Criminal Tax Procedure (2-4 Credits)
Statute of limitations on assessment/collection of deficiencies, definition of deficiency, restrictions on assessment and collection; statute of limitations on overpayments, claims and suits for refund, and limitations for criminal prosecutions; regulations and rulings—retroactive revocation; administrative settlements, closing agreements and compromises; civil penalties; tax return preparer penalties; civil litigation—injunctions, jurisdiction of Tax Court, District Court, and Court of Claims, small claims procedure, authority to increase deficiencies, choice of forum; jeopardy assessments and termination of taxable years; criminal tax investigations—administrative summons, document production (taxpayer and third party), constitutional protections, common law privileges, strategies; professional responsibilities and ethics for the tax practitioner. Cross listed with TAX 4310.

LAWS 4490 Property (4 Credits)
This course introduces selected topics relating to rights and interests in land and personal property. These topics include estates in land and future interests; private and/or public restriction of land use; conveyancing; interests and estates in land; and landlord/tenant relations.

LAWS 4495 Public Land & Resources Law (3 Credits)
This course provides an overview of law, policy, and procedures governing the third of United States land managed by the federal government for the benefit of all the people. The course traces the interwoven law, history, and economics controlling acquisition and allocation of public lands and resources and examines a selection of significant commercial uses and resource categories of land use practices. Recommended prerequisite: LAWS 4025.

LAWS 4497 Law & Popular Culture (3 Credits)
Why are there so many jokes about lawyers? Why is John Grisham so popular? What explains the success of the "Law and Order" franchise? Does popular culture affect the outcomes of trials? This seminar explores the role law plays in popular culture (for example, how law and lawyers are portrayed and perceived; how law shapes and defines pop culture) and the role popular culture plays in law and in the lives of lawyers (for example, the impact of cameras in the courtroom); should lawyers be allowed to write books and sell their clients' stories? The reading list includes traditional materials (case law and legal scholarship) as well as movies, novels and other popular culture materials. Recommended prerequisite: LAWS 4425.

LAWS 4498 Public Interest Practicum (1 Credit)
The Public Interest Practicum is one option for students to satisfy the Public Service Requirement. The only satisfying course offered for only zero or one credit, it requires participation of the JD student in a 50-hour, non-compensated, law-related, public interest placement under the supervision of an attorney or judge who has been in practice or on the bench for a minimum of three years. A practicum student must complete the minimum of 50 hours in one of the following settings: judicial internship; government agency; private law firm doing pro bono or low bono work; non-profit (501(c)(3)) organization; or pre-approved uncompensated research project for a faculty member. A student may decide to take the Public Interest Practicum for 1 credit or 0 credit. The Public Interest Practicum for 1 Academic Credit requires a Public Interest Practicum Online Seminar component to supplement the practical experience. The Public Interest Practicum is beneficial for students who are not planning on satisfying the Public Service Requirement through other opportunities.

LAWS 4500 Public Utility Regulation (3 Credits)
This intensive, 1-week course presents law practitioners with recent innovations in the economics and policy of utility regulation. Course features guest lectures with individuals from industry and government sectors that are involved with utility regulation. Students learn the social science of utility regulation and gain insight into how utility regulation is conducted.

LAWS 4506 Energy & Project Finance Law (3 Credits)
This course explores the legal, economic, technological, and policy underpinnings of the Renewable Energy Industry, global warming, and associated implications to the electric utility and transportation sectors. The course addresses both domestic and international perspectives on renewable energy development.
LAWS 4508 Renewable Energy for the 21st Century: Law, Policy & Markets (3 Credits)
Renewable Energy for the 21st Century helps prepare students for future involvement in this dynamic sector. Students are introduced to the policy and legal framework involving renewables and energy efficiency as well as important technological and market-based issues.

LAWS 4509 Renewable Energy: Project Development and Regulation (3 Credits)
This course examines the broad range of legal topics that a renewable energy lawyer must understand in order to practice effectively. We examine the structure, regulation, and functioning of the electric energy industry in the United States. We explore in detail the law applicable to the development, ownership and operation of renewable projects across the spectrum of technologies. Significant emphasis is placed on the practical "real world" issues encountered in developing, financing and operating these projects.

LAWS 4510 Business Legal Research (2 Credits)
This course will introduce the legal material, research methodologies, and resources used in conducting business legal research. Students will gain experience locating and using law and guidance produced by government agencies, business-oriented legal treatises, transactional materials, and company/industry research. This class will take an integrative approach between the different business-related disciplines to provide students with a well-rounded knowledge base.

LAWS 4511 Renewable Energy Law (3 Credits)
The development of renewable energy sources has grown exponentially both nationally and worldwide. The increased appetite for renewable energy sources has driven a need for more information about those sources and the significant legal implications arising from the development of those sources. This course is organized by resource—solar, wind, hydropower, biomass, and geothermal. It focuses primarily on critical legal issues in tort, property, and contract areas raised by the expansion of these key renewable energy sources. The course also addresses the role of energy efficiency and some of the broader legal hurdles facing renewable energy use from a nationwide perspective.

LAWS 4520 Remedies (3 Credits)
Remedies provides students with the basic principles and problems of damages, restitution, and equity. Students enter into an investigation of fundamental concepts, such as remedial goals, problems of proof, and the relationship between remedies and substantive rights. The course also explores equitable remedies and alternative remedial devices available in any given situation.

LAWS 4524 Russian for Lawyers I (3 Credits)
This is a unique chance to break stereotypes about Russia! This sequence of courses introduces students to the fundamentals of the Russian language, with emphasis on legal and economic vocabulary. More specifically, this includes vocabulary and reading assignments that involve finance, international trade, stock exchange, and with a special focus on Natural Resources and Environmental Law in Russia. No prior knowledge of Russian is required.

LAWS 4525 Russian for Lawyers II (3 Credits)
This course picks up where Russian for Lawyers I leaves off by continuing to introduce students to the fundamentals of the Russian language, but with an emphasis on legal and economic vocabulary. More specifically, this includes vocabulary and reading assignments that involve finance and banking, insurance, international trade, and stock exchange/securities matters. Prerequisite: LAWS 4524.

LAWS 4526 Sales and Leases (3 Credits)
This course examines the formation and terms, as well as remedies for breach, of contracts for the sale of goods under Article 2 of the Uniform Commercial Code (UCC). The course completes the coverage of Article 2 of the UCC that was introduced in the first-year Contracts course. In addition, the course also examines the provisions on leases in Article 2A, sales transactions involving the use of documents of title (Article 7) and letters of credit (Article 5).

LAWS 4527 School of Mines Exchange (3 Credits)

LAWS 4528 Securities Law (3 Credits)
Students in this course study the statutes and regulations regulating the offer and sale of securities by private and public corporations. Course material information pertaining to the Securities Exchange Act of 1934; federal regulation of the public securities markets; insider trading; broker-dealer regulation; tender offers; and public corporations. Recommended prerequisites: LAWS 4190 or LAWS 4048.

LAWS 4529 Securities Litigation (3 Credits)
The main focus of this course is the granting of a security interest in collateral in exchange for a loan and the priority among creditors to the collateral in case the debtor defaults on its obligation to repay. Secured transactions can be involved in a wide variety of legal representations, including transactional matters and litigation. The Secured Transactions Class is designed to provide students with a working understanding of Article 9 of the Uniform Commercial Code and how it comes into play in these transactions.

LAWS 4530 Secured Transactions (3 Credits)
This course covers the law of secured transactions in personal property. It is not a securities course. Students who have taken the Commercial Law Survey course should not take this unless they wish to study this subject in greater depth. The main focus of this course is the granting of a security interest in collateral in exchange for a loan and the priority among creditors to the collateral in case the debtor defaults on its obligation to repay. Secured transactions can be involved in a wide variety of legal representations, including transactional matters and litigation. The Secured Transactions Class is designed to provide students with a working understanding of Article 9 of the Uniform Commercial Code and how it comes into play in these transactions.
LAWS 4539 Social Change Lawyering (2 Credits)
This seminar explores the role of law and the legal profession in pursuing broader social causes across the political spectrum, such as the pursuit of civil rights for racial minorities or the effort to overturn the constitutional right to abortion. Distinguished from the practice of law solely advocating the interests of individual clients, social change lawyering is a major component of the legal profession of the 21st century. Known variously as “public interest law,” cause lawyering, and by numerous other labels, this area of practice implicates many important issues worthy of serious scholarly consideration. Some of the topics that may be examined include: the competing definitions of social change lawyering and the relevance of such definitions; the history of American law and social change; the role of progressive/conservative ideologies in social change lawyering; the role of government and private firm lawyers in effectuating social change; strategies and organizational models for social change lawyering groups; the relationship between social change lawyers and their clients; the economics and financing of social change lawyering; ethics and social change lawyering; legal education and social change. Throughout the course, students are asked to critically examine the role of lawyers in social change, and question whether and how lawyers have been effective agents of social change in American society. The course does not use a traditional casebook. Rather, students study a set of materials comprised of excerpts from law review articles and books, historical and sociological materials, and problems. Students are required to write short, reflective discussion board posts on each week’s readings, as well as a more comprehensive final paper. Students may elect to use this seminar to fulfill the upper level writing requirement if they submit a draft of the final paper and do a substantial rewrite after receiving the instructor’s feedback. Prerequisite: permission of instructor.

LAWS 4543 Sexual Orientation and the Law (3 Credits)
This seminar offers an opportunity for students to study the relationship between law and sexual orientation. Historically, law in this country consistently and pervasively regulated the realm of human identity and behavior we call sexuality. However, questions and claims challenging traditional assumptions about sexual orientation have surfaced in the last twenty-five years. Our study of sexual orientation and law allows students to view the relationship between law and society through a new lens, that of sexual orientation.

LAWS 4545 Sports Law (3 Credits)
The course studies the legal problems of professional athletics. It applies the application of contract law, antitrust, labor law and income tax to the functioning of a professional league. The question of governmental regulation of professional sports is a constant focus of students’ work. Special attention is given to the impact of these questions on negotiating players’ contracts.

LAWS 4550 State & Local Government (2,3 Credits)
The institutional framework within which the decision-making process affecting urban areas operate; the rules by which the formal power to govern in urban areas is organized, limited and divided among decision-making units. Although dealing largely with the subject matter of traditional courses in municipal corporations, this course broadens that perspective to include newer institutional and organizational arrangements.

LAWS 4552 Securities Law Seminar (3 Credits)

LAWS 4553 Spanish for Lawyers (3 Credits)
This course is in beginning Spanish with an emphasis on the development of listening, speaking, reading and writing skills. The focus is on creating conversational exchanges about selected topics and situations in the present and future tenses. Students practice oral communication skills needed to converse with Spanish-speaking clients, using basic legal terminology. The customs and culture of Spanish-speaking people are also examined with the aid of video programs, CDs and readings. Topics: Greetings, spelling names and addresses, personal descriptions, numbers, coordinating meetings (times, driving directions), family members, housing arrangements and meals, grammatical structures, present and future tenses of verbs, ser and estar, possessive adjectives, commands, por and para and direct object pronouns. Legal Topics: intake, phone etiquette, interview, fees, and confidentiality.

LAWS 4554 Spanish for Lawyers II (3 Credits)
This course is the second of a two part series in beginning Spanish with an emphasis on the development of listening, speaking, reading and writing skills. The focus is on creating conversational exchanges about selected topics and situations in the present and past tenses. Students practice oral communication skills needed to converse with Spanish-speaking clients using basic legal terminology. The customs and culture of Spanish-speaking people are also examined with the aid of video programs, CDs and readings. Topics: Daily routine, the concept of time, shopping, sports and pastimes, holidays and traditions, transportation and travel. Grammatical structures: past tenses, uses of ser and estar, reflexive verbs, double object pronouns, verbs like gustar. Legal Topics: interviewing client (divorce, robbery, domestic violence, and traffic accident), explaining civil and criminal court proceedings.

LAWS 4555 Street Law (3 Credits)
Under faculty supervision, students in two-person teams will teach law in urban high schools. An underlying principle of the course is that one of the best ways to learn is to teach. There will be weekly seminars and field performances supervised by the instructor. Students will develop skills in: practical application of legal concepts; substantive topics in federal and Colorado Law; teaching techniques; classroom management; and the multi-faceted roles of lawyers in the community. Each student will participate in researching, drafting, and presenting a course in a particular field of substantive law.

LAWS 4556 Sustainable Dev & Trade (3 Credits)
This seminar is designed to give an introduction to the convergence of trade, environment, and development issues and law, addressing areas of conflict and synergies among them. It focuses on rules, procedures, and institutions aimed at making globalization compatible with sustainable development by integrating trade policy and law with policies that address other aspects of “human development”, such as, environmental concerns, social concerns, human rights, gender issues, and governance. This course satisfies the Upper Level Writing requirement (ULW).
LAWS 4560 Colorado Legal Research (1 Credit)
This course will focus on Colorado-specific primary and secondary sources using a problem-based approach, so as to simulate the type of work performed in law firms. It is geared toward students who have some experience with research and want to improve their skills and writing ability before they finish law school. Students will gain hands-on experience researching judicial (case law), legislative (statutory), and executive (administrative) legal materials and will learn research methodologies and strategies to tackle research problems effectively. Classes will combine instruction with hands-on scenarios using print and electronic resources and students will complete research and writing projects for this course, which runs for the first seven weeks of the semester. Students are required to bring their laptops to class.

LAWS 4561 Crimmigration Law Seminar: The Intersection of Criminal Law and Immigration Law (3 Credits)
This seminar addresses the historical and contemporary relationship between criminal and immigration law. In particular, the course explores how individuals perceived to have violated a criminal offense are treated in the immigration law system, how individuals thought not to be citizens of the United States are uniquely affected by criminal procedure norms and substantive criminal law, and how states and the federal government have sought to police criminal activity by noncitizens. In the process, course participants will learn to analyze constitutional, statutory, and regulatory provisions concerning immigration, as well as procedural and substantive requirements concerning criminal proceedings as they affect noncitizens. Participants will also consider the motivations that resulted in various enforcement policies grounded in civil or criminal law related to immigration and immigrants.

LAWS 4562 E-Discovery (3 Credits)
LJigation is undergoing a significant transformation as technology continues to evolve and Society transitions from a “paper” to a “digital” world. That transformation inevitably impacts the legal community, confronting lawyers and clients with the choice of conducting discovery on a pre-computer, “business as usual” basis or embracing the challenges and opportunities presented by “e-discovery.” This course provides students with an understanding of the legal and practical challenges presented by “e-discovery” and how electronically stored information (“ESI”) shapes and impacts litigation and the pretrial process.

LAWS 4563 Environmental Law, Energy, & Natural Resources in Indian Country (3 Credits)
This Seminar explores energy and natural resources development on Native American tribal lands in the United States, and how tribes, states and the federal government regulate and enforce environmental quality within Indian Country. The Seminar is open to all interested students and does not require any previous study or experience in American Indian law. It provides an introduction to tribal sovereignty and self-determination, along with some of the basics of Indian Country jurisdiction and tribal sovereign immunity. Students will examine the federal governments trust responsibility to Indian tribes and nations. The Seminar also examines the legal framework used to regulate and enforce environmental quality, traditional and renewable energy development, and the use and stewardship of other natural resources on Indian lands. The goal of this Seminar is for students to gain a greater awareness of Indian tribes and nations and the critical role they play in overall U.S. environmental, energy, and natural resource law and public policy.

LAWS 4564 Immigration Law in Spanish (3 Credits)
Immigration Law in Spanish is a survey of the fundamental concepts of U.S. immigration law. In addition, students learn and practice the vocabulary required to appropriately communicate these concepts to Spanish-speaking clients. The class is taught entirely in Spanish, and requires a working-level written and spoken proficiency in the language.

LAWS 4565 Intellectual Property Capstone (3 Credits)
The intellectual property capstone is a simulation based course that crosses different intellectual property disciplines. Several different adjuncts are asked to prepare real world problems in different substantive and procedural contexts. The problems vary from year to year, but generally deal with patent, copyright and trademark law from litigation, administrative (i.e. representation before the patent and trademark office) and business perspectives. Students are expected to have taken at least one prior intellectual property course. This course fulfills the experiential component of the IP Certificate requirement.

LAWS 4589 LLM and Master's Internship (0 Credits)
The Sturm College of Law encourages students to gain practical experience and to develop professional skills in the legal and policy fields. Some students may elect to pursue externships for credit while others may choose to pursue paid opportunities during their study in the program. Internships are supervised by faculty and GLS department who interact with the eligible student and the employer or organization that provides the externship. The externship should provide a new learning experience for the student intern and must be related to their field of studies (e.g. business and commercial law; environmental law and policy). Satisfactory completion of the internship will result in a passing grade for the externship. The Program Director and/or GLS Advisor may serve as Supervisor for non-JD interns.

LAWS 4605 Taxation of Natural Resource (2 Credits)
This course outlines the financial, business, and legal tax problems that may be encountered during the acquisition, operation, and disposition of natural resources properties. It is a strong course for students to develop skills in general tax planning for natural resources ventures.

LAWS 4610 Torts (4 Credits)
This introductory course considers compensation for private wrongs, covering harm to persons and property, with attention to legal theories of intentional torts, negligence and strict liability.

LAWS 4615 Torts (Advanced) (3 Credits)
Advanced Torts combines practical and theoretical discussion of issues that personal injury lawyers face in practice. The topics in the seminar vary but generally include fee agreements, damages, use of experts, medical malpractice, hospital and other liens, subrogation, and governmental immunity. The seminar emphasizes the empirical reality of injuries, claims, and litigation. Prerequisite: LAWS 4610.
LAWS 4618 Representing Clients Before the SEC (3 Credits)
SEC insiders explain the processes and practices of the Division, intertwined with discussion and analysis of SEC enforcement actions past and present. This course gives students critical information to effectively represent a wide variety of clients before the Division, among them public companies, regulated entities, defrauded investors, and perpetrators of crime.

LAWS 4631 Space and Technology Law (3 Credits)
Space and Technology Law is not one particular area of law. Rather it is best thought of as a combination of numerous areas of policy and law (including the Communications Act, the COMSAT Act, the Defense Production Act, the Land Remote Sensing Act, the Commercial Space Act, the Arms Export Control Act, the Export Administration Act, and several other bodies of law) that come together to govern the Space and High Technology industries. There is extensive overlap between what is considered high tech and what is considered space and how they are treated from a legal and policy standpoint. The course explores many of these interrelated issues.

LAWS 4634 Motions Practice (3 Credits)
In this class, students learn how to present and argue pre-trial motions. These motions include motions from civil practice (motion for preliminary injunction, motion to dismiss, motion for summary judgment, etc.) criminal practice (motion to suppress, Rule 35 (c), etc.) and evidentiary motions (Rules 403, 404, and 405.) In addition, the course covers both legal and evidentiary motions in limine. Each student is asked to prepare, present, and argue a motion, as well as decide motions presented by others after making appropriate findings of fact and conclusions of law. Because a number of the motions involve the presentation of witnesses and appropriate case and statutory law, students learn trial skills, as well as refresh their knowledge of criminal and civil procedure, and the rules of evidence. Students are not asked to draft motions or prepare written briefs.

LAWS 4635 Trial Practice I: Basic Courtroom Skills (3 Credits)
The course is designed to teach the concepts and organizing principles of the formal trial process. It emphasizes the understanding necessary to develop, evaluate, prepare, and present a case for trial before a judge, jury, or other fact-finder. Exercises and simulations are used to demonstrate the importance of theory building and teach the functions of each stage of a trial. Students develop the advocacy skills appropriate to adversary adjudication. Prerequisite or corequisite: LAWS 4235.

LAWS 4637 Civil Litigation Practicum (3 Credits)
This course provides students a practical, hands-on approach to civil pretrial litigation. Students draft pleadings, motions and discovery requests essential in the litigation process prior to the actual trial stage.

LAWS 4638 Trial Practice III: Mentor's Practicum (3 Credits)
The Mentor's Practicum employs and relies upon integrated teaching, feedback, student collaboration, and multiple assessment. The practicum is designed for law school students who have exhibited advanced skills in trial advocacy, client advocacy, case analysis and communication.

LAWS 4640 Trusts and Estates (4 Credits)
Students enrolled in this course learn the ins-and-outs of trusts and estates planning. The course surveys everything involving succession wills, trusts, the role of third parties to a trust or estate, and property disposition.

LAWS 4651 Legal Writing (Advanced) (3 Credits)
Course involves a series of writing assignments, normally related. Typically, students research an initial legal issue, and then draft a first office memo. After receiving detailed feedback, students do at least one revision of that first office memo. Students then undertake research for a second legal issue, and then draft a second office memo. After receiving detailed feedback, students then do a revision of that second office memo. Finally, students use the final versions of those two office memos to create a court document, which they then revise as their final assignment. This course satisfies the Upper Level Writing requirement (ULW).

LAWS 4660 Scientific Evidence (3 Credits)
The course begins with the U.S. Supreme Court decision in Daubert v. Merrell Dow Pharmaceuticals, Inc. (113 S.Ct. 2786 (1993)). This decision threw out the Frye Rule that had governed the admission of scientific evidence in federal courts since 1923. While the Daubert rule now applies in all federal courts, states are free to either stay with the Frye Rule, adopt the new Daubert Standard or adopt some combination of the two. Students discuss the implications of these evidentiary changes in a number of areas of legal controversy. The course concentrates primarily on the use of social science evidence; however, topics include tort litigation involving Bendectin, and the controversy over the use of DNA testing in criminal cases. Other topics include the use of scientific evidence in consumer confusion cases; obscenity cases and the question of community standards; and the number of syndrome evidence cases, including post-traumatic stress disorder, battered woman syndrome, and rape trauma syndrome. Constitutional law cases include coverage of death penalty issues, jury size cases, and school segregation by race and gender (including the controversy over single-sex education, and the ending of school busing mandates by the federal courts). The goal of this course is to increase the proficiency of lawyers to use scientific evidence on behalf of clients and be able to defend against such evidence when presented by the opposing counsel.

LAWS 4670 Water Law (3 Credits)
Water Law is an introductory course for students interested in pursuing water law. It covers private property rights in water, and the legal and environmental controls surrounding it. Recommended prerequisite: LAWS 4025.

LAWS 4672 International Water Law (3 Credits)
This course presents a global overview of water law, systems, and practice in the modern world. It includes coverage of hydrology, history, national legal systems, and modern international treaties and cases. It has a special emphasis on sustainable development, equitable utilization, pollution control, and ecosystem protection utilized for multi-nation water basins. LAWS 4670 Water Law and LAWS 4320 International Law courses are not a prerequisite, as basics will be covered.
LAWS 4674 White Collar Crime (3 Credits)
This course is designed for students with an interest in advanced criminal law practice, particularly the growing legal field of white collar crime. This seminar course will introduce students to the major substantive legal areas that make up the white collar field, including mail and securities fraud, bribery, health care fraud, conspiracy, and money laundering. In addition, students will learn the basics of conducting a corporate internal investigation, dealing with search warrants and subpoenas, criminal pre-trial matters, special considerations for criminal discovery, and common ethical issues. By the end of the course, students will have learned the basic substantive and procedural issues involved in white collar practice. Students will learn from and interact with a variety of practitioners drawn from the private and government sector. Instructor permission is required for enrollment.

LAWS 4686 Wills Lab (1 Credit)
This lab is designed to provide students with practical experience with interviewing and drafting for a real client while under the close supervision of a practicing attorney. Clients come primarily from Legal Aid. Each student is individually supervised by a volunteer attorney or by Prof. Marsh. The attorney goes with the student to the first interview with the client to assist the student if any difficulties come up in the interview. Then the student drafts the appropriate documents from scratch, and the attorney helps the student determine what revisions are necessary. When documents are in final form the attorney assists the student in having the documents properly signed. Documents include will, living will, and medical or financial powers of attorney, as appropriate. Letter grades are given by Prof. Marsh. Note that no student is allowed to drop the Wills Lab after the first interview with the client unless there is a severe medical emergency. There will be one introductory meeting scheduled during lunch time. All the rest of the work is scheduled individually by the student, supervising attorney, and client. NOTE: Students will NOT be allowed to drop the course after the first interview with the client. Prerequisite: LAWS 4640.

LAWS 4700 Special Topics (1-5 Credits)
LAWS 4701 Special Topics (1-5 Credits)
LAWS 4702 Special Topics (1-6 Credits)
LAWS 4703 Special Topics (1-5 Credits)
LAWS 4704 Special Topics (1-5 Credits)
LAWS 4705 Special Topics (1-5 Credits)
LAWS 4706 Special Topics (1-5 Credits)
LAWS 4707 Special Topics (1-5 Credits)
LAWS 4708 Special Topics (1-5 Credits)
LAWS 4709 Special Topics (1-15 Credits)

LAWS 4800 Criminal Defense Clinic (3-6 Credits)
This clinic offers students the opportunity to defend low-income clients charged with various criminal offenses. These offenses include DUI/DDWAI; domestic violence; assault; theft; disturbance; child abuse and neglect; menacing; etc. Students represent their clients in various municipal and county courts in the area. This course requires numerous court appearances for arraignments, pre-trial motions, and sentencing. Students should be prepared for an intense litigation experience in misdemeanor criminal defense. Corequisite: LAWS 4801. Prerequisite: permission of faculty supervisor.

LAWS 4801 Criminal Defense Clinic Seminar (3-4 Credits)
The Criminal Law Clinic Seminar must be taken in conjunction with the Criminal Law Clinic. Class sessions will be devoted to a variety of topics, including classes on lawyering skills, substantive law, issues of lawyering and society, and case review sessions, in which student attorneys will present information about their cases/projects to each other and give and solicit feedback about issues they are confronting in the representation of their clients. The classes include simulation exercises that are critiqued by faculty, and field exercises that involve trips to the Denver jail. Classes are taught by clinical faculty and by guest speakers who include area judges, practitioners, interpreters and other court personnel. Co-requisite: LAWS 4800.

LAWS 4802 Environmental Law Clinic Seminar (3 Credits)
The ELCP clinic seminar must be taken in conjunction with the ELCP Clinic. During class, students will review federal civil procedure through a lecture series entitled "anatomy of a lawsuit," have specific lectures on effective legal writing, and commonly used statues such as the Freedom of Information Act, and Endangered Species Act. Each student must also prepare a class presentation on their assigned major case, and participate in random, less formal docket meetings. Students must also attend four guest lectures from lawyers and other professionals on environmental law advocacy issues. Students earn 3 in class credits for this course and 3 out of class credits through the corequisite course. Corequisite: LAWS 4206.

LAWS 4803 Mediation & Arbitration Clinic Seminar (2 Credits)
The Mediation and Arbitration Clinic Seminar must be taken in conjunction with the Mediation and Arbitration Clinic. The seminar meets once a week for 90 minutes. Students read articles on mediation issues and receive intensive training in the classroom that is reinforced with classroom simulations. Students are also required to critique each other in the simulations. The seminar focuses upon identifying and resolving issues that arise during actual mediations. Students will earn 2 in class credits for this course and 3 out of class credits through the corequisite course. Corequisite: LAWS 4430.
The Corporate Apprenticeship Program's purpose is to provide the opportunity for law students to learn about the distinct challenges facing corporate law. Students have represented clients in areas involving wage and hour claims, housing discrimination, eviction defense and domestic violence protection orders. Additionally, the Corporate Apprenticeship Program requires some form of community outreach project enabling the student to learn about the client populations they serve. Students will earn 3 out of class for this course and 3 in class credits through the corequisite course. Corequisite: LAWS 4806.

LAWS 4806 Civil Litigation Clinic Semnr (3 Credits)

The Civil Litigation Clinic students represent low-income clients in a variety of civil disputes. The clinic permits students to participate in the selection of cases and problems they work on. Students have represented clients in areas involving wage and hour claims, housing discrimination, eviction defense and domestic violence protection orders. Additionally, the Civil Litigation Clinic requires some form of community outreach project enabling the student to learn about the client populations they serve. Students will earn 3 out of class for this course and 3 in class credits through the corequisite course. Corequisite: LAWS 4805.

LAWS 4807 Child Advocacy Seminar (2 Credits)

The Child Advocacy Externship Seminar is a course and taught by the Rocky Mountain Children's Law Center. In the fall semester, the seminar course focuses on the laws surrounding advocacy for children in dependency & neglect, delinquency, civil protection order, and education cases. In the spring, students can enroll in a 2-credit Advanced Child Advocacy seminar to expand on the fall semester with topics such as the overlap of child welfare and family law, immigration advocacy, appellate advocacy for children, trial practice in the child welfare context, ethical issues in the representation of children, and a variety of other hot topic child advocacy issues. Students can choose to also enroll in a corresponding externship for credit. For more information on the field work component, please visit http://www.law.du.edu/index.php/legal-externship-program/specific-externship-programs/child-advocacy-externship-program.

LAWS 4809 Civil Rights Clinic (3 Credits)

The Civil Rights Clinic (CRC) represents individuals and groups in civil and human rights matters. The CRC's current cases address a range of complex constitutional issues litigated before the Federal District Court for the District of Colorado. Some of the claims currently being litigated in the CRC will impact constitutional jurisprudence nationwide. The current CRC docket is focused on the constitutional rights of prisoners. These cases challenge prison conditions and policies pursuant to the First, Fifth, Eighth and Fourteenth Amendments on issues such as: indefinite solitary confinement, failure to provide prisoners with adequate medical or mental health care, long-term denial of outdoor exercise, and the prison's refusal to provide meaningful process to individuals placed in long-term segregation. Students will earn 3 out of class for this course and 3 in class credits through the corequisite course L4812, Civil Rights Clinic Seminar. This course meets the Upper Level Writing requirement (ULW).

LAWS 4812 Civil Rights and Disability Law Clinic Seminar (3 Credits)

The Civil Rights Clinic (CRC) represents individuals and groups in civil and human rights matters. The CRC's current cases address a range of complex constitutional issues litigated before the Federal District Court for the District of Colorado. Some of the claims currently being litigated in the CRC will impact constitutional jurisprudence nationwide. The current CRC docket is focused on the constitutional rights of prisoners. These cases challenge prison conditions and policies pursuant to the First, Fifth, Eighth and Fourteenth Amendments on issues such as: indefinite solitary confinement, failure to provide prisoners with adequate medical or mental health care, long-term denial of outdoor exercise, and the prison's refusal to provide meaningful process to individuals placed in long-term segregation. Students will earn 3 in class credits for this course and 3 out of class through the corequisite course L4805, Civil Rights Clinic. This course meets the Upper Level Writing requirement (ULW).

LAWS 4867 Advising the Adviser: Compliance and Enforcement under the Investment Advisers Act (3 Credits)

This class will focus generally on investment adviser (IA) compliance with the federal securities laws and the Securities and Exchange Commission's (SEC) role with respect to that compliance. We will focus on how to advise an IA with respect to SEC regulations, touching on topics such as an IA's fiduciary role as a fiduciary and an IA's requirements with respect to marketing, best execution, and principal and cross trading. We will also focus on what's necessary to establish and operate a robust IA compliance program.

LAWS 4880 DU Law Journal (0-3 Credits)

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

LAWS 4884 Int'l Law Journal (0-3 Credits)

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

LAWS 4888 Transportation Law Journal (0-3 Credits)

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

LAWS 4889 Water Law Review (0-3 Credits)

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

LAWS 4991 Corporate Apprenticeship Program (4 Credits)

The Corporate Apprenticeship Program's purpose is to provide the opportunity for law students to learn about the distinct challenges facing corporate counsel. This program is offered solely in the spring term and consists of four mandatory seminars and 15 hours of work per week (preferably on consecutive days) in the legal department of sponsoring corporations. The interactive seminars are designed to introduce students to the practice environment and operations of an in-house corporate legal department.
LAWS 4996 Thesis (1-10 Credits)
The program is designed to allow students the opportunity to gain experience working in legal programs of concern to the legal profession and the community. Example placements include public defenders' offices; prosecutors' offices; the Attorney General's office; Legal Service offices; judicial clerkships; and selected private firms. Need special enrollment permission from Internship/Externship Office. A maximum of 10 credit hours may be awarded for this program.

LAWS 4999 Directed Research (1-5 Credits)
Direct Research is an opportunity for students to research and write on any area of law approved by a full-time faculty member who agrees to direct the project. The research project must be completed within the semester for which the student is registered. The research is compiled into a paper of publishable quality. A copy is delivered to the supervising faculty member for grading and a second copy is delivered to the associate dean for academic affairs by the last day of exams for that semester. Students may petition for either two or three semester hours. A maximum of five semester hours credit for Directed Research is permitted in satisfaction of the 90-credit degree requirement. A Directed Research application form (available in the registrar's office) signed by both the faculty supervisor and student is required for enrollment. The registrar's office will register the student for his or her directed research once the student's application form has been approved. All directed research projects must conform with the upper level writing requirement, which involves a mandatory rewrite, in addition to any other requirements. This course satisfies the upper level writing requirement (ULWR). Permission is required from the faculty supervisor and the Assistant Dean for Student Affairs to increase credit hours to 4 or 5.

LAWS 5025 Externship (1-10 Credits)
The program is designed to allow students the opportunity to gain experience working in legal programs of concern to the legal profession and community. Example placements include public defenders' offices; prosecutors' offices; the attorney general's office; legal service offices; judicial clerkships; and selected private firms. Externship Seminar: In conjunction with the above field placement each student shall meet in a seminar under the supervision of a member of the law faculty to explore common and contrasting areas of professional responsibility, professional tasks and skills, decision making and dispute resolution presented in the various extern settings.

LAWS 5026 Trial Practice III: National Trial Team (3 Credits)
The Trial Teams Course is for the new and veteran students who are selected to represent the school on one of the national trial teams. The course meets one night a week during the summer session for five hours each night. The course is split into two sections, one for returning team members, and one for the newly-selected team members. The course is an advanced courtroom-simulation course in which students work intensely with other students and the instructor, delving into increasingly complex areas of case analysis, evidentiary interpretation and application, examination drafting and presentation, and ethical dynamics of fact patterns. The veteran section begins the first class with students presenting both sides of a criminal case. The new member section begins with refreshers on case analysis, evidence, and courtroom strategies, and culminates with final trials. There is weekly out-of-class case analysis, drafting, and preparation required. Grading is based on classroom participation, written homework, simulated courtroom presentations, and a final trial.

LAWS 5027 American Association for Justice Trial Team (3 Credits)
Sturm's American Association for Justice Trial Team (AAJ) is one of four of the school's advanced courtroom-simulation based "team-courses" in which students find themselves working intensely with five other students and an instructor, delving deeply into increasingly complex areas of case analysis, evidentiary interpretation and application, examination drafting and presentation, and ethical dynamics of fact patterns. Students must invited to be on one of Sturm's National Trial Teams, after tryouts that are held every spring (April). The team-courses meet all three semesters (fall, spring, and summer). Being invited onto one of the teams is a two-year commitment. Starting the first week of each semester, and continuing throughout the entire semester, the AAJ team-course meets once a week in a classroom environment, for a total of 2.5 classroom hours per week. The AAJ team-course also meets a second time each week for courtroom simulation performances and video review, for an additional four (4) hours. There is also substantial out-of-class case analysis and examination drafting required. The team competes on the national level in the fall at an "invitational" tournament, and in the spring in the AAJ tournament against other ranked law schools from around the country. Grading is based on classroom participation, written homework, simulated courtroom presentations, and a final trial.

LAWS 5028 ABA Trial Team (3 Credits)
Sturm's ABA/NTC team is one of four of the school's advanced courtroom-simulation based "team-courses" in which students find themselves working intensely with five other students and an instructor, delving deeply into increasingly complex areas of case analysis, evidentiary interpretation and application, examination drafting and presentation, and ethical dynamics of fact patterns. Students must be invited to be on one of Sturm's National Trial Teams, after tryouts that are held every spring (April). The team-courses meet all three semesters (fall, spring, and summer). Being invited onto one of the teams is a two-year commitment. Starting the first week of each semester and continuing throughout the entire semester, the ABA/NTC team-course meets twice a week in a classroom environment, for a total of five (5) classroom hours per week. The ABA/NTC team-course also meets a third time each week for courtroom simulation performances and video review, for an additional four (4) hours. There is also substantial out-of-class case analysis and drafting required. The team competes on the national level in the fall at an "invitational" tournament, and in the spring in the ABA/NTC tournament against other ranked law schools from around the country. Grading is based on classroom participation, written homework, and simulated courtroom presentations.
LAWS 5029 Semester in Practice (1-12 Credits)
The Semester in Practice program is designed to allow students the opportunity to develop practice skills by working full-time in legal programs of concern to the legal profession and community. This is a capstone experience offered to students in their last year of law school, where students have significant exposure to the substantive law in their externship. Example placements include public defenders' offices; prosecutors' offices; the attorney general's office; legal service offices; judicial clerkships; and selected private firms. As this is an externship, credit may vary, up to 12 credits, depending on the student. Externship Seminar: In conjunction with the above field placement, each student shall meet in a three-credit graded seminar under the supervision of a member of the externship faculty to explore common and contrasting areas of professional responsibility, professional tasks and skills, decision making and dispute resolution presented in the various extern settings.

LAWS 5030 Semester in Practice Seminar (3 Credits)
This seminar is the classroom component of the Semester in Practice (SIP) course. Through class discussion, we explore a variety of issues that provide students with the opportunity to reflect on the legal profession and how they perceive their role in the profession - currently and prospectively. We focus primarily on professional identity and ethical issues of key importance to the practice of law.

LAWS 5031 Legal Externship Seminar (1-3 Credits)
The Legal Externship Program is divided into practice-specific programs. Students enrolled in each of these programs are required to also enroll in an accompanying for-credit seminar that addresses topics specific to each practice area.

LAWS 5035 Public Service Externship (2-6 Credits)
The externship program is designed to allow students to gain experience working in legal programs of concern to the legal profession and community. Example placements include public defenders' offices; prosecutors' offices; the attorney general's office; legal service offices; and judicial clerkships. To ensure that the College of Law remains in the forefront of public service, every Juris Doctor student is required to perform a minimum of 50 hours of supervised, uncompensated, law-related public service work during his or her law school career as a prerequisite to graduation. This requirement may be fulfilled by registering for, and passing, an externship for credit at a government agency, judicial chambers, or nonprofit organization via the Legal Externship Office, as long as no financial compensation of any kind whether from the employer or outside source was received for the externship.

Legal Administration Courses
MSLA 4050 The Impact of Court Governance (1 Credit)
This course informs students on the policy making process of local court governance and the impact of the process on court operations and public services. Various governance structures are explored to include the benefits of principle based governance. Students gain in-depth insight into the roles and relationships of judges and court administrators as leaders and governing authorities within the judicial system. Course knowledge is applicable to all levels of national and international court jurisdiction.

MSLA 4080 Law Firm Information Technology (2 Credits)
This course is designed to inform the student on the complexities of information technology in a law firm setting. Topics include time and billing, assessing the IT needs of the office, networking abilities, creating a paperless office, security, case management, outsourcing, and knowledge management.

MSLA 4090 Court Information Technology (2 Credits)
This course is designed to introduce students to the intricacies of information technology in a court setting and the importance of an efficient and effective system. Topics include communications technology (internal and external), virtual courthouses, electronic case filing, legal research systems, information and systems security, networking abilities and needs, court reporting/recording and accessibility to the public (website).

MSLA 4100 Court Fiscal Management (3 Credits)
This course focuses on the key aspects of fiscal management in a court setting. Students learn models of public budgeting, internal controls, procurement, outsourcing, RFPs, internal and external auditing, and government funding models. Prerequisite: MSLA 4410.

MSLA 4121 Human Res & Performance Mgmt (3 Credits)
This course will provide a broad overview of the field of human resource and performance management. Students learn what managers and administrators need to know to effectively address Human Resource issues in today's workplace. The course will provide major concepts and techniques of performance management in law and court environments. By employing perspectives of both the employer and employee the class will focus on "best practices" utilized by managers and administrators and emphasize decision-making skills and processes in the context of Human Resources law and policy. Students will learn how to achieve organizational goals via management of a company's most precious resource, their people. This textbook provides an overview of the content upon which the most common HR certification (SPHR, PHR) are based.

MSLA 4151 Applied Leadership and Management Theory (3 Credits)
This course is designed to provide the student with an understanding of the importance of effective leadership and management in the workplace. Students will learn the tools necessary to manage conflict, build strong teams, function as a team, manage performance, create and maintain a positive work environment, and motivate others.

MSLA 4180 Court Case Flow and Load Management (2 Credits)
This course is designed to provide the student with the fundamental principles of managing an effective case management system. Students will learn the importance of an efficient case flow management system, the history of case management, electronic case filing, civil and criminal rules of procedure, case assignment, quality assurance and time standards and major case, records management and reporting systems, strategies necessary to gain judicial support, leadership and cooperation to effectuate effective case flow management practices, and improve judicial performance as it relates to the disposition of actions.
MSLA 4181 Inclusiveness in the Legal Profession - The Next Generation of Diversity Efforts (1 Credit)
Diversity and inclusiveness are hot topics in the legal profession. This highly interactive course will educate students about the state of diversity and inclusiveness within the legal profession, the systemic underpinnings of the lack of diversity, how to create inclusive environments for successful retention and advancement of female and diverse attorneys and staff, as well as the importance of diversity and inclusiveness to the viability of the legal profession. Students will be challenged to draw upon their own life experiences, to consider different perspectives, and provide thoughtful analysis on how they can incorporate diversity and inclusiveness practices with their career path and future legal organizations.

MSLA 4200 The Business of Courts (3 Credits)
This course is designed to provide the student with the fundamental principles and elements of the key functions performed by the courts. These functions include jury management, court based mediation and arbitration programs, court reporting, client expectations, contingency planning, continuity of operations planning, needs and expectations of litigants without lawyers, interpreter services, court and staff performance measurement and management, and the role of the court administrator.

MSLA 4201 Law Firm Administration (3 Credits)
This course informs the student of the fundamental principles, elements and day-to-day operational processes of law office management. Topics covered in this course include law office culture, law firm organization, succession planning, practice areas, client communication flow, collection challenges, and understanding and working with law office timekeeping, accounting, and billing systems.

MSLA 4205 Lawyer Recruitment, Development, and Advancement in Law Firms (2 Credits)
This course will focus on the key aspects of lawyer recruitment, development and advancement in law firms. Students will learn the primary methods for recruiting and hiring lawyers at all experience levels, and the most important elements of lawyer development, including orientation, integration, legal and core skills training, experiential learning, mentoring, performance management, and evaluations. Traditional compensation and advancement models, as well as emerging trends in all of these areas, will also be covered during the course.

MSLA 4215 Court Space, Facilities and Security (2 Credits)
This course is designed to inform the students of the fundamentals of managing the court's space, facilities and security. Aspects of this course include: facilities management, operational standards and management, safety and security, assessing courthouse building needs, developing space planning reports, the management of all types of space projects, building and personnel security issues, contingency planning, and disaster recovery.

MSLA 4300 Introduction to the United States Judicial System (3 Credits)
This course provides the student with an overview of the United States judicial system. Students learn the fundamentals of our legal system, historical basis of the U.S. judicial system, the foundation, structure, purpose, what it stands for, and the varying levels of the U.S. court system.

MSLA 4301 Judicial Performance and Evaluation (1 Credit)
This course informs students on the complexities of judicial performance and evaluation. Students learn the fundamentals of developing a judicial performance program, measuring the effectiveness of performance recommendations, commissions on judicial performance, and the components of the evaluation process.

MSLA 4310 World Judicial Systems (3 Credits)
The goal of this course is to compare and contrast the role of the judiciary in various legal systems. Topics include types of courts and court systems (including domestic, supranational, i.e., the European Union, and international courts), judicial independence, separation of powers, and challenges facing the judiciary such as miscarriages of justice. Students also compare court procedures (civil, criminal, appellate review) in different types of legal systems.

MSLA 4320 Fundamentals of Comparative Law (3 Credits)
This course introduces the classifications of the world's legal systems: (civil law, common law, Islamic law, customary law, and mixed law systems). Students will learn the general elements of a legal system then compare and contrast these features in different types of legal systems as they are used in various countries or other jurisdictions including the European Union. Students will also explore internet and electronic resources to research and analyze foreign legal systems.

MSLA 4330 Specialty Courts (2 Credits)
This course will provide the students with an understanding of the purpose, functionality and effectiveness of specialty courts. Topics will include the types of specialty courts and how to create them, maintaining sustainability, treatment options, demographics, budgeting and measuring specialty court performance.

MSLA 4340 Communication, Writing, and Research in Legal Business (3 Credits)
This is a foundation course is designed to provide students with effective, productive, and relevant communication, writing, and research skills used in legal business today. Topics will include writing press releases, social media news/headlines/updates, executive summaries, email strategies based on audience, etc.

MSLA 4384 Court Comm & Media Relations (2 Credits)
This course will inform the students how to address communications and manage media relations for the courts. Topics will include views of the court from multiple perspectives, communicating to different constituencies, public relations and customer satisfaction, and educational outreach programs.
MSLA 4385 Law Firm Communications and Technology (3 Credits)
This course is designed to build student’s foundation knowledge of technology in the legal environment. The competitive landscape in the law firm setting is stronger than it ever has been, and this competitiveness forces law firms to find efficient and innovative ways to conduct business in this new landscape through the use of technology. Topics of this course will include identification of technologies used in law firms and legal departments as well as thoughts about how to leverage those technologies to help gain efficiencies.

MSLA 4386 Law Firm Client Services and Satisfaction (2 Credits)
This course is designed to inform the student of the importance of client service and satisfaction and its value to the law firm. Topics covered in this course include external communication, client feedback, partnering with clients, client relationship management, and evaluation and survey design.

MSLA 4410 Accounting and Financial Management in Legal Business (3 Credits)
This course will explore the principals and practices of financial accounting including the standards that govern the preparation of financial statements in legal business. Students will gain a comprehensive overview of double entry accounting, a detailed understanding of assets, liability, equity, revenue and expenses and how they affect the income statement, balance sheet, and statement of cash flows. Special attention will be given to the unique attributes of financial reports related to law firms.

MSLA 4415 Statistics for the Legal Administrator (2 Credits)
This course will introduce the fundamentals of statistics for the legal administrator. Students will learn how to measure efficiencies and work performance, perform and analyze needs assessment, track productivity; measure cases flows, and assess client needs.

MSLA 4420 Legal Practice Seminar-Law as a Business (3 Credits)
This course provides an overview of the business functions of a law practice. Students learn how effective law practice administrators and managers base policy and management decisions on a comprehensive understanding of the law firm as a complex and interdependent equation. MSLA course, open to JD students with approval from Associate Dean.

MSLA 4460 ADR for the Court and Law Firm Administrators (1 Credit)
This course has been designed for the Court/Legal Administrator to explore and understand the skills essential when negotiating/mediating conflict and to examine the ADR system designed for court-annexed, Federal/state agency and private sector arbitration/mediation programs. Students will have an opportunity to explore issues related to ADR in the public and private sector by actively participating in weekly online discussions and experience hands-on learning buy developing an ADR system to include the process for selecting a panel of ADR specialists, and a process for implementing and managing the program.

MSLA 4901 Law Firm Financial Management (3 Credits)
This course focuses on the key aspects of financial management in a law firm setting. Students analyze financial reports/data, work flow analysis and assessment, understand trust accounts, client billing and internal controls, to ultimately recognize and understand the financial health of the law firm. Prerequisite: MSLA 4410.

MSLA 4950 Strategic Planning in Courts (2 Credits)
This course is designed to prepare the student in creating a strategic plan for the courts. Students learn to think strategically, design surveys, perform an environmental analysis, set goals, develop action plans, and measurement tools.

MSLA 4954 Project Management (3 Credits)
This course is designed to provide students with the tools to effectively manage a project regardless of its size. Topics include clarifying the project goals, using objectives to define responsibilities, understanding GANTT and PERT charts, goal setting, prioritization, time management, consensus building, developing creative teams, empower the project team, motivating the team, communications tools, how to handle conflicts, and how to celebrate your success.

MSLA 4999 Directed Research MSLA (1-17 Credits)
MSLA Directed Research is an opportunity for students to research and write on any area of legal administration approved by an MSLA faculty member who agrees to direct the project. The research project must be completed within the semester for which the student is registered. The research is compiled into a paper of publishable quality that is delivered to the MSLA program director by the last day of exams for that semester. A Directed Research application form (available in the Registrar’s Office) signed by both the faculty supervisor and student is required for enrollment. The Registrar’s Office will register the student for his or her directed research once the student’s application form has been approved.

MSLA 5010 Capstone: Externship/Project (3 Credits)
The externship or creative project is designed to complement the student’s area of study. The externship enables the student to work in a practical setting and acquire the experience in a legal environment. The creative project option provides students, already working in the legal environment, an opportunity to complete a project or research paper on a topic determined by student and MSLA office. A grade of “pass” is given after the work is completed, and a letter from the supervisor summarizing the student’s experience is submitted to the MSLA Office.

University College

University College (http://universitycollege.du.edu/answers/why-university-college.cfm), the college of professional and continuing studies at the University of Denver, provides a fully accredited educational experience that engages, challenges, and energizes our students. At University College, career-focused content is designed and delivered for busy adults through online, on campus, or hybrid courses. Hone your talent and master new skills by earning a master’s degree (http://universitycollege.du.edu/masters-degrees.cfm) in 18 months, or finish a graduate certificate (https://universitycollege.du.edu/certificate) in less than a year.
Arts and Culture Management

Office: University College Student Support Center
Mail Code: 2211 S. Josephine St., Denver, CO 80208
Phone: 303-871-2291, 800-347-2042
Email: ucolsupport@du.edu
Web Site: http://www.universitycollege.du.edu

The Arts and Culture Management program helps students enhance their ability to support, promote, and lead both public and private sector arts and cultural organizations. The program’s larger aim is to prepare students to strengthen their communities through the dissemination of artistic and cultural creations that address and celebrate diverse constituencies, whether based on age, ethnic background, religious/philosophical identity, or political commitments. The program fosters the study of best practices in areas such as advocacy, community outreach, marketing, fundraising, facilities management, organizational development, budgeting, and governance. The program develops critical and creative thought through a combination of academic and applied inquiry to fully understand the needs of communities and organizations and to meet those needs in the most effective possible ways.

This program prepares students to:

- Develop careers in public and/or private arts and culture organizations
- Implement best practices to support organizational stability and creative vibrancy
- Cultivate strong connections between arts and culture organizations and the communities they serve
- Effectively deliver well-planned programs and events tailored to particular audiences

Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Outreach and Advocacy

Students in the Arts and Culture Outreach and Advocacy concentration learn strategies and methods for creating strong relationships between arts and culture organizations and the communities they serve. Instructors with current expertise in arts and culture outreach and advocacy offer current industry insight and help students develop the practical knowledge they need to advocate for arts and culture in communities of all kinds. By designing engaging events and targeted programs, applying entrepreneurial thinking and skills to issues of community outreach, and developing effective approaches to securing grant support, graduates with this concentration will bring core skills to any organization they join in the arts and culture sector.

This degree prepares students to:

- Design events and programs that cultivate connections between arts and culture organizations and the communities they serve
- Develop winning proposals to secure grant support for outreach and advocacy initiatives
- Evaluate the opportunities to build a strategic marketing plan using various forms of media
- Apply creative, entrepreneurial approaches to help both nonprofit and for-profit organizations develop a strong, productive community presence

Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Marketing

In the Arts and Culture Marketing concentration, students learn to plan, sustain, and develop strategic marketing initiatives and campaign assessment methodologies on behalf of arts and culture organizations, both nonprofit and for-profit. Instructors with current expertise in arts and culture marketing provide industry insight and help students develop the practical knowledge they need to work as effective members of arts and culture marketing teams.

This degree prepares students to:

- Design effective marketing strategies to cultivate audiences for arts and culture events
- Identify, develop, and retain key audiences
- Evaluate the opportunities to build strategic marketing plans using various forms of promotion, advertising, digital communications, and social media
- Assess individual campaigns and overarching strategies in order to improve them over time

Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Fundraising and Development

Students in the Arts and Culture Fundraising concentration learn the practical steps involved in creating successful fundraising campaigns on behalf of nonprofit arts and culture organizations. Instructors with current expertise in arts and culture fundraising help students understand how to
leverage an organization’s senior staff, board of directors, and volunteers to secure support from four major funding groups: businesses, foundations, individuals, and government agencies. Coursework also addresses how to build a stable patron base and mount special events that build a sense of ownership on the part of donors.

This degree prepares students to:

• Design effective annual arts and culture fundraising campaigns
• Determine the giving policies of businesses and foundations
• Create special events for donors that instill a sense of ownership in the arts and culture organization’s mission
• Evaluate the success of each campaign to apply lessons learned to future efforts

Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Leadership

In the Arts and Culture Leadership concentration, students learn how to establish strong leadership practices in four key areas: organizational operations, management of people and programs, creation of sustainable business models designed to build healthy organizations, and activities aimed at fostering social change. Instructors with experience as arts and culture leaders provide industry insight and help students develop the practical knowledge and sophisticated skillset they need to effectively lead arts and culture organizations.

This degree prepares students to:

• Develop strategic approaches to managing an organization’s operations
• Manage people and programs in ways that encourage commitment, innovation, and audience loyalty
• Explore a variety of sustainable business models to choose one that best matches the mission of a particular organization

Graduate Certificate in Arts and Culture management with a Concentration in Arts and Culture Outreach and Advocacy

Students earning a certificate in the Arts and Culture Outreach and Advocacy learn strategies and methods for creating strong relationships between arts and culture organizations and the communities they serve. Instructors with current expertise in arts and culture outreach and advocacy offer current industry insight and help students begin to develop the practical knowledge they need to advocate for arts and culture in communities of all kinds. By designing engaging events and targeted programs, applying entrepreneurial thinking and skills to issues of community outreach, and developing effective approaches to securing grant support, certificate students will develop core skills that are easily transferable to any organization they join in the arts and culture sector. Students will also learn additional skills and knowledge in arts and culture through elective coursework.

Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Marketing

Students earning a certificate in Arts and Culture Marketing learn to plan, sustain, and develop strategic marketing initiatives and campaign assessment methodologies on behalf of arts and culture organizations, both nonprofit and for-profit. Instructors with current expertise in arts and culture marketing provide industry insight and help students begin to develop the practical knowledge they need to work as effective members of arts and culture marketing teams. Students will also learn additional skills and knowledge in arts and culture through elective coursework.

Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Fundraising and Development

Students earning a certificate in Arts and Culture Fundraising learn the practical steps involved in creating successful fundraising campaigns on behalf of nonprofit arts and culture organizations. Instructors with current expertise in arts and culture fundraising help students begin to understand how to leverage an organization’s senior staff, board of directors, and volunteers to secure support from four major funding groups: businesses, foundations, individuals, and government agencies. Coursework also addresses how to build a stable patron base and mount special events that build a sense of ownership on the part of donors. Students will also learn additional skills and knowledge in arts and culture through elective coursework.

Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Leadership

Students earning a certificate in Arts and Culture Leadership learn how to establish strong leadership practices in four key areas: organizational operations, management of people and programs, creation of sustainable business models designed to build healthy organizations, and activities aimed at fostering social change. Instructors with experience as arts and culture leaders provide industry insight and help students begin to develop the practical knowledge and sophisticated skillset they need to effectively lead arts and culture organizations. Students will also learn additional skills and knowledge in arts and culture through elective coursework.
Specialized Graduate Certificate in Arts and Culture Marketing

Students earning a specialized graduate certificate in Arts and Culture Marketing learn to plan, sustain, and develop strategic marketing initiatives and campaign assessment methodologies on behalf of arts and culture organizations, both nonprofit and for-profit. Instructors with current expertise in arts and culture marketing provide industry insight and help students begin to develop the practical knowledge they need to work as effective members of arts and culture marketing teams.

Specialized Graduate Certificate in Arts and Culture Outreach and Advocacy

Students earning a specialized graduate certificate in the Arts and Culture Outreach and Advocacy learn strategies and methods for creating strong relationships between arts and culture organizations and the communities they serve. Instructors with current expertise in arts and culture outreach and advocacy offer current industry insight and help students begin to develop the practical knowledge they need to advocate for arts and culture in communities of all kinds. By designing engaging events and targeted programs, applying entrepreneurial thinking and skills to issues of community outreach, and developing effective approaches to securing grant support, certificate students will develop core skills that are easily transferable to any organization they join in the arts and culture sector.

Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Outreach and Advocacy, Arts and Culture Marketing, Arts and Culture Fundraising, Arts and Culture Leadership

Master’s Degree Admission

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

• Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
• Minimum CAE Score: 169

English Conditional Admission: Master’s degree applicants who do not meet the required level of English proficiency may be considered for conditional acceptance if all other admission criteria are met. Prior to enrolling in any graduate-level coursework, English Conditional Acceptance

Certificate in Arts and Culture Management with a Concentration in Arts and Culture Outreach and Advocacy, Arts and Culture Marketing, Arts and Culture Fundraising, Arts and Culture Leadership

Certificate Admission

Degree and GPA Requirements

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

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

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

Master of Arts in Arts and Culture Management with Concentration in Arts and Culture Outreach and Advocacy

Degree Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MALS 4475</td>
<td>Organizational Vibrancy and Measurement</td>
<td>4</td>
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<tr>
<td>MALS 4480</td>
<td>Arts and Culture: Best Practices and Practical Skills</td>
<td>4</td>
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<tr>
<td>MALS 4485</td>
<td>Legal Landscape of Arts and Culture</td>
<td>4</td>
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<td>MALS 4905</td>
<td>Graduate Social Research Methods</td>
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<td>MALS 4901</td>
<td>Capstone Project</td>
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<td>or MALS 4902</td>
<td>Capstone Seminar</td>
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<tr>
<td>or MALS 4904</td>
<td>Interdisciplinary Capstone Seminar</td>
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Arts and Culture Outreach and Advocacy concentration requirements (Choose four courses):

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<th>Code</th>
<th>Title</th>
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<tr>
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<td>MALS 4284</td>
<td>Arts and Culture Entrepreneurship</td>
<td>4</td>
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<tr>
<td>MALS 4470</td>
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Elective requirements (Choose 3 courses in consultation with Enrollment Manager)

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Total Credits 48

Minimum number of credits required: 48

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Master of Arts in Arts and Culture Management with Concentration in Arts and Culture Marketing

Degree Requirements

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<tr>
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<tbody>
<tr>
<td>MALS 4475</td>
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<td>MALS 4905</td>
<td>Graduate Social Research Methods</td>
<td>4</td>
</tr>
<tr>
<td>MALS 4901</td>
<td>Capstone Project</td>
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Arts and Culture Marketing concentration requirements (Choose four courses):

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**Master of Arts in Arts and Culture Management with Concentration in Arts and Culture Leadership**

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<tr>
<td>MALS 4300</td>
<td>Operational Strategy for Arts and Culture</td>
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</tr>
<tr>
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<td>Program and People Management</td>
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MALS 4320 Sustainable Business Models for Healthy Organizations 4
MALS 4340 Arts and Culture Leadership for Social Change 4
Elective requirements (Choose 3 courses in consultation with Enrollment Manager) 12

Total Credits 48

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**Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Outreach and Advocacy**

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<tr>
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Elective requirements (Choose two courses): 8

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<tr>
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<tr>
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<td>MALS 4286</td>
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<td>MALS 4287</td>
<td>Managing Demand and Pricing for Arts and Culture</td>
</tr>
<tr>
<td>MALS 4444</td>
<td>Emerging Trends in Art</td>
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<td>MALS 4475</td>
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Total Credits 24

Minimum number of credits required: 24

**Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Marketing**

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### Graduate Certificate in Arts and Culture Management with Concentration in Arts and Culture Fundraising

**Code** | **Title** | **Credits**
---|---|---
MALS 4280 | Funding Arts and Culture Programming and Development | 4
MALS 4200 | Grant Writing for Arts and Culture | 4
MALS 4210 | Inspiring Individual Donations for Arts and Culture | 4
MALS 4220 | Acquiring Sponsorships for Arts and Culture | 4

**Elective requirements (Choose two courses):**

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**Minimum number of credits required: 24**

### Graduate Certificate in Arts and Culture Management with Concentration in Arts and Culture Leadership

**Code** | **Title** | **Credits**
---|---|---
MALS 4300 | Operational Strategy for Arts and Culture | 4
MALS 4310 | Program and People Management | 4
MALS 4320 | Sustainable Business Models for Healthy Organizations | 4
MALS 4340 | Arts and Culture Leadership for Social Change | 4

**Elective requirements (Choose 2 courses):**

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<tr>
<td>MALS 4210</td>
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<tr>
<td>MALS 4510</td>
<td>Arts, Culture, and Economic Revitalization</td>
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**Minimum number of credits required: 24**

### Specialized Graduate Certificate in Arts and Culture Marketing

**Code** | **Title** | **Credits**
---|---|---
MALS 4283 | Strategic Marketing Planning for Arts and Culture | 4
MALS 4285 | Basics of Arts and Culture Marketing | 4
MALS 4286 | Social Media and Digital Marketing for Arts and Culture | 4
MALS 4287 | Managing Demand and Pricing for Arts and Culture | 4

**Total Credits**

16
specialized graduate certificate in arts and culture outreach and advocacy

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Courses

**MALS 4020 Graduate Research and Writing (4 Credits)**
Critical thinking, accomplished through solid research and clear writing, is paramount to success in one's academic and professional pursuits. This course enables students to develop clear analytic and rhetorical writing skills at the graduate level; these skills are utilized throughout the curriculum in all degree areas. Each student organizes and produces a focused paper on a topic related to the student's degree field that contains a continuing argument centered around a clear thesis statement supported by the work of experts. Sources are evaluated for validity and incorporated in the paper with regard to the absence of plagiarism and proper Turabian author-date documentation. Focusing on the thesis statement, students research and analyze current data and trends in the field, build a rhetorical argument, and draw conclusions. The course stresses editing and revision for mechanics, style, and language. It is designed to improve writing and communication skills for use in academic and professional settings. This course is required of all degree seeking students and should be taken in the first two quarter of enrollment. A final grade of B or better must be earned in this course to meet degree requirements.

**MALS 4050 World Visual & Performance Art (4 Credits)**
This course draws upon global artistic traditions of visual art and performance in conveying how human beings express ideas, themes, and emotions. Students view and experience artistic forms and movements throughout history and from a variety of traditions across the world, critically analyzing art movements and forms across time. They synthesize ideas across cultures, traditions, and types of creative expression and make connections and distinctions between genres and art forms. A different, rich, artistic theme is the focus each time the course is taught.

**MALS 4200 Grant Writing for Arts and Culture (4 Credits)**
This course explores the unique approaches to grant writing required by a variety of government and private entities that offer support for the arts and humanities. By identifying the special character of each entity's mission, its funding history, its place in the funding ecosystem, and the personalities involved, students learn how to produce effective funding proposals that align the goals of the funding entity with the programming goals of arts and culture organizations.

**MALS 4210 Inspiring Individual Donations for Arts and Culture (4 Credits)**
Students in this course learn the most effective ways to cultivate relationships with individuals in their community who are engaged with arts and culture and then inspire them to donate both time and money to organizations that align with their interests.

**MALS 4220 Acquiring Sponsorships for Arts and Culture (4 Credits)**
Students in this course learn how to identify businesses in their communities that care about arts and culture programming and value their programming enough to sponsor their efforts. The course presents case studies of sponsorship acquisitions, and students develop approaches of their own based on the most successful methods used by similar organizations.

**MALS 4280 Funding Arts and Culture Programming and Development (4 Credits)**
Arts organizations must always consider funding when developing programming. Organizational strategic planning is analyzed, and fundraising is examined as a major component of that planning. Various tools and techniques for fundraising, including communication and planning skills, are analyzed and applied to case studies. Students explore different forms of fundraising and their implications for programming, which may include private or public grants, governmental funding, fundraising events, and private donations.

**MALS 4281 Event Planning (4 Credits)**
Events and festivals play a large role in promoting the arts and developing links between the arts community and wider audiences and patrons. Students address various topics associated with event and festival planning and management, such as program development, marketing and audience development, venue considerations, and building partnerships. Students create an event program and plan.

**MALS 4283 Strategic Marketing Planning for Arts and Culture (4 Credits)**
This course provides a strategic approach to audience and markets. Students study basic principles of marketing and audience identification. They build strategic marketing plans that are cohesive with the mission and programming of the organization, utilizing various forms of media. Audience characteristics are examined from various perspectives, and theories of creating commitment to the arts are studied. Students create an arts marketing plan for an organization or event.

**MALS 4284 Arts and Culture Entrepreneurship (4 Credits)**
In any sector of the Arts and Culture field, whether government, non-profit, or for profit, it is essential to be able to develop programs and/or organizations from conception through implementation and assessment. This development requires the clear communication of what is needed to develop, implement, and sustain this plan over time. In this course, students take an entrepreneurial approach to develop a program or organization in the arts and culture field. Students develop and present a comprehensive business plan to define, map, structure, and assess the program / organization in either the non-profit or for profit sector.
MALS 4285 Basics of Arts and Culture Marketing (4 Credits)
This course provides a strategic approach to audiences and markets through an arts and cultural lens. Students will study basic principles of marketing, audience characteristics, and theories of creating commitment to the arts.

MALS 4286 Social Media and Digital Marketing for Arts and Culture (4 Credits)
Marketing arts and culture in the digital age is an art unto itself. Today's arts marketers are expected to produce visual, audio, and written content that matches the quality of the art, on stage or in the gallery, or the cultural programming presented to the public. This course provides students with a framework for producing engaging digital campaigns that build communities around art and culture, a skill that is immediately marketable in their job search after graduation.

MALS 4287 Managing Demand and Pricing for Arts and Culture (4 Credits)
Tomorrow’s arts leaders need to be prepared to face the emotional subject of pricing in a way that is responsive to the community yet supports a sustainable business model. This class takes an evidence-based approach to determining demand for arts and culture programming and setting prices for programs and events offered by arts and culture organizations. Students will explore dynamic pricing strategies, approaches to communicating the relationship between price and value, and how artistic and cultural programming enriches the broader community.

MALS 4300 Operational Strategy for Arts and Culture (4 Credits)
This course introduces students to the operational challenges faced by leaders in arts and culture organizations. Operational leaders shape the structures and systems that help organizations realize their strategies and objectives. These structures and systems enable creative solutions at every level of the organization, cultivating a relatively open culture that encourages individual commitment and innovation as well as effective group collaboration. Students learn to analyze and assess productive operational strategies based on understanding the organization's goals; its financial, technical, and regulatory constraints, and the limitations and opportunities presented by the communities it seeks to serve.

MALS 4310 Program and People Management (4 Credits)
In this course, students learn a variety of approaches to managing people and programs in arts and culture organizations, with the aim of encouraging creative engagement and commitment to the mission of the organization as expressed in its programming.

MALS 4340 Arts and Culture Leadership for Social Change (4 Credits)
Arts and Culture organizations historically have been at the forefront of social change. In this course, students examine the role of arts and humanities in inspiring and shaping social change and learn how to integrate social change goals into the programming of arts and culture organizations.

MALS 4410 Writing and Healing (4 Credits)
Many writers attest to the emotional, spiritual, and even physical benefits of writing. In this course, students will explore a variety of ways in which written expression can help them navigate the human journey. Students learn leading theoretical models of journal and poetry therapy (interactive bibliotherapy), assess poems based on their usefulness in personal growth contexts, and participate in experiential discussions and writing exercises. Students focus on the writing and healing process rather than their own self-explanations of healing through writing. Students submit a portfolio of reflection writings, as well as complete a final paper on a writing topic that intersects with a personal growth experience or interest. Cross-listed with PWRI 4410 Writing and Healing.

MALS 4440 Artists on Art (4 Credits)
This course explores the professional life of the artist, including how artists conceive of a vision for their work, organize their time and space, and communicate about their art. Students read significant works (diaries, correspondence, and essays) by and about artists, and have opportunities to interact with working artists. Students keep and produce a journal to explore ideas, plan projects, and describe methods and media to be used in their current or proposed work.

MALS 4444 Emerging Trends in Art (4 Credits)
This course focuses on what is "going on" in the arts: contemporary trends, what’s hot, what’s not, and why. Selected themes in modern and contemporary art are reviewed to help students discover how their art will fit into or counter emerging trends in art. The latest cutting edge developments in art are explored, and students are challenged to describe the place and purpose for their work.

MALS 4470 Arts and Culture: History, Context, and Trends (4 Credits)
This course examines the significant and growing economic, social, and educational impact of the arts in today’s rapidly changing environment. Discussion of current and historical trends in the visual, performing, literary, and media arts provide a context for practical applications in the field.

MALS 4475 Organizational Vibrancy and Measurement (4 Credits)
As database and analytics systems for arts organizations grow ever more sophisticated, arts leaders must be literate in basics concepts of statistics, finance, and data analysis. This course will prepare students to examine data critically, explore the stories that data can tell, and determine how to measure success and vibrancy.

MALS 4480 Arts and Culture: Best Practices and Practical Skills (4 Credits)
This course provides a comprehensive overview of nonprofit best practices with specific applications to arts and culture organizations. Governance, budget planning and management, organizational development, advocacy, marketing and fundraising, community and rural development, event planning and facilities management are discussed using exemplary and diverse arts organizations as case studies.

MALS 4485 Legal Landscape of Arts and Culture (4 Credits)
Professionals in arts and culture, whether they are artists, managers, directors, or others working in the private, government, or nonprofit sector, will encounter a variety of legal issues during their careers. Through readings, case studies, assignments, and research, students will be introduced to a complex interdisciplinary system of relevant laws that impact and, in some cases, govern arts and culture organizational activities.
MALS 4490 Cultural Participation and Program Planning (4 Credits)
In this course, students explore changing attitudes and participation in the arts and the need for innovative approaches to engage audiences. Audience development and involvement is explored, especially in terms of arts education. The connection between cultural participation and program planning is closely examined. Various models are discussed on a theoretical level, and diverse arts organizations serve as case studies for practical applications.

MALS 4701 Topics in Literature (4 Credits)
The content of this course varies each term. The topics may include time-sensitive issues in the area of literature, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

MALS 4702 Topics in Writing (1-4 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues in the areas of writing and literature, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

MALS 4703 Topics in Film (1-5 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues from the film industry, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

MALS 4704 Topics in Art (1-5 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues from the film industry, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

MALS 4740 Natural Science and Literature (4 Credits)
The natural sciences have inspired some of the most entertaining, creative and provocative works in international literature. Writers like Thoreau, Gould, McPhee, Kingsolver and others have explored some of the most complex theories that explain the majesty of the physical world. Students read and analyze many works in this popular genre. Specifically, the class looks at how these writers use story to shape their work, how they introduce and explain multifaceted theories for the layperson, and how recent scientific theory has shaped our culture. Students also have an opportunity to write about scientific subjects in their own voice.

MALS 4745 Children's Literature (4 Credits)
This course is an introductory study of all levels of children’s literature for the student who is interested in literature, the student who is planning to teach, and for those who are or will be parents. This course introduces students to types, genres, and varieties of literature for reading to children as well as reading by children. The main focus is to remember the joys and wonders of reading as a child and young adult, and to approach the literature selected not as “just a kid's book,” but as literature with real quality standards and room for critical and analytical discussions.

MALS 4750 Literature to Film (4 Credits)
In this course, we examine the adaptation of literary works into films. We closely study selected modern literary works and the film interpretations of each work. Focusing on the transition from one narrative form to another, the course aims at enhancing the critical skill of students as well as their creative ability. Therefore, we also have mini scripting workshops as a way of imaginatively highlighting the sort of considerations that go into the making of the film script.

MALS 4755 World Literature (4 Credits)
In this course, students take a literary tour of the world in 70 days. Stops along the way include classic works of the 20th-Century from Africa, Asia, Europe, and Latin America - fiction, nonfiction, and poetry. As with any whirlwind tour, students learn a little about "the other" and a lot about themselves. An emphasis can help us see our own literary and cultural assumptions with new eyes. Students are also asked to reflect on thematic relationships and differences among texts from different times and places.

MALS 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.
MALS 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

MALS 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

MALS 4905 Graduate Social Research Methods (4 Credits)
Graduate Social Research Methods is an exploration of the methods and purposes of social science research from the perspective of the researcher as well as that of the informed professional and consumer of information. Students will learn about the process of research, including the development of research questions, the purpose of various social science research methods, the role of professional ethics, and general approaches to the analysis and interpretation of data. Students will develop the ability to read and critique basic social science research articles and to implement simple research designs. Students will develop and write a research proposal around a specific research question informed by a review of the literature. Technical requirements include the ability to read and modify Microsoft Excel documents. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

MALS 4915 Research in Humanities (4 Credits)
Graduate Social Research Methods is an exploration of the methods and purposes of social science research from the perspective of the researcher as well as that of the informed professional and consumer of information. Students will learn about the process of research, including the development of research questions, the purpose of various social science research methods, the role of professional ethics, and general approaches to the analysis and interpretation of data. Students will develop the ability to read and critique basic social science research articles and to implement simple research designs. Students will develop and write a research proposal around a specific research question informed by a review of the literature. Technical requirements include the ability to read and modify Microsoft Excel documents. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

MALS 4920 Portfolio Capstone (4 Credits)
The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the Portfolio Capstone produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field. Students must complete the Portfolio Capstone with a grade of B or better.

MALS 4980 Internship (1-4 Credits)
The internship is designed to offer students a purposeful experience in a practical, industry-related setting. The internship is an individualized learning experience and a training plain is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master’s programs.

MALS 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

MALS 4992 Directed Study (1-8 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.
Communication Management

Office: University College Student Support Center
Mail Code: 2211 S. Josephine St., Denver, CO 80208
Phone: 303-871-2291, 800-347-2042
Email: ucolsupport@du.edu
Web Site: http://www.universitycollege.du.edu

Learn the art and science of powerful communication that persuades your audience to take desired actions. From the nuance required to handle interpersonal conversations or lead organizational change, to the strategy behind impactful digital communication or training, our curriculum develops your expertise in meaningful, data-driven storytelling.

In this program, you'll enhance your abilities to strategically craft messages, measure their impact, and create desired outcomes—whether that's gaining employee buy-in, gathering participant feedback, engaging customers, or building brand awareness.

This degree prepares students to do the following:
• Demonstrate ability to integrate learning, including creating links between course concepts and personal and professional experiences in order to synthesize learning and apply it to new situations.
• Demonstrate critical thinking abilities, including exploring issues, ideas, and events before formulating an opinion or drawing a conclusion.
• Demonstrate behaviors, skills, and characteristics of intercultural communication and competence, including appropriate application of these in varied contexts.
• Demonstrate organizational literacy, specifically the role of communication efforts in organizations and the relationship between these efforts and essential organizational functions (structures, finance, strategy, etc.).
• Demonstrate effective communication skills by crafting strategic plans, campaigns, or interventions that meet organizational/client needs.

Master of Arts in Communication Management with a Concentration in Dispute Resolution

Enhance your ability to assess, manage, and resolve conflict. No matter what role or sector you find yourself in, dispute resolution skills are essential for relationships among individuals, within organizations, and in our communities. You will analyze the nature, roots, and resolution of conflict in a variety of settings. Guided by practitioner-faculty, students develop contextually appropriate conflict management strategies and hone mediation, negotiation, and facilitation skills in order to find acceptable resolution for all parties.

This concentration prepares students to do the following:
• Apply conflict theories in understanding and analyzing conflict situations
• Assess the role of culture in conflict situations
• Articulate and defend a variety of processes to resolve conflict
• Develop contextually appropriate conflict management systems for work with diverse stakeholders
• Perform alternative dispute resolution practices while adhering to applicable codes of ethics

Master of Arts in Communication Management with a Concentration in Learning and Development

Gain insight to the strategies needed to effectively facilitate adult learning. Organizations continue to invest in improving employee performance, and in this program you will learn to lead learning and development efforts by leveraging your technology, facilitation, and evaluation skills. From design to implementation, learn to strategically execute entire L&D programs and specialized initiatives from start to finish.

This concentration prepares students to do the following:
• Design and execute projects from needs assessment through design, delivery, implementation, and evaluation
• Elucidate key components of adult learning theories; assess contributions of these theories; articulate challenges to, limits of, and new directions for these theories; and apply them to meet organizational needs
• Identify, analyze, choose, and defend best instructional strategies and techniques to achieve learning objectives
• Develop advanced facilitation and communication skills and demonstrate the ability to respond appropriately to varied audiences with diverse needs and across platforms
• Evaluate and communicate impact of projects using most relevant metrics and analytics
Master of Arts in Communication Management with a Concentration in Marketing Communication

Create integrated marketing campaigns that are driven by strategic objectives, reach clearly defined audiences, and deliver desired results. You'll discover the power of brands and determine how to craft, deploy, and measure campaigns from start to finish. Receive hands-on experience as you evaluate traditional and digital marketing communication tactics and dig deep into marketing trends: social, mobile, email, search, and more.

This concentration prepares students to do the following:

• Design, manage, and measure persuasive, integrated marketing communication campaigns
• Assess the current scope and learn how to anticipate future trends in traditional, social, mobile, email, and search marketing
• Measure marketing communication efforts and create plans to adjust future campaigns based on results
• Create strategies to elevate an organization's or client's marketing and branding efforts through the use of appropriate tactics

Master of Arts in Communication Management with a Concentration in Leadership Communication

Effective communication and advanced problem-solving skills are at the top of every organization's wish list. Are you prepared to meet the demand? You've already mastered your area of expertise, but now you need to harness the potential of your team, manage change initiatives, and meet needs by persuading stakeholders. In this program, you will enhance and deepen your interpersonal, organizational, and managerial abilities.

This concentration prepares students to do the following:

• Articulate and defend various persuasion and crisis management techniques to make contextually appropriate selections
• Evaluate and utilize business communication concepts, tools, and presentation techniques
• Assess and apply theories and best practices of group and team dynamics
• Identify barriers of effective communication and develop plans to ensure productive outcomes
• Create strategies to lead change by applying principles of change, critical change dynamics, and processes for knowledge transfer within organizations

Master of Arts in Communication Management with a Concentration in Organizational Development

Learn to improve individual and organizational performance using the tenets of organizational development. As organizations continue to evolve to meet the shifting demands of consumers and technology, develop your own philosophy around organizational change. This program prepares you to better facilitate communication between and among leadership and stakeholders, all in an effort to create a more effective organization.

This concentration prepares students to do the following:

• Articulate and define organizational development, history of OD, and challenges and possibilities using an intentional OD intervention
• Develop and defend a personal philosophy of organizational change
• Evaluate the impact of organizational culture and core values on OD interventions
• Integrate the contract for a successful OD intervention with the organizational culture and determine the role of an OD practitioner in each stage of an OD intervention, distinguishing between an internal and external consultant
• Assess, compare, and contrast different models of change and describe the impact of each model on an OD process
• Define and organize OD strategies for different types of organizations (sectors, life cycle, size, industry, types of innovation, or other defining characteristics) for maximizing impacts of OD interventions
• Summarize the importance and impact of the different organizational structures and design on OD strategy and interventions
• Construct an organizational diagnosis plan by using interviewing, group facilitation, process observation, synthesis of data, and writing effective reports, while providing effective presentations of the findings
• Analyze the human side of change and build strategies for successful implementation of an OD intervention that honor the loss, resistance and acceptance of changes
Master of Arts in Communication Management with a Concentration in Public Relations

Expertly reach stakeholders, manage your organization’s identity, and maximize the impact of its reputation. You’ll learn strategies to connect with influencers, utilize mass media, and leverage social media, all while employing principles of persuasion and quality content creation. From researching and evaluating audiences, to assessing the value of PR campaigns, you will apply critical thinking, precise writing, and complex reasoning.

This concentration prepares students to do the following:

- Communicate persuasively to targeted audiences to meet specific organizational outcomes
- Create communication plans with measurable results using public relations best practices, tactics, and strategies
- Develop, manage, and analyze effective media relations practices
- Articulate and defend the selection of techniques to measure, monitor, and influence an organization’s reputation
- Articulate the primary principles and practices of public relations in an increasingly interconnected, global economy

Certificate in Communication Management with a Concentration in Dispute Resolution

Enhance your ability to assess, manage, and resolve conflict. No matter what role or sector you find yourself in, dispute resolution skills are essential for relationships among individuals, within organizations, and in our communities. You will analyze the nature, roots, and resolution of conflict in a variety of settings. Guided by practitioner-faculty, students develop contextually appropriate conflict management strategies and hone mediation, negotiation, and facilitation skills in order to find acceptable resolution for all parties. Students will also gain additional skills and knowledge in communication management through elective coursework.

Certificate in Communication Management with a Concentration in Learning and Development

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Certificate in Communication Management with a Concentration in Marketing Communication

Create integrated marketing campaigns that are driven by strategic objectives, reach clearly defined audiences, and deliver desired results. You’ll discover the power of brands and determine how to craft, deploy, and measure campaigns from start to finish. Receive hands-on experience as you evaluate traditional and digital marketing communication tactics and dig deep into marketing trends: social, mobile, email, search, and more. Students will also gain additional skills and knowledge in communication management through elective coursework.

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Specialized Graduate Certificate in Dispute Resolution

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
• Minimum CAE Score: 169

English Conditional Admission: Master’s degree applicants who do not meet the required level of English proficiency may be considered for conditional acceptance if all other admission criteria are met. Prior to enrolling in any graduate-level coursework, English Conditional Acceptance

Certificate Admission
Degree and GPA Requirements
• Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
• Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master’s degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master’s degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
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- Minimum CAE Score: 169

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

Master of Arts in Communication Management with a Concentration in Dispute Resolution

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>COMM 4010</td>
<td>Business Fundamentals for Communicators</td>
<td>4</td>
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<td>COMM 4045</td>
<td>Applied Critical Thinking in Communication</td>
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<td>COMM 4002</td>
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<td>COMM 4020</td>
<td>Communication in Professions and Organizations</td>
<td>4</td>
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<tr>
<td>COMM 4220</td>
<td>Conflict Resolution Strategies and Process</td>
<td>4</td>
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<td>COMM 4222</td>
<td>Negotiation Strategies and Process</td>
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<tr>
<td>COMM 4270</td>
<td>Forty-Hour Mediation</td>
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Elective requirements (Choose three courses) 12

Total Credits 48

Minimum number of credits required: 48

Students may choose electives from the Communication Management program, related University College programs, and through consultation with their academic advisor.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Arts in Communication Management with a Concentration in Learning and Development

Degree Requirements

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<td>COMM 4020</td>
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COMM 4030  Managing Learning in Organizations  4
COMM 4200  Instructional Design  4
COMM 4203  Adult Learning Strategies and Theories  4
COMM 4235  Integrating Learning and Development Technologies  4

Elective requirements (Choose two courses):  8

Total Credits  48

Minimum number of credits required: 48

Students may choose electives from the Communication Management program, related University College programs, and through consultation with their academic advisor.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Arts in Communication Management with a Concentration in Marketing Communication

Degree Requirements

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<thead>
<tr>
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<td>Marketing Strategy and Process</td>
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<td>COMM 4324</td>
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<td>4</td>
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</tbody>
</table>
| Elective requirements (Choose three courses):      |         | 12
| Total Credits                                     | 48      |

Minimum number of credits required: 48

Students may choose electives from the Communication Management program, related University College programs, and through consultation with their academic advisor.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Arts in Communication Management with a Concentration in Leadership Communication

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>Core coursework requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMM 4010</td>
<td>Business Fundamentals for Communicators</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4045</td>
<td>Applied Critical Thinking in Communication</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4905</td>
<td>Research, Measurement, and Storytelling</td>
<td>4</td>
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</table>
### Master of Arts in Communication Management with a Concentration in Organizational development

**Degree Requirements**

<table>
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<tr>
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<tbody>
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<tr>
<td>COMM 4905</td>
<td>Research, Measurement, and Storytelling</td>
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<tr>
<td>COMM 4001</td>
<td>Portfolio Foundations</td>
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</tr>
<tr>
<td>COMM 4901</td>
<td>Capstone Project</td>
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<td>or COMM 4920</td>
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<tr>
<td><strong>Concentration requirements</strong></td>
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<tr>
<td>COMM 4020</td>
<td>Communication in Professions and Organizations</td>
<td>4</td>
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<tr>
<td>ORL 4110</td>
<td>Fundamentals of Organizational Development</td>
<td>4</td>
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<tr>
<td>ORL 4115</td>
<td>Organizational Culture and Organizational Development Impacts</td>
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<tr>
<td>ORL 4120</td>
<td>Team Interventions</td>
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<tr>
<td>ORL 4125</td>
<td>Evaluate and Sustain Change</td>
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<td><strong>Elective requirements (Choose three courses):</strong></td>
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<td>12</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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<td>48</td>
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**Minimum number of credits required: 48**

Students may choose electives from the Communication Management program, related University College programs, and through consultation with their academic advisor.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
Master of Arts in Communication Management with a Concentration in Public Relations

Degree Requirements

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Concentration requirements

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<tr>
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<tbody>
<tr>
<td>COMM 4016</td>
<td>Persuasion and Influence</td>
<td>4</td>
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<tr>
<td>COMM 4050</td>
<td>Communication and Society: Theories and Applications</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4144</td>
<td>Public Relations Strategies and Process</td>
<td>4</td>
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<tr>
<td>COMM 4145</td>
<td>Public Relations Writing and Tactics</td>
<td>4</td>
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<tr>
<td>COMM 4150</td>
<td>Dimensions of Reputation Management</td>
<td>4</td>
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</table>

Elective requirements (Choose three courses): 12

Total Credits 48

Minimum number of credits required: 48

Students may choose electives from the Communication Management program, related University College programs, and through consultation with their academic advisor.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Certificate in Communication Management with a Concentration in Dispute Resolution

Program Requirements

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>COMM 4002</td>
<td>Effective Facilitation and Presentation</td>
<td>4</td>
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<tr>
<td>COMM 4220</td>
<td>Conflict Resolution Strategies and Process</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4222</td>
<td>Negotiation Strategies and Process</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4270</td>
<td>Forty-Hour Mediation</td>
<td>4</td>
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</table>

Elective requirements (Choose two courses): 8

Total Credits 24

Minimum number of credits required: 24

Students may choose electives from the Communication Management program, related University College programs, and through consultation with their academic advisor.

Certificate in Communication Management with a Concentration in Learning and Development

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>COMM 4030</td>
<td>Managing Learning in Organizations</td>
<td>4</td>
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<tr>
<td>COMM 4200</td>
<td>Instructional Design</td>
<td>4</td>
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<tr>
<td>COMM 4203</td>
<td>Adult Learning Strategies and Theories</td>
<td>4</td>
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</tbody>
</table>
COMM 4235 Integrating Learning and Development Technologies 4
COMM 4905 Storytelling through Research and Measurement 4
Elective requirements (Choose one course): 4

Total Credits 24

Minimum number of credits required: 24

Students may choose electives from the Communication Management program, related University College programs, and through consultation with their academic advisor.

Certificate in Communication Management with a Concentration in Marketing Communication

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>Concentration requirements</td>
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<tr>
<td>COMM 4140</td>
<td>Marketing Strategy and Process</td>
<td>4</td>
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<td>COMM 4301</td>
<td>Brand Management Strategies</td>
<td>4</td>
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<td>COMM 4321</td>
<td>Digital Marketing Communication</td>
<td>4</td>
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<td>Elective requirements (Choose one course):</td>
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Total Credits 24

Minimum number of credits required: 24

Students may choose electives from the Communication Management program, related University College programs, and through consultation with their academic advisor.

Certificate in Communication Management with a Concentration in leadership Communication

Program Requirements

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<tbody>
<tr>
<td>Concentration requirements</td>
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<tr>
<td>COMM 4006</td>
<td>Building High-Performing Teams</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4016</td>
<td>Persuasion and Influence</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4032</td>
<td>Managing Organizational Change</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4220</td>
<td>Conflict Resolution Strategies and Process</td>
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<td>Elective requirements (Choose one course)</td>
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Total Credits 24

Minimum number of credits required: 24

Certificate in Communication Management with a Concentration in Public Relations

Program Requirements

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<td>COMM 4905</td>
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Total Credits 24
Elective requirements (Choose one course):

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<td>Effective Facilitation and Presentation</td>
<td>4</td>
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<td>Conflict Resolution Strategies and Process</td>
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<tr>
<td>COMM 4270</td>
<td>Forty-Hour Mediation</td>
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Total Credits: 16

Minimum number of credits required: 24

Students may choose electives from the Communication Management program, related University College programs, and through consultation with their academic advisor.

specialized graduate certificate in dispute resolution

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Total Credits: 16

SPECIALIZED GRADUATE CERTIFICATE IN leadership communication

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Total Credits: 16

SPECIALIZED GRADUATE CERTIFICATE IN learning and development

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<tr>
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<td>Managing Learning in Organizations</td>
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<tr>
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Total Credits: 16

SPECIALIZED GRADUATE CERTIFICATE IN marketing communication

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<tbody>
<tr>
<td>COMM 4140</td>
<td>Marketing Strategy and Process</td>
<td>4</td>
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Total Credits: 16

SPECIALIZED GRADUATE CERTIFICATE IN public relations

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<td>4</td>
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</table>

Total Credits: 16

Courses

COMM 4001 Portfolio Foundations (0 Credits)

Master's and certificate-seeking students in Communication Management must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.
COMM 4002 Effective Facilitation and Presentation (4 Credits)
The evolution and increasing presence of technology in the workplace has changed the way we conduct meetings, present information, and facilitate in-person and virtual group conversations. In this course, students hone their presentation and facilitation skills by assessing their audience, purpose, and the desired outcomes of the engagement. Students learn to use appropriate and memorable visual aids, maximize audience and/or participant engagement, and employ communication competencies to increase sensitivity to group dynamics and verbal and nonverbal cues. Whether facilitating high-level face-to-face meetings, conducting virtual interactions, or presenting to groups, students will gain the skills and confidence needed for effective communication across varied delivery methods.

COMM 4006 Building High-Performing Teams (4 Credits)
High-performing teams are invaluable to every organization. Ensuring productive and satisfying group and team interactional outcomes in organizational, professional, and personal settings can be difficult. Students focus on theory, application, and the practice of working together to learn the fundamentals of building high-performing teams. Students learn about the development of group dynamics, assessment, and leadership while also gaining knowledge about their strengths and weaknesses in teams, developing new skills, and learning how to enhance productivity while reducing barriers to effective communication.

COMM 4010 Business Fundamentals for Communicators (4 Credits)
Communications leaders must speak the language of business to effectively craft strategies, execute deliverables, and measure outcomes that create tangible value and advance their organizations’ objectives. Whether in an industry, public sector, or non-profit role, these leaders gain an edge through supplementing strong technical literacy with the ability to assess operational priorities and execute deliverables accordingly. In this class, students will sharpen their understanding of balance sheets and budgets; demystify key aspects of Information Technology infrastructure (intranets, cloud and on-premises computing, databases, security, etc.); delve into various organizational and divisional/departmental models, functions, and political positions; address the benefits and challenges of globalizing and cross-cultural communication; and touch on an assortment of other relevant topics, including managing upward and workflow prioritization. Along the way, students will hone their strategic planning competencies and perspectives by putting all elements learned in this course together. Materials and assessments are geared toward application in relevant contexts.

COMM 4016 Persuasion and Influence (4 Credits)
The ability to write and speak in a persuasive manner is often the difference between success and failure. In this hands-on course, students learn to 1) recognize persuasive activities; 2) develop skills in persuading others; and 3) develop skills in defending themselves against unwanted persuasive activities. In this course, students will examine a variety of concepts, techniques, and tools designed to improve the persuasiveness of written and spoken interactions. Students will discuss persuasion both in the sense of how people behave and in the sense of how people use language. Students will also discuss how people argue and how persuasive techniques can be used not so much to "win" an argument but to gain agreement with others. Throughout the course, students will learn to use persuasive techniques in an ethical manner.

COMM 4020 Communication in Professions and Organizations (4 Credits)
In this course, students develop and refine interpersonal, intercultural, and organizational communication competencies while applying foundational communication models and concepts to a variety of contexts. The mastery of these communication skills leads to more productive written, virtual, and face-to-face interactions, resulting in personal, professional, and organizational success.

COMM 4030 Managing Learning in Organizations (4 Credits)
In today’s highly competitive information society, there is a tremendous need for continuous learning and employee development at all levels of an organization. New knowledge is the foundational resource for the creation and implementation of new visions, structures, and outcomes leading to organizational success. The learning organization, when effectively managed, is engaged in continuous improvement, and grows beyond its current state to widen its creative capacity for the future. In this course, students explore concepts, processes, models, and tools to cultivate a learning organization, and to manage the learning and development function within an organization. The focus of this course is on preparing students to be able to identify major business challenges and the competencies needed to support them from a learning and development perspective.

COMM 4032 Managing Organizational Change (4 Credits)
This course prepares students to create and implement effective communication strategies for change management. The course begins with a discussion of seminal organizational change models, how these models support change management communications, and how change affects employees and individuals. Concepts and practices for facilitating change communications are explored, as well as methods of supporting change leaders. Students develop competencies in change communication through discussion, lecture, video, and change assessment inventories.

COMM 4035 Communicating Across Cultures (4 Credits)
There is a growing need to communicate effectively across cultural differences. Writer James Neuliep defines culture as an accumulated pattern of values, beliefs, and behaviors shared by an identifiable group of people with a common history and verbal and nonverbal code system. Culture pervades every aspect of the communicative process. This course uses a contextual approach to examine the ways culture, communication, context, and power intersect in intercultural communication interactions. Students will identify and analyze obstacles and barriers to effective intercultural communication. Finally, students will examine strategies and skills needed to become a competent and effective intercultural communicator.

COMM 4045 Applied Critical Thinking in Communication (4 Credits)
This course provides an examination of the critical thinking processes and models of decision making and problem solving. The suitability, usage, and effectiveness of critical thinking models in achieving positive organizational outcomes are emphasized. Faculty and student perspectives and experiences, along with case studies, demonstrate applications of the critical thinking and problem solving processes within various communication settings and specialties.
COMM 4050 Communication and Society: Theories and Applications (4 Credits)
This course provides an overview of seminal mass and mediated communication theories and applies them to today's workplace. Additionally, students develop a command of mediated communication frameworks using emerging theoretical approaches to digitization, convergence, and networked culture. Readings and assessments are geared toward active comprehension of communication theories so that students are able to recall and implement theoretical concepts in their professional environments.

COMM 4070 Understanding Human Communication (4 Credits)
This course emphasizes the many communication theories, their origin, and applied use in personal, organizational and smaller professional settings. The course utilizes case studies, surveys, projects, and self-assessment to encourage students to reflect on personal experiences with issues like interpersonal communication and group and team dynamics to facilitate understanding of the importance of applying theory to practice. Key skills and strengths are identified as they relate to students' professional goals and objectives.

COMM 4117 International Technical Comm (3 Credits)
This course focuses on communication and technical writing skills needed to address today's international business environment. Students will develop the foundational skills necessary to write for translation, as well as develop an understanding of, and sensitivity to, the challenges inherent in intercultural technical communication. Additionally, international standards organizations and the role they play in international communication will be discussed.

COMM 4140 Marketing Strategy and Process (4 Credits)
COMM 4140 Marketing Strategy and Process is an application-oriented course to help students examine the fundamentals of marketing, and develop the insights and skills to formulate and implement sound, ethical marketing strategies and processes. The weekly topics covered in this course are divided into three main content areas: 1) foundations, 2) marketing mix elements with an emphasis on communications, and 3) strategy and planning. Each content area helps students apply strategic concepts through discussion and teamwork. Throughout the quarter, students explore marketing decisions by examining how information and research are used to inform marketing management decisions. Because marketing communication plays such a critical role in marketing success, special emphasis is placed on message and media factors. All of the course material culminates in the development of a marketing plan.

COMM 4144 Public Relations Strategies and Process (4 Credits)
In a complex global environment, business, government, nonprofit, and other organizations require professional public relations practitioners who can effectively develop two-way relationships with constituents/publics to enable strategic and effective communication processes. This course explores the essential components of public relations through an examination of the profession, its publics, and effective processes. Areas studied include the nature and history of public relations; applying theories; use of strategy; the value of relationship development; an overview of the range of PR tactics; the evolving role of digital communications and social media to PR; and the importance of ethics and transparency in PR practice.

COMM 4145 Public Relations Writing and Tactics (4 Credits)
Leveraging effective and persuasive writing to develop relationships with media and other target audiences is an integral part of public relations. This course deepens students' knowledge of the strategic use of public relations tactics, while ensuring they become effective, creative, clear, and concise architects and translators of the written word. To assist in this development, public relations practitioners have a number of communication tools at their disposal. Determining the correct tool to use is based on a strategic approach to all public relations efforts. Professionals must consider their objectives, publics, and key messages in choosing tactics to effectively influence the intended audience. In this course, students examine the purposes, style, format, content, and distribution of tactics used to support public relations programs and the concepts behind generating effective public relations copy. Tactics such as news releases, fact sheets, media alerts/advisories, feature articles, newsletters, emails, pitches, brochures, and social media will enable the creation of a public relations writing portfolio by the end of class.

COMM 4150 Dimensions of Reputation Management (4 Credits)
Reputation management is the process of tracking, maintaining, and defending a consistent message and positive image across all media. It applies to corporations and individuals, to billion-dollar brands and grassroots causes. Today's reputation management integrates public relations, search engine optimization (SEO), content marketing, and social media management. It requires constant monitoring and participation in the dialogues that comprise modern media as the traditional roles of sender and receiver merge and evolve. Awareness of the ethical and global considerations surrounding the digital landscape is imperative. As digital presence has become the front lines of reputation management, systems use various predefined criteria for processing complex data to report behavior and activity surrounding a reputation, thereby automating the process of determining positive sentiment, influence, and trustworthiness. This course will present the history of managing reputations in the mass media era, from the dawn of the 20th century to present day. Through the study of proactive and reactive programs, students will learn how to apply reputation management principles in times of quiet and crisis, monitoring, positioning, and measuring a brand's presence online.

COMM 4155 Public Relations Research and Measurement (4 Credits)
Public relations practitioners leverage research at the formative stage of every campaign: during the campaign to measure effectiveness, and at the conclusion of a campaign, to show results. This requires strategic processes to guide organizations toward the best possible actions in creating and sustaining relationships with target publics. This course introduces students to research methods available to public relations professionals, which are dependent on writing measurable objectives to drive accurate evaluation during and following a campaign. Students will explore how to creatively, effectively, efficiently, and ethically adapt research methods to practical application based on available budget, time constraints, and other resources. They then justify these methods to potential clients.
COMM 4200 Instructional Design (4 Credits)
Designing training that maximizes results is a central concern in organizations. Students in this course identify the elements of effective training, they identify and discuss how learning occurs both formally and informally in organizations, and how trainers must plan for learning in order to meet organizational needs and objectives. The stages of systematic instructional design are presented and students are given an opportunity to create an instructional design project that might be applied in their work settings.

COMM 4203 Adult Learning Strategies and Theories (4 Credits)
Adult learning is very different from the learning processes in children. Adults bring a great deal of experience to the learning situation and are intent on the application of their newfound knowledge and skills. The factors that determine how adults learn, as well as appropriate instructional strategies to best reach these learners, are discussed. Students in this course focus on using adult learning principles to strategically design training materials and facilitate adult learning in various workplace settings.

COMM 4206 Evaluating Learning and Development Effectiveness (4 Credits)
Assessment and evaluation enable learning and development professionals to determine if learners acquired the intended content, knowledge, skills and/or attitudes; if the benefits of the training endeavors are worth the costs; whether training has met organizational goals; and if further training is necessary. Through case studies, practice exercises, and the development of an authentic assessment plan, students learn how to design, interpret, and apply different types of learning and development evaluation concepts and methods to their respective or intended work settings.

COMM 4220 Conflict Resolution Strategies and Process (4 Credits)
Conflict is a natural and common part of human interaction. This course prepares students to thoughtfully and creatively manage and resolve conflict in interpersonal and organizational contexts. Students study the sources, causes, and dynamics of conflict in order to explain and predict the patterns of conflict interactions. Students analyze case studies and develop the most appropriate conflict management and resolution strategies based on analysis and evaluation of the personal, interpersonal, historical, and cultural dynamics of a given conflict. By focusing on the application of conflict resolutions strategies and processes, students develop their interpersonal, analytical, and managerial competencies to creatively address conflict in a variety of situations.

COMM 4222 Negotiation Strategies and Process (4 Credits)
Negotiation is at the core of dispute resolution. This course presents the theoretical groundwork for interest-based dispute resolution upon which principled negotiation and other dispute resolution methods are founded. Topics include the definition of the negotiation process, different types of negotiation, and negotiation strategies. Students have an opportunity to practice and compare different negotiation techniques. Teaching methods are experiential in nature and include mini-lectures, discussions, and role-plays. Students also develop strategies for managing challenging negotiations and breakdowns.

COMM 4226 Managing Organizational Conflict (4 Credits)
Conflict is a part of all businesses, government, and nonprofit organizations. It is a product of human existence and diversity in an interrelated society. Though many people fear conflict as a threat to a productive work environment, it is not conflict itself that jeopardizes harmony but unresolved conflict, and the associated costs are well documented. Organizations increasingly recognize that conflict need not carry costly financial and interpersonal burdens and can, in fact, serve as a productive change agent. Students in this course explore the nature and sources of organizational conflict and facilitate development of practical skills to recognize and manage conflict using case studies, exercises, speakers, and field research. Students are introduced to the concept of various conflict resolution methods, including individual initiative, negotiation, mediation, restorative justice, and arbitration. This course is well suited for leaders and aspiring leaders in any profession who want to increase their interpersonal capability and enhance their value in organizations.

COMM 4235 Integrating Learning and Development Technologies (4 Credits)
Organizational learning and talent development are changing rapidly in the face of staggering technological advances. As organizations become increasingly decentralized, teams interact virtually, and collaboration becomes dependent on digital tools. In this context, it is imperative that learning and development professionals harness technology to meet the changing needs of individuals and the places/spaces in which they work. In this course, students explore the latest technological trends in Learning and Development, while also learning how to evaluate technologies for their appropriateness in meeting organizational learning and development goals. In recognition of the rapidly changing nature of this field, students also develop strategies for future learning to keep their work relevant and engaged.

COMM 4270 Forty-Hour Mediation (4 Credits)
This course is designed specifically for individuals interested in becoming mediators or integrating mediation skills into their current positions within (but not limited to) human resources, public service, healthcare, law, non-profit management, etc. The course satisfies the initial training requirements for professional mediators in accordance with the Mediation Association of Colorado (the MAC) and the Association for Conflict Resolution (ACR). The DU mediation training is distinctive for several reasons, including: small class size (limited to 24 people) and the opportunity to network with accomplished mediators and mediation coaches.

COMM 4301 Brand Management Strategies (4 Credits)
Organizations of all types – private, public, and nonprofit – increasingly recognize that a strong brand can ultimately become one of an organization's greatest assets. Executing on a strategy designed to build long-lasting brand recognition, resonance, and loyalty is a critical marketing responsibility. In today's dynamic business landscape, brand management requires complex decisions to create meaning and value for consumers. This course covers the essential components of branding with a focus on how to maintain consistent alignment between brand vision and marketing strategies.
COMM 4318 Mobile Marketing (4 Credits)
Mobile technologies can be found in your pocket, on your coffee table, at your workplace, and even on your wrist. If a business's marketing plan doesn't include mobile, that business plan simply isn't complete. The growing field of mobile marketing has created a new set of communication imperatives and business opportunities. This course is designed to familiarize students to the tools used to implement a robust mobile marketing strategy. Current and future organization and business leaders will learn mobile marketing best practices and gain the knowledge to implement and analyze the results of their mobile marketing efforts.

COMM 4320 Social Media Strategy (4 Credits)
Social media is a critical communication channel that is constantly evolving. Learn to plan, manage, measure, and anticipate social media efforts that add value to your target audiences through organic and paid options. In this course, students will explore motivations that prompt audiences to engage, identify the tools and technology needed to execute social media campaigns or communication interventions, and devise effective strategy and tactics needed to cut through the noise. Create a stronger online presence, show personality, and build your brand by gaining skills needed to successfully communicate on behalf of any organization or individual using social media. Through online research, case studies, and practical exercises, students will gain first-hand knowledge of social media techniques and how to leverage social media as a communications tool.

COMM 4321 Digital Marketing Communication (4 Credits)
At its most basic level, digital marketing leverages digital technologies and media that allow brands to promote their products and services to very targeted audiences in a highly measurable way. Digital marketing as a category has become so integral to overall marketing and communication efforts that the term “digital” as a differentiator may soon become obsolete. Digital marketing continues to grow and evolve, so the focus of this course is to provide an expansive grasp of digital marketing communication tactics, including how to utilize them and how to integrate them into the marketing mix. Through discussion, research, application, and evaluation of case studies and projects, students will learn about the essential tactics utilized by digital marketers.

COMM 4322 Digital Campaign Management (4 Credits)
Today's consumer expectations for relevant, engaging, and timely messages have made email marketing an essential component of the multichannel marketing mix. The creation and delivery of personalized, targeted messages to subscribers can drive both engagement and ROI. This course examines the development and integration of email marketing (including tools, copy, design, service providers, tracking and measurement) to enhance business relationships, encourage customer loyalty and acquire new customers.

COMM 4323 Marketing Analytics (4 Credits)
Marketing analytics leverages business metrics to better understand marketing performance and return on investment (ROI). Through data analysis, attribution modeling, and reporting, marketers are able to measure and optimize their initiatives. The focus of this class is on developing a performance measurement system for marketing channels, incorporating measuring website traffic, conducting market research, estimating usage patterns, and interpreting website visitor behavior. Key performance indicators are tied to marketing goals and tactical campaigns. Students conduct a review of online metrics, compare marketing analytics vendors, and develop ways to communicate performance.

COMM 4324 Search Marketing (4 Credits)
Search marketing is a communicator's medium and a vital part of any marketing mix. This type of digital marketing specifically focuses on increasing a website's visibility in the search engine results pages (SERPs) through organic Search Engine Optimization (SEO) and pay-per-click (PPC) while also drawing attention to quality website content or well-crafted paid ad messaging. This class will provide deep insight into the tools and tactics of search marketing. Students will learn what makes search marketing demanding and how to overcome the challenges presented by regular search engine algorithm updates, increasing mobile device usage, and the influence of social media. Two key techniques of SEM will be explored: search engine optimization (SEO) to improve results from the natural or organic listings, and paid search marketing, or pay-per-click (PPC), to deliver results from the sponsored listings within search engines. A variety of search practices, including mobile and local, will be explored.

COMM 4325 Digital Campaign Management (4 Credits)
Any successful marketing or communication campaign — digital or traditional — is dependent on many factors, from its strategic beginnings through its final readout. However, perhaps the most critical factors driving the success of a digital campaign are rooted within the human, technical, and business processes through which that campaign comes to life. Assuming a foundational understanding of digital marketing techniques (i.e., web, search marketing, social media, etc.), this course will focus on the practical management of digital marketing and communication campaign efforts, including planning, management, and measurement. Pre-requisite: COMM 4321.

COMM 4326 Digital Content Creation (4 Credits)
Content is at the heart of any communication intervention, and creating quality digital content requires an understanding of how digital users experience and consume content. Whether driving consumer behavior or keeping co-workers engaged and effective, quality content will help deliver messages clearly and persuasively. In this course, students explore the relationships between the strategies that drive content creation, the tools used to deliver messages, and the theory behind making content work for the target audience. In addition to hands-on exposure to a variety of content creation tools, students will learn key components of visual communication, the principles of user experience design, and how to match tools to strategies.

COMM 4701 Topics in Communication Management (4 Credits)
The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of communication, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects, such as ethics, human communication theory, or interpersonal communication. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.
COMM 4900 Experiential Learning in Communication Management (4 Credits)
This course is designed especially for students transitioning into the professional fields of communication. Through an experiential learning process, students will actively engage in their chosen communication field in order to develop the essential networking, writing, inquiry, and investigation skills required to be successful professional communicators. The course has three central components: first, students will develop professional networks to cultivate mentorship, gain intimate knowledge of the field, and become familiar with the field's norms and values. Second, students will strengthen their business-writing skills by creating industry-standard documents, communicating clearly and effectively, and activating their voice to convey their points with authenticity. Finally, students will explore their chosen field of communication to determine the current state of the field and its future trajectory, while also exploring how they may adapt and grow to meet the demands of the future.

COMM 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.

COMM 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

COMM 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

COMM 4905 Storytelling through Research and Measurement (4 Credits)
Whether conducting a needs assessment, attempting to understand your audience, or developing a new product, communication professionals regularly harness the power of research, measurement, and storytelling. Divided into three parts that culminate in an individualized project, this course explores essential research methods; strategies for measuring the impact of communication interventions; and the fundamentals of telling data-driven stories that persuade stakeholders and demonstrate ROI. On their own, each of these pieces is informative; together they enable confident problem solving, enhance organizational decision making, and influence external stakeholder behavior.

COMM 4920 Portfolio Capstone (4 Credits)
The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the seminar produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field. Students must complete the Portfolio Capstone with a grade of B or better.

COMM 4980 Internship (1-4 Credits)
The Organizational and Professional Communication Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all COMM students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.
COMM 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. Before registering for the independent study, the student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices. Independent Study is offered only on a for-credit basis.

COMM 4992 Directed Study (1-5 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

Environmental Policy and Management

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Master of Science in Environmental Policy and Management with a Concentration in Energy and Sustainability

The Energy and Sustainability master’s degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Students are prepared to enter the dynamic industry of energy and sustainability, which is emerging in importance and popularity around the world. Students will establish a solid foundation in energy and sustainability concepts, and then learn to integrate environmental systems, put policy into practice, and develop effective sustainability plans. Regulatory and policy issues related to energy development, implementation, and use, energy finance, and alternative and renewable energy processes will be examined, along with renewable energy sources, plans for integration, and trends within the field of energy.

Sustainable systems must be considered and developed in the areas of growth, transportation, energy, policy, and business models in order to head off looming environmental, political, and humanitarian problems. This will be accomplished through a comprehensive study of sustainability in the areas of economic development, green building, land use, transportation, and water resources. Customize your Environmental Policy and Management master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

• Demonstrate a solid understanding of how non-renewable and renewable energy sources are developed, used, regulated, and financed
• Articulate a strong working knowledge of sustainability concepts
• Show an understanding of trends and issues in areas of traffic management, climate science, water supplies, and green buildings
• Develop plans for the integration of sustainable practices into products, business and marketing plans, environmental policies, and organizational processes
• Build finance schemes and marketing strategies for their plans so they can be presented to an organization leader as an executable idea

Master of Science in Environmental Policy and Management with a Concentration in Environmental Analytics and Reporting

The Environmental Analytics and Reporting master’s degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. This certificate and concentration emphasizes learning how to utilize the tools and insights of the data analytics revolution to perform sophisticated environmental analyses and reports. Students learn possible uses of data analytics in an era of sustainability and ever-increasing complexity to manage the environmental elements of their organizations more effectively. Constructively reporting these results, trends, and accomplishments is an important avenue of communication in any organization. Environmental professionals will learn to identify and obtain a data set from a publicly traded company, from their own organization, or another public or governmental source suitable to use for carrying out analytics projects. Clear questions will be formulated and framed; analytical algorithms will be run on cloud technologies to reveal relevant insight into environmental issues. Context for these analyses will be provided through study of ISO 14001, fundamental U.S. environmental statutes, and governmental and NGO environmental reporting standards and requirements.

This degree prepares students to do the following:
• Analyze the value, function, and use of data and analytics and assess the promise of cognitive computing techniques
• Assess effective management techniques for analytics projects by evaluating the people and process implementations and changes associated with data and analytics efforts
• Differentiate between the most commonly used analytical techniques and formulate business cases and define an analytics modeling pilot project for data and analytics initiatives specific to your field
• Evaluate how and when to use analytics to create or enhance business value.
• Apply the ISO 14001 framework as a proactive and systematic approach to environmental management develop ISO 14001 environmental policies including objectives and targets, implement an environmental management program, monitor and measure program results, and review the program to ensure continual improvement.
• Make informed judgments based on the requirements of, and interrelationships of, key environmental statutes including: National Environmental Policy Act (NEPA), Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Emergency Planning and Community Right-to-Know Act (EPCRA), Occupational Safety and Health Act (OSHA), and related toxics laws; and the legal system and the roles of Congress, the President, executive agencies, states, and courts in shaping environmental laws.
• Conduct analyses and craft reports addressing SEC requirements and NGO standards, e.g., the 30 GRI environmental performance indicators, and Sustainability Accounting Standards Board recommendations.
• Design and perform analyses on a structured data set using a choice of software analysis and statistics tools and craft the environmental reporting elements of organizational reports addressing matters such as sustainability, risk, efficiency, impacts, permit status, routine releases, unplanned events, strategies, operations monitoring, management monitoring, ethics, stakeholder perceptions, innovation, and collaboration.

Master of Science in Environmental Policy and Management with a Concentration in Environmental, Health and Safety

The Environmental, Health and Safety master’s degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Whether students currently work in environmental and safety positions for commercial or government operations, or aspire to, the Environmental, Health and Safety master’s degree prepares them with the management skills and technical knowledge required to become a health and safety manager or officer. Students will begin with the foundational statutory and regulatory origins of environmental health and safety compliance management and learn how to effectively and efficiently streamline resources to integrate safety and health regulations across sectors and industries.

Critical instruction is given on relevant training, emergency planning, procedural operations, and the management of worker health and safety, in addition to environmental management and reporting systems and business and finance strategy. Customize your Environmental Policy and Management master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:
• Evaluate the benefits and barriers to integration of environmental health and safety including the fundamentals of safety management, training requirements, emergency planning, setting goals, objectives, and operating procedures, and how management views environmental health and safety
• Describe the Occupational Safety and Health Act and other rules governing workplace safety with emphasis on the overlap between safety and environmental laws, OSHA’s inspection and enforcement authority, employee and employer rights and record keeping requirements
• Develop and apply compliance programs including how to reduce losses of direct and indirect costs due to accidents and how to convince management and employees that safety programs are beneficial
• Investigate workplace safety topics including costs of accidents, investigation programs, practical application of worker’s compensation, confined space entry programs, injury/illness records and reporting, programs for new fall protective rules and personal protective equipment programs

Master of Science in Environmental Policy and Management with a Concentration in Environmental Management

The Environmental Management master’s degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Master’s degree students will learn environmental management and leadership essentials, providing them with critical knowledge related to technology, law, and economics as they each relate to the environment.
Facilitating environmental innovation, development plans, and integration will be discussed, along with essential permitting and regulatory issues that environmental managers need.

Students in the Environmental Management master’s concentration will receive engaging instruction from professional practitioners who work in the fields in which they teach in topics ranging from economics to law, leadership to regulations, as each topic relates to the environment. Designed for students seeking a combination of leadership, policy, and environmental issue education, the concentration prepares graduates to address and manage complex environmental systems. Customize your Environmental Management master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

• Examine the requirements and implementation strategies of the National Environmental Policy Act and the requirements of various federal agencies which are responsible for National Environmental Policy Act implementation.
• Critique Environmental Impact Statements and Environmental Assessments for regulatory compliance and thoroughness in disclosing environmental effects of proposed actions.
• Investigate the Resource Conservation and Recovery Act’s regulations governing performance requirements for treatment, storage and disposal of solid and hazardous waste generation and disposal.
• Explain and summarize developing trends in waste minimization, solid waste management and special waste controls.
• Demonstrate how to use the ISO 14001 framework as a proactive and systematic approach to environmental management and develop a complete program that integrates the ISO 14001 requirements with the existing strategic management methods of an organization.
• Assess personal leadership attributes and construct a personal leadership development plan that integrates leadership principles necessary for advancement including interpersonal communication and leading environmental innovation using the natural world as a model.

Master of Science in Environmental Policy and Management with a Concentration in Environmental Policy

The Environmental Policy master’s degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Designed for professionals working in organizations focused on environmental policy development or advocacy such as legislatures, regulatory agencies, consultants, and advocacy groups, the Environmental Policy master’s concentration provides students with policy analysis and development skills needed to serve as a senior analyst or manager within a policy-making organization.

Students will receive valuable instruction—from professional practitioners who work in the fields in which they teach—in topics ranging from economics to law, ethics to finance, as each topic relates to environmental policy. A master’s degree concentration in Environmental Policy will prepare students for careers that impact environmental decisions. Foundational public environmental policy analysis will be discussed, including contemporary methods of policy analysis, agenda-setting, models of policy formulation and implementation, and policy evaluation. Customize your Environmental Policy and Management master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

• Outline the legal and philosophical underpinnings of the environmental movement, both in the United States and internationally, including the use of international laws and treaties to mitigate, lessen, or eliminate damage to various aspects of the environment.
• Analyze global environmental issues including endangered species, overpopulation, resource depletion, biodiversity, ocean dumping, deforestation, desertification, global warming, and ozone depletion.
• Explain how to encourage sustainability through consumption patterns that ensure a continuing resource supply for future generations and through achieving a balance between environmental protection and economic development.
• Describe the field of public environmental policy including contemporary methods of policy analysis, agenda-setting, models of policy formulation and implementation, and policy evaluation.
• Examine ethical considerations in environmental management and decision making and explore various philosophies of humankind’s relationship with the environment.
• Develop and express a personal philosophy addressing one’s own role in the regulatory, technical, scientific, and financial management of the environment.
Master of Science in Environmental Policy and Management with a Concentration in Natural Resource Management

The Natural Resource Management master's degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Designed for professionals whose primary interest is the management of natural resources for organizations which plan or regulate the use of natural resources, or commercial operations which extract and use natural resources (e.g., mining or forestry management), the Natural Resource Management concentration prepares students to work in professional roles overseeing natural resource management for commercial or government purposes. Learn historic and contemporary management systems and principles, along with key policies and procedures needed to excel in the public or private sectors related to natural resource management.

Degree-seeking students are exposed to a breadth of knowledge pertaining to natural resources, water management, zoning, forestry management, mining, and land use issues. Focused skills concentrate on technology, management, and communication knowledge that is critical to success in the natural resource management field. Customize your Environmental Policy and Management master's degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

• Analyze the practical and theoretical basis of recreational land use in the context of ecosystem management and explore the responsibilities of various federal, state and local agencies, environmental and wildlife interest groups, and other organizations involved in wildlife management issues.

• Discuss the statutory and regulatory policies and current issues regarding the management and use of lands in wilderness systems, wild and scenic river corridors, parks, and open spaces.

• Explain historic and contemporary management systems and principles by examining key policies, guidelines, and planning procedures of governmental agencies, resource-based industry and the public.

• Describe how the biological, physical, social, and economic aspects of lands, waters, and natural resources work together to achieve sustainable conditions that encourage preservation and management of natural resources for recreation.

• Investigate the basic principles, trends, challenges, and controversies of the administration of maintaining certain wildlife species including threats from water and air pollution, poaching and other illegal actions.

• Characterize the field of public environmental policy including contemporary methods of policy analysis, agenda-setting, models of policy formulation and implementation, and policy evaluation.

Master of Science in Environmental Policy and Management with a Concentration in Supply Chain Management

The Supply Chain Management master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students learn tactical innovation and change management using vision, values, and mission as an overall guide. Led by professional practitioners who work in the fields in which they teach, leadership classes provide professionals the skills to manage change, encourage innovation, and develop effective strategic initiatives while fulfilling an organization's mission.

The Supply Chain Management concentration will teach students to apply principles of environmental sustainability as they plan for and manage the end-to-end flow of products, including closed loop supply chains. Students will explore the many links in the supply chain that have significant impact on the environment, from raw material sourcing to energy use to transportation. Students will gain hands-on experience, learn new technologies, and develop skills ranging from logistics to organizational development.

This degree prepares students to do the following:

• Articulate the six pillars of supply chain management to diagram the process to appraise their role in the market system.

• Apply the six pillars of supply chain management to realistic problem scenarios to develop strategies to diagnose and address future supply chain problems.

• Assess supply chains using a multidimensional perspective that includes connections between supply chain processes and fundamental business topics such as financial management and technology.

• Solve supply chain problems using a nonlinear process that addresses connections between supply chain pillars, market trends, and business best practices.

• Apply best practices to address an authentic supply chain problem in a work setting.
Certificate in Environmental Policy and Management with a Concentration in Energy and Sustainability

The graduate certificate in Energy and Sustainability concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Busy adults who already hold master's degrees, or professionals who work within the field of energy development, will benefit from a graduate certificate in Energy and Sustainability, a dynamic field that is emerging in importance and popularity. Ideal for students seeking further study related to sustainable systems, energy development and use, energy finance, and alternative and renewable energy process, the graduate certificate in Energy and Sustainability may be earned online or on campus in the evenings. Students will develop integration strategies, build finance schemes and marketing plans, articulate a strong working knowledge of sustainability concepts, and learn about energy and sustainability systems. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

Sustainable systems must be considered and developed in the areas of growth, transportation, energy, policy, and business models in order to head off looming environmental, political, and humanitarian problems. This will be accomplished through a comprehensive study of sustainability in the areas of economic development, green building, land use, transportation, and water resources. Credits earned through this graduate certificate may apply toward a master's degree in Environmental Policy and Management.

Certificate in Environmental Policy and Management with a Concentration in Environmental Analytics and Reporting

The Environmental Analytics and Reporting certificate may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. This certificate emphasizes learning how to utilize the tools and insights of the data analytics revolution to perform sophisticated environmental analyses and reports. Students learn possible uses of data analytics in an era of sustainability and ever-increasing complexity to manage the environmental elements of their organizations more effectively. Constructively reporting these results, trends, and accomplishments is an important avenue of communication in any organization. Environmental professionals will learn to identify and obtain a data set from a publicly traded company, from their own organization, or another public or governmental source suitable to use for carrying out analytics projects. Clear questions will be formulated and framed; analytical algorithms will be run on cloud technologies to reveal relevant insight into environmental issues. Context for these analyses will be provided through study of ISO 14001, fundamental U.S. environmental statutes, and governmental and NGO environmental reporting standards and requirements. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

Certificate in Environmental Policy and Management with a Concentration in Environmental, Health and Safety

The graduate certificate in Environmental, Health and Safety concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Designed and delivered for professionals who already holds a master's degree, or for professionals looking to further their environmental career with a new skillset, the graduate certificate in Environmental, Health and Safety concentration may be earned online or on campus in the evenings. Certificate students will explore the foundational statutory and regulatory origins of environmental health and safety compliance management and learn how to effectively and efficiently streamline resources to integrate safety and health regulations across sectors and industries. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

Students pursuing this graduate certificate, either online or on campus, will acquire environmental management skills and technical knowledge that prepare them to work with health and safety statutes and regulations, management of worker health and safety issues, environmental management and reporting systems, and business and finance. Credits earned through this graduate certificate may apply toward a master’s degree in Environmental Policy and Management.

Certificate in Environmental Policy and Management with a Concentration in Environmental Management

The graduate certificate in Environmental Management concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Environmental Management certificate students will develop essential management skills and technical knowledge required to function in a variety of managerial positions within the environmental field. Certificate students learn to facilitate environmental innovation and integrate systems while complying with regulatory and policy matters.

The Environmental Management certificate is designed for busy adults who already hold a master's degree, or for professionals looking to further their environmental career with a new skillset in leadership, policy, and environmental issues. The graduate certificate in Environmental Management concentration provides detailed instruction on statutes and regulations, management and reporting systems, business and finance strategy, and communication and negotiation skills as they each relate to environmental management. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework. Environmental Management graduate certificate students take master's-level
classes but do not complete a capstone project. Credits earned through this graduate certificate may apply toward a master’s degree in Environmental Policy and Management.

**Certificate in Environmental Policy and Management with a Concentration in Environmental Policy**

The graduate certificate in Environmental Policy concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Designed and delivered for professionals who already hold master’s degrees or for those looking to further their environmental career with a new skillset, the graduate certificate in Environmental Policy concentration is ideal for adult students seeking an innovative, career relevant graduate certificate. Environmental policy analysis at the public level will be discussed, including contemporary methods for analytical model development, implementation, and evaluation. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

Environmental Management and Policy students who are currently in the field of environmental policy, or for those aspiring to join the field, will develop skills through the online graduate certificate program that will serve them well in a policy making organization, such as values and ethics, communication and negotiation, policy analysis, and environmental laws and regulations. Environmental Policy graduate certificate students take master’s level classes, but do not complete a capstone project. Credits earned through this graduate certificate may apply toward a master’s degree in Environmental Policy and Management.

**Certificate in Environmental Policy and Management with a Concentration in Natural Resource Management**

The Natural Resource Management graduate certificate concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Designed for professionals who already hold master’s degrees, or for busy adults looking to further their environmental career with a new skillset, the graduate certificate in Natural Resource Management will prepare students to work in natural resource management roles for commercial or government organizations. Certificate students will learn historic and contemporary management systems and principles, in addition to essential policies and procedures needed to thrive in natural resource management in the public or private sectors. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

The graduate certificate is designed for professionals whose primary interest is the management of natural resources for organizations which plan or regulate the use of natural resources, or commercial operations which extract and use natural resources. Graduate certificate students will develop organizational leadership skills and learn environmental statutes and regulations pertaining to natural resource management. Credits earned through this graduate certificate may apply toward a master’s degree in Environmental Policy and Management.

**SPECIALIZED GRADUATE CERTIFICATE IN ENVIRONMENTAL ANALYTICS AND REPORTING**

The Environmental Analytics and Reporting specialized graduate certificate emphasizes learning how to utilize the tools and insights of the data analytics revolution to perform sophisticated environmental analyses and reports. Students learn possible uses of data analytics in an era of sustainability and ever-increasing complexity to manage the environmental elements of their organizations more effectively. Constructively reporting these results, trends, and accomplishments is an important avenue of communication in any organization. Environmental professionals will learn to identify and obtain a data set from a publicly traded company, from their own organization, or another public or governmental source suitable to use for carrying out analytics projects. Clear questions will be formulated and framed; analytical algorithms will be run on cloud technologies to reveal relevant insight into environmental issues. Context for these analyses will be provided through study of ISO 14001, fundamental U.S. environmental statutes, and governmental and NGO environmental reporting standards and requirements.

**SPECIALIZED GRADUATE CERTIFICATE IN ENVIRONMENTAL, HEALTH AND SAFETY**

The specialized graduate certificate in Environmental, Health and Safety may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Students will explore the foundational statutory and regulatory origins of environmental health and safety compliance management and learn how to effectively and efficiently streamline resources to integrate safety and health regulations across sectors and industries.

Students pursuing this certificate will acquire environmental management skills and technical knowledge that prepare them to work with health and safety statutes and regulations, management of worker health and safety issues, environmental management and reporting systems, and business and finance. Credits earned through the specialized graduate certificate may apply toward a master’s degree in Environmental Policy and Management.

**SPECIALIZED GRADUATE CERTIFICATE IN ENVIRONMENTAL MANAGEMENT**

The specialized graduate certificate in Environmental Management may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. The Environmental Management specialized graduate certificate is designed for busy adults who already hold a master’s degree, or for professionals looking to further their environmental career with a new skillset in
leadership, policy, and environmental issues. The graduate certificate in Environmental Management concentration provides detailed instruction on statutes and regulations, management and reporting systems, business and finance strategy, and communication and negotiation skills as they each relate to environmental management. Students will take master’s-level classes but do not complete a capstone project. Credits earned through this certificate may apply toward a master’s degree in Environmental Policy and Management.

**SPECIALIZED GRADUATE CERTIFICATE IN ENVIRONMENTAL POLICY**

The specialized graduate certificate in Environmental Policy may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Designed and delivered for professionals who already hold master’s degrees or for those looking to further their environmental career with a new skillset. Environmental policy analysis at the public level will be discussed, including contemporary methods for analytical model development, implementation, and evaluation.

Environmental Management and Policy students will develop skills that will serve them well in a policy making organization, such as values and ethics, communication and negotiation, policy analysis, and environmental laws and regulations. Environmental Policy specialized graduate certificate students take master’s level classes, but do not complete a capstone project. Credits earned through this graduate certificate may apply toward a master’s degree in Environmental Policy and Management.

**SPECIALIZED GRADUATE CERTIFICATE IN ENERGY AND SUSTAINABILITY**

The specialized graduate certificate in Energy and Sustainability may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Students will develop integration strategies, build finance schemes and marketing plans, articulate a strong working knowledge of sustainability concepts, and learn about energy and sustainability systems.

Sustainable systems must be considered and developed in the areas of growth, transportation, energy, policy, and business models in order to head off looming environmental, political, and humanitarian problems. This will be accomplished through a comprehensive study of sustainability in the areas of economic development, green building, land use, transportation, and water resources. Credits earned through this certificate may apply toward a master’s degree in Environmental Policy and Management.

**SPECIALIZED GRADUATE CERTIFICATE IN NATURAL RESOURCE MANAGEMENT**

The Natural Resource Management specialized graduate certificate may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Students will learn historic and contemporary management systems and principles, in addition to essential policies and procedures needed to thrive in natural resource management in the public or private sectors.

The certificate is designed for professionals whose primary interest is the management of natural resources for organizations which plan or regulate the use of natural resources, or commercial operations which extract and use natural resources. Students will develop organizational leadership skills and learn environmental statutes and regulations pertaining to natural resource management. Credits earned through this certificate may apply toward a master’s degree in Environmental Policy and Management.

**Master's Degree Admission**

**Degree and GPA Requirements**

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

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

English Conditional Admission: Master’s degree applicants who do not meet the required level of English proficiency may be considered for conditional acceptance if all other admission criteria are met. Prior to enrolling in any graduate-level coursework, English Conditional Acceptance
Certificate Admission

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

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

Master of Science in Environmental Policy and Management with a Concentration in Energy and Sustainability

Degree Requirements

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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<td>EPM 4003</td>
<td>Environmental Finance and Economics</td>
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<td>EPM 4200</td>
<td>Environmental Protection Law</td>
<td>4</td>
</tr>
<tr>
<td>EPM 4001</td>
<td>Environmental Foundations and Principles</td>
<td>4</td>
</tr>
<tr>
<td>or EPM 4115</td>
<td>Introduction to Ecology</td>
<td></td>
</tr>
<tr>
<td>or EPM 4710</td>
<td>Environmental Project Management</td>
<td></td>
</tr>
<tr>
<td>EPM 4910</td>
<td>Research Practices and Applications</td>
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</tr>
<tr>
<td>EPM 4901</td>
<td>Capstone Project</td>
<td>4</td>
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<tr>
<td>or EPM 4902</td>
<td>Capstone Seminar</td>
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</tr>
<tr>
<td>EPM 4002</td>
<td>Integrated Environmental Systems</td>
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<tr>
<td>EPM 4230</td>
<td>Renewable and Alternative Energies</td>
<td>4</td>
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<td>EPM 4232</td>
<td>Sustainability Policy and Practice</td>
<td>4</td>
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<td>EPM 4233</td>
<td>Sustainable Transportation</td>
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Elective requirements (Choose three courses):

- EPM 4234 | Climate Change and Science                        |
- EPM 4235 | Green Building                                   |
- EPM 4236 | Nuclear and Hydrogen Energy                       |
- EPM 4238 | Water and Food Sustainability                      |
- EPM 4980 | Internship                                        |

Total Credits 48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
Master of Science in Environmental Policy and Management with a Concentration in Environmental Analytics and Reporting

Degree Requirements

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<td>EPM 4200</td>
<td>Environmental Protection Law</td>
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</tr>
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<td>EPM 4001</td>
<td>Environmental Foundations and Principles</td>
<td>4</td>
</tr>
<tr>
<td>or EPM 4115</td>
<td>Introduction to Ecology</td>
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</tr>
<tr>
<td>or EPM 4710</td>
<td>Environmental Project Management</td>
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<td>EPM 4910</td>
<td>Research Practices and Applications</td>
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<tr>
<td>EPM 4901 &amp; 4902</td>
<td>Capstone Project &amp; Seminar</td>
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Concentration requirements

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<td>EPM 4615</td>
<td>Analytics II</td>
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<td>EPM 4620</td>
<td>Environmental Reporting Standards and Models</td>
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<td>EPM 4625</td>
<td>Environmental Analysis and Reporting Project</td>
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Elective requirements (Choose three courses):

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<th>Code</th>
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<tr>
<td>EPM 4355</td>
<td>ISO 14001 Standards</td>
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<tr>
<td>EPM 4500</td>
<td>Leadership for Environmental Managers</td>
<td></td>
</tr>
<tr>
<td>EPM 4710</td>
<td>Environmental Project Management</td>
<td></td>
</tr>
<tr>
<td>EPM 4980</td>
<td>Internship</td>
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</tbody>
</table>

Total Credits: 48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Science in Environmental Policy and Management with a Concentration in Environmental, Health and Safety

Degree Requirements

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<thead>
<tr>
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<td>or EPM 4710</td>
<td>Environmental Project Management</td>
<td></td>
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<tr>
<td>EPM 4910</td>
<td>Research Practices and Applications</td>
<td>4</td>
</tr>
<tr>
<td>EPM 4901 &amp; 4902</td>
<td>Capstone Project &amp; Seminar</td>
<td>4</td>
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Concentration requirements

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>EPM 4280</td>
<td>RCRA Permitting and Compliance</td>
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<tr>
<td>EPM 4510</td>
<td>Environmental, Health &amp; Safety</td>
<td>4</td>
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<tr>
<td>EPM 4520</td>
<td>OSHA Law</td>
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<td>EPM 4525</td>
<td>Workplace Safety Management</td>
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Elective requirements (Choose three courses):

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<td>EPM 4980</td>
<td>Internship</td>
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</table>
Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Science in Environmental Policy and Management with a Concentration in Environmental Management

Degree Requirements

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<tr>
<th>Code</th>
<th>Title</th>
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<td>EPM 4140</td>
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Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Science in Environmental Policy and Management with a Concentration in Environmental Policy

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<td>Core coursework requirements</td>
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<td>EPM 4003</td>
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**Concentration requirements**

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<tbody>
<tr>
<td>EPM 4150</td>
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<td>EPM 4232</td>
<td>Sustainability:Policy and Practice</td>
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<td>EPM 4390</td>
<td>Environmental Policy Analysis</td>
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<td>EPM 4400</td>
<td>Environmental Values and Ethics</td>
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**Elective requirements (Choose three courses):**

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**Total Credits**

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<td>EPM 4910</td>
<td>Research Practices and Applications</td>
<td>4</td>
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<td>EPM 4901</td>
<td>Capstone Project</td>
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<tr>
<td>or EPM 4902</td>
<td>Capstone Seminar</td>
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**Concentration requirements**

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<tr>
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<tbody>
<tr>
<td>EPM 4150</td>
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<td>EPM 4232</td>
<td>Sustainability:Policy and Practice</td>
<td>4</td>
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<tr>
<td>EPM 4390</td>
<td>Environmental Policy Analysis</td>
<td>4</td>
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<tr>
<td>EPM 4400</td>
<td>Environmental Values and Ethics</td>
<td>4</td>
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**Elective requirements (Choose three courses):**

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<tbody>
<tr>
<td>EPM 4002</td>
<td>Integrated Environmental Systems</td>
<td></td>
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<tr>
<td>EPM 4108</td>
<td>Impacts of Recreational Use</td>
<td></td>
</tr>
<tr>
<td>EPM 4140</td>
<td>NEPA</td>
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<tr>
<td>EPM 4236</td>
<td>Nuclear and Hydrogen Energy</td>
<td></td>
</tr>
<tr>
<td>EPM 4460</td>
<td>Land And Visual Resources</td>
<td></td>
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</tbody>
</table>

**Minimum number of credits required: 48**

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

**Master of Science in Environmental Policy and Management with a Concentration in Natural Resource Management**

**Degree Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>EPM 4000</td>
<td>Environmental Protection Law</td>
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<tr>
<td>EPM 4001</td>
<td>Environmental Foundations and Principles</td>
<td>4</td>
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<tr>
<td>or EPM 4115</td>
<td>Introduction to Ecology</td>
<td></td>
</tr>
<tr>
<td>or EPM 4710</td>
<td>Environmental Project Management</td>
<td></td>
</tr>
<tr>
<td>EPM 4910</td>
<td>Research Practices and Applications</td>
<td>4</td>
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<tr>
<td>or EPM 4902</td>
<td>Capstone Seminar</td>
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**Concentration requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>EPM 4108</td>
<td>Impacts of Recreational Use</td>
<td>4</td>
</tr>
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<td>EPM 4120</td>
<td>Introduction to Natural Resource Management</td>
<td>4</td>
</tr>
<tr>
<td>EPM 4220</td>
<td>Endangered Species and Wildlife</td>
<td>4</td>
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</table>
**Minimum number of credits required: 48**

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**MASTER OF SCIENCE IN ENVIRONMENTAL POLICY AND MANAGEMENT WITH A CONCENTRATION IN supply chain management**

**Degree Requirements**

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<tr>
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<td>EPM 4003</td>
<td>Environmental Finance and Economics</td>
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<td>EPM 4200</td>
<td>Environmental Protection Law</td>
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<td>EPM 4001</td>
<td>Environmental Foundations and Principles</td>
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<td>or EPM 4710</td>
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<td>EPM 4901</td>
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<td>or EPM 4902</td>
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<td><strong>Concentration requirements</strong></td>
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<td>TRAN 4100</td>
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<td>TRAN 4110</td>
<td>Fundamentals of Supply Chain Planning</td>
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</tr>
<tr>
<td>TRAN 4120</td>
<td>Fundamentals of Supply Chain Execution</td>
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<td>TRAN 4130</td>
<td>Supply Chain Management Practicum</td>
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<td>TRAN 4140</td>
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<td>TRAN 4150</td>
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<td>EPM 4280</td>
<td>RCRA Permitting and Compliance</td>
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<tr>
<td>EPM 4355</td>
<td>ISO 14001 Standards</td>
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<tr>
<td>EPM 4610</td>
<td>Analytics I</td>
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<td>EPM 4710</td>
<td>Environmental Project Management</td>
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<tr>
<td>EPM 4620</td>
<td>Environmental Reporting Standards and Models</td>
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<td><strong>Total Credits</strong></td>
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</table>

**Minimum number of credits required: 48**

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
## Certificate in Environmental Policy and Management with a Concentration in Energy and Sustainability

### Program Requirements

<table>
<thead>
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<th>Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td><strong>Concentration requirements</strong></td>
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<tr>
<td>EPM 4002</td>
<td>Integrated Environmental Systems</td>
<td>4</td>
</tr>
<tr>
<td>EPM 4230</td>
<td>Renewable and Alternative Energies</td>
<td>4</td>
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<tr>
<td>EPM 4232</td>
<td>Sustainability: Policy and Practice</td>
<td>4</td>
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<tr>
<td>EPM 4233</td>
<td>Sustainable Transportation</td>
<td>4</td>
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<td></td>
<td><strong>Elective requirements (Choose two courses):</strong></td>
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<tr>
<td>EPM 4234</td>
<td>Climate Change and Science</td>
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<tr>
<td>EPM 4235</td>
<td>Green Building</td>
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<tr>
<td>EPM 4236</td>
<td>Nuclear and Hydrogen Energy</td>
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<tr>
<td>EPM 4238</td>
<td>Water and Food Sustainability</td>
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<tr>
<td>EPM 4980</td>
<td>Internship</td>
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<td><strong>Total Credits</strong></td>
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Minimum number of credits required: 24

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## Certificate in Environmental Policy and Management with a Concentration in Environmental Analytics and Reporting

### Program Requirements

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</tr>
<tr>
<td>EPM 4610</td>
<td>Analytics I</td>
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<tr>
<td>EPM 4615</td>
<td>Analytics II</td>
<td>4</td>
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<tr>
<td>EPM 4620</td>
<td>Environmental Reporting Standards and Models</td>
<td>4</td>
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<tr>
<td>EPM 4625</td>
<td>Environmental Analysis and Reporting Project</td>
<td>4</td>
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<tr>
<td>EPM 4200</td>
<td>Environmental Protection Law</td>
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</tr>
<tr>
<td>EPM 4355</td>
<td>ISO 14001 Standards</td>
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Minimum number of credits required: 24

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## Certificate in Environmental Policy and Management with a Concentration in Environmental, Health and Safety

### Program Requirements

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<tr>
<td>EPM 4280</td>
<td>RCRA Permitting and Compliance</td>
<td>4</td>
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<tr>
<td>EPM 4510</td>
<td>Environmental, Health &amp; Safety</td>
<td>4</td>
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<tr>
<td>EPM 4520</td>
<td>OSHA Law</td>
<td>4</td>
</tr>
<tr>
<td>EPM 4525</td>
<td>Workplace Safety Management</td>
<td>4</td>
</tr>
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<td><strong>Elective requirements (Choose two courses):</strong></td>
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<tr>
<td>EPM 4002</td>
<td>Integrated Environmental Systems</td>
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<tr>
<td>EPM 4500</td>
<td>Leadership for Environmental Managers</td>
<td></td>
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<tr>
<td>EPM 4705</td>
<td>Land Use Planning</td>
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<td>EPM 4980</td>
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Minimum number of credits required: 24
Minimum number of credits required: 24

Certificate in Environmental Policy and Management with a Concentration in Environmental Management

Program Requirements

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<td>EPM 4140</td>
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<td>EPM 4355</td>
<td>ISO 14001 Standards</td>
<td>4</td>
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<td>EPM 4500</td>
<td>Leadership for Environmental Managers</td>
<td>4</td>
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Total Credits 24

Minimum number of credits required: 24

Certificate in Environmental Policy and Management with a Concentration in Environmental Policy

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<td>EPM 4002</td>
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<tr>
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<td>Impacts of Recreational Use</td>
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Total Credits 24

Minimum number of credits required: 24

Certificate in Environmental Policy and Management with a Concentration in Natural Resource Management

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<td>EPM 4236</td>
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<tr>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
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</tr>
<tr>
<td>EPM 4460</td>
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Minimum number of credits required: 24

### SPECIALIZED GRADUATE CERTIFICATE IN environmental analytics and reporting

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<td>Environmental Reporting Standards and Models</td>
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Total Credits 16

### SPECIALIZED GRADUATE CERTIFICATE IN environmental, health and safety

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<td>EPM 4280</td>
<td>RCRA Permitting and Compliance</td>
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<td>Environmental, Health &amp; Safety</td>
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<td>EPM 4520</td>
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<td>EPM 4525</td>
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### SPECIALIZED GRADUATE CERTIFICATE IN environmental management

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<tr>
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Total Credits 16

### SPECIALIZED GRADUATE CERTIFICATE IN environmental policy

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<td>EPM 4150</td>
<td>Global Environmental Law and Policy</td>
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<td>EPM 4390</td>
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Total Credits 16

### SPECIALIZED GRADUATE CERTIFICATE IN energy and sustainability

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<td>Renewable and Alternative Energies</td>
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<tr>
<td>EPM 4233</td>
<td>Sustainable Transportation</td>
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Total Credits 16

### SPECIALIZED GRADUATE CERTIFICATE IN natural resource management

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<tr>
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<tbody>
<tr>
<td>EPM 4108</td>
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<tr>
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<td>Endangered Species and Wildlife</td>
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Total Credits 16
Courses

EPM 4001 Environmental Foundations and Principles (4 Credits)

Each major federal environmental law has a basis in protecting human health, as well as the environment. Although protection of the environment is claimed to be the purpose of the law, protection of the public’s health ultimately becomes its foremost effort. This course provides an overview of how government institutions address environmental health concerns, develop policy, apply the law, and implement environmental public health protections. In addition, how environmental health law is implemented by agencies; the responsibilities of local, state and federal agencies; the rights of the citizens subject to these rules; and the role of the courts throughout the process are explored.

EPM 4002 Integrated Environmental Systems (4 Credits)

The earth as a whole is comprised of many systems that affect the environment. Some have large wide ranging reach, while others are restricted to a relatively small area. Included is everything in between. Actions in one area or system may have unintended secondary and tertiary consequences in that system or others. This course uses various tools and materials to study a few environmental systems and determine connections, consequences, impacts, barriers, decision making, life cycle costs, etc.

EPM 4003 Environmental Finance and Economics (4 Credits)

This class provides an overview of economics and finance in an environmental context. Topics include an overview of the economic system, efficiency, equity, market failure, environmental regulation, benefit-cost analysis, valuing the environment, pollution control, energy, conservation of natural resources, performance metrics, risk and return, time value of money, cost of capital, returns on investments, and standard financial reports. The class makes use of reading assignments, written assignments, case studies, and class participation. The course emphasizes relationship between business management and environmental quality, and provides students with a financial and economic decision-making framework for understanding and analyzing environmental issues.

EPM 4040 Wetland Ecology and Management (4 Credits)

This course provides a detailed examination of aquatic communities and habitats with an emphasis on freshwater systems. The recognition, identification, classification, and maintenance requirements of various wetland communities are stressed. Students analyze Section 404 of the Clean Water Act and the permitting process. Guidelines for placing dredge and fill materials in wetlands and other construction projects that directly or indirectly affect these areas are reviewed. Students explore concepts related to regulatory enforcement, mitigation, and the need for additional policies and actions to sustain as well as protect these critical communities.

EPM 4108 Impacts of Recreational Use (4 Credits)

The practical and theoretical basis of recreational use of public and private lands is examined in the context of ecosystem management. The statutory and regulatory policies and current issues regarding the management and use of lands in wilderness systems, wild and scenic river corridors, parks, and open spaces are discussed in detail. The impacts of recreational uses on the environment and conflicts with other uses of land and resources are discussed. Land use planning policies and decisions which respond to recreation, wilderness and open space issues are examined. Field trips to Rocky Mountain National Park, Chatfield State Park, or other outdoor recreation sites will be scheduled to supplement classroom meetings.

EPM 4115 Introduction to Ecology (4 Credits)

This course examines the concepts of the ecosystem, populations, communities, the flows of energy, material cycles, and the necessity of diversity. Concepts including the unity of organisms and inseparable interactions with the physical environment are analyzed. Class discussions include topics such as the formation, distribution, and organization of ecological communities; plant succession and nutrient cycling; evolutionary trends of plant and animal populations; and species interactions in subalpine and alpine forests, prairies, and plains.

EPM 4120 Introduction to Natural Resource Management (4 Credits)

This course provides an introduction to natural resource management with an overview of historic and contemporary management systems and principles. Students examine key policies, guidelines, and planning procedures of governmental agencies, resource-based industry and the public. Topics include the simultaneous consideration of biological, physical, social, and economic aspects of lands, waters, and natural resources to achieve sustainable conditions. Other topics are multiple use/sustained yield management; soil and water conservation and protection; use, restoration, and preservation of renewable and non-renewable resources; and the preservation and management of natural resources for recreation, spiritual renewal, and other amenity values.

EPM 4140 NEPA (4 Credits)

Students examine the requirements and implementation strategies of the National Environmental Policy Act. The Council on Environmental Quality, National Environmental Policy Act Regulations and the rules and requirements of various federal agencies which are responsible for National Environmental Policy Act implementation are examined in detail. Specific applications of National Environmental Policy Act to private and public activities which constitute major federal actions significantly affecting the quality of the human environment are discussed. Representative Environmental Impact Statements and Environmental Assessments are presented and critiqued for regulatory compliance and thoroughness in disclosing environmental effects of proposed actions. Prerequisite: EPM 4200 (Environmental Protection Law).

EPM 4150 Global Environmental Law and Policy (4 Credits)

This course explores the legal and philosophical underpinnings of the environmental movement, both in the United States and internationally. Students will analyze global environmental issues including endangered species, overpopulation, resource depletion, biodiversity, ocean dumping, deforestation, desertification, global warming, and ozone depletion. Emphasis is placed on management options and the use of international laws and treaties to mitigate, lessen, or eliminate damage to various aspects of the environment.
EPM 4200 Environmental Protection Law (4 Credits)
This course reviews a wide spectrum of laws which protect our environment and health. Students will discuss the purpose, context and implications of the most important laws, regulations and court cases that affect the quality of our lives. Coverage includes: National Environmental Policy Act (NEPA), Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Emergency Planning and Community Right-to-Know Act (EPCRA), Occupational Safety and Health Act (OSHA), and related toxics laws. It provides an overview of the legal system and the roles of Congress, the President, executive agencies, states, and courts in shaping environmental laws.

EPM 4220 Endangered Species and Wildlife (4 Credits)
This course provides an overview of the basic principles, trends, challenges, and controversies of the administration of maintaining certain wildlife species. Threats from water and air pollution, poaching and other illegal actions, interrelationships of wildlife and their habitats, and biodiversity will be discussed. Students gain an understanding of the roles and responsibilities of various federal, state and local agencies, environmental and wildlife interest groups, and other organizations involved in wildlife management issues.

EPM 4230 Renewable and Alternative Energies (4 Credits)
This course provides a well-rounded primer on energy as a resource and its importance in the economy and the world today. Renewable energy and alternative fuels as well as nuclear and hydrogen-based technologies will be explored. This course also provides an in-depth view of issues surrounding the development, enforcement and application of energy regulatory policy.

EPM 4232 Sustainability Policy and Practice (4 Credits)
In 1987, the Brundtland Commission, formerly the World Commission on Environment and Development, defined sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Sustainability covers many disciplines, and the concept is very broad. Sustainability relates to some of the most challenging questions of our time, and the United Nations has developed sustainability goals to meet these challenges. The UN Sustainable Development Goals range from reducing poverty to building sustainable communities. Not only are countries working on sustainability goals but corporations have joined as well. Shareholders of many corporations have requested their corporations meet sustainability needs. Sustainability reports are now required in the annual reports. This course will look at sustainability goals as it relates to environmental policy and practice. Students will understand the language of sustainability and analyze sustainability reports for greenwashing versus legitimate actions toward sustainable practices. They will also be able to put into practice possible policies to meet sustainability goals.

EPM 4233 Sustainable Transportation (4 Credits)
21st Century transportation planning on the local and global scale involves consideration of environmental policies and sustainable practices. Development of an efficient system for moving goods and people along highways, airways and public transit networks must coordinate with legal requirements governing automobile source emissions, water pollution, mitigation of congestion, and crisis management. Conflicts occur along political fault lines between public interest groups, environmental justice advocates, the business community, government regulators, and the ordinary commuter. Consideration is given to different fuel sources, including carbon-based, hydrogen, electricity, and biofuels. The course also examines fuel efficiency (CAFE) and trends in emission science and regulation.

EPM 4234 Climate Change and Science (4 Credits)
Global Warming* is a cause celebre, but how much do we really know about the science involved in studying the earth's climate? Moving beyond the social and political opinions espoused in the current debate on climate change, this course delves into the chemical and physical forces at play in the arena. This course covers scientific processes used in measuring climate dynamics, among them ozone chemistry, carbon and oxygen cycles, and heat and water budgets. It explores scales and methods for detecting climate change, including analyzing ice cores, instrumental records, and time series. Some attention will be dedicated to "climate forcing" caused by such things as orbital variations, volcanism, plate tectonics, and solar variability.

EPM 4235 Green Building (4 Credits)
 Builders, developers and designers increasingly are promoting the use of green construction practices in the pursuit of healthier, smarter buildings. Students in this course examine sustainable building strategies and tools, including LEED (Leadership in Energy and Environmental Design), the nationally-accepted benchmark for the design, construction and operation of high-performance green buildings. LEED promotes a whole-building approach by recognizing performance in five areas: sustainable site development water savings, energy efficiency, materials selection and indoor air quality. What materials are best in the design and operation of green building? How can a designer or building owner make better use of power and water efficiency programs? What are the recent developments, trends and case studies of green buildings and materials?.

EPM 4236 Nuclear and Hydrogen Energy (4 Credits)
Two future- and high-tech oriented energy sources are explored in this course, nuclear power and hydrogen fuel. The course covers principles used in fissioenergy and in nuclear power engineering, including controlled chain reactions and reactor design criteria. It also attends to issues of radioactive waste treatment and storage and the mitigation of other radiation hazards. Currently, some 20% of the United States electric power comes from nuclear plants that use low-enriched uranium as fuel, burn nothing, and emit virtually no CO2. What is the future for this form of energy? In addition to nuclear power technology, the course focuses on fuel cells and the hydrogen economy, which brings its own questions concerning cost-benefit analysis and risks. Do these new economy, relatively "clean" energies present a way to avoid the downward trend of depleting natural resources, or do they send a siren song with the waste and safety problems they present?.
EPM 4238 Water and Food Sustainability (4 Credits)
For such basic human needs, water and food present their own highly-technical challenges inside legal, political and environmental spheres. This course delves into environmental, economic, and social implications in water usage and water resources regulation. This course also takes a broad look at food and farming systems at community, society, and ecosystem levels.

EPM 4280 RCRA Permitting and Compliance (4 Credits)
This course presents Resource Conservation and Recovery Act’s cradle-to-grave regulations governing solid and hazardous waste generation and disposal, the various permitting requirements, and the process by which permits are obtained. Design and performance requirements for treatment, storage, and disposal facilities are examined. Developing trends in waste minimization, solid waste management, and special waste controls are also examined.

EPM 4355 ISO 14001 Standards (4 Credits)
This advanced course introduces the new ISO 14001 standard for environmental management systems. It includes a history and developmental context review of the ISO 14001 standard. This class reviews the specific elements and processes that form certifiable 14001 environmental management systems. Using an example, students develop a complete program that integrates the 14001 requirements with the existing strategic management methods of an organization. This program demonstrates how to use the 14001 framework as a proactive and systematic approach to environmental management. Class discussions include developing an environmental policy, specifying objectives and targets, implementing an environmental management program, monitoring and measuring program results, and reviewing the program to ensure continual improvement.

EPM 4390 Environmental Policy Analysis (4 Credits)
This course provides a basic introduction to the field of public environmental policy analysis. Specifically, it serves as a foundation course that introduces contemporary methods of policy analysis, agenda-setting, models of policy formulation and implementation, and policy evaluation. The focus is principally on concepts, analytical approaches, and research methods.

EPM 4400 Environmental Values and Ethics (4 Credits)
Students examine ethical considerations in environmental management and decision making. Discussions cover personal versus organizational attitudes; cultural, economic, and historic values; science versus politics; and international and intergenerational policies. The course also explores various philosophies of humankind's relationship with the environment. Students are encouraged to develop and express a personal philosophy relative to their role in the regulatory, technical, scientific, and financial management of the environment.

EPM 4460 Land And Visual Resources (4 Credits)
This course is designed to provide students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems is also be discussed.

EPM 4461 Assessment of Social Impacts (4 Credits)
Students examine how the introduction of nuclear power systems or a nuclear waste treatment facilities affect the demographic and economic characteristics of a specific region. Basic analysis of archaeological resources, historic buildings and structures, and traditional cultural properties are also considered. Pertinent areas of environmental law provides guidelines and regulations with relation to the nuclear industry and current policy issues including the importance of the Energy Policy Act of 2005.

EPM 4462 Ecology, Soil, and Water (4 Credits)
A general overview of the potential effects of nuclear power facilities on ecosystems and ecological resources. These include terrestrial resources, wetlands, floodplains, aquatic resources, protected and sensitive species, geology, soil mechanics and seepage. In site-specific scales, the following items need to be considered, such as physical alteration of the landscape, disruption of natural processes, such as flooding and fires, and pollution.

EPM 4463 Air Quality, Noise and Transportation (4 Credits)
Air quality, noise and transportation issues can potentially be affected in the area surrounding a nuclear power plant in a variety of ways. Students become acquainted with the methodology of the dose rate estimations to the public and workers; the methods that are in place to monitor and reduce the risk to the public and workers from all hazards; and various pathways of exposure from possible nuclear contaminants and related pollution. Perceptions of citizens as stakeholders are considered. Identifying and profiling atmospheric toxic sources, developing and assessing emerging measurement methods, characterizing the degree and extent of local air toxicity problems, and tracking progress of air toxics reduction efforts. The impact of transportation on human and environmental risk assessment, including the primary methods and routes used to transport to a specific site, affected employees, commercial shipments, hazardous and radioactive material shipments, transportation packaging, transportation accidents, and onsite and offsite traffic volumes.

EPM 4464 Nuclear Power Plant Systems (4 Credits)
This course presents the basic components of nuclear power plant systems, their functional purpose, and operating conditions, including an overview of the equipments design and components from the safety point of view. An overview of nuclear power plants is presented in context of their impact on the environment and human health, including active and passive safety aspects.
EPM 4465 Environmental Restoration and Waste Management (4 Credits)
Environmental Restoration is the identification and elimination of hazardous materials from a designated site such that the risks to human health and the environment are reduced to an acceptable level for an intended future land use. This course examines successful environmental restoration activities that were used to reduce and mitigate risk associated with past operations of nuclear and nuclear-related facilities and the significant potential to release harmful contaminants. Environmental restoration effects on the ecological and human health risk assessments and analyses related to the transport, treatment, storage, and disposal of waste from the contaminated site are presented. Remediation processes for radioactive materials and other hazardous wastes and the eventual storage, processing, and disposal and the potential effect on humans and the environment is studied. An overview is given on the development of a radiological protection program for an EIS report. External and internal hazards: control measures and monitoring, and other important limits and measurements are explored.

EPM 4500 Leadership for Environmental Managers (4 Credits)
This course is an overview of basic leadership and management skills with an emphasis on topics germane to practicing environmental professionals. It addresses three main subject areas: performance metrics and standard financial reports (i.e., how organizations and businesses keep score); leadership (i.e., changes in behavior and work habits necessary for advancement from staff to management; and achieving clarity in organizational values and mission); and basic elements of internal and external communications. The class will make use of reading assignments, written assignments and class participation.

EPM 4510 Environmental, Health & Safety (4 Credits)
The exponential growth in regulations and the increased demand to streamline resources present a unique opportunity for the environmental professional to integrate safety and health practices both horizontally and vertically within the organization. Students will evaluate the benefits and barriers to integrating environmental, health and safety programs with applicable laws and regulations. Topics addressed in the class will include a brief review of EPA and OSHA standards as well as an introduction to industrial hygiene, workplace safety management, hazard evaluation and control, and the integration of environment, health, and safety. The course also reviews concepts essential for the understanding and implementation of environmental safety and health policies for use in the workplace.

EPM 4520 OSHA Law (4 Credits)
This course provides an in-depth review of the laws and regulations that govern the safety and health of workers. The course is of value to students seeking to expand knowledge of the Occupational Safety and Health Act. Emphasis is on the areas of overlap between safety and environmental laws, OSHA’s inspection and enforcement authority, employee and employer rights, record keeping requirements and an outline of labor’s interest in OSHA cases. Current topics such as OSHA reform legislation and regulatory agenda are discussed.

EPM 4525 Workplace Safety Management (4 Credits)
This course introduces students to core elements in a health and safety management systems approach to identifying and preventing workplace injuries and illnesses. Students examine the five elements of developing an effective occupational health and safety management program. The course also explores the common challenges and obstacles encountered during the development and implementation of these programs. This course includes a general overview of common OSHA regulations, rights, and responsibilities for developing a safety and health program. The format of this class is highly interactive, affording students an opportunity to engage with case studies and their peers, as well as to practice developing health, safety, and environmental programs at their respective establishments.

EPM 4610 Analytics I (4 Credits)
This course explores how companies can and do use data analytics in an era of sustainability and ever-increasing complexity to manage their businesses more effectively. The course has a managerial focus rather than a technical one. Students do not need a statistics or analytics background. It is designed to provide managers with sufficient background on the potential value of data analytics, the business process change associated with data analytics, and the underlying technologies to enable them to interface effectively with analysts and data scientists. A key component of the course is developing a pilot project or business case for an analytics project of your choice.

EPM 4615 Analytics II (4 Credits)
Building on the course content of Environmental Analytics I, this course retains a managerial focus rather than a technical one. Students do not need a statistics or analytics background. It is designed to prepare managers to identify and obtain a publicly available data set (or one from their own organization), suitable to use for carrying out an analytics project, often the pilot project identified in the previous course. In addition, the course goes into the next level of detail on analytical algorithms and cloud technologies to enable students to frame the questions to be answered or insights revealed from running an analytics application. Finally, the course provides an introduction to cognitive computing and its applications, trends, and potential impacts.

EPM 4620 Environmental Reporting Standards and Models (4 Credits)
Students learn the reporting requirements of existing and emerging environmental reporting standards, e.g., SEC requirements, EU standards, NGO standards, Global Reporting Initiative environmental performance indicators, and Sustainability Accounting Standards Board recommendations, and how to craft mandatory and optional reports that conform to these standards and requirements.

EPM 4625 Environmental Analysis and Reporting Project (4 Credits)
This is the concluding class for the Environment Analytics and Reporting concentration and graduate certificate. The class centers on performing sophisticated investigations of sustainability-related datasets utilizing the tools and insights of the data analytics revolution. The focus of the course is on applying advanced data analytics techniques (e.g., data mining, predictive analytics, and prescriptive analytics) to support innovative approaches for organizational sustainability, business performance, stakeholder relations, and/or environmental policy. Students will engage in readings, develop an analysis project using Watson Analytics, and prepare a report covering conclusions and recommendations.
EPM 4701 Topics in EPM (2-5 Credits)
The content of this course will vary each time it is offered. The topics may include time-sensitive issues in the field of environmental policy and management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content will be announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

EPM 4705 Land Use Planning (4 Credits)
This course includes a comprehensive examination of the land use planning efforts of federal, state, and local governments. The legal authorities, responsibilities, and conflicts of these governmental entities are examined in detail. Class discussions include: setting goals and objectives for specific components of ecosystems; design of projects to achieve desired ecologic conditions; the interrelationship between home rule authority, local zoning and planning requirements, and federal/state natural resource plans; use of new technologies in planning; and public participation in land use plans.

EPM 4710 Environmental Project Management (4 Credits)
Students discuss environmental project management from the government, industry, and contractor perspectives. The course looks at successful project management organization, planning, and communication strategies. Using examples, students will also examine complex projects needing management. The types of contractual assistance needed will be reviewed.

EPM 4780 Air, Water and Soil Pollution (4 Credits)
This course addresses sources, reactions, and remediation of pollutants occurring in the atmosphere, waters, and soil. The deposition of pollutants from the atmosphere to soil and surface waters (acid rain) is covered. The migration of pollutants from surface waters through the soil to ground waters are also discussed.

EPM 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.

EPM 4902 Capstone Seminar (4 Credits)
The purpose of this Capstone Seminar is to develop and apply transferable professional skills to persuade decision makers. This is accomplished through the following: investigate questions and issues found within a discipline-specific area of interest. To do this, a clear question/issue will be researched in order to create (a) several different arguments for (b) several different audiences in (c) several different professional contexts. Peer-to-peer conversations will support the development of the questions/issues, and throughout the process, peer-to-peer critiques will take place to foster a developed sense of community where peers rely on one another for what is working, what is not working, and possible ways forward. Part of this process will also include intentional moments spent reflecting upon the process and the knowledge gained by it. Thus, through reflection and meaningful dialogues and conversations, students learn how to be active agents of change where they can successfully contribute to any professional exchange. In sum, the Capstone Seminar focuses on how to investigate problem(s) found within professional settings, how to analyze and critique those problems, and ultimately, how to generate effective arguments for the various stakeholders involved throughout this process. The knowledge gained within this course should transfer forward informing a current or future job.

EPM 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.
EPM 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master's degree. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

EPM 4980 Internship (1-4 Credits)
The EPM Internship is designed to offer students a purposeful experience in the field of environmental policy and management. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

EPM 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed it with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

EPM 4992 Directed Study (1-10 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

Geographic Information Systems
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Phone: 303-871-2291, 800-347-2042
Email: ucolsupport@du.edu
Web Site: http://www.universitycollege.du.edu

Certificate in Geographic Information Systems
The certificate in Geographic Information Systems is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. University College offers the region's first complete graduate certificate program in Geographic Information Systems. Designed and delivered for busy adults, the Geographic Information Systems graduate certificate helps professionals add to their skillset with technology skills that help solve real-world spatial problems.

Certificate students receive applied instruction from professional practitioners who work in the fields in which they teach as they learn to plan, implement, and execute a project using GIS, GPS, remote sensing, internet mapping, or digital image processing. The GIS certificate allows students to explore training fundamentals at a very hands-on, applied level necessary to succeed in the field.

Gain a contextual background in GIS, from the management of natural resources to public utility management, public works engineering, environmental impact assessment, and even market research. In a burgeoning integrative world, it is vital to grasp the diverse fundamentals of each topic within the Geographic Information Systems industry and gain an insider’s perspective to specific fields as they each relate to GIS training. Credits earned through this graduate certificate may apply toward a master's degree in Geographic Information Science offered in the Department of Geography and the Environment or Information and Communications Technology.

Geographic Information Systems Outcomes
This program prepares students to do the following:

- Describe, analyze, and evaluate the nature of geographic data
- Compare, contrast, and apply appropriate applications of GIS technology to solve spatial problems
- Apply GIS technology to solve real-world problems
- Plan, implement, and execute a GIS project
## Certificate Admission

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

### English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

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

## Certificate in Geographic Information Systems with a Concentration in Geographic Information Systems

### Program Requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td><strong>Core coursework requirements</strong></td>
<td>8</td>
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<tr>
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<td>Complete the following two courses:</td>
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<tr>
<td>GIS 4101</td>
<td>Introduction to Geographic Information Systems</td>
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<td>GIS 4504</td>
<td>Cartography and Geovisualization</td>
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<td></td>
<td><strong>Elective requirements (Choose four courses):</strong></td>
<td>16</td>
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<tr>
<td>GIS 4007</td>
<td>Creative Problem Solving and Programming</td>
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<td>GIS 4070</td>
<td>ArcObjects</td>
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<td>GIS 4080</td>
<td>Python Programming in GIS</td>
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<td>GIS 4110</td>
<td>Geographic Statistics</td>
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<td>GIS 4200</td>
<td>Geospatial Intelligence</td>
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<td>GIS 4510</td>
<td>GIS in Business</td>
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<td>GIS 4520</td>
<td>GIS in Telecommunications</td>
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<td>GIS 4530</td>
<td>Crime Mapping and Analysis</td>
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<td>GIS 4540</td>
<td>Conservation GIS</td>
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<td>GIS 4570</td>
<td>Geographic Information Systems in Public Health</td>
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<td>GIS 4620</td>
<td>Geodatabase Application</td>
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<td>GIS 4630</td>
<td>Public Domain Data for GIS</td>
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<td>GIS 4650</td>
<td>Demographic Analysis Using GIS</td>
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<td>GIS 4660</td>
<td>GIS in Municipal Government</td>
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<td>GIS 4670</td>
<td>GIS and the Law</td>
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<td>GIS 4680</td>
<td>Environmental Applications</td>
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<tr>
<td>GIS 4683</td>
<td>GIS for Disaster Management</td>
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GIS 4750  |  UAVs and GIS
GIS 4760  |  UAS Photogrammetry
GIS 4770  |  UAV Ground School Practical
GIS 4860  |  Internet Mapping
GIS 4980  |  Internship
GIS 4991  |  Independent Study
GIS 4992  |  Directed Study

**Total Credits**  |  24

**Minimum number of credits required for certificate: 24 credits**

**SPECIALIZED GRADUATE CERTIFICATE IN geographic information systems**

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<tr>
<th>Code</th>
<th>Title</th>
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<tr>
<td>GIS 4101</td>
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<tr>
<td>GIS 4504</td>
<td>Cartography and Geovisualization</td>
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**Electives (Choose two courses)**

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<tr>
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<td>GIS 4080</td>
<td>Python Programming in GIS</td>
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<td>GIS 4110</td>
<td>Geographic Statistics</td>
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<td>GIS 4200</td>
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<td>GIS 4510</td>
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<td>GIS 4520</td>
<td>GIS in Telecommunications</td>
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<td>GIS 4530</td>
<td>Crime Mapping and Analysis</td>
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<td>GIS 4540</td>
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**Total Credits**  |  16

**Courses**

**GIS 4077 Creative Problem Solving and Programming (4 Credits)**

In this course students will develop, or improve upon, their problem-solving skills and how to use those skills to analyze problems and determine how to create solutions. Students will document their solutions (e.g., in pseudocode or UML diagrams) and, by the end of the course, translate their solutions into running programs written in at least two languages (e.g., Python and C#). Students will learn programming concepts including the use of variables, program input and output, flow control (if-then-else, looping, etc.), and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as Visual Studio Code on their personal computers in which they will write programs.
GIS 4070 ArcObjects (4 Credits)
This class is an introduction to the development of custom applications and tools in GIS. It combines ESRI's ArcObjects with C#.NET programming language to introduce students to desktop GIS development. Students learn about the C# language, Object Oriented Programming, ESRI's Object Model Diagrams, conversion of VBA code to C# code, the creation of custom GIS based forms, buttons, and tools, and the automation of the GIS workflow. Students leave this class with the ability to create embedded tools as well as distributable C#.NET GIS applications based on ArcGIS 10.

GIS 4080 Python Programming in GIS (4 Credits)
This course introduces Python concepts and the Python scripting environment in a GIS environment. Python is a free, open-source scripting language that has been integrated with ArcGIS. Python is a dynamic, interpreted language that can be used to automate redundant tasks and workflows in GIS. Students learn tools and techniques of Python syntax, script flow, and error handling. Students learn to write scripts that allow them to automate redundant tasks and workflows in GIS. Students learn to write scripts that allow them to automate geoprocessing processes and GIS workflow more efficiently. This course teaches fundamental concepts needed to create Python scripts in ArcGIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4101 Introduction to Geographic Information Systems (4 Credits)
This is the initial course in Geographic Information Systems (GIS). General introduction including background, development, trends, prospects in this rapidly evolving technology; basic components, functions of GIS, fundamental spatial, geographic concepts explored through use of GIS software.

GIS 4110 Geographic Statistics (4 Credits)
This course introduces the basic concepts of probability and statistics with an emphasis on applications and an ongoing focus regarding the nature and problems associated with spatial or geographic data. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4200 Geospatial Intelligence (4 Credits)
The term geospatial intelligence (GEOINT) means the exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the earth. GEOINT consists of imagery, imagery intelligence and geospatial information. This course serves as an introduction to the fundamentals of the geospatial intelligence community, core GEOINT technologies and operations, and the role of GEOINT in national, regional and local security affairs supporting decision makers and operations. The course is built on a framework of data, technology and analysis in support of the GEOINT community which may include natural disasters, first responders, military problems, homeland defense, and law enforcement. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4504 Cartography and Geovisualization (4 Credits)
The theory and art of map making developed over several thousand years and has recently been revolutionized by computer technology. This course is designed to expose students to the use of computer techniques in assessing technical design issues in the compilation of accurate and meaningful automated geographic mapping products. ArcView is used in a series of hands-on lab exercises to produce typical GIS mapping products. Each class includes lecture and discussion of cartographic design concepts. Emphasis is placed on reader perception of map design elements, and also includes an introduction to appropriate software tools and application of concepts through lab exercises. In-class time is provided for work on lab exercises. It is likely that additional lab time outside of class will be necessary and/or valuable for students, particularly in completion of the final project. Prerequisite: GIS 4101.

GIS 4510 GIS in Business (4 Credits)
Businesses continue to embrace GIS as an effective alternative to traditional manual mapping analysis methods. GIS has emerged as an affordable solution for performing essential revenue producing and expense reducing functions. Many years ago, successful GIS implementation required huge capital investment and a large staff of GIS experts; however, with the introduction of more powerful inexpensive computers and easier to use software, companies of all sizes are unleashing the business potential of GIS on the marketplace. This course exposes students to various business applications and uses of GIS as well as the underlying theories and technology behind the applications. This course emphasizes various business disciplines including Marketing, Real Estate, Transportation, and Oil & Gas using ArcView GIS in practical, hands-on exercises that demonstrate the theories and concepts discussed in the lectures. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4520 GIS in Telecommunications (4 Credits)
Telecommunications is a thriving technology and business, accounting for a significant percentage of technical advances and revenue around the globe. GIS has emerged as a crucial tool in the telecommunications field for maintaining existing entities, planning for additional ones, and for gaining an advantage in this very competitive marketplace. The use of GIS in the telecom industry continues to grow because GIS technology accommodates the many CAD programs and drawings representing plant and transmission towers/coverage as well as the geographic representations of those items. Only a few years ago, introducing GIS into a telecom business required significant cash outlay, but through less expensive hardware and more user-friendly software, now even a modest CLEC can implement an effective GIS. This course exposes students to the various applications and uses for GIS in the telecom arena by breaking down the miscellaneous telecom requirements into GIS components and technological solutions. This course emphasizes specific telecom technology application requirements and allows students, through hands-on lab work, to discover the power of GIS in delivering superior telecom solutions. This course also focuses on OSP/ISP applications and solutions, network connectivity issues as well as the exploding future of wireless technology. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4530 Crime Mapping and Analysis (4 Credits)
Municipal police departments, county sheriff departments, and other state and federal law enforcement agencies use GIS technology as a tool to analyze crime statistics and patterns. This course explores how GIS technology is used in law enforcement to provide strategic, tactical, and administrative crime analysis. Prerequisite: GIS 4504 or similar GIS course and/or work experience.
GIS 4540 Conservation GIS (4 Credits)
This course is designed to provide students with an introduction to the use of geographic information systems (GIS) in conservation. Students receive an introduction to the use of GIS in various types of conservation studies and preservation. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support planning and management of land, species, and habitats. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4570 Geographic Information Systems in Public Health (4 Credits)
GIS offers many applications and functionality that are tremendously beneficial to the Public Health industry. The ability to visualize cases in space (geographically) and time is invaluable in analyzing spatial clusters of health related events. Further the ability to model the spread of a potential epidemic can literally be a life saver. GIS is a natural choice for solving many Public Health issues including: analyzing the location of diseases; the spread of contagious diseases (both vector borne as well as the spread through human contact); the cause and effect of environmental factors; as well as the availability of Health facilities. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4620 Geodatabase Application (4 Credits)
This course in Geodatabase Application is logically broken into two separate component parts; the first section deals with Geodatabase concepts and provides a general overview of the Geodatabase structure and implementation including: background, object classes, feature classes, relationship classes, domains, validation rules, and Geodatabase topology. The second portion of the course focuses on Geodatabase Application introducing advanced features of Geodatabase, providing a solid foundation for the application of the Geodatabase to model and address complex real world issues. Geodatabase Linear Referencing, Geodatabase Surface Modeling, and Geocoding Services in the Geodatabase, are explored. This course incorporates a hands-on lab component. Computer lab exercises are designed to introduce the student to concepts and Geodatabase application. Strong emphasis is placed on Geodatabase design. Design objectives, design guidelines and functional requirements of the resulting Geodatabase model are addressed. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4630 Public Domain Data for GIS (4 Credits)
Geospatial data are the foundation upon which GIS and spatial analysis rests. As GIS has matured, the challenge has evolved from generating data to managing the enormous volume of data from government agencies, nonprofit organizations, and industry, and increasingly, from ordinary citizens through citizen science and volunteered geographic information efforts. Key to working with this volume of data are essential issues such as privacy, copyright, public domain, cost recovery, metadata standards, and data quality that GIS professionals must grapple with to be effective in the 21st Century. This class discusses and applies these issues and works with a rich array of data sources to enable effective decision-making in a Geographic Information System. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4650 Demographic Analysis Using GIS (4 Credits)
This course offers an overview of US Decennial Census data, covering a brief historical overview of why census information is collected, collection procedures, geographic coverage, and subject matter contained in census reports. Using a popular PC-based desktop mapping software program, students learn how to navigate through census files and create a variety of thematic maps. Several application areas, such as marketing, demographic analysis and facility planning, are used in sample exercises. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4660 GIS in Municipal Government (4 Credits)
There are many areas of government where desktop mapping can be extremely helpful in solving problems that are spatial in nature. This course explores the many types of data collected by city and county government agencies from crime and election data to building, assessment, and zoning data and how it can be displayed in map form. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4670 GIS and the Law (4 Credits)
This course explores the legal and technical ramifications created by Geographic Information Systems (GIS), Mobility and the Law, including the legal and policy issues related to the science of GIS, the sharing of geographic information, the data generated by mobile devices, the intellectual property issues, security and privacy issues, business and contractual issues related to GIS, and the standards of care and liability related to GIS. This course also examines the types of issues and concerns that exist in the U.S. and the world created by geographic information science and the mobile device. The evolution of GIS and the mobile device directly impacts governments, companies, and individuals on a daily basis. In today's world, more than three billion people have smart phones in their hands constantly. This creates issues about how to handle data, security and privacy, civil and criminal laws, rules and regulations, contractual agreements, and service-level agreements between parties on many levels from service providers in different states, countries and parts of the world. All of these issues need to be balanced by the differing cultural standards and mores from all over the world and legal (and sometimes not so legal) methods of protecting governments and companies in this ever-changing “always-connected” world created by GIS and the mobile device. Prerequisite: GIS 4101 - Intro to GIS, and GIS 4700 - Remote Sensing I and/or similar GIS course and/or work experience.

GIS 4680 Environmental Applications (4 Credits)
This class provides students with an introduction to practical applications of computerized Geographic Information Systems (GIS) in environmental assessment and natural resource management. Emphasis is placed on automated analytical techniques and data presentation methods that support facility site selection, environmental impact analyses, resource management, and characterization of environmental hazards. This course is designed to provide students who participate in environmental assessment projects with introductory preparation for practice as GIS professionals in public agencies or in the private sector. Prerequisite: GIS 4101 or similar GIS course and/or work experience.
GIS 4683 GIS for Disaster Management (4 Credits)
This course serves as an introduction to Geographic Information Systems and their application in Emergency Operations. The basic concepts of geography, cartography and Global Positioning Systems will be covered, along with the basic components and capabilities of a geographic information system. Students will learn about the fundamental types of GIS analysis and applications, focusing on those used in Emergency Operations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4685 GIS and Natural Hazards (4 Credits)
This course is designed to provide students with an introduction to the use of GIS in natural hazard assessment. Students receive an introduction to the use of geographical information systems (GIS) in various types of natural disasters and response management. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support hazard risk and assessment, mitigation, and emergency response planning. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4687 Hydrologic Modeling in GIS (4 Credits)
Hydrology is concerned with movement of the earth's waters through the hydrologic cycle, and the transport of constituents carried in its flow. In GIS, the landscape is represented by means of geographically referenced data describing the character and shape of relief features. A spatial hydrology model simulates the water flow and transport in a specific locale using GIS data structures. Hydrologic modeling in GIS allows us to automatically delineate a drainage system and quantify the characteristics of the system. It focuses on the movement of water across a land surface. This course looks at the basic inputs to hydrological modeling in GIS, walks students through established modeling procedures, and has students work on projects that are real and relevant as model applications. Instruction is largely hands-on, project-oriented. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4690 GPS for GIS (4 Credits)
This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Assurance issues for data collection programs. Lab exercises include planning a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, and data integration into a GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4700 Remote Sensing I (4 Credits)
This course provides a survey of remote sensing technologies, applications, and the industry. This course is designed for GIS, Geography and Geoscience students who seek to broaden their understanding of remote sensing in support of Geographic Information Systems. Introductions to the electromagnetic spectrum, energy sources, radiation principles, aerial cameras, and electronic imaging provide the student with the initial building blocks to a thorough understanding of remote sensing. This course provides an overview of the various high altitude and space-based collection systems and their characteristics, with a view toward future systems and capabilities. In addition, this course exposes students to the techniques of extracting relevant information from both hard copy and digital imagery. Pre-requisite: This course is a pre-requisite for GIS 4740 – Remote Sensing II.

GIS 4701 Topics in Geographic Information Systems (2-5 Credits)
The content of this course varies each time it is offered, depending on the interests and needs of the students. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

GIS 4740 Remote Sensing II (4 Credits)
This course is the second in the two-course Remote Sensing emphasis of University College's GIS Certificate Program. The curriculum is a rigorous presentation of digital imaging processing theory with emphasis on its application to airborne and space borne imagery. The course includes computer laboratory exercises and workshops, where the students apply theory to satellite and air photo data. Interpretation of the digitally processed data is also included in the class exercises. Examples of vector and raster data integration are shown as well. Prerequisite: GIS 4700.

GIS 4750 UAVs and GIS (4 Credits)
The purpose of this course is to introduce GIS students to the emerging world of using Unmanned Aerial Vehicles (UAV) in the GIS workplace for data collection, reconnaissance, and research. UAVs are in the news every day, highlighting their use in a military context. Soon the Federal Aviation Administration (FAA) will release new rules and regulations governing the use of UAVs in the civilian sector. This course will prepare students to be conversant in the world of UAVs, basic aviation, safety, flying, mission planning, and general data gathering techniques for use in GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4760 UAS Photogrammetry (4 Credits)
Surveying, photogrammetric mapping, GPS, and remote sensing are critical components to working in the UAV and GIS domain. The second course in this two-course sequence will expand on the data collection process highlighted in the first class and deliver the foundations required by GIS professionals workings with UAVs. Prerequisite: GIS 4101 or similar GIS course and/or work experience and GIS 4750-UAVS and GIS.
Global Community Engagement

GIS 4770 UAV Ground School Practical (4 Credits)
Course Description: The purpose of this course is to provide skills and abilities to become a remote pilot in command (RPIC) within the United States. The class content will focus on 14 CFR 107, the rules and regulations that allow RPICs to operate unmanned aircraft vehicles (UAVs) safely and legally. In addition, students will be given hands-on training in the best practices for flying UAVs. Course Overview/Purpose: The release of 14 CFR 107 by the FAA has set a legal framework for commercial UAVs operations in the United States. The purpose of this course is to help students become well versed in 107 and gain hands-on experience operating UAVs. Students will become proficient with UAV aeronautical operation standards, discover the rules and regulations of airspace that all RPICs must comply with, and evaluate the effects that weather has on UAVs as well as sources of weather information. Students will also assess the performance abilities and limitations of UAVs and explore standard UAV operations as outlined in the 107 regulations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4860 Internet Mapping (4 Credits)
Creating web-based maps allows city and local governments, businesses, and other organizations to publish, discover, and share geospatial information. This course introduces the fundamentals of various web-based mapping systems and software applications. Students complete comprehensive projects, each resulting in the creation of a working web site using different technologies. Students make use of WMS (Web Map Services) and WFS (Web Feature Services), integrating them into their web sites and creating their own web map service. Prerequisite: GIS 4101 and GIS 4504 or similar GIS course and/or work experience.

GIS 4980 Internship (1-4 Credits)
GIS students may fulfill up to four quarter hours of electives by enrolling in a GIS internship with a GIS company or an agency actively engaged in GIS activities. Students incorporating professional work experience must work with an approved mentor, who evaluates the student's performance and learning. The internship is designed to provide practical experience to students without prior professional experience in the field. Students who are employed on a full-time basis in the GIS industry may not use paid work experience as part of the academic program.

GIS 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

GIS 4992 Directed Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the directed study. Directed Study is offered only on a for-credit basis.

Global Community Engagement

Office: University College Student Support Center
Mail Code: 2211 S. Josephine St., Denver, CO 80208
Phone: 303-871-2291, 800-347-2042
Email: ucolsupport@du.edu
Web Site: www.universitycollege.du.edu

Master of Arts in Global Community Engagement

Professional success in an increasingly globalized world requires a nuanced understanding of how events, actors, and processes worldwide impact work at the local level. It requires the ability to interact effectively with people from diverse cultural, national, and linguistic backgrounds, in addition to adapting industry-specific policies and practices to the ever-changing demands of multinational and multicultural environments. This program provides working professionals with the knowledge and skills necessary to effectively navigate the complexities of their profession in an increasingly diverse 21st-century workplace. Hands-on opportunities enable students to apply knowledge gained through the program to their own professional lives. Students acquire the tools necessary to thrive in diverse environments and to achieve organizational goals while developing a greater understanding of their own roles as citizens of the greater global community.

This degree prepares students to:

- Optimize organizational effectiveness by taking into account the impact of diversity and shifting global perspectives
- Interact effectively with people whose ideas are rooted in cultural backgrounds other than one's own
- Apply global cultural awareness to the structures and process of specific professions and industries
- Engage effectively with communities impacted by timely global struggles
- Leverage global and cultural practices of organizations and/or communities to effect change at home or abroad

Certificate in Global Community Engagement with a Concentration in Culture and Diversity

The graduate certificate in Culture and Diversity offered at University College provides working professionals with knowledge and skills necessary to navigate the complexities of their profession in an increasingly diverse 21st-century workplace. Students learn to thrive in diverse environments and
achieve organizational goals while developing a greater understanding of their own roles as citizens of the greater global community. Credits earned through this certificate may be applied toward a master’s degree in Global Affairs.

**Certificate in Global Community Engagement with a Concentration in Global Issues**
The graduate certificate in Global Issues offered at University College focuses on the impact of global events, actors, and processes worldwide on students’ work and experiences at the local level. Students will assess the effects of global issues on domestic organizations, structures, and procedures in addition to relating their own roles as citizens in a globalizing world. Credits earned through this certificate may be applied toward a master’s degree in Global Affairs.

**Certificate in Global Community Engagement with a Concentration in Translation Studies**
The graduate certificate in Translation Studies is offered entirely online to meet the needs of busy adults and help students expand their translator or interpreter skills and stay ahead of the curve in this competitive industry. Translation Studies students will gain the knowledge and transferable skills needed to become effective translators or interpreters in a professional capacity, either from English to Spanish or Spanish to English. Certificate students with proficiency in Spanish and English will gain a broad theoretical and practical background through translation studies, as well as practice in different types of translation and/or interpretation. Classes are led by translation and interpretation experts who work in the field and are taught online. Learn what it takes to become a professional and gain valuable training and experience by interning in a professional setting. The online graduate translation certificate will cover essential terminology, computer applications for translators and interpreters, and issues related to working in a multi-cultural context. Up to twelve credits earned through this graduate certificate may be applied toward a master’s degree in Global Affairs.

**Master of Arts in Global Community Engagement**

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

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

**Certificate in Global Community Engagement with a Concentration in Global Issues**

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

**English Language Proficiency Test Score Requirements**
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
Certificate in Global Community Engagement with a Concentration in Translation Studies

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

Other Requirements
• Language Assessment - applicants will be asked via email to complete a translation exercise after they submit their application.

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
• Minimum CAE Score: 169

Certificate in Global Community Engagement with a Concentration in Culture and Diversity

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
• Minimum CAE Score: 169

Master of Arts in Global Community Engagement

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GS 4010</td>
<td>Global Society: Structures and Stakeholders</td>
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</table>
### Concentration Courses:

#### Culture and Diversity (choose two courses):

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>GS 4030</td>
<td>Working Internationally</td>
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<tr>
<td>GS 4040</td>
<td>Managing Across Cultures</td>
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<tr>
<td>GS 4050</td>
<td>Diversity and Organizational Structure</td>
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<tr>
<td>GS 4060</td>
<td>Communication and Cultural Memory</td>
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#### Global Issues (choose two courses):

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>GS 4140</td>
<td>Contemporary Racial and Ethnic Relations</td>
<td></td>
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<tr>
<td>GS 4130</td>
<td>Gender and Social Justice: Sex and Power in Global Perspective</td>
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<tr>
<td>GS 4150</td>
<td>Global Trade: The Intersection of Main Street and the World</td>
<td></td>
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<tr>
<td>GS 4210</td>
<td>The Force of Faith: Religion in the Global Workplace</td>
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<tr>
<td>GS 4701</td>
<td>Topics in Global Community Engagement</td>
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### Elective requirements (Choose three courses):

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<td>GS 4210</td>
<td>The Force of Faith: Religion in the Global Workplace</td>
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<tr>
<td>GS 4303</td>
<td>Practicum: Engaging Global Communities</td>
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<tr>
<td>GS 4701</td>
<td>Topics in Global Community Engagement</td>
<td></td>
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<tr>
<td>GS 4800</td>
<td>The Puerto Rican Paradox: Challenges and Opportunities in Uncertain Times</td>
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</tbody>
</table>

#### Total Credits

Minimum number of credits required: 48

Students will work with their personal academic advisor to determine the best set of courses to choose for their electives.

### Certificate in Global Community Engagement with a Concentration in Global Issues

#### Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>GS 4005</td>
<td>Graduate Social Research Methods</td>
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<tr>
<td>GS 4901</td>
<td>Capstone Project</td>
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<tr>
<td>or GS 4902</td>
<td>Capstone Seminar</td>
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<tr>
<td>or GS 4904</td>
<td>Interdisciplinary Capstone Seminar</td>
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#### Concentration requirements (Choose four courses):

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>GS 4010</td>
<td>Global Society: Structures and Stakeholders</td>
<td>16</td>
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<tr>
<td>GS 4130</td>
<td>Gender and Social Justice: Sex and Power in Global Perspective</td>
<td></td>
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<tr>
<td>GS 4150</td>
<td>Global Trade: The Intersection of Main Street and the World</td>
<td></td>
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<tr>
<td>GS 4200</td>
<td>Globalization and Global Citizenship</td>
<td></td>
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<tr>
<td>GS 4210</td>
<td>The Force of Faith: Religion in the Global Workplace</td>
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#### Elective requirements (Choose two courses)

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<tr>
<td>GS 4701</td>
<td>Topics in Global Community Engagement</td>
<td></td>
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</tbody>
</table>

#### Total Credits

Minimum number of credits required: 24

Electives may be chosen from among all courses in the Global Community Engagement program. You may also select courses from other University College graduate programs with approval from the academic director.
## Certificate in Global Community Engagement with a Concentration in Translation Studies

### Program Requirements

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<tr>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Concentration requirements:</strong></td>
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</tr>
<tr>
<td>GS 4300</td>
<td>Foundations of Translation: The Role of the Professional Translator</td>
<td>4</td>
</tr>
<tr>
<td>or GS 4310</td>
<td>Foundations of Interpretation: The Role of the Professional Interpreter</td>
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<tr>
<td>GS 4301</td>
<td>Written and Sight Translation for Translators and Interpreters</td>
<td>4</td>
</tr>
<tr>
<td>GS 4303</td>
<td>Practicum: Engaging Global Communities</td>
<td>4</td>
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<tr>
<td>GS 4311</td>
<td>The Language Services Business for Translators &amp; Interpreters</td>
<td>4</td>
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<tr>
<td></td>
<td><strong>Electives (Choose two courses):</strong></td>
<td>8</td>
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<tr>
<td></td>
<td>Translation Studies Certificate Students may select two electives from either set of courses below.</td>
<td></td>
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<tr>
<td></td>
<td>If considering applying your certificate toward a Master’s degree in Global Community Engagement, it is recommended that you select electives from the Global Community Engagement electives.</td>
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### Concentration/Interpretation Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>GS 4302</td>
<td>Computer Aided Translation (CAT): An Introduction to Software for Translators</td>
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<tr>
<td>GS 4304</td>
<td>Introduction to Legal Translation</td>
<td></td>
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<tr>
<td>GS 4305</td>
<td>Localization and Translation of Software and Web Pages</td>
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<tr>
<td>GS 4306</td>
<td>Translation of Medical Texts for the Health Care Industry</td>
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<tr>
<td>GS 4315</td>
<td>Interpreting for Health Care</td>
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<tr>
<td>GS 4316</td>
<td>Interpreting in the U.S. Court System</td>
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### Global Community Engagement Electives

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**Total Credits**: 24

**Minimum number of credits required**: 24

## Certificate in Global Community Engagement with a Concentration in Culture and Diversity

### Program Requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td><strong>Concentration requirements (Choose four courses):</strong></td>
<td>16</td>
</tr>
<tr>
<td>GS 4020</td>
<td>Culture, Identity, Power</td>
<td></td>
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<tr>
<td>GS 4030</td>
<td>Working Internationally</td>
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<tr>
<td>GS 4040</td>
<td>Managing Across Cultures</td>
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<tr>
<td>GS 4050</td>
<td>Diversity and Organizational Structure</td>
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<tr>
<td>GS 4140</td>
<td>Contemporary Racial and Ethnic Relations</td>
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<tr>
<td>GS 4200</td>
<td>Globalization and Global Citizenship</td>
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</table>

**Elective requirements (Choose two courses)**

Electives may be chosen from among all courses in the Global Community Engagement program. You may also select courses from other University College graduate programs with approval from the academic director.

**Total Credits**: 24

**Minimum number of credits required**: 24
Courses

GS 4010 Global Society: Structures and Stakeholders (4 Credits)
This course provides students with an introduction to the major actors, structures, and issues in contemporary global society. Moving beyond a state-centric view of the global landscape, the course considers the values, interests, and ideas of a variety of stakeholders—including businesses, corporations, institutions, governmental and non-governmental organizations, and grass-roots initiatives—in order to assess some of the ways in which these actors both compete and cooperate for opportunities and resources. Students will apply relevant concepts to their own personal and professional experiences so as to gain a better understanding of how global issues and actors at a variety of levels impact their work and how their work constitutes an important part of global society.

GS 4020 Culture, Identity, Power (4 Credits)
In a rapidly globalizing world, culture and identity are increasingly recognized as having profound implications for professional success across a range of industries and practices. From health care to education, law enforcement to social work, an understanding and appreciation of difference are central to effective professional interactions and institutional progress. This course introduces the concepts of culture and cultural competency, presenting approaches for thinking about culture, identity, and power in professional environments, and for mitigating cultural and identity-based conflict in the workplace and beyond.

GS 4030 Working Internationally (4 Credits)
This course addresses some of the logistical and conceptual challenges of working internationally and provides students with knowledge and skills necessary to succeed in the global workplace. Legal, corporate, and cultural issues are addressed, as well as different approaches to conducting business across national, cultural, and linguistic borders.

GS 4040 Managing Across Cultures (4 Credits)
This course addresses the impact of cultural difference on management and provides students with approaches to managing effectively in cross-cultural and multicultural contexts. Additionally, the course enables students to analyze the impact of global issues and events on the management process in different times and places and to evaluate managerial practices in different cultures and institutional environments. The impact of culture and cultural competence on managerial performance is also addressed.

GS 4050 Diversity and Organizational Structure (4 Credits)
Organizational diversity is often conceptualized in terms of legally protected categories and related anti-discrimination and accommodation policies. Yet diversity presents opportunities and challenges that go far beyond legal considerations. The ability to appreciate and accommodate differences in experience, knowledge, and perspective is crucial for maximizing institutional effectiveness. This course focuses on the ways in which organizations at various levels benefit from diversity and struggle to manage it effectively. Students will develop a comprehensive understanding of the many forms diversity takes and will explore various strategies for maximizing effective professional interactions and institutional success.

GS 4060 Communication and Cultural Memory (4 Credits)
The ability to communicate effectively with employees, stakeholders, and clients from diverse cultural backgrounds requires an understanding of the cultural memories, experiences, and values of everyone involved. The culturally-inflected meanings attached to historical events such as 9/11, the Civil Rights Movement, the Holocaust, and colonialism profoundly influence how people imagine the world and their role in it. This course focuses on the impact of cultural memory on identity, looking in particular at the implications for effective professional communication across an array of organizational contexts. Students will gain an understanding of how history comes to be contested and changed, creating diversity in cultural memories that must be taken into account in professional communication.

GS 4130 Gender and Social Justice: Sex and Power in Global Perspective (4 Credits)
This course provides students with a critical understanding of gender and sexuality in relation to social and institutional processes, particularly as they impact professional interactions and conduct. Issues such as inequalities in the labor force, low wage work and poverty, work/family conflict, and domestic work will be addressed. The course will take an intersectional approach to analyzing gender and sexuality in the workplace and beyond.

GS 4140 Contemporary Racial and Ethnic Relations (4 Credits)
This course provides students with ways of assessing the effects of race and ethnicity in professional settings. Topics addressed will include forms of prejudice and discrimination, manifestations of privilege and inequality, and the intersection of race and ethnicity with other markers of identity. Students will analyze social and institutional practices that foster inclusivity and the implications of such practices on workplace equity and social justice.

GS 4150 Global Trade: The Intersection of Main Street and the World (4 Credits)
Trade is often characterized in terms of economic flows—the exchange of goods and services across borders and the electronic transfer of funds worldwide, as well as associated taxes, tariffs, labor, and production costs in different parts of the world. Yet trade also involves the exchange of ideas, cultures, languages, and people, all of which have profound implications for doing business worldwide. This course addresses trade in its different manifestations and explores the impact of trade on work in a variety of contexts. Students will approach trade from a holistic perspective to analyze its connections to globalization and their own work environments.

GS 4200 Globalization and Global Citizenship (4 Credits)
Over the past century the world has witnessed unprecedented developments in communication, technology, and mobility. These have enabled the rapid exchange of money, people, materials, ideas, and cultures across national borders. With these changes have come questions about the roles and responsibilities of individuals, companies, and organizations within this increasingly complex and interconnected global society. Globalization is often used as a buzzword for this ever-evolving context, although its meaning is sometimes unclear. This course clarifies the nature of globalization by introducing students to fundamental concepts of global citizenship, focusing in particular on relationships between the local and the global, and on the necessity of developing a cosmopolitan perspective in order to be more successful in an increasingly globalizing workplace.
GS 4210 The Force of Faith: Religion in the Global Workplace (4 Credits)
This course examines the role of religion in the global workplace, addressing issues involved in working with clients, stakeholders, and employees from diverse religious backgrounds with the aim of increasing students’ awareness of their own attitudes toward religious beliefs and professional responsibilities. Students will develop an understanding of the ways in which different religious beliefs impact conceptions of professional communication and conduct, in addition to exploring relationships between religious faiths and business ethics.

GS 4300 Foundations of Translation: The Role of the Professional Translator (4 Credits)
This course examines fundamental translation ideas and theories through assigned readings, lectures, and class discussions. It explores the links between linguistic and cultural factors and their relevance to translation. The course covers the different aspects of translation, surveys translation tools and reference materials, discusses professional roles of translators, analyzes the public perception of the profession, and examines standard business practices and professional codes of ethics. It also introduces the actual practice of translation through realistic exercises.

GS 4301 Written & Sight Translation for Translators & Interpreters (4 Credits)
This is an introductory course for translators and interpreters covering a variety of registers: commercial, journalistic, legal, literary, medical, and technical. Students learn to apply text analysis, text typology, and contrastive analysis of their working languages to identify, analyze, and resolve translation/interpretation problems while independently developing an efficient and rational approach to the process of translation or interpretation. In addition, course assignments include practice and graded exercises in translation and sight translation, utilizing authentic texts drawn from an extensive variety of text categories that include, but are not limited to, current events, general political economy, general legal documents, and scientific and technical topics for general audiences. Language-specific.

GS 4302 Computer Aided Translation (CAT): An Introduction to Software for Translators (4 Credits)
In this course, students examine the various technologies and software used by professional translators. Students will explore the differences between Computer Assisted Translation (CAT) and Machine Translation (MT) and become familiar with the concept of Translation Memory (TM), especially how TM differs from term bases and glossaries. Students will also learn the main features of a professional translation tool and use them in conjunction with QA functionalities, as well as practicing how to revise translation drafts in a consistent work-flow.

GS 4303 Language Services Practicum for Translators or Interpreters (4 Credits)
The Practicum helps students develop and establish an identity as professionals because it builds a practical knowledge of translation or interpretation as a profession. Its goal is to empower students to identify and pursue professional development opportunities and specializations. Students are expected to apply the knowledge, skills, and attitudes attained in the translation and interpretation curriculum by apprenticing under qualified translators or interpreters, language agencies, law firms, government agencies (e.g., school districts, the IRS, police departments, social services agencies), and/or healthcare and community-based organizations in a variety of general work situations. Interns shadow their mentors and then move into actual translation or interpretation assignments in monitored situations. Initiation into the language industry through interaction with members of the profession, professional organizations, and institutions is encouraged. Students must prepare a final project based on their practicum experience, following the University College Internship Handbook. The practicum should be taken as one of the last two Translation Studies classes.

GS 4304 Introduction to Legal Translation (4 Credits)
Because a legal document bears legal liabilities, the translation of a legal document has the same legal effect as the original. As a result, the requirements for accuracy in legal translation (meaning, tone, and style) are quite high. This course provides an overview of the nature of legal translation and an introduction to the principles of comparative law, such as how to research legal issues in the countries of the language pair. The concepts of equivalence and zero equivalence are analyzed. Participants translate different types of agreements; certificates; and affidavits, as well as a wide array of documents focusing on probate, family, poverty, and criminal law. Students are given assignments on the research approach, steps, and skills needed to tackle a legal translation project from start to finish. Fundamental legal translation theory is emphasized at the beginning of the course and conveyed in the form of assigned readings, lectures, class discussions, and independent research. Language specific. Prerequisites: GS 4301 and admission to the Master of Liberal Studies in Global Affairs with a Translation Studies specialty of the Certificate of Advanced Study in Translation Studies.

GS 4305 Localization and Translation of Software and Web Pages (4 Credits)
This course provides students with a general overview of the field of web page translation and an introduction to software localization. Class topics range from technical discussions on computer architecture to tips for managing localization projects. Students gain a thorough understanding of the basic components of a localization project (web, software, online help, and documentation) and insight into the larger context of software/web localization and internationalization processes. Using real-life examples and hands-on exercises, students explore the cultural, technical, and organizational challenges in the adaptation of culturally sensitive elements. Language generic. Prerequisites: GS 4301 and admission to the Master of Liberal Studies in Global Affairs with a Translation Studies specialty of the Certificate of Advanced Study in Translation Studies.

GS 4306 Translation of Medical Texts for the Health Care Industry (4 Credits)
This course covers medical terminology involving patient education, medical research, drug development, the human body and systems, major diseases, as well as the most common injuries. Students translate documents used in general medical practice and are introduced to the common roots, prefixes and suffixes in medical terminology. Translation skills are reinforced by analyzing different levels of difficulty in medical texts, by translating, and by addressing requests for editing and rewriting translated materials for patient populations and audiences of different education levels. Students practice translating medical office correspondence, informational brochures, patient letters, discharge information, hospital intake questionnaires, living wills, patient outreach/educational materials, instructions for taking medications, laboratory tests, and medical disability reports, among others. Language-specific. Prerequisites: GS 4301.
GS 4307 Translation Project Management (4 Credits)
This course gives students the opportunity to address both translation and non-translation related issues associated with planning, executing, controlling, and delivering a final translation for a client (either direct or as an agency). Particular focus is given to hands-on practice of the various communications between the parties. The course outlines an effective project management methodology that can be applied to large or small translation/localization projects. Language generic. Prerequisites: GS 4301 and admission to the Master of Liberal Studies in Global Affairs with a Translation Studies specialty of the Certificate of Advanced Study in Translation Studies.

GS 4308 Introduction to Terminology for Translators and Interpreters (4 Credits)
Terminology is a fundamental part of both translation and interpretation, and knowing how to create and use terminology is a skill necessary both to translators and interpreters. This course will introduce what terminology is, how a termbase differs from a simple glossary or from a dictionary, and how terminology differs from allied fields such as lexicography. It will further introduce some tools used by translators, interpreters and terminologists in their work. Language generic.

GS 4309 Foundations of Interpretation: The Role of the Professional Interpreter (4 Credits)
This course examines the profession of interpreting, including employment opportunities, the role of the interpreter, administrative matters, and ethical considerations. In addition, an overview will be given of the three modes of interpretation (sight, consecutive, and simultaneous), as well as the different areas of interpretation, such as legal, medical, business, community, and conference interpretation.

GS 4310 The Language Services Business for Translators & Interpreters (4 Credits)
Translation and interpretation are professions that typically require their practitioners to set up businesses on their own. This course addresses the key issues involved in being an independent contractor in the language industry, including how to acquire clients, how to price professional language services, how to estimate different types of service, and how to manage different client relationships, from government entities to private individuals. The course also analyzes the differences between working directly for clients and working with translation agencies or as a staff translator or interpreter, where it is crucial to know how to work on a team with other language professionals and content experts. The course also covers basic standard business practices in the language industry and business codes of ethics.

GS 4311 Research for Translation & Interpretation (4 Credits)
Not so long ago, the only way for translators to conduct research for their assignments was to consult the reference works they happened to own, or (if they lived near a good library), go to the library and hope what they needed was available there. The Internet changed all that, revolutionizing the translation and interpretation professions. Now translators and interpreters have at their disposal a seemingly bottomless well of information. At the same time, the research skills needed for translation and interpretation also have changed. This course teaches students how to conduct research using a variety of online tools, how to distinguish between reliable and unreliable sources of information, how to take advantage of the research tools made available by libraries, and in particular how to leverage the various types of resources offered by different types of libraries. Language-generic.

GS 4312 Translation for the Publishing Industry (4 Credits)
Most professional translators work outside the publishing industry; they work as freelancers or staff translators in business, technical, medical, legal translation—or in some other translation specialization. But when people outside our industry think of translators, it is likely they think of book translators, i.e., translators who work for the publishing industry. Working as a translator for the publishing industry may be rewarding, but in many respects it is different from the kind of work most translators are accustomed to. This course will explore such themes as the difference between working on book-length projects and shorter projects, and the differences between translations performed as "work done for hire" and copyrighted translations. It will look at publishing contracts, and at the difference between translating non-fiction and fiction works. It will also survey the most prominent theories of translation, past and present, to see how they apply to the translation of literature. Language-specific.

GS 4313 Translation & Interpretation for Law Enforcement (4 Credits)
This course explores the scope and nature of translating and interpreting in a law enforcement context, including the kinds of documents a translator is likely to encounter and how an interpreter interacts with both law enforcement professionals and members of the public who lack fluency in English. Language-specific.

GS 4314 Interpreting for Health Care (4 Credits)
In this course, students analyze and learn to apply the correct interpreting mode for different healthcare situations. They develop personalized introductions for use in interpreted sessions to provide a framework for interpretation that is clear to both providers and patients. Students learn to apply the medical code of ethics to different interpreting situations. Selecting from a list of various medical specialties, students create interpreting role plays with classmates that include appropriate introductions, interpreting modes, and terminology in both Spanish and English to simulate real-life interpretation situations. This course cultivates many of the skills needed to pass medical interpreter examinations and helps to prepare students for work as professional healthcare interpreters.

GS 4315 Interpreting in the U.S. Court System (4 Credits)
This course explores the general body of knowledge that serves as the context for the U.S. court interpreting profession and covers the special skills and abilities court interpreters must demonstrate. It addresses the court interpreter code of ethics, essential legal concepts and terminology, and the different modes of interpreting used in courtroom settings. The course also covers the practical aspects of legal interpreting and will be a skills-based course.

GS 4701 Topics in Global Affairs (4 Credits)
The content of this course varies each time it is offered. Specific course content is detailed on quarterly schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.
GS 4900 The Puerto Rican Paradox: Challenges and Opportunities in Uncertain Times (4 Credits)
The Commonwealth of Puerto Rico is a tropical paradise boasting vibrant communities, rich cultures, and abundant natural resources. Once coined a “natural jewelry box” by the BBC, Puerto Rico offers sparkling turquoise waters, bioluminescent bays, lush mountainous terrain, and colorful colonial architecture. It is also plagued by a debilitating debt crisis, political corruption, and a crumbling infrastructure, which, particularly in the aftermath of hurricanes Irma and Maria, have caused many residents to flee the island in search of better opportunities and more stable living conditions. In this course, students will examine the paradox that is Puerto Rico. Drawing from literature on culture, history, power, and politics, students will research a topic of their choosing, with the professor’s approval. They will then work with local communities in Puerto Rico on a project of mutual interest and importan, culminating in an approach or proposal for addressing the issue(s) at hand. Students will be required to spend 5 days on-site in Puerto Rico, plus any necessary travel time. This course will give students broad exposure to the history and culture of Puerto Rico, in addition to a nuanced understanding of a specific industry, issue, or problem. It will additionally highlight the power, privilege, and oppression that exists in our own backyards on this U.S. Commonwealth island.

GS 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.

GS 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

GS 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

GS 4905 Graduate Social Research Methods (4 Credits)
Graduate Social Research Methods is an exploration of the methods and purposes of social science research from the perspective of the researcher as well as that of the informed professional and consumer of information. Students will learn about the process of research, including the development of research questions, the purpose of various social science research methods, the role of professional ethics, and general approaches to the analysis and interpretation of data. Students will develop the ability to read and critique basic social science research articles and to implement simple research designs. Students will develop and write a research proposal around a specific research question informed by a review of the literature. Technical requirements include the ability to read and modify Microsoft Excel documents. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

GS 4980 Internship (1-4 Credits)
The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master’s programs.

GS 4991 Independent Study (1-5 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.
GS 4992 Directed Study (1-5 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

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Master of Science in Healthcare Management with a Concentration in Global Health Program Management
The Healthcare Management master’s degree concentration in Global Health Program Management is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing healthcare systems and regulatory environments, finance, and communication and leadership. The concentration focuses on the delivery and support of the global health industry has increasingly emerged as a multinational, multi-organizational endeavor, pulling together individuals and groups from multiple locations and backgrounds to provide services. Individuals, organizations and corporations routinely come together, providing a range of services from public health to emergency and long-term medical services. Individuals and groups engaged in management of direct and indirect health industry service programs, as well as those responsible for the development and marketing of medical devices, products, and services to support the health industry, require specialized skill when operating in the international market. This concentration builds on general knowledge of leadership and management in the health industry with a focus on global application.

Students will gain transferable skills across functions, assisting them in managing services and projects related to the health industry within international settings. Knowledge gained through this concentration will also be of assistance to those writing grants for global healthcare programming, services and product development. Curriculum includes topics such as working with remote teams, regional governance, employment and labor law, independent cross-functional decision making, customs and importation laws, regulatory compliance and other management and legal concerns. Building on desirable areas of expertise identified by those hiring in these fields, this course of study is designed to create a portfolio of skills applicable to various aspects of global health management that can be applied in a multitude of settings throughout the world.

This degree prepares students to:

- Generate and analyze strategies to transfer management skills across a variety of organizational, geographic and/or cultural settings
- Create team management and communication plans for face-to-face, virtual, and remote teams
- Develop and evaluate decision-making strategies to integrate systems, processes, and procedures across various organizational functions
- Assess global legal, cultural, and governance issues and challenges in both delivery of healthcare services and marketing of products to determine most effective implementation strategies
- Examine regional attitudes, traditions, and cultural differences to apply understanding of those concepts to global-health-related critical thinking and decision-making skills
- Evaluate the health industry and health delivery systems in developed and emerging countries in terms of successes, opportunities, and challenges to inform adaptation and application of lessons learned
- Assemble regulatory compliance requirements for research, development, and marketing of healthcare products in the international setting to recommend appropriate courses of action for an organization
- Appraise management principles for healthcare related Non-Government Organizations (NGO’s)

Master of Science in Healthcare Management with a Concentration in Health Data Informatics and Analytics
The Health Data Informatics and Analytics master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing healthcare systems and regulatory environments, finance, and communication and leadership. The concentration prepares students for the evolving environment in the health industry and healthcare system informatics and analytics. In addition, this concentration presents many opportunities to bridge the divide between field-level and director-level positions related to informatics and analytics within the healthcare delivery system. The program incorporates lessons learned from
across the training spectrum, and produces graduates with the necessary skills to create and populate the new mid- and higher-level management positions. This degree concentration focuses on three areas of development.

First, students develop a solid base of knowledge about healthcare delivery in the U.S. within the framework of the “4 Ps”: Patients/People, Providers, Payers, and Population. This framework allows students to understand both informatics and analytics related to the process of transforming data into information, knowledge, and then insight (DIKI) along the broad scope that exists in health industry and U.S. healthcare today. Second, students will: (1) compare and contrast the similarities and differences between asking and answering research and business questions and (2) demonstrate competencies in this area. Third, students will learn how to collaborate, organize projects, and formulate real-life solutions to existing healthcare industry issues.

This degree prepares students to:

- Compare how healthcare data is generated, routed, and analyzed within the U.S. healthcare delivery system and the health industry from the perspectives of patients/people, providers, payers, and populations and how these processes affect interoperability
- Distinguish major, as well as innovative, health information systems as they relate to the perspectives of patients/people, providers, payers, and populations - utilizing both active and passive informatics
- Appraise healthcare and health industry informatics tools as they relate to the past, present, and future directions of healthcare reform - as well as how these differ from other industries
- Articulate the ways in which HIPPA regulations and biostatistics principles influence data informatics and analytics
- Evaluate the impact of data governance challenges, ethical implications, and security issues on stakeholders in healthcare data research, business workflows, and compliance
- Recommend study and project designs for healthcare informatics and analytics-based case studies incorporating frameworks such as database architecture, data warehousing, natural language processing, and epidemiology
- Defend the fundamental DIKI process of transforming data to information, knowledge, then insight through integrating disparate public data sets and modeling predictive analytics to create solutions, complete with data visualizations, to healthcare and health industry challenges
- Develop a professional, actionable implementation, change management, and assessment plan for bringing IT, clinical, engineering, and business individuals together to solve a healthcare industry challenge

Master of Science in Healthcare Management with a Concentration in Healthcare Policy and Regulatory Leadership

The Healthcare Policy and Regulatory Leadership master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing healthcare systems and regulatory environments, finance, and communication and leadership. The career-relevant courses within the concentration provide students with the knowledge and tools to help them achieve leadership and management skills with a pulse on the dynamism in healthcare and continuing emergence of reform leading to changes in healthcare policy.

Students acquire the essential tools necessary to become leaders and managers who help shape, interpret, and implement policies and regulations that impact a value-driven healthcare system. Students improve their understanding of healthcare systems, legislative procedures, and trends as they relate to healthcare regulatory systems and public policy. Students examine the relationship between public policy, the patient as the consumer, and the impact of culture on the formation of policy and practice within a transitioning healthcare environment.

This degree prepares students to:

- Compare variations in healthcare delivery domestically and internationally
- Examine the legislative process involved in the creation of healthcare public policy
- Assess how change leads to resistance and what measures must be adopted to incorporate change
- Correlate how professional standards and accreditation relate to quality assurance in various areas of healthcare
- Analyze the processes involved in the implementation of healthcare public policy and healthcare reform

Master of Science in Healthcare Management with a Concentration in Managing Legal Issues in Healthcare

The Managing Legal Issues in Healthcare master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing healthcare systems and regulatory
environments, finance, and communication and leadership. The concentration provides legal professionals, health providers, practice managers, healthcare administrators, and others with the concentrated knowledge of how law and medicine must work in cooperation to deliver better health, better care, and lower costs while ensuring patient safety. Students interested in policy and advocacy find this concentration applicable to career advancement.

In the Managing Legal Issues in Healthcare program, students explore the intersection of law and health systems as they navigate business and practice management in the health industry. Students will acquire specialized skills related to the economic and legal structures associated with healthcare systems and delivery mechanisms in order to assess and respond to common legal and policy issues facing health organizations.

Principles of change management will be applied throughout all coursework to provide leadership skills necessary to develop, facilitate, and maintain change across health systems.

The curriculum focuses on legal and policy issues including transactional law, professional liability, professional review, patient privacy, and anti-discrimination—all discussed in relation to both inpatient and outpatient facilities and providers. Unique legal concerns related to academic and entrepreneurial medicine are addressed including research regulations, intellectual property, and product development.

This degree prepares students to:

• Analyze the intersection of law and healthcare in health administration
• Assess legal and regulatory systems that impact healthcare payment and delivery
• Summarize legal issues that influence academic medical research and health entrepreneurship
• Examine ethical considerations that affect healthcare
• Identify business principles necessary to manage the legal components of healthcare systems

Master of Science in Healthcare Management with a Concentration in Medical and Healthcare Information Technologies

The Medical and Healthcare Information Technologies master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing healthcare systems and regulatory environments, finance, and communication and leadership. The innovative classes in the concentration cover how to reduce costs and improve access to quality healthcare through technologies that comprise the framework of modern interconnected healthcare.

Students stay at the cutting edge of emerging healthcare information technology, telehealth, digital, and virtual health with a master’s degree concentration by learning how technology affects and improves diagnosis, treatment, training, patient records, and financial transactions. You’ll gain high-level knowledge of the interoperability of healthcare information systems, the benefits and barriers associated with electronic health records systems, and the emerging use of distance medicine.

Courses emphasize provider and patient interaction and how to improve overall efficiency through relevant health data interoperability.

This degree prepares students to:

• Assess how technology affects diagnosis, treatment, training, record keeping, financial transactions and data outcome analysis
• Compare and contrast emerging trends in medical and healthcare information technology including electronic health records, telehealth, digital, and virtual health
• Analyze how technology can help improve quality of patient care and reduce costs as healthcare moves from a volume-based to value-based system
• Recommend different ways to facilitate discussion and communication between clinical providers and their counterparts

Master of Science in Healthcare Management with a Concentration in Strategic Leadership in Healthcare Organizations

The Strategic Leadership in Healthcare Organizations master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing healthcare systems and regulatory environments, finance, and communication and leadership. The concentration prepares students to develop and administer strategic plans for various types of healthcare systems.

Students acquire the skills needed to successfully and strategically lead within healthcare organizations through the integrative process of a changing healthcare industry. Through analysis of the interrelationships of value, quality, and price, students examine the financial state of healthcare at the macro level, allowing them to better understand budgetary restraints while striving to realize an organization’s vision and goals.
Using case-based study techniques, students explore practice and system management, strategic planning, and change leadership.

This degree prepares students to:

- Compare and contrast leadership and administration characteristics that contribute to success in the provision of healthcare
- Evaluate basic components of a strategic plan and change management, relating them to financial planning and patient value within the healthcare system
- Analyze issues that support and detract from a harmonious workplace environment, and how these issues affect patient services, and provide solutions in effectively dealing with these issues
- Compare and contrast the strategic management functions required to lead and administer various types of healthcare systems
- Demonstrate expertise in the complex history and process of healthcare economics

**Master of Science in Healthcare Management with a Concentration in Supply Chain Management**

The Supply Chain Management master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students learn tactical innovation and change management using vision, values, and mission as an overall guide. Led by professional practitioners who work in the fields in which they teach, leadership classes provide professionals the skills to manage change, encourage innovation, and develop effective strategic initiatives while fulfilling an organization’s mission.

In the Supply Chain Management concentration, students will build end-to-end knowledge of the complex process that provides the many products healthcare organizations need to function. Students will learn to plan for and manage the flow of supplies from raw material sourcing to manufacturing, transportation, and inventory management. Students will use the latest technology to execute plans that deliver healthcare products in the most cost-effective, streamlined way possible.

This degree prepares students to do the following:

- Understand how the six core supply chain processes work collectively to provide goods from design to markets.
- Develop an understanding of the sub-elements of each core supply chain process to demonstrate an aptitude of each function at a tactical to strategic level.
- Investigate the key operating and financial measures of supply chain management to explain the impact on users and providers of services.
- Assess a supply chain to recommend current technology and processes, including solutions to overcome potential barriers to implementation, to improve the existing structure.
- Create strategies to address transportation related issues using basic principles of supply chain management.

**Certificate in Healthcare Management with a Concentration in Global Health Program Management**

The Healthcare Management certificate in Global Health Program Management is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Delivery and support of healthcare in the global health industry has increasingly emerged as a multinational, multi-organizational endeavor, pulling together individuals and groups from multiple locations and backgrounds to provide services. Individuals, organizations and corporations routinely come together, a range of services from public health to emergency and long-term medical services. Individuals and groups engaged in management of direct and indirect health industry service programs, as well as those responsible for the development and marketing of medical devices and products and services to support the health industry, require specialized skill when operating in the international market. Students will gain transferable skills across functions, assisting them in managing services and projects related to the health industry within international settings. Knowledge gained through this concentration will also be of assistance to those writing grants for global healthcare programming, services and product development. Curriculum includes topics such as working with remote teams, regional governance, employment and labor law, independent cross-functional decision making, customs and importation laws, regulatory compliance and other management and legal concerns. Building on desirable areas of expertise identified by those hiring in these fields, this course of study is designed to create a portfolio of skills applicable to various aspects of global health management that can be applied in a multitude of settings throughout the world. Students will also gain additional skills and knowledge in healthcare management through elective coursework.

**Certificate in Healthcare Management with a Concentration in Health Data Informatics and Analytics**

The Health Data Informatics and Analytics certificate is offered completely online to meet the needs of busy adults. This certificate is designed for three principal types of students. This certificate is appropriate for individuals in the health data informatics or analytics field who are currently working beyond their skillset capacity. This certificate seeks to match their skills to the competencies they would like to acquire. These students will
benefit from instruction on theory and validation of their on-the-job experiences. Students will also gain additional skills and knowledge in healthcare management through elective coursework.

Alternatively, this certificate is appropriate for those who are ready to move to a managerial position and may need a new skillset to make this conversion. Additionally, this certificate is appropriate for individuals with solid business skills looking to transition from another industry into the health industry or healthcare but need support for the move. This certificate will aid in the transition to a health data informatics and analytics position within the healthcare or health industry. To this end, the certificate curriculum is aligned with AHIMA and HIMSS certification specific core objectives. This certificate focuses on three concentrated areas of development.

First, students develop a solid base of knowledge about the healthcare delivery in the U.S. within the framework of the “4 Ps”: Patients/People, Providers, Payers, and Population. This framework allows students to understand both informatics and analytics related to the process of transforming data into information, knowledge, and then insight (DIKI) along the broad scope that exists in health industry and U.S. healthcare today. Second, students will compare and contrast the similarities and differences between asking and answering research and business questions. Third, students will learn how to collaborate, organize projects, and formulate real-life solutions to existing healthcare industry issues.

Certificate in Healthcare Management with a Concentration in Healthcare Policy and Regulatory Leadership

The graduate certificate in Healthcare Policy and Regulatory Leadership concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will add new skills to their portfolio, including knowledge of how to help shape, interpret, and implement policies and regulations that impact a value-driven healthcare system. The Healthcare Policy and Regulatory Leadership concentration will provide an improved understanding of healthcare systems, legislative procedures, and trends as they relate to healthcare-related public policy and healthcare law.

Career-relevant courses provide students with the knowledge and tools to help them achieve leadership and management with a pulse on the dynamism in healthcare and continuing emergence of reform leading to changes in healthcare policy. Improve your understanding of healthcare systems, legislative procedures, and trends as they relate to healthcare regulatory systems and public policy by earning a certificate. You’ll examine the relationship between public policy, the patient as the consumer, and the impact of culture on the formation of policy and practice within a transitioning healthcare environment. Students will also gain additional skills and knowledge in healthcare management through elective coursework. Credits earned through this certificate may apply toward a master's degree in Healthcare Management.

Certificate in Healthcare Management with a Concentration in Managing Legal Issues in Healthcare

The Managing Legal Issues in Healthcare graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This certificate program provides legal professionals, health providers, practice managers, healthcare administrators, and others with the concentrated knowledge of how law and medicine must work in cooperation to deliver better health, better care, and lower costs while ensuring patient safety.

Certificate students will explore the intersection of law and health systems as they navigate business and practice management in the health industry. Earn specialized skills related to the economic and legal structures associated with healthcare systems and delivery mechanisms in order to assess and respond to common legal and policy issues facing health organizations. Principles of change management will be applied throughout all coursework to provide leadership skills necessary to develop, facilitate, and maintain change across health systems.

Certificate curriculum focuses on legal and policy issues including transactional law, professional liability, professional review, patient privacy, and anti-discrimination—all discussed in relation to both inpatient and outpatient facilities and providers. Students will also gain additional skills and knowledge in healthcare management through elective coursework. Credits earned through the graduate certificate may apply toward a master's degree in Healthcare Management.

Certificate in Healthcare Management with a Concentration in Medical and Healthcare Information Technologies

The Medical and Healthcare Information Technologies graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate courses emphasize provider and patient interaction and how to improve overall efficiency through relevant health data interoperability. Innovative classes cover how to reduce costs and improve access to quality healthcare through technologies that comprise the framework of modern interconnected healthcare.

Certificate students stay at the cutting edge of emerging healthcare information technology, telehealth, digital, and virtual health by learning how technology affects and improves diagnosis, treatment, training, patient records, and financial transactions. You’ll gain high-level knowledge of the interoperability of healthcare information systems, the benefits and barriers associated with electronic health records systems, and the emerging use of distance medicine. Students will also gain additional skills and knowledge in healthcare management through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in Healthcare Management.
Certificate in Healthcare Management with a Concentration in Strategic Leadership in Healthcare Organizations

The Strategic Leadership in Healthcare Organizations graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This certificate prepares students to develop and administer strategic plans for various types of healthcare systems.

Certificate students will acquire the skills needed to successfully and strategically lead within healthcare organizations through the integrative process of a changing healthcare industry. Through analysis of the interrelationships of value, quality, and price, students examine the financial state of healthcare at the macro level, allowing them to better understand budgetary restraints while striving to realize an organization’s vision and goals. Using case-based study techniques, students explore practice and system management, strategic planning, and change leadership. Students will also gain additional skills and knowledge in healthcare management through elective coursework. Credits earned in the graduate certificate may apply toward a master’s degree in Healthcare Management.

SPECIALIZED GRADUATE CERTIFICATE IN GLOBAL HEALTH PROGRAM MANAGEMENT

The specialized graduate certificate in Global Health Program Management is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Delivery and support of healthcare in the global health industry has increasingly emerged as a multinational, multi-organizational endeavor, pulling together individuals and groups from multiple locations and backgrounds to provide services. Individuals, organizations and corporations routinely come together, a range of services from public health to emergency and long-term medical services. Individuals and groups engaged in management of direct and indirect health industry service programs, as well as those responsible for the development and marketing of medical devices and products and services to support the health industry, require specialized skill when operating in the international market. Students will gain transferable skills across functions, assisting them in managing services and projects related to the health industry within international settings. Knowledge gained through this concentration will also be of assistance to those writing grants for global healthcare programming, services and product development. Curriculum includes topics such as working with remote teams, regional governance, employment and labor law, independent cross-functional decision making, customs and importation laws, regulatory compliance and other management and legal concerns. Building on desirable areas of expertise identified by those hiring in these fields, this course of study is designed to create a portfolio of skills applicable to various aspects of global health management that can be applied in a multitude of settings throughout the world.

SPECIALIZED GRADUATE CERTIFICATE IN HEALTH DATA INFORMATICS AND ANALYTICS

The Health Data Informatics and Analytics specialized graduate certificate is offered completely online to meet the needs of busy adults. This certificate is designed for three principal types of students. This certificate is appropriate for individuals in the health data informatics or analytics field who are currently working beyond their skillset capacity. This certificate seeks to match their skills to the competencies they would like to acquire. These students will benefit from instruction on theory and validation of their on-the-job experiences.

Alternatively, this certificate is appropriate for those who are ready to move to a managerial position and may need a new skillset to make this conversion. Additionally, this certificate is appropriate for individuals with solid business skills looking to transition from another industry into the health industry or healthcare but need support for the move. This certificate will aid in the transition to a health data informatics and analytics position within the healthcare or health industry. To this end, the certificate curriculum is aligned with AHIMA and HIMSS certification specific core objectives. This certificate focuses on three concentrated areas of development.

First, students develop a solid base of knowledge about the healthcare delivery in the U.S. within the framework of the “4 Ps”: Patients/People, Providers, Payers, and Population. This framework allows students to understand both informatics and analytics related to the process of transforming data into information, knowledge, and then insight (DIKI) along the broad scope that exists in health industry and U.S. healthcare today. Second, students will compare and contrast the similarities and differences between asking and answering research and business questions. Third, students will learn how to collaborate, organize projects, and formulate real-life solutions to existing healthcare industry issues.

SPECIALIZED GRADUATE CERTIFICATE IN HEALTHCARE POLICY AND REGULATORY LEADERSHIP

The specialized graduate certificate in Healthcare Policy and Regulatory Leadership concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will add new skills to their portfolio, including knowledge of how to help shape, interpret, and implement policies and regulations that impact a value-driven healthcare system. The Healthcare Policy and Regulatory Leadership concentration will provide an improved understanding of healthcare systems, legislative procedures, and trends as they relate to healthcare regulatory systems and public policy by earning a certificate. You’ll examine
the relationship between public policy, the patient as the consumer, and the impact of culture on the formation of policy and practice within a transitioning healthcare environment. Credits earned through this certificate may be applied toward a master's degree in Healthcare Management.

**SPECIALIZED GRADUATE CERTIFICATE IN MEDICAL AND HEALTHCARE INFORMATION TECHNOLOGIES**

The Medical and Healthcare Information Technologies specialized graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate courses emphasize provider and patient interaction and how to improve overall efficiency through relevant health data interoperability. Innovative classes cover how to reduce costs and improve access to quality healthcare through technologies that comprise the framework of modern interconnected healthcare.

Students stay at the cutting edge of emerging healthcare information technology, telehealth, digital, and virtual health by learning how technology affects and improves diagnosis, treatment, training, patient records, and financial transactions. You'll gain high-level knowledge of the interoperability of healthcare information systems, the benefits and barriers associated with electronic health records systems, and the emerging use of distance medicine. Credits earned through this certificate may be applied toward a master's degree in Healthcare Management.

**SPECIALIZED GRADUATE CERTIFICATE IN MANAGING LEGAL ISSUES IN HEALTHCARE**

The Managing Legal Issues in Healthcare specialized graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This certificate provides legal professionals, health providers, practice managers, healthcare administrators, and others with the concentrated knowledge of how law and medicine must work in cooperation to deliver better health, better care, and lower costs while ensuring patient safety.

Students will explore the intersection of law and health systems as they navigate business and practice management in the health industry. Earn specialized skills related to the economic and legal structures associated with healthcare systems and delivery mechanisms in order to assess and respond to common legal and policy issues facing health organizations. Principles of change management will be applied throughout all coursework to provide leadership skills necessary to develop, facilitate, and maintain change across health systems.

The curriculum focuses on legal and policy issues including transactional law, professional liability, professional review, patient privacy, and anti-discrimination—all discussed in relation to both inpatient and outpatient facilities and providers. Credits earned through this certificate may be applied toward a master's degree in Healthcare Management.

**SPECIALIZED GRADUATE CERTIFICATE IN STRATEGIC LEADERSHIP IN HEALTHCARE ORGANIZATIONS**

The Strategic Leadership in Healthcare Organizations specialized graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This certificate prepares students to develop and administer strategic plans for various types of healthcare systems.

Students will acquire the skills needed to successfully and strategically lead within healthcare organizations through the integrative process of a changing healthcare industry. Through analysis of the interrelationships of value, quality, and price, students examine the financial state of healthcare at the macro level, allowing them to better understand budgetary restraints while striving to realize an organization’s vision and goals. Using case-based study techniques, students explore practice and system management, strategic planning, and change leadership. Credits earned in the certificate may be applied toward a master’s degree in Healthcare Management.

**Master’s Degree Admission**

**Degree and GPA Requirements**

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

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
• Minimum CAE Score: 169

English Conditional Admission: Master’s degree applicants who do not meet the required level of English proficiency may be considered for conditional acceptance if all other admission criteria are met. Prior to enrolling in any graduate-level coursework, English Conditional Acceptance

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
• Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
• Minimum TOEFL Score (Paper-based test): 550
• Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
• Minimum CAE Score: 169

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

Master of Science in Healthcare Management with a Concentration in Global Health Program Management
Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HC 4000</td>
<td>Healthcare Systems and Regulatory Environments</td>
<td>4</td>
</tr>
<tr>
<td>HC 4010</td>
<td>Healthcare Communication and Leadership</td>
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<td>Healthcare Finance</td>
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<td>HC 4910</td>
<td>Research Practices and Applications</td>
<td>4</td>
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<td>HC 4901</td>
<td>Capstone Project</td>
<td>4</td>
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<tr>
<td>or HC 4902</td>
<td>Capstone Seminar</td>
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<tr>
<td>or HC 4904</td>
<td>Interdisciplinary Capstone Seminar</td>
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Concentration requirements

<table>
<thead>
<tr>
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<tr>
<td>HC 4200</td>
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<tr>
<td>HC 4500</td>
<td>Operational Challenges in Global Health Management</td>
<td>4</td>
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<tr>
<td>HC 4510</td>
<td>Legal and Employment Issues in Global Health Management</td>
<td>4</td>
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<td>HC 4520</td>
<td>Global Health NGO Management</td>
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<td>or HC 4530</td>
<td>Regulatory Affairs in Global Health Management</td>
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Elective requirements (Choose three courses):

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<tbody>
<tr>
<td>HC 4005</td>
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<td>HC 4100</td>
<td>Management Principles in Healthcare Systems</td>
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<tr>
<td>HC 4110</td>
<td>Healthcare: Innovative Strategies and Change Management</td>
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<td>HC 4130</td>
<td>Organizational Behavior in Healthcare</td>
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<tr>
<td>HC 4520</td>
<td>Global Health NGO Management</td>
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<td>HC 4530</td>
<td>Regulatory Affairs in Global Health Management</td>
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</table>

Total Credits 48
Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

### Master of Science in Healthcare Management with a Concentration in Health Data Informatics and Analytics

**Degree Requirements**

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<th>Title</th>
<th>Credits</th>
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<td>HC 4010</td>
<td>Healthcare Communication and Leadership</td>
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<td>HC 4015</td>
<td>Healthcare Finance</td>
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<td>HC 4910</td>
<td>Research Practices and Applications</td>
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<td>HC 4901</td>
<td>Capstone Project</td>
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<tr>
<td>or HC 4902</td>
<td>Capstone Seminar</td>
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<td>or HC 4904</td>
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**Concentration requirements**

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<td>HC 4600</td>
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<td>HC 4610</td>
<td>Healthcare Ethics and Biostatistics</td>
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<td>HC 4620</td>
<td>Healthcare Methods and Programming</td>
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<td>HC 4630</td>
<td>Healthcare Data Mining, Integration, and Interpretation</td>
<td>4</td>
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<td>HC 4640</td>
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<td>HC 4650</td>
<td>Healthcare Project Management and Professionalism</td>
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**Elective requirements (Choose one course):**

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<th>Code</th>
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<tbody>
<tr>
<td>HC 4210</td>
<td>Quality Improvement for HC Leaders</td>
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<tr>
<td>HC 4310</td>
<td>Electronic Health Records Systems and Health Information Exchanges</td>
<td></td>
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<tr>
<td>HC 4315</td>
<td>Telehealth, Digital, and Virtual Health</td>
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<tr>
<td>HC 4325</td>
<td>Healthcare Information Technology Applications</td>
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</tr>
<tr>
<td>HC 4335</td>
<td>Information Systems Security in Healthcare</td>
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**Total Credits**

<table>
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<tr>
<th>Credits</th>
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<tbody>
<tr>
<td>48</td>
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</table>

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

### Master of Science in Healthcare Management with a Concentration in Healthcare Policy and Regulatory Leadership

**Degree Requirements**

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<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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<td>HC 4010</td>
<td>Healthcare Communication and Leadership</td>
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<td>Healthcare Finance</td>
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<td>HC 4910</td>
<td>Research Practices and Applications</td>
<td>4</td>
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<tr>
<td>HC 4901</td>
<td>Capstone Project</td>
<td>4</td>
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</table>
or HC 4902  Capstone Seminar
or HC 4904  Interdisciplinary Capstone Seminar

Concentration requirements

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<th>Title</th>
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<tr>
<td>HC 4200</td>
<td>Comparative Healthcare Systems</td>
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<td>HC 4210</td>
<td>Quality Improvement for HC Leaders</td>
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<td>HC 4220</td>
<td>Ethical Considerations in Healthcare</td>
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<tr>
<td>HC 4225</td>
<td>Healthcare Public Policy and the Legislative Process</td>
<td>4</td>
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<tr>
<td>or HC 4230</td>
<td>Implementation and Evaluation of Healthcare Public Policy</td>
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Elective requirements (Choose three courses): 12

<table>
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<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>HC 4005</td>
<td>Healthcare Macroeconomics</td>
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<tr>
<td>HC 4100</td>
<td>Management Principles in Healthcare Systems</td>
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<tr>
<td>HC 4110</td>
<td>Healthcare: Innovative Strategies and Change Management</td>
</tr>
<tr>
<td>HC 4130</td>
<td>Organizational Behavior in Healthcare</td>
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</tbody>
</table>

Total Credits 48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Science in Healthcare Management with a Concentration in Managing Legal Issues in Healthcare

Degree Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HC 4000</td>
<td>Healthcare Systems and Regulatory Environments</td>
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<td>HC 4010</td>
<td>Healthcare Communication and Leadership</td>
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<td>HC 4015</td>
<td>Healthcare Finance</td>
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<tr>
<td>HC 4910</td>
<td>Research Practices and Applications</td>
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<td>HC 4901</td>
<td>Capstone Project</td>
<td>4</td>
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<tr>
<td>or HC 4902</td>
<td>Capstone Seminar</td>
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<tr>
<td>or HC 4904</td>
<td>Interdisciplinary Capstone Seminar</td>
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Concentration requirements

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<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>HC 4400</td>
<td>Legal Issues: Healthcare Providers and Facilities</td>
<td>4</td>
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<tr>
<td>HC 4410</td>
<td>Legal Issues: Research, Reform, and Government</td>
<td>4</td>
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<td>HC 4420</td>
<td>Legal Issues: Healthcare Delivery and Payment Systems</td>
<td>4</td>
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<tr>
<td>HC 4430</td>
<td>Significant Healthcare Law</td>
<td>4</td>
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Elective requirements (Choose three courses): 12

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<th>Title</th>
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<tbody>
<tr>
<td>HC 4200</td>
<td>Comparative Healthcare Systems</td>
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<td>HC 4210</td>
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<td>Healthcare Public Policy and the Legislative Process</td>
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<tr>
<td>HC 4230</td>
<td>Implementation and Evaluation of Healthcare Public Policy</td>
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</tbody>
</table>

Total Credits 48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree
be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Science in Healthcare Management with a Concentration in Medical and Healthcare Information Technologies

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HC 4000</td>
<td>Healthcare Systems and Regulatory Environments</td>
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<td>HC 4010</td>
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<td>Healthcare Finance</td>
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<tr>
<td>HC 4910</td>
<td>Research Practices and Applications</td>
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<td>HC 4901</td>
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<td>or HC 4902 Capstone Seminar</td>
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<td></td>
<td>or HC 4904 Interdisciplinary Capstone Seminar</td>
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Concentration requirements

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<th>Credits</th>
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<tbody>
<tr>
<td>HC 4301</td>
<td>Fundamentals of Healthcare Information Systems</td>
<td>4</td>
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<td>HC 4310</td>
<td>Electronic Health Records Systems and Health Information Exchanges</td>
<td>4</td>
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<tr>
<td>HC 4315</td>
<td>Telehealth, Digital, and Virtual Health</td>
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<td>HC 4325</td>
<td>Healthcare Information Technology Applications</td>
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<tr>
<td>HC 4335</td>
<td>Information Systems Security in Healthcare</td>
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Elective requirements (Choose two courses):

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<td>HC 4005</td>
<td>Healthcare Macroeconomics</td>
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<td>HC 4100</td>
<td>Management Principles in Healthcare Systems</td>
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<td>HC 4110</td>
<td>Healthcare: Innovative Strategies and Change Management</td>
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<tr>
<td>HC 4130</td>
<td>Organizational Behavior in Healthcare</td>
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</table>

Total Credits

48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Science in Healthcare Management with a Concentration in Strategic Leadership in Healthcare Organizations

Degree Requirements

<table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
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<td>Healthcare Communication and Leadership</td>
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<td>HC 4015</td>
<td>Healthcare Finance</td>
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<td>HC 4910</td>
<td>Research Practices and Applications</td>
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<td></td>
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Concentration requirements

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<td>HC 4100</td>
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<tr>
<td>HC 4110</td>
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Healthcare Management

Elective requirements (Choose three courses):

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<tbody>
<tr>
<td>HC 4200</td>
<td>Comparative Healthcare Systems</td>
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<td>HC 4210</td>
<td>Quality Improvement for HC Leaders</td>
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<td>Healthcare Public Policy and the Legislative Process</td>
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<tr>
<td>HC 4230</td>
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Total Credits: 12

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

**MASTER OF SCIENCE IN HEALTHCARE MANAGEMENT WITH A CONCENTRATION IN supply chain management**

Degree Requirements

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<td>HC 4910</td>
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<tr>
<td>HC 4000</td>
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<tr>
<td>HC 4010</td>
<td>Healthcare Communication and Leadership</td>
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<td>HC 4015</td>
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<td>HC 4902</td>
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Concentration requirements

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<tbody>
<tr>
<td>TRAN 4100</td>
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<td>TRAN 4110</td>
<td>Fundamentals of Supply Chain Planning</td>
<td>4</td>
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<tr>
<td>TRAN 4120</td>
<td>Fundamentals of Supply Chain Execution</td>
<td>4</td>
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<td>TRAN 4130</td>
<td>Supply Chain Management Practicum</td>
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Elective requirements (Choose three courses)

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<td>TRAN 4140</td>
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<tr>
<td>TRAN 4150</td>
<td>Supply Chain Finance</td>
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<tr>
<td>HC 4100</td>
<td>Management Principles in Healthcare Systems</td>
<td>4</td>
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<tr>
<td>HC 4110</td>
<td>Healthcare: Innovative Strategies and Change Management</td>
<td>4</td>
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<tr>
<td>HC 4130</td>
<td>Organizational Behavior in Healthcare</td>
<td>4</td>
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</tbody>
</table>

Total Credits: 48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
Certificate in Healthcare Management with a Concentration in Global Health Program Management

Program Requirements

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Total Credits: 24

Minimum number of credits required: 24

Certificate in Healthcare Management with a Concentration in Health Data Informatics and Analytics

Program Requirements

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<td>Healthcare Data Mining, Integration, and Interpretation</td>
<td>4</td>
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<tr>
<td>HC 4640</td>
<td>Healthcare Database Applications</td>
<td>4</td>
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<tr>
<td>HC 4650</td>
<td>Healthcare Project Management and Professionalism</td>
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Total Credits: 24

Minimum number of credits required: 24

Certificate in Healthcare Management with a Concentration in Healthcare Policy and Regulatory Leadership

Program Requirements

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Total Credits: 24
Certificate in Healthcare Management with a Concentration in Managing Legal Issues in Healthcare

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<tr>
<td>HC 4400</td>
<td>Legal Issues: Healthcare Providers and Facilities</td>
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Total Credits: 24

Certificate in Healthcare Management with a Concentration in Medical and Healthcare Information Technologies

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<tr>
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<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>HC 4301</td>
<td>Fundamentals of Healthcare Information Systems</td>
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</tr>
<tr>
<td>HC 4310</td>
<td>Electronic Health Records Systems and Health Information Exchanges</td>
<td>4</td>
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<tr>
<td>HC 4315</td>
<td>Telehealth, Digital, and Virtual Health</td>
<td>4</td>
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<td>HC 4325</td>
<td>Healthcare Information Technology Applications</td>
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<td>HC 4335</td>
<td>Information Systems Security in Healthcare</td>
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<td>HC 4130</td>
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Total Credits: 24

Certificate in Healthcare Management with a Concentration in Strategic Leadership in Healthcare Organizations

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Elective requirements (Choose two courses):

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Total Credits: 24

Minimum number of credits required: 24

**SPECIALIZED GRADUATE CERTIFICATE IN global health program management**

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Total Credits: 16

**SPECIALIZED GRADUATE CERTIFICATE IN health data informatics and analytics**

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Total Credits: 16

**SPECIALIZED GRADUATE CERTIFICATE IN healthcare policy and regulatory leadership**

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**SPECIALIZED GRADUATE CERTIFICATE IN medical and healthcare information technologies**

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Total Credits: 16

**SPECIALIZED GRADUATE CERTIFICATE IN managing legal issues in healthcare**

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Total Credits: 16
SPECIALIZED GRADUATE CERTIFICATE IN strategic leadership in healthcare organizations

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SPECIALIZED GRADUATE CERTIFICATE in Healthcare leadership Business acumen

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SPECIALIZED GRADUATE CERTIFICATE in healthcare leadership business expertise

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<tr>
<td>HC 4000</td>
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Courses

**HC 4000 Healthcare Systems and Regulatory Environments (4 Credits)**
This course opens with a comprehensive overview of the functions of various types of healthcare organizations: providers, insurance companies, government agencies, and professional associations. Alternative payment and provider models are reviewed, regulatory bodies and issues are explored, and healthcare reform efforts and proposals are discussed. Supply and demand projections for personnel are examined. The work of key federal agencies (NIH, National Center for Disease Control, and Food and Drug Administration) is reviewed as well as the activity of national and international non-governmental organizations. Major national and global public health challenges are introduced.

**HC 4005 Healthcare Macroeconomics (4 Credits)**
This course focuses on macro analysis of the current financial state of healthcare in the United States. The relationships of value, quality, and price are analyzed. Transparency related to price and quality is considered. Fundamental items such as balance sheets/income statements, accounting vs. financial reporting, equity, cash flows, and debt financing are covered in detail. Payment and incentive models are considered in connection with employer-furnished benefits, private health insurance plans, Medicare and Medicaid. Current issues, such as pay for performance, shared savings, cost shifting, and healthcare for the aging, under and uninsured are discussed. Students will discuss variations in health policy related to payment and coverage systems.

**HC 4010 Healthcare Communication and Leadership (4 Credits)**
This course focuses on the welfare of patient, family, and community in the context of medical team communication and leadership. Models for communicating highly technical medical information with patients and others involved in their care are examined. Students weigh and assess differences in personal and organizational cultures to optimize patient-centered outcomes. Students acquire a sound body of knowledge and terminology to facilitate communication and leadership across a multitude of disciplines essential in the delivery of healthcare. NOTE: This course is strongly recommended within the first 3 terms of study.

**HC 4015 Healthcare Finance (4 Credits)**
This course presents an overview of financial management in healthcare organizations operating in the United States. Students will gain a broad overview of the business of healthcare in the United States, including interpretation of financial statements, budgeting, variance analysis, operational analysis, capital investment analysis, expense management issues, revenues, and payment systems used in the current United States healthcare system. The course will use a case-based approach where students will demonstrate mastery of financial management skills through application of knowledge to real-life scenarios from the industry.
HC 4100 Management Principles in Healthcare Systems (4 Credits)
Healthcare systems are complex, dynamic, multilayered and unpredictable. They require constant situational awareness to maintain safety, efficiency, compliance, relevance and fiscal responsibility. Management and leadership need to have the vision to respond to changes and unexpected events. In this course, students encounter and explore the management functions required to lead and administer various types of healthcare systems. Students will engage in activities such as analyzing a healthcare system or organization's current level of performance or culture to inform ways to lead that organization toward excellence.

HC 4110 Healthcare: Innovative Strategies and Change Management (4 Credits)
Effective healthcare takes continual innovation to meet the ever-changing needs of the population. Through an examination of disruptions that create a catalyst for change, this course focuses on teaching students how innovative strategies can enable quality care and sustainability both within the healthcare delivery system and the health industry. Further, the drivers of innovation are explored from their use in grassroots efforts through regulatory reform through the lens of supply and demand. Finally, strategic planning for maximum use of financial resources to meet stakeholder expectations is ventured into in this course.

HC 4130 Organizational Behavior in Healthcare (4 Credits)
Customer and employee satisfaction elements of healthcare management are often a result of how well the entire healthcare system functions. Students examine successful and less successful examples of cooperation, compatibility, and dedication within the workplace and explore what contributes to a harmonious and effective healthcare environment. Interpersonal skills are discussed, as are ethical guidelines and laws that define acceptable workplace behavior.

HC 4200 Comparative Healthcare Systems (4 Credits)
This course describes variations in healthcare delivery systems locally, nationally, and globally as they relate to policy, structure, and finance. Comparisons of systems are made relative to expenditure of resources and outcomes. Students learn about healthcare coverage, access to care, healthcare rationing, provider manpower distribution, and seeking healthcare in foreign countries (medical tourism). The discrepancy between the desirable and the practical is explored, and students are asked to outline and defend a system that they believe is both desirable and practical.

HC 4210 Quality Improvement for HC Leaders (4 Credits)
This course is designed to review the body of knowledge and core competencies needed to function at the level of Certified Professional in Healthcare Quality (CPHQ) in a healthcare organization. Skills gained are applicable to managers and administrators of hospitals, practices, and clinics. Course content is beneficial to clinicians and others interested in quality and patient safety. This course facilitates the successful pursuit of the CPHQ certification exam. Core competencies, aligned with the CPHQ certification exam, to be explored in detail include: Leadership and Management; Quality and Performance Improvement; Healthcare Safety; Information Management and Regulation, Accreditation and Continuous Readiness. Students are strongly encouraged to complete HC4000 and HC4220 prior to registering for the course.

HC 4220 Ethical Considerations in Healthcare (4 Credits)
This course explores ethical considerations encountered throughout the United States' healthcare industry as well as within the broader global environment. Both clinical and non-clinical scenarios will be examined. Students will learn to apply ethical principles, theories, and concepts to analyze and draw conclusions for a broad range of ethical dilemmas. Through readings, class discussions, and assignments, students will recognize how ethical considerations vary depending on the perspective of the stakeholder or assessor, a critical step in making ethical decisions with no single right answer.

HC 4225 Healthcare Public Policy and the Legislative Process (4 Credits)
This class provides students with an understanding of the political and legislative procedures that lead to healthcare policy change and reform. Students examine the influences and functions of government agencies, legislative processes and procedures and executive branch rule-making. Students objectively evaluate how policy changes occur at the federal and state levels and subsequently affect the functioning as a citizen and a professional. Class lecture focuses on the legislative path of federal law and then follows it through to the outcomes at the state level. Students explore the importance of developing relationships, communication and advocacy strategies with elected officials and various stakeholder groups that interact with the federal and state legislative processes.

HC 4230 Implementation and Evaluation of Healthcare Public Policy (4 Credits)
This course examines strategies for implementation and evaluation of healthcare public policy. Students develop skills in analyzing issues, considering and weighing pros and cons of proposed policy, and defending strategies for bringing about change. Beginning with the passage of a new law, policy, or regulation, students track the process to implement and evaluate new policy. Topics related to implementation of a new policy include funding the implementation, effect on constituents and the overall national economy, sustainability, and short- and long-term evaluation of the policy. At the conclusion of this course, students will prepare an implementation plan for selected recently passed state legislation. Students are strongly encouraged to complete HC 4000 prior to registering for this course.

HC 4301 Fundamentals of Healthcare Information Systems (4 Credits)
Health information technology (HIT) can improve cost and efficiency when systems are properly evaluated, implemented, and optimized. Effective IT systems are also increasingly being associated with better patient outcomes and reduced costs. However, healthcare has lagged behind other industries in the adoption of IT systems. A major challenge to healthcare professionals is to articulate the major underlying technical concepts involved in the jargon-filled world of health information technology. This foundational course provides a working knowledge of key HIT definitions and concepts. It is not designed to turn students into network administrators or software developers; rather it is to equip students to become an active and valuable participant – or even a team leader – in the evaluation, selection, implementation and ongoing operation of health information systems.

NOTE: This course is a prerequisite for HC 4325 unless approved by the academic director.
HC 4310 Electronic Health Records Systems and Health Information Exchanges (4 Credits)
Electronic health records systems (electronic medical records (EMRs), electronic health records (EHRs), personal health records (PHRs), and health information exchanges (HIEs)) are all the buzz these days, yet for the past 30 years the healthcare sector has clung to paper records, file folders, and clipboards. This course will explore the technical and controversial aspects of healthcare information technology in general, and the specific factors involving evaluation and adoption of EMR systems. The course also covers the fundamental components of modern electronic records systems and reviews their impact on both business and clinical functions. Key areas of interoperability, interfaces, and standards will be introduced. The course will be practical and thought-provoking as it emphasizes critical thinking and the synthesis of ideas from multiple sources and perspectives. Participants will be challenged to develop their own viewpoints and opinions, substantiated by the published work of those who are thought leaders in the field of HIT, as well as the participants’ own experiences.

HC 4315 Telehealth, Digital, and Virtual Health (4 Credits)
The lack of access to proper medical facilities presents a gap in quality healthcare, particularly populations, geographies, and specialties. Other populations simply prefer receiving some healthcare services in locations and/or during times that are more patient-centric. This course will present the advantages and challenges of telehealth services to close these gaps, and to develop more efficiencies in providing healthcare services across populations. This course will also cover a broad variety of healthcare services and specialties but will focus on services and specialties that primarily utilize synchronous technologies. After a broad review of the telehealth field, this course will focus on how to set up, sustain, and lead a telehealth, digital, or virtual program. This will include regulatory issues such as state-based licensure, state-based licensing boards, emergency management procedures, reimbursement, and credentialing and privileging. In addition to these regulatory issues, the course will focus on current and emerging technologies, how to conduct a needs assessment, define staff training needs, overcome resistance, market services, implement different business models, and evaluate best practices for leading virtual teams. The course will also cover how some innovative and emerging technologies such as mobile apps and virtual reality are being used in healthcare.

HC 4325 Healthcare Information Technology Applications (4 Credits)
This course covers the major healthcare information technologies and topics other than electronic health records systems. Electronic health records systems represent a large focus in healthcare technology; however, many other important systems form the complete framework of modern connected healthcare. These include electronic practice management (EPM/PMS) systems, scheduling, billing, diagnostics/labs, reporting, payment interfaces, and business intelligence in healthcare. This course focuses on the fundamentals of how to be an analyst of health IT technology. Prerequisite: HC 4301 or approval by the academic director.

HC 4335 Information Systems Security in Healthcare (4 Credits)
This course will introduce students to information security risks facing the healthcare industry. Students will learn how to protect healthcare organizations and their patients’ data better. Students will learn about recent security breaches, the impact of those breaches on healthcare organizations, and all of the key players involved. This course also covers the evolution of healthcare IT and the continuously evolving risk and regulatory landscape. Students will explore regulations of HIPAA, NIST/ONC, HITECH, and Meaningful Use and how they relate to day-to-day operations in healthcare organizations. Additionally, this course will prepare students to support information security initiatives in order to protect the organization while furthering the advancement of healthcare IT capabilities. This is not a technical course; however, the course covers how security is impacted by technology and what one must do across technology to secure healthcare systems, organizations and patients.

HC 4400 Legal Issues: Healthcare Providers and Facilities (4 Credits)
This course is a primer on the legal and compliance considerations associated with organization, payment, and administration of facilities and provider groups. Topics will include the corporate and contract law, Stark and anti-kickback law, licensure and credentialing, professional liability, professional review and patient safety, HIPAA and patient privacy, and other laws affecting healthcare providers and organizations.

HC 4410 Legal Issues: Research, Reform, and Government (4 Credits)
This course reviews the recent history of healthcare reform in the United States beginning with the 2010 Affordable Care Act (ACA) and moving to health reform since the ACA. Students examine the influences and functions of Medicare and Medicaid as well as the Department of Health and Human Services’ (HHS) role in shaping benefit coverage throughout the healthcare industry. Students will explore the importance of, and examine legal issues related to, public health and healthcare provided by entities within the Federal Government such as the Department of Veterans Affairs (VA), Department of Defense (DoD), and Indian Health Service (IHS). Students will objectively evaluate the legalities and ethical issues associated with clinical research as well as the Food and Drug Administration (FDA)’s involvement in the development of pharmaceutical agents and medical devices. The course concludes with students analyzing the future landscape of health reform and public sector influence in healthcare.

HC 4420 Legal Issues: Healthcare Delivery and Payment Systems (4 Credits)
This course provides an understanding of the legal complexities of creating and managing delivery and payment models for healthcare services. Course content revolves around the current challenges of evolving from volume-based to value-based payment principles. Topics will include fraud and abuse and compliance, legal foundations of private and public payment systems, fee for service, managed care, value-based systems, and a review of current healthcare payment reform efforts. The course wraps up with the role of clinical health information and related data systems in healthcare delivery and payment.
HC 4430 Significant Healthcare Law (4 Credits)
As a foundation, students begin with an overview of healthcare law and an analysis of the sources of law to include the Constitution, statutes, regulations, and case law. Throughout the course, students will objectively analyze constitutional issues and major federal healthcare laws and will further delve into regulations implementing statutes as well as cases interpreting them. Students will examine the intersection of traditional areas of law and healthcare to include torts, antitrust, contracts, and intellectual property. They will explore the contemporary and emerging areas of information and innovation in healthcare law as well as the Affordable Care Act, to include the Supreme Court’s landmark decision. The course concludes with a consideration of the pervasive problem of fraud, waste, and abuse. This course is delivered in a seminar style with significant independent work/research on the part of students and should be taken after introductory and concentration courses.

HC 4500 Operational Challenges in Global Health Management (4 Credits)
This course presents challenges in operations that are unique to healthcare services and products being delivered in the international market. Topics include international marketing of services and healthcare products, negotiation styles, ethical considerations, organizational structure, transporting of medical goods and personnel, individual travel health and medical tourism as a business model. Cultural and religious considerations in healthcare delivery are discussed. Grants and research management for global health are compared with domestic procedures.

HC 4510 Legal and Employment Issues in Global Health Management (4 Credits)
This course presents legal considerations involved in conducting global programs and business related to healthcare services and products. Employment and labor law are discussed in relationship to employment across international lines and within foreign countries. Intellectual property, patent and copyright of healthcare products, curriculum, and programs are examined. Customs laws, foreign trade, and other regulations such as healthcare licensing and credentialing of personnel are developed. Human resource challenges such as remote team management are discussed.

HC 4520 Global Health NGO Management (4 Credits)
Students will examine factors that impact organizational performance in the global nonprofit health sector. Students expore current challenges associated with Non-Government Organizations (NGOs) that operate in low-income and middle-income countries. Examples include Doctors Without Borders, Shoulder to Shoulder, and others. Students are empowered to research and compare different NGOs and analyze factors that impact organizational effectiveness. Key challenges facing NGO leaders are analyzed and students provide recommendations to improve organizational performance. Course topics include assessment of NGO strategies, organizational resources and financing, and stakeholder relations. Other topics include analysis of countries' demographics, culture, healthcare delivery, policies, and external environment. It is recommended that students in the Global Health Program Management concentration or certificate complete HC4500 and HC4510 prior to registering for this course. Students in other concentrations or programs may take this course at any time as an elective.

HC 4530 Regulatory Affairs in Global Health Management (4 Credits)
This course discusses the various regulatory requirements of conducting healthcare related business from the perspective of research, development, and marketing of medical devices and pharmaceuticals. Both domestic and international requirements will be examined. Students will develop a template of skills for investigating healthcare related compliance issues that can be adapted to specific markets as needed.

HC 4600 Healthcare Data and Delivery by Perspective (4 Credits)
This course evaluates the environment of the U.S. healthcare delivery system and introduces the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, towards the payer, and evolving into population health. Students will learn about the associated data that is generated from the patient as a consumer, from the provider through clinical operations, from the payer perspective, and finally how all of these contribute toward population health data. This course will cover the basics of U.S. healthcare research and clinical intervention, and students will have the ability to model the conceptual as well as practical application of health informatics.

HC 4610 Healthcare Ethics and Biostatistics (4 Credits)
This course discusses research investigator training and outlines the progression of the Institutional Review Board (IRB) process. In addition, this IRB process will be compared with the business process improvement cycle. Health Insurance Portability and Accountability Act (HIPAA) as well as data governance issues are surveyed from the patient, provider, payer, and population perspectives. The connections between these topics and ethics are explored, and the principles of biostatistics are discussed. Common statistical packages used within healthcare research and business applications are covered, and this course concludes with an analysis of resulting ethical implications of short- and long-term healthcare data. Prerequisite: HC 4600.

HC 4620 Healthcare Methods and Programming (4 Credits)
This course presents the basic study designs of epidemiology and illustrates the field's benefit to the healthcare industry. Randomized control trials (RCT) through correlation studies are explained through case studies as well as practical application. Informatics tools such as machine learning, clinical decision support, and natural language processing (NLP) are categorized with respect to their relative positions in the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. This course concludes with the many benefits of auditing as a check and balance for healthcare methods and programming. Prerequisite: HC 4600.
HC 4630 Healthcare Data Mining, Integration, and Interpretation (4 Credits)
This course explores available public healthcare data sets and the data mining process. In addition, this course articulates the value of mapping relationships between data points and workflows. This process determines the level of integration of disparate data sources and is explored through the 4P (patient, provider, payer, population) perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. Once the data sources are integrated, the focus becomes how to turn this data into information, knowledge, and insight. This course wraps up by exploring both business and research options for interpreting data through visualizations and predictive analytics. Prerequisite: HC 4600.

HC 4640 Healthcare Database Applications (4 Credits)
This course covers the growing functions of security in healthcare data and specifically elaborates on the vulnerabilities and emerging solutions for dealing with data once it is stored. Database architecture is surveyed, which transitions into an exploration of terminologies and standards and how these impact interoperability of data in warehouses. A significant portion of this course focuses on the specifics of medical coding and how coding is affected by the 4P perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. The course wraps up with a compilation of Structured Query Language (SQL) capabilities and a study of their influence of their practical application.

HC 4650 Healthcare Project Management and Professionalism (4 Credits)
This course applies skillsets acquired during the course of the program. It is important to learn how to utilize these skillsets, as well as to understand how cultural issues influence processes within the healthcare delivery system. In addition, this course compares research collaborations and business mergers and acquisitions. Finally, the course includes exercises to build professionalism in reporting to convey actionable items. The combination of all of these skillsets informs students’ strategies for addressing change management, program implementation, and evaluation. At the culmination of this course, students will have a baseline proficiency in the cultural aspects that are required to succeed as a healthcare informatics and analytics professional. Prerequisites: HC 4600, HC 4610, HC 4620, HC 4630, and HC 4640.

HC 4701 Topics in Healthcare Management (1-10 Credits)
This is an advanced special topics seminar course. The focus is on specialized areas of interest. Topics courses may be used as electives within the Healthcare Leadership degree and certificates, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate programs.

HC 4900 Experiential Learning in Healthcare (4 Credits)
This course is for students who want to do independent research by completing an industry project and serves as a connector between research methods and a student’s Capstone Project. The course will connect an academic research question with an experiential learning opportunity in healthcare for students as they prepare for their Capstone Project experience. Students will choose a Capstone Advisor, choose a topic, develop a thesis statement, explore project methodologies, write a proposal, and complete the necessary Institutional Review Board (IRB) requirements. Students will also agree to the structure and deliverables of their projects. There is an expectation for face to face (virtual is acceptable) meetings between students and their prospective Capstone Advisor during this course. This course is a prerequisite for any students planning to complete the Capstone Project (HC 4901) as it is the beginning of the Capstone Project process. Prerequisites: approval by Academic Director, acceptance as a degree candidate, and completion of between 30-40 quarter-hours. This course meets an elective option.

HC 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.

HC 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.
This degree prepares students to do the following:

- Knowledge and the specific skills needed to put the student on the path to earn key industry certifications for vendor database platforms. Oracle PL/SQL, Transact-SQL programming, and NoSQL databases. This comprehensive content delivered in a hands-on manner provides both the

- The combination of required and elective courses in the master's degree program covers key database system (DBS) technologies such as SQL Server, which they teach, providing cutting-edge insight to what is needed to work efficiently and effectively in this sector of ICT.

- To design, administer, fine-tune, and maintain databases with a database administration degree, plus develop business acumen that will help them

The Database Design and Administration master's degree concentration is offered online or on campus at the University of Denver in the evenings, or

HC 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program
to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from
various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student
produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic
work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and
academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion
and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions
of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a
cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the
Capstone Seminar in one quarter; no incomplete grades are assigned.

HC 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of
study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes
and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper
qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting
cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and
sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific
research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the
design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as
a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and
evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master's degree.
This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

HC 4980 Internship (1-10 Credits)
The Healthcare Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an
individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences
related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for
finding their own internship site and proposing their internship ideas. University College will send notification to all Healthcare students if they hear of
internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences.

HC 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have
earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and
filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

HC 4992 Directed Study (1-8 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned
a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Directed Study form and filed the form
with all appropriate offices before registering for the directed study. Directed Study is offered only on a for-credit basis.

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Master of Science in Information and Communications Technology with a
Concentration in Database Design and Administration
The Database Design and Administration master's degree concentration is offered online or on campus at the University of Denver in the evenings, or
in a combination of both, to meet the needs of busy adults who are current or aspiring database designers and administrators. Students will learn how
to design, administer, fine-tune, and maintain databases with a database administration degree, plus develop business acumen that will help them
excel in the Information and Communications Technology (ICT) field. Master's degree students learn from expert instructors who work in the fields in
which they teach, providing cutting-edge insight to what is needed to work efficiently and effectively in this sector of ICT.

The combination of required and elective courses in the master's degree program covers key database system (DBS) technologies such as SQL Server,
Oracle PL/SQL, Transact-SQL programming, and NoSQL databases. This comprehensive content delivered in a hands-on manner provides both the
knowledge and the specific skills needed to put the student on the path to earn key industry certifications for vendor database platforms.

This degree prepares students to do the following:
• Analyze, design, develop, test, deploy, administer and maintain database applications and database security based on industry best practices and end-user requirements
• Apply data modeling, data warehousing, performance tuning, programming and maintenance through technologies such as SQL Server, Oracle, PL/SQL Transact-SQL, and NoSQL
• Create plans to solve organizational issues using business management strategies directly related to database administration theories and applications
• Formulate plans for database installation and configuration, maintenance, and backup and recovery

Master of Science in Information and Communications Technology with a Concentration in Geographic Information Systems

The Geographic Information Systems (GIS) master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. GIS training prepares students to apply geographic information systems technology to solve real-world problems, whether determining the best location for a new store, analyzing environmental damage, or detecting crime patterns in a city. GIS solutions provide the capability to store, retrieve, and analyze spatial information by combining layers of data to yield valuable understanding of a locale.

As a current or aspiring GIS professional, you will receive applied instruction from professional practitioners who work in the fields in which they teach as you learn to plan, implement, and execute a GIS project through remote sensing, internet mapping, or digital image processing. Also, you will develop a valuable business background with creative, solution-oriented techniques through this versatile program, which emphasizes applied education that will propel your GIS career forward. Students will explore GIS fundamentals at a very hands-on, practical level necessary to succeed in the field of GIS. Customize your Information and Communications Technology master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:
• Analyze the nature of, uses for, and implementation processes for geographic data
• Select appropriate applications of GIS technology to solve spatial problems based on organizational/client needs
• Analyze real-world problems and select the appropriate GIS tools and processes to address the issues
• Plan, implement, and execute a GIS project

Master of Science in Information and Communications Technology with a Concentration in Information Systems Security

The Information Systems Security master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. A master’s degree concentration in Information Systems Security from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in Information and Communications Technology (ICT) security.

Master’s degree students receive applied instruction as they learn to navigate real-world security challenges, such as setting up a secure network, securing servers, and problem solving hypothetical security situations. Students also garner career-relevant knowledge on related ICT subjects to better relate the challenges of the rapidly evolving world of information security and cyber threats to other key trends in the ICT industry. To ensure up-to-the-minute knowledge and skills, the curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)². In addition, the program was developed in collaboration with the Colorado Springs and Denver chapters of the Information Security Systems Association (ISSA), and the courses have been mapped to the Committee on National Security Systems (CNSS) standards. The University of Denver has been designated by NSA/DHS as a National Center of Academic Excellence in Cyber Defense Education.

This degree prepares students to do the following:
• Develop and implement technical information security tools, policies and procedures to meet organizational needs based on best practices
• Analyze security scenarios to design secure network solutions and applications
• Create strategies to establish secure operations, access control methods, and system security to meet organizational/client requirements
• Evaluate encryption standards and solutions
• Conduct computer forensics analysis

Master of Science in Information and Communications Technology with a Concentration in Mobile Application Development

The Mobile Application Development master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. With mobile application development on the rise, current software and web developers need
to update their mobile app design skills to meet the growing demand in the marketplace. In this master’s degree program, students will learn best practices in browser-based and packaged apps, 3rd-party native extensions, distribution to app stores, and cross-platform application development. Degree-seekers will acquire specialized developer knowledge and the technical skillset needed to succeed as professional mobile app designers and developers.

With a wide range of electives to choose from, students can expand their technical skills in JavaScript, learn about next-gen wireless networks, learn PHP, or brush up on their knowledge of relevant programming languages. In the rapidly evolving, converged world of ICT, it is vital to grasp the diverse industry fundamentals, while also gaining an insider's perspective regarding specific areas of ICT such as mobile application design and development. The master's degree in Mobile Application Development provides a high level of applied knowledge pertaining to mobile app design and development that will help launch a career as a mobile app developer, or elevate students to new current positions.

This degree prepares students to do the following:

• Analyze and apply best practices in browser-based and packaged apps, 3rd-party native extensions, distribution to app stores, and cross-platform application development
• Compare, contrast, and use IDEs such as FDT or IntelliJ IDEA and SDKs
• Critique and build mobile applications in programming languages such as MXML, ActionScript, and Java
• Design and develop mobile applications applying best practices in code reuse, mobile usability, and mobile web standards such as HTML5, CSS3, and JavaScript
• Integrate XML for data description and exchange

Master of Science in Information and Communications Technology with a Concentration in Project Management

The Project Management master’s degree specialty through the Information and Communications Technology (ICT) program is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students will combine information and communication technology skills with a project management and business background and become a proficient leader within the IT field. Students will receive hands-on, practical instruction from professional practitioners, who work in the fields in which they teach, on the tools and techniques of effective project management. Students will learn how to develop a clear plan that places a project in the context of an organization’s strategic plan, while considering the implications information and communication technologies present in any given project.

Graduates of the Project Management program will gain a firm grasp on converging information and communication technologies and learn to understand the fundamentals of each sector. Recognizing how each ICT subject connects to one another, from information security systems to geographic information systems, will give students the competitive edge needed in this dynamic industry. The content for this concentration has been developed to parallel the Project Management Institute’s (PMI)® A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) – Sixth Edition, Project Management Institute, Inc. The unique curriculum prepares students to succeed on the PMI® Project Management Professional (PMP)® Certification Exam.

This degree prepares students to do the following:

• Summarize and apply the basic principles of project management and become proficient in the use of project management software
• Analyze and apply agile concepts and techniques
• Design a comprehensive risk management plan for a project
• Create strategies to manage the complexity inherent in large-scale projects
• Relate project scope to cost, time, and resource requirements
• Develop procurement plans and assess project contracts

Master of Science in Information and Communications Technology with a Concentration in Software Design and Programming

The Software Design and Programming master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students will expand their knowledge of software design and programming principles, while developing the in-depth skills needed to succeed in the field with a Software Design and Programming master’s degree. Current or aspiring programmers will practice Object Oriented methods and programming, with a focus on modern web-based, client-server applications and systems. Students are able to select from a variety of elective courses that best meet their specific Information and Communications Technology (ICT) career goals.

Degree-seekers learn how to develop quality software programs and applications, apply Software Quality Assurance practices, use software management processes such as the Unified Software Development Process, and code in languages such as C#, Java, Python, and PHP. Skills are applied in hands-on assignments, with expert instructors guiding software degree students to identify and overcome the challenges presented by designing and programming software with various languages and development tools.
This degree prepares students to do the following:

- Generate program code in languages such as C#, Java, Python, and PHP
- Create database programming and queries
- Analyze the concepts of object oriented methods and programming and create code using the methodology
- Compare and contrast the features and benefits of multiple IDEs
- Assess appropriate implementations of frameworks such as J2EE, .NET, and Ruby on Rails

**Master of Science in Information and Communications Technology with a Concentration in Technology Management**

The Technology Management master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. The Technology Management degree concentration represents the convergence of business and technology and emphasizes the impact technology can have on strategic and operational objectives when applied through sound business management practices. With the right technical skills, combined with a strategic perspective regarding critical business needs, students will be prepared to meet current industry demands, and positioned to meet the demands of tomorrow.

Graduates with a Technology Management master’s degree concentration or graduate certificate become proficient in creating, managing, and using technology to accomplish strategic organizational goals as they expand and strengthen their knowledge and skills in creative thinking, strategic and tactical decision making, and global awareness. In addition to the practical education received online or on campus, Technology Management master’s degree students will also receive a broader understanding of how related IT sectors impact their technology management roles.

This degree prepares students to do the following:

- Formulate plans to manage technologies for strategic advantage
- Develop and evaluate business cases based on organizational and client requirements
- Assess the role of strategic alliances within an organization
- Summarize project management principles and processes in relation to technology management strategies
- Create and defend IT service assurance plans
- Analyze cloud and internet law across various IT scenarios
- Evaluate strategies and utilize best practices in technology forecasting and innovation

**Master of Science in Information and Communications Technology with a Concentration in Telecommunications Technology**

The Telecommunications Technology master’s degree concentration is offered online to meet the needs of busy adults. This degree prepares students to become proficient, technical leaders within the Information and Communications Technology (ICT). Students will learn how to evaluate emerging telecommunications technologies, wireless networks and services, and the convergence of voice, data, and multimedia services on the global IP network.

Students will learn how to assess and analyze telecommunications technologies, plus gain vital skills necessary to design, develop, and implement telecommunications systems such as wireless networks. The program emphasizes the challenges and approaches to deal with the immense wireless data traffic explosion from devices such as the iPhone, iPad, Android smartphones, connected laptops and the Internet of Things (IoT), as well as broadband services like VOIP and mobile video and the move to 5G networks.

This degree prepares students to do the following:

- Analyze and design network solutions
- Analyze the "triple play" convergence of voice, video, and data over wireless networks
- Evaluate and apply best practices in network security
- Create plans to manage global telecommunications projects
- Evaluate next generation wireless networks and services such as 5G networks

**Master of Science in Information and Communications Technology with a Concentration in Web Design and Development**

The Web Design and Development master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. The program provides an in–depth knowledge of web design and web development through hands–on instruction. Students will move beyond the development of first-generation HTML–based Web pages and learn to create interactive, state–of
data modeling, data warehousing, performance tuning, programming, and building and maintaining client–server databases. The combination of

This certificate prepares students to become leaders in database design, development, and administration while expanding their skillsets to include
efficiently and effectively in this sector of IT.

and administration concentration. Expert instructors who work in the fields in which they teach, result in a highly career–relevant, innovative degree in web design and development.

In addition to IT fundamentals, students will also develop essential business and problem–solving skills that will help them thrive in any organization.

In an increasingly technological world, it is vital to understand the fundamentals of other areas of the Information and Communications Technology (ICT) field, and how each converges with web design and web development.

This degree prepares students to do the following:

- Create interactive web-based applications for e-business processes and consumer demands using tools such as cascading style sheets, web graphics construction, interface design and usability, web scripting, and databases
- Create requirements for and design the user experience by applying UX principles such as user personas, information design, wireframing, and prototyping
- Analyze enterprise goals and apply information architecture and web-design foundational principles and theories to create client-server and cloud-based solutions
- Compare and contrast potential solutions for web, app, and mobile scenarios and apply technology such as JavaScript, HTML5, CSS3, XML, PHP, Python, and Ruby on Rails
- Assess how web design and development converges within the context of security, software, database design, and telecommunications

MASTER OF SCIENCE IN INFORMATION AND COMMUNICATIONS TECHNOLOGY WITH A CONCENTRATION IN Cybersecurity Management

The Cybersecurity Management master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. A master’s degree concentration Cybersecurity Management from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in Information and Communications Technology (ICT) security.

The Cybersecurity Management concentration is designed to equip students with knowledge of industry best practices and management skills demanded by private and public sector employers in today’s rapidly evolving cybersecurity industry. Through hands-on interaction with a set of relevant industry case studies, students will gain knowledge of management tools and principles needed to define, establish, and grow effective and mature cybersecurity management programs for a wide range of organizations. Through experiential learning activities, students will gain an understanding of governance, compliance, regulatory, and business operations domains. These experiences will be enhanced with knowledge of policy and risk management frameworks most relevant to the cybersecurity management profession. The curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)² and supports the National Initiative for Cybersecurity Education (NICE) framework.

Students will be prepared to serve in a range of cybersecurity management and leadership roles to continuously strengthen security postures in a fluid environment of constantly changing human, machine, and state actor threats.

This degree prepares students to do the following:

- Analyze methods to develop and implement cybersecurity management policies and procedures to meet organizational needs based on best practices
- Evaluate methods for the development and delivery of cybersecurity training and education at the institutional level
- Plan cybersecurity management oversight and governance through development of strategic cybersecurity policies and plans
- Examine best practices for communicating cybersecurity management issues with Boards of Director and other management leadership teams
- Evaluate methods for performing cybersecurity audits and documenting audit responses

Certificate in Information and Communications Technology with a Concentration in Database Design and Administration

The graduate certificate in Database Design and Administration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults who are current or aspiring database designers and administrators. Certificate students will expand their skillsets to include designing, administering, fine–tuning, and maintaining databases with a graduate certificate in database design and administration concentration. Expert instructors who work in the fields in which they teach provide excellent insight to what is needed to work efficiently and effectively in this sector of IT.

This certificate prepares students to become leaders in database design, development, and administration while expanding their skillsets to include data modeling, data warehousing, performance tuning, programming, and building and maintaining client–server databases. The combination of
Certificate in Information and Communications Technology with a Concentration in Information Systems Security

The graduate certificate Information Systems Security offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. A graduate certificate in Information Systems Security from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in IT security.

Certificate classes at University College use innovative lab experiences to provide hands-on expertise with industry-current security tools. Students also garner career-relevant knowledge on related IT subjects to better relate the challenges of the rapidly evolving world of cyber security and cyber threats to other key trends in the ICT industry. To ensure up-to-the-minute knowledge and skills, the curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)². In addition, the program was developed in collaboration with the Colorado Springs and Denver chapters of the Information Security Systems Association (ISSA), and the courses have been mapped to the Committee on National Security Systems (CNSS) standards. The University of Denver has been designated by NSA/DHS as a National Center of Academic Excellence in Cyber Defense Education. Credits earned through this graduate certificate may apply toward a master’s degree in Information and Communications Technology.

Certificate in Information and Communications Technology with a Concentration in Mobile Application Development

The graduate certificate in Mobile Application Development is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Current software and web developers need to update their mobile app design skills to meet the growing demand in the marketplace, and a graduate certificate will help expand skills and provide credentials needed to be competitive in the field. Students in the mobile application concentration will learn best practices in browser-based and packaged apps, 3rd-party native extensions, distribution to app stores, and cross-platform application development. Certificate students will also acquire specialized developer knowledge and the technical skillset needed to succeed as professional mobile app designers and developers. Students will also gain additional skills and knowledge in mobile application development through elective coursework.

Certificate students will be able to expand their technical skills in JavaScript, learn about next gen wireless networks, learn PHP, or brush up on knowledge of other mobile application development tools. Students at University College gain a strategic business perspective and problem-solving skills that will help them thrive in any organization. In the rapidly evolving, converged world of ICT, it is vital to grasp the diverse industry fundamentals, while also gaining an insider’s perspective regarding specific areas of ICT such as mobile application design and development. Credits earned through this graduate certificate may apply toward a master’s degree in Information and Communications Technology.

Certificate in Information and Communications Technology with a Concentration in Project Management

The graduate certificate in Project Management through the Information and Communications Technology program is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will learn to combine information and communication technology skills with a project management and business background and become a proficient leader within the Information and Communications Technology (ICT) field. Students will receive hands-on, practical instruction from professional practitioners who work in the fields in which they teach on the tools and techniques of effective project management. Additionally, students will learn how to develop a clear plan that places a project in the context of an organization’s strategic plan, while considering the implications information and communication technologies present in any given project. Students will also gain additional skills and knowledge in project management through elective coursework.

Project Management concentration students will learn about converging information and communication technologies and the fundamentals of each sector. Recognizing how each ICT subject connects to one another, from information security systems to geographic information systems, will give students the competitive edge needed in this dynamic industry. The content for this graduate certificate has been developed to parallel the Project Management Institute’s (PMI) A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) – Sixth Edition, Project Management Institute, Inc. The unique curriculum prepares students to succeed on the PMI® Project Management Professional (PMP)® Certification Exam. Credits earned through this graduate certificate may apply toward a master’s degree in the Information and Communications Technology program.
Certificate in Information and Communications Technology with a Concentration in Software Design and Programming

The graduate certificate in Software Design and Programming is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will be able to expand their skillsets to include software design and programming principles, while developing the in-depth knowledge needed to succeed in the field of Software Design and Programming. Current or aspiring programmers will practice Object Oriented methods and programming, with a focus on modern web-based, client-server applications and systems.

Certificate students learn how to develop quality software programs and applications, apply Software Quality Assurance practices, use software management processes such as the Unified Software Development Process, and code in languages such as C#, Java, Python, and PHP. Expert instructors guide software certificate students to identify and overcome the challenges presented by designing and programming software with various languages and development tools. A comprehensive perspective is also provided at University College, conveying how other technology domains such as application security and database design, affect software programming. Students will also gain additional skills and knowledge in software design and programming through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in the Information and Communications Technology program.

Certificate in Information and Communications Technology with a Concentration in Technology Management

The graduate certificate in Technology Management is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will learn how the convergence of business and technology impacts the strategic and operational objectives. Students will gain the right technical skills, combined with a strategic perspective regarding critical business needs, as they are prepared to meet current industry demands, and positioned to meet the demands of tomorrow.

The Technology Management concentration allows students to become proficient in creating, managing, and using technology to accomplish strategic organizational goals as they expand and strengthen their knowledge and skills in creative thinking, strategic and tactical decision making, and global awareness. This applied Technology Management certificate offers professionals an opportunity to receive applied instruction from professional practitioners who bring deep expertise in business management strategies and their technological implications. Students will also gain additional skills and knowledge in technology management through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in the Information and Communications Technology program.

Certificate in Information and Communications Technology with a Concentration in Telecommunications Technology

The graduate certificate in Telecommunications Technology is offered online to meet the needs of busy adults. The Telecommunications Technology concentration provides practical telecommunications instruction, including evaluating emerging telecommunications technologies, wireless networks and services, and the convergence of voice, data, and multimedia services on the global IP network. Certificate students will learn how to assess and analyze telecommunications technologies, plus gain vital skills necessary to design, develop, and implement telecommunications systems such as wireless networks. The dominant wireless telecom technologies and protocols are presented, including OFDM, MIMO, mobile IP, WiMAX, LTE, and WPANs.

In addition to ICT fundamentals, students will also develop essential strategic business and problem-solving skills that will help them thrive in any organization by creating effective alliances throughout the technology sector. Students will also gain additional skills and knowledge in telecommunication technology through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in the Information and Communications Technology program.

Certificate in Information and Communications Technology with a Concentration in Web Design and Development

The Web Design and Development graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will move beyond developing first-generation HTML-based Web pages and learn to create interactive, state-of-the-art, Web-based applications that support the demands of contemporary e-business processes. The certificate program provides an in-depth knowledge of web design and web development through hands-on instruction. Students will gain the competitive advantage needed to meet current industry demands, as well as the foundations to meet the demands of tomorrow by expanding their IT skillset with a certificate.

Students will use a variety of essential software tools employed in professional web development projects, such as Animate CC, AJAX, and Ruby on Rails. The real-world development scenarios, coupled with the hands-on learning experience provided by professional practitioners who work in the fields in which they teach, result in a highly career-relevant, innovative graduate certificate in web design and development. Web design and development will be put in the context of subjects such as information systems security, software and database design, and telecommunications, and students will learn how their work is impacted by these different sectors. Students will also gain additional skills and knowledge in web design and...
CERTIFICATE IN INFORMATION AND COMMUNICATIONS TECHNOLOGY WITH A
CONCENTRATION IN cybersecurity management

The graduate certificate in Cybersecurity Management is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. A graduate certificate in Cybersecurity Management from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in Cybersecurity Management.

Certificate classes at University College are designed to equip students with knowledge of industry best practices and management skills demanded by private and public sector employers in today’s rapidly evolving cybersecurity industry. Through hands-on interaction with a set of relevant industry case studies, students will gain knowledge of management tools and principles needed to define, establish, and grow effective and mature cybersecurity management programs for a wide range of organizations. Through experiential learning activities, students will gain an understanding of governance, compliance, regulatory, and business operations domains. These experiences will be enhanced with knowledge of policy and risk management frameworks most relevant to the cybersecurity management profession. The curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)² and supports the National Initiative for Cybersecurity Education (NICE) framework.

specialized graduate CERTIFICATE IN DATABASE DESIGN AND ADMINISTRATION

Students in this specialized graduate certificate will expand their skillsets to include designing, administering, fine-tuning, and maintaining databases with a graduate certificate in database design and administration concentration. Expert instructors who work in the fields in which they teach provide excellent insight to what is needed to work efficiently and effectively in this sector of IT.

This certificate prepares students to become leaders in database design, development, and administration while expanding their skillsets to include data modeling, data warehousing, performance tuning, programming, and building and maintaining client-server databases. The combination of required and elective courses covers key database system (DBS) technologies such as SQL Server, Oracle PL/SQL, Transact-SQL programming, and NoSQL databases. This extensive content delivered in a hands-on manner provides both the knowledge and the specific skills needed to put the student on the path to earn key industry certifications for vendor database platforms. Credits earned through this certificate may apply toward a master's degree in Information and Communications Technology.

specialized graduate CERTIFICATE IN INFORMATION SYSTEMS SECURITY

A specialized graduate certificate in Information Systems Security from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in IT security.

Certificate classes at University College use innovative lab experiences to provide hands-on expertise with industry-current security tools. Students also garner career-relevant knowledge on related IT subjects to better relate the challenges of the rapidly evolving world of cyber security and cyber threats to other key trends in the ICT industry. To ensure up-to-the-minute knowledge and skills, the curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)². In addition, the program was developed in collaboration with the Colorado Springs and Denver chapters of the Information Security Systems Association (ISSA), and the courses have been mapped to the Committee on National Security Systems (CNSS) standards. The University of Denver has been designated by NSA/DHS as a National Center of Academic Excellence in Cyber Defense Education. Credits earned through this certificate may apply toward a master's degree in Information and Communications Technology.

specialized graduate CERTIFICATE IN MOBILE APPLICATION DEVELOPMENT

Current software and web developers need to update their mobile app design skills to meet the growing demand in the marketplace, and a specialized graduate certificate will help expand skills and provide credentials needed to be competitive in the field. Students will learn best practices in browser-based and packaged apps, 3rd-party native extensions, distribution to app stores, and cross-platform application development. Certificate students will also acquire specialized developer knowledge and the technical skillset needed to succeed as professional mobile app designers and developers.

Students will be able to expand their technical skills in JavaScript, learn about next gen wireless networks, learn PHP, or brush up on knowledge of other mobile application development tools. Students at University College gain a strategic business perspective and problem-solving skills that will help them thrive in any organization. In the rapidly evolving, converged world of ICT, it is vital to grasp the diverse industry fundamentals, while also gaining an insider's perspective regarding specific areas of ICT such as mobile application design and development. Credits earned through this certificate may apply toward a master's degree in Information and Communications Technology.
specialized graduate CERTIFICATE IN PROJECT MANAGEMENT

Students in the specialized graduate certificate in Project Management will learn to combine information and communication technology skills with a project management and business background and become a proficient leader within the Information and Communications Technology (ICT) field. Students will receive hands-on, practical instruction from professional practitioners who work in the fields in which they teach on the tools and techniques of effective project management. Additionally, students will learn how to develop a clear plan that places a project in the context of an organization's strategic plan, while considering the implications information and communication technologies present in any given project.

Students will learn about converging information and communication technologies and the fundamentals of each sector. Recognizing how each ICT subject connects to one another, from information security systems to geographic information systems, will give students the competitive edge needed in this dynamic industry. The content for this graduate certificate has been developed to parallel the Project Management Institute's (PMI® A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) – Sixth edition, Project Management Institute, Inc. The unique curriculum prepares students to succeed on the PMI® Project Management Professional (PMP)® Certification Exam. Credits earned through this certificate may apply toward a master’s degree in the Information and Communications Technology program.

specialized graduate CERTIFICATE IN SOFTWARE DESIGN AND PROGRAMMING

Students in this specialized graduate certificate will be able to expand their skillsets to include software design and programming principles, while developing the in−depth knowledge needed to succeed in the field with a Software Design and Programming certificate. Current or aspiring programmers will practice Object Oriented methods and programming, with a focus on modern web-based, client-server applications and systems.

Students learn how to develop quality software programs and applications, apply Software Quality Assurance practices, use software management processes such as the Unified Software Development Process, and code in languages such as C#, Java, Python, and PHP. Expert instructors guide software certificate students to identify and overcome the challenges presented by designing and programming software with various languages and development tools. A comprehensive perspective is also provided at University College, conveying how other technology domains such as application security and database design, affect software programming. Credits earned through this certificate may apply toward a master’s degree in the Information and Communications Technology program.

specialized graduate CERTIFICATE IN TECHNOLOGY MANAGEMENT

Students in the specialized graduate certificate in technology Management will learn how the convergence of business and technology impacts the strategic and operational objectives. Students will gain the right technical skills, combined with a strategic perspective regarding critical business needs, as they are prepared to meet current industry demands, and positioned to meet the demands of tomorrow.

The Technology Management certificate allows students to become proficient in creating, managing, and using technology to accomplish strategic organizational goals as they expand and strengthen their knowledge and skills in creative thinking, strategic and tactical decision making, and global awareness. This applied Technology Management certificate offers professionals an opportunity to receive applied instruction from professional practitioners who bring deep expertise in business management strategies and their technological implications. Credits earned through this certificate may apply toward a master’s degree in the Information and Communications Technology program.

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The Telecommunications Technology specialized graduate certificate provides practical telecommunications instruction, including evaluating emerging telecommunications technologies, wireless networks and services, and the convergence of voice, data, and multimedia services on the global IP network. Certificate students will learn how to assess and analyze telecommunications technologies, plus gain vital skills necessary to design, develop, and implement telecommunications systems such as wireless networks. The dominant wireless telecom technologies and protocols are presented, including OFDM, MIMO, mobile IP, WiMAX, LTE, and WPANs.

In addition to ICT fundamentals, students will also develop essential strategic business and problem−solving skills that will help them thrive in any organization by creating effective alliances throughout the technology sector. Credits earned through this certificate may apply toward a master’s degree in the Information and Communications Technology program.

specialized graduate CERTIFICATE IN WEB DESIGN AND DEVELOPMENT

Students in the specialized graduate certificate in Web Design and Development will move beyond developing first-generation HTML−based Web pages and learn to create interactive, state-of-the-art, Web−based applications that support the demands of contemporary e−business processes. This certificate provides an in−depth knowledge of web design and web development through hands−on instruction. Students will gain the competitive advantage needed to meet current industry demands, as well as the foundations to meet the demands of tomorrow by expanding their IT skillset with a certificate.

Students will use a variety of essential software tools employed in professional web development projects, such as Animate CC, AJAX, and Ruby on Rails. The real−world development scenarios, coupled with the hands−on learning experience provided by professional practitioners who work in the fields in which they teach, result in a highly career−relevant, innovative graduate certificate in web design and development. Web design and development will be put in the context of subjects such as information systems security, software and database design, and telecommunications, and
students will learn how their work is impacted by these different sectors. Credits earned through this certificate may apply toward a master's degree in the Information and Communications Technology program.

**specialized graduate CERTIFICATE IN CYBERSECURITY MANAGEMENT**

A specialized graduate certificate in Cybersecurity Management from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in Cybersecurity Management.

Certificate classes at University College are designed to equip students with knowledge of industry best practices and management skills demanded by private and public sector employers in today's rapidly evolving cybersecurity industry. Through hands-on interaction with a set of relevant industry case studies, students will gain knowledge of management tools and principles needed to define, establish, and grow effective and mature cybersecurity management programs for a wide range of organizations. Through experiential learning activities, students will gain an understanding of governance, compliance, regulatory, and business operations domains. These experiences will be enhanced with knowledge of policy and risk management frameworks most relevant to the cybersecurity management profession. The curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)² and supports the National Initiative for Cybersecurity Education (NICE) framework.

**Master's Degree Admission**

**Degree and GPA Requirements**

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

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

**Certificate Admission**

**Degree and GPA Requirements**

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

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169
English Conditional Admission: No, this program does not offer English Conditional Admission.

**Master of Science in Information and Communications Technology with a Concentration in Database Design and Administration**

**Degree Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ICT 4000</td>
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<td>4</td>
</tr>
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</tr>
<tr>
<td>ICT 4010</td>
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</tr>
<tr>
<td>or ICT 4902</td>
<td>Capstone Seminar</td>
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**Core course requirements**

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<tr>
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<td>Database Administration</td>
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</tr>
<tr>
<td>ICT 4405</td>
<td>Database Design and Implementation</td>
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</tr>
<tr>
<td>ICT 4410</td>
<td>Data Warehousing Design</td>
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**Concentration requirements**

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<td>ICT 4100</td>
<td>Principles of Project Management</td>
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<td>ICT 4305</td>
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</tr>
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<td>ICT 4370</td>
<td>Python Programming</td>
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<tr>
<td>ICT 4415</td>
<td>Database Backup and Recovery with Lab</td>
<td></td>
</tr>
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<td>ICT 4430</td>
<td>Database Security</td>
<td></td>
</tr>
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<td>ICT 4451</td>
<td>Database Programming: Oracle PL/SQL</td>
<td></td>
</tr>
<tr>
<td>ICT 4461</td>
<td>SQL Server with Lab</td>
<td></td>
</tr>
<tr>
<td>ICT 4462</td>
<td>Transact - SQL Programming</td>
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</tr>
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<td>NoSQL Databases</td>
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<td>ICT 4695</td>
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**Elective requirements (Choose four courses):**

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**Total Credits**

48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

**Master of Science in Information and Communications Technology with a Concentration in Geographic Information Systems**

**Degree Requirements**

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**Core coursework requirements**

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<td>ICT 4410</td>
<td>Data Warehousing Design</td>
<td>4</td>
</tr>
</tbody>
</table>

**Minimum number of credits required: 48**

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
### Concentration requirements

<table>
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<th>Title</th>
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<tr>
<td>GIS 4101</td>
<td>Introduction to Geographic Information Systems</td>
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<tr>
<td>GIS 4700</td>
<td>Remote Sensing I</td>
<td>4</td>
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</table>

Select three of the following: 12

- GIS 4520 GIS in Telecommunications
- GIS 4620 Geodatabase Application
- GIS 4690 GPS for GIS
- GIS 4740 Remote Sensing II
- GIS 4860 Internet Mapping

### Elective requirements (Choose three courses): 12

- GIS 4080 Python Programming in GIS
- GIS 4520 GIS in Telecommunications
- GIS 4620 Geodatabase Application
- GIS 4690 GPS for GIS
- GIS 4740 Remote Sensing II
- GIS 4860 Internet Mapping
- ICT 4100 Principles of Project Management
- ICT 4200 Cybersecurity Foundations
- ICT 4605 Principles of Information Security

Total Credits: 48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

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## Master of Science in Information and Communications Technology with a Concentration in Information Systems Security

### Degree Requirements

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ICT 4000</td>
<td>ICT Business Foundations</td>
<td>4</td>
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<tr>
<td>ICT 4005</td>
<td>ICT Technical Foundations</td>
<td>4</td>
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<tr>
<td>ICT 4010</td>
<td>Enterprise Architecture</td>
<td>4</td>
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<tr>
<td>ICT 4901</td>
<td>Capstone Project</td>
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<tr>
<td>or ICT 4902</td>
<td>Capstone Seminar</td>
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</table>

### Concentration requirements

- ICT 4300 Web Enabled Information Systems
- ICT 4605 Principles of Information Security
- ICT 4615 Computer and Physical Security
- ICT 4845 Network Security with Lab

### Elective requirements (Choose four courses): 16

- ICT 4370 Python Programming
- ICT 4405 Database Design and Implementation
- ICT 4430 Database Security
- ICT 4505 Website Design and Management
- ICT 4610 TCP/IP Networks
- ICT 4670 Disaster Recovery and Operations Security
- ICT 4675 Information Systems Security in Healthcare
- ICT 4680 Principles of Cryptography
### Master of Science in Information and Communications Technology with a Concentration in Mobile Application Development

#### Degree Requirements

<table>
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<td>ICT 4000</td>
<td>ICT Business Foundations</td>
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<td>ICT 4005</td>
<td>ICT Technical Foundations</td>
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<td>or ICT 4902</td>
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<td>ICT 4510</td>
<td>Advanced Website Design and Management</td>
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<td>ICT 4576</td>
<td>Native Application Development on Mobile Devices</td>
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<td>ICT 4580</td>
<td>Mobile Application Development with Web Standards</td>
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<tr>
<td>ICT 4515</td>
<td>Usability Design for Websites</td>
<td>4</td>
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<tr>
<td>or ICT 4555</td>
<td>Introduction to Animate CC</td>
<td></td>
</tr>
<tr>
<td>or ICT 4561</td>
<td>Web Development with PHP</td>
<td></td>
</tr>
<tr>
<td>or ICT 4570</td>
<td>Web Scripting with JavaScript</td>
<td></td>
</tr>
<tr>
<td>ICT 4100</td>
<td>Principles of Project Management</td>
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<tr>
<td>ICT 4300</td>
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<td>ICT 4305</td>
<td>Object-Oriented Methods</td>
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<td>ICT 4310</td>
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<tr>
<td>ICT 4315</td>
<td>Object-Oriented Programming</td>
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<tr>
<td>ICT 4351</td>
<td>.NET Programming with C#</td>
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</tr>
<tr>
<td>ICT 4361</td>
<td>Java Programming</td>
<td></td>
</tr>
<tr>
<td>ICT 4370</td>
<td>Python Programming</td>
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</tr>
<tr>
<td>ICT 4400</td>
<td>Database Administration</td>
<td></td>
</tr>
<tr>
<td>ICT 4405</td>
<td>Database Design and Implementation</td>
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<tr>
<td>ICT 4505</td>
<td>Website Design and Management</td>
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<td>ICT 4515</td>
<td>Usability Design for Websites</td>
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<tr>
<td>ICT 4540</td>
<td>XML and Data in Application Development</td>
<td></td>
</tr>
<tr>
<td>ICT 4555</td>
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<tr>
<td>ICT 4560</td>
<td>Web Graphics Production</td>
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<tr>
<td>ICT 4561</td>
<td>Web Development with PHP</td>
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<td>ICT 4570</td>
<td>Web Scripting with JavaScript</td>
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<tr>
<td>ICT 4585</td>
<td>Web Development with Ruby on Rails</td>
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</tr>
<tr>
<td>ICT 4605</td>
<td>Principles of Information Security</td>
<td></td>
</tr>
</tbody>
</table>

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Science in Information and Communications Technology with a Concentration in Project Management

Degree Requirements

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<tr>
<th>Code</th>
<th>Title</th>
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</tr>
<tr>
<td>ICT 4000</td>
<td>ICT Business Foundations</td>
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<td>ICT 4901</td>
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<td>or ICT 4902</td>
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<td><strong>Concentration requirements</strong></td>
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<tr>
<td>ICT 4100</td>
<td>Principles of Project Management</td>
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<tr>
<td>ICT 4105</td>
<td>Project Contracts and Procurement</td>
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<td>ICT 4110</td>
<td>Project Risk and Quality Management</td>
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<td>ICT 4115</td>
<td>Project Management Dynamics</td>
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<tr>
<td><strong>Elective requirements (Choose four courses):</strong></td>
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<td>16</td>
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<tr>
<td>ICT 4015</td>
<td>Managing Technology for Strategic Value</td>
<td></td>
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<tr>
<td>ICT 4020</td>
<td>Business Forecasting and Planning</td>
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<td>ICT 4025</td>
<td>Technology and Innovation Management</td>
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<td>ICT 4045</td>
<td>Information Technology Service Assurance</td>
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<td>ICT 4155</td>
<td>Strategic Alliances in the Technology Sector</td>
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<td>ICT 4160</td>
<td>Advanced Methods for Complex Projects</td>
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<td>ICT 4165</td>
<td>Project Collaboration with SharePoint</td>
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<td>ICT 4170</td>
<td>Agile Techniques and Practices in Project Management</td>
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<tr>
<td>ICT 4370</td>
<td>Python Programming</td>
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<tr>
<td>ICT 4605</td>
<td>Principles of Information Security</td>
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</tr>
<tr>
<td>ICT 4685</td>
<td>Cloud and Internet Law</td>
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</tr>
<tr>
<td>ICT 4815</td>
<td>Managing Global Telecommunications Projects</td>
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</tr>
</tbody>
</table>

Total Credits: 48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
Master of Science in Information and Communications Technology with a Concentration in Software Design and Programming

**Degree Requirements**

<table>
<thead>
<tr>
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<th>Title</th>
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<td>ICT 4005</td>
<td>ICT Technical Foundations</td>
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<td>or ICT 4902</td>
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**Concentration requirements**

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<th>Code</th>
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<th>Credits</th>
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<td>Web Enabled Information Systems</td>
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<td>ICT 4305</td>
<td>Object-Oriented Methods</td>
<td>4</td>
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<tr>
<td>ICT 4310</td>
<td>Distributed Computing</td>
<td>4</td>
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<td>ICT 4315</td>
<td>Object-Oriented Programming</td>
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**Elective requirements (Choose four courses):**

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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ICT 4100</td>
<td>Principles of Project Management</td>
<td>4</td>
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<tr>
<td>ICT 4351</td>
<td>.NET Programming with C#</td>
<td>4</td>
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<td>ICT 4361</td>
<td>Java Programming</td>
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<td>ICT 4370</td>
<td>Python Programming</td>
<td>4</td>
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<td>ICT 4400</td>
<td>Database Administration</td>
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<td>ICT 4405</td>
<td>Database Design and Implementation</td>
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<td>ICT 4505</td>
<td>Website Design and Management</td>
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<tr>
<td>ICT 4510</td>
<td>Advanced Website Design and Management</td>
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<tr>
<td>ICT 4515</td>
<td>Usability Design for Websites</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4540</td>
<td>XML and Data in Application Development</td>
<td>4</td>
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<tr>
<td>ICT 4555</td>
<td>Introduction to Animate CC</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4561</td>
<td>Web Development with PHP</td>
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<td>ICT 4570</td>
<td>Web Scripting with JavaScript</td>
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<td>ICT 4576</td>
<td>Native Application Development on Mobile Devices</td>
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<td>ICT 4580</td>
<td>Mobile Application Development with Web Standards</td>
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<td>ICT 4585</td>
<td>Web Development with Ruby on Rails</td>
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<td>ICT 4605</td>
<td>Principles of Information Security</td>
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<td>ICT 4680</td>
<td>Principles of Cryptography</td>
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<tr>
<td>ICT 4695</td>
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</table>

**Total Credits**

48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

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Master of Science in Information and Communications Technology with a Concentration in Technology Management

**Degree Requirements**

<table>
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<tr>
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<th>Title</th>
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<td>ICT 4005</td>
<td>ICT Technical Foundations</td>
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### Master of Science in Information and Communications Technology with a Concentration in Telecommunications Technology

#### Degree Requirements

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<td>ICT 4005</td>
<td>ICT Technical Foundations</td>
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<td>ICT 4010</td>
<td>Enterprise Architecture</td>
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<tr>
<td>ICT 4901</td>
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<td><strong>Concentration requirements</strong></td>
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<tr>
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<td>ICT 4830</td>
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<td>ICT 4840</td>
<td>Next Generation Wireless Networks and Services</td>
<td>4</td>
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<tr>
<td>ICT 4845</td>
<td>Network Security with Lab</td>
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<tr>
<td><strong>Elective requirements (Choose four courses):</strong></td>
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<tr>
<td>ICT 4015</td>
<td>Managing Technology for Strategic Value</td>
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<tr>
<td>ICT 4020</td>
<td>Business Forecasting and Planning</td>
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</tr>
<tr>
<td>ICT 4045</td>
<td>Information Technology Service Assurance</td>
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</table>

*Minimum number of credits required: 48*

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**Information and Communications Technology**

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<td>or ICT 4902</td>
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<td><strong>Concentration requirements</strong></td>
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<tr>
<td>ICT 4015</td>
<td>Managing Technology for Strategic Value</td>
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<tr>
<td>ICT 4020</td>
<td>Business Forecasting and Planning</td>
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<tr>
<td>ICT 4045</td>
<td>Information Technology Service Assurance</td>
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</table>

Total Credits 48
ICT 4100  Principles of Project Management
ICT 4155  Strategic Alliances in the Technology Sector
ICT 4300  Web Enabled Information Systems
ICT 4370  Python Programming
ICT 4400  Database Administration
ICT 4405  Database Design and Implementation
ICT 4410  Data Warehousing Design
ICT 4605  Principles of Information Security
ICT 4610  TCP/IP Networks
ICT 4685  Cloud and Internet Law
ICT 4815  Managing Global Telecommunications Projects
ICT 4835  Advanced Network Technologies
GIS 4520  GIS in Telecommunications

Total Credits 48

Minimum number of credits required: 48

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Master of Science in Information and Communications Technology with a Concentration in Web Design and Development

Degree Requirements

<table>
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<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
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<td>Core coursework requirements</td>
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<tr>
<td>ICT 4000</td>
<td>ICT Business Foundations</td>
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<td>ICT 4005</td>
<td>ICT Technical Foundations</td>
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<td>ICT 4010</td>
<td>Enterprise Architecture</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4901</td>
<td>Capstone Project</td>
<td>4</td>
</tr>
<tr>
<td>or ICT 4902</td>
<td>Capstone Seminar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Concentration requirements</td>
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</tr>
<tr>
<td>ICT 4300</td>
<td>Web Enabled Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4505</td>
<td>Website Design and Management</td>
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<tr>
<td>ICT 4510</td>
<td>Advanced Website Design and Management</td>
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<tr>
<td>ICT 4515</td>
<td>Usability Design for Websites</td>
<td>4</td>
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<tr>
<td></td>
<td>Elective requirements (Choose four courses):</td>
<td>16</td>
</tr>
<tr>
<td>ICT 4100</td>
<td>Principles of Project Management</td>
<td></td>
</tr>
<tr>
<td>ICT 4305</td>
<td>Object-Oriented Methods</td>
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</tr>
<tr>
<td>ICT 4310</td>
<td>Distributed Computing</td>
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<tr>
<td>ICT 4370</td>
<td>Python Programming</td>
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<tr>
<td>ICT 4400</td>
<td>Database Administration</td>
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<td>ICT 4405</td>
<td>Database Design and Implementation</td>
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<tr>
<td>ICT 4540</td>
<td>XML and Data in Application Development</td>
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<td>ICT 4555</td>
<td>Introduction to Animate CC</td>
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<td>ICT 4561</td>
<td>Web Development with PHP</td>
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<tr>
<td>ICT 4570</td>
<td>Web Scripting with JavaScript</td>
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<tr>
<td>ICT 4576</td>
<td>Native Application Development on Mobile Devices</td>
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<td>ICT 4580</td>
<td>Mobile Application Development with Web Standards</td>
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<tr>
<td>ICT 4585</td>
<td>Web Development with Ruby on Rails</td>
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</table>
Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

MASTER OF SCIENCE IN INFORMATION AND COMMUNICATIONS TECHNOLOGY WITH A CONCENTRATION IN CYBERSECURITY MANAGEMENT

Degree Requirements

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<tr>
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<td>ICT Technical Foundations</td>
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<tr>
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<td>Cybersecurity Leadership and Strategic Planning</td>
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Elective requirements (choose 4 courses) 16

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<tr>
<td>ICT 4615</td>
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<tr>
<td>ICT 4675</td>
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</tr>
<tr>
<td>ICT 4680</td>
<td>Principles of Cryptography</td>
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</table>

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
## Certificate in Information and Communications Technology with a Concentration in Database Design and Administration

### Program Requirements

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<thead>
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### Elective requirements (Choose two courses): 8

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<td>ICT 4005</td>
<td>ICT Technical Foundations</td>
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<tr>
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<td>Principles of Project Management</td>
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<tr>
<td>ICT 4305</td>
<td>Object-Oriented Methods</td>
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<td>ICT 4370</td>
<td>Python Programming</td>
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<tr>
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<td>Database Backup and Recovery with Lab</td>
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<td>Transact - SQL Programming</td>
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<tr>
<td>ICT 4610</td>
<td>TCP/IP Networks</td>
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<td>ICT 4670</td>
<td>Disaster Recovery and Operations Security</td>
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<td>ICT 4675</td>
<td>Information Systems Security in Healthcare</td>
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<td>ICT 4680</td>
<td>Principles of Cryptography</td>
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<tr>
<td>ICT 4685</td>
<td>Cloud and Internet Law</td>
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<tr>
<td>ICT 4690</td>
<td>Computer Forensics with Lab</td>
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**Total Credits: 24**

Minimum number of credits required: 24

## Certificate in Information and Communications Technology with a Concentration in Information Systems Security

### Program Requirements

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<td>ICT 4845</td>
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### Elective requirements (Choose two courses): 8

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<td>ICT Technical Foundations</td>
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<td>ICT 4370</td>
<td>Python Programming</td>
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<td>Database Security</td>
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<td>ICT 4610</td>
<td>TCP/IP Networks</td>
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<td>ICT 4670</td>
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<td>ICT 4680</td>
<td>Principles of Cryptography</td>
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<td>ICT 4685</td>
<td>Cloud and Internet Law</td>
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<td>ICT 4690</td>
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**Certificate in Information and Communications Technology with a Concentration in Mobile Application Development**

**Program Requirements**

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<td>Native Application Development on Mobile Devices</td>
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<td>ICT 4580</td>
<td>Mobile Application Development with Web Standards</td>
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<tr>
<td>ICT 4515</td>
<td>Usability Design for Websites</td>
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<tr>
<td>or ICT 4555</td>
<td>Introduction to Animate CC</td>
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</tr>
<tr>
<td>or ICT 4561</td>
<td>Web Development with PHP</td>
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**Elective requirements (Choose two courses):**

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<td>ICT 4315</td>
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<tr>
<td>ICT 4351</td>
<td>.NET Programming with C#</td>
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<tr>
<td>ICT 4361</td>
<td>Java Programming</td>
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<td>ICT 4585</td>
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<td>ICT 4680</td>
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**Total Credits**

Minimum number of credits required: 24
### Certificate in Information and Communications Technology with a Concentration in Project Management

**Program Requirements**

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<tr>
<td>ICT 4100</td>
<td>Principles of Project Management</td>
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<td>ICT 4105</td>
<td>Project Contracts and Procurement</td>
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<td>ICT 4110</td>
<td>Project Risk and Quality Management</td>
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<td>Project Management Dynamics</td>
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<td>ICT 4025</td>
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<td>Information Technology Service Assurance</td>
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<td>Advanced Methods for Complex Projects</td>
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<td>ICT 4165</td>
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<td>ICT 4170</td>
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**Total Credits**: 24

**Minimum number of credits required**: 24

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### Certificate in Information and Communications Technology with a Concentration in Software Design and Programming

**Program Requirements**

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**Total Credits**: 24

**Minimum number of credits required**: 24
### Information and Communications Technology

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<td>ICT 4570</td>
<td>Web Scripting with JavaScript</td>
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<td>ICT 4576</td>
<td>Native Application Development on Mobile Devices</td>
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<tr>
<td>ICT 4580</td>
<td>Mobile Application Development with Web Standards</td>
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<tr>
<td>ICT 4585</td>
<td>Web Development with Ruby on Rails</td>
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<td>ICT 4605</td>
<td>Principles of Information Security</td>
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Total Credits: 24

**Certificate in Information and Communications Technology with a Concentration in Technology Management**

**Program Requirements**

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**Elective requirements (Choose two courses):** 8

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<td>Project Collaboration with SharePoint</td>
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<td>ICT 4170</td>
<td>Agile Techniques and Practices in Project Management</td>
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<td>ICT 4370</td>
<td>Python Programming</td>
<td></td>
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<td>ICT 4605</td>
<td>Principles of Information Security</td>
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<td>ICT 4685</td>
<td>Cloud and Internet Law</td>
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<td>ICT 4815</td>
<td>Managing Global Telecommunications Projects</td>
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Total Credits: 24

**Certificate in Information and Communications Technology with a Concentration in Telecommunications Technology**

**Program Requirements**

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</thead>
<tbody>
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<tr>
<td>ICT 4845</td>
<td>Network Security with Lab</td>
<td>4</td>
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**Elective requirements (Choose two courses):** 8

<table>
<thead>
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Minimum number of credits required: 24
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ICT 4000</td>
<td>ICT Business Foundations</td>
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<tr>
<td>ICT 4005</td>
<td>ICT Technical Foundations</td>
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<tr>
<td>ICT 4015</td>
<td>Managing Technology for Strategic Value</td>
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</tr>
<tr>
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<td>Business Forecasting and Planning</td>
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<td>ICT 4045</td>
<td>Information Technology Service Assurance</td>
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<tr>
<td>ICT 4100</td>
<td>Principles of Project Management</td>
<td></td>
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<tr>
<td>ICT 4155</td>
<td>Strategic Alliances in the Technology Sector</td>
<td></td>
</tr>
<tr>
<td>ICT 4160</td>
<td>Advanced Methods for Complex Projects</td>
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<tr>
<td>ICT 4300</td>
<td>Web Enabled Information Systems</td>
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</tr>
<tr>
<td>ICT 4370</td>
<td>Python Programming</td>
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<tr>
<td>ICT 4605</td>
<td>Principles of Information Security</td>
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<tr>
<td>ICT 4610</td>
<td>TCP/IP Networks</td>
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<tr>
<td>ICT 4685</td>
<td>Cloud and Internet Law</td>
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<tr>
<td>ICT 4815</td>
<td>Managing Global Telecommunications Projects</td>
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<td>ICT 4835</td>
<td>Advanced Network Technologies</td>
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<tr>
<td>GIS 4520</td>
<td>GIS in Telecommunications</td>
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<td>24</td>
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Minimum number of credits required: 24

Certificate in Information and Communications Technology with a Concentration in Web Design and Development

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>ICT 4300</td>
<td>Web Enabled Information Systems</td>
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</tr>
<tr>
<td>ICT 4505</td>
<td>Website Design and Management</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4510</td>
<td>Advanced Website Design and Management</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4515</td>
<td>Usability Design for Websites</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4550</td>
<td>Database Design and Implementation</td>
<td></td>
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<tr>
<td>ICT 4560</td>
<td>XML and Data in Application Development</td>
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</tr>
<tr>
<td>ICT 4555</td>
<td>Introduction to Animate CC</td>
<td></td>
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<tr>
<td>ICT 4560</td>
<td>Web Graphics Production</td>
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</tr>
<tr>
<td>ICT 4561</td>
<td>Web Development with PHP</td>
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<tr>
<td>ICT 4570</td>
<td>Web Scripting with JavaScript</td>
<td></td>
</tr>
<tr>
<td>ICT 4576</td>
<td>Native Application Development on Mobile Devices</td>
<td></td>
</tr>
<tr>
<td>ICT 4580</td>
<td>Mobile Application Development with Web Standards</td>
<td></td>
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<tr>
<td>ICT 4585</td>
<td>Web Development with Ruby on Rails</td>
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<tr>
<td>ICT 4605</td>
<td>Principles of Information Security</td>
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<tr>
<td>ICT 4680</td>
<td>Principles of Cryptography</td>
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<tr>
<td>ICT 4695</td>
<td>Application Security</td>
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<tr>
<td>COMM 4324</td>
<td>Marketing Analytics</td>
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COMM 4327  
Digital Content Creation  

Total Credits 24  

Minimum number of credits required: 24  

CERTIFICATE IN INFORMATION AND COMMUNICATIONS TECHNOLOGY WITH A CONCENTRATION IN  cybersecurity management  

Program Requirements  

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>ICT 4205</td>
<td>Cybersecurity Management</td>
<td>4</td>
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<tr>
<td>ICT 4210</td>
<td>Cybersecurity Policy</td>
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<tr>
<td>ICT 4215</td>
<td>Cybersecurity Risk Management and Incident Response</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4220</td>
<td>Cybersecurity Leadership and Strategic Planning</td>
<td>4</td>
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Elective requirements (Choose two courses) 8  

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<tbody>
<tr>
<td>ICT 4200</td>
<td>Cybersecurity Foundations</td>
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<tr>
<td>ICT 4225</td>
<td>Cybersecurity Audits</td>
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<tr>
<td>ICT 4300</td>
<td>Web Enabled Information Systems</td>
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<tr>
<td>ICT 4370</td>
<td>Python Programming</td>
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<tr>
<td>ICT 4430</td>
<td>Database Security</td>
<td></td>
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<tr>
<td>ICT 4615</td>
<td>Computer and Physical Security</td>
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<td>ICT 4675</td>
<td>Information Systems Security in Healthcare</td>
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</tr>
<tr>
<td>ICT 4680</td>
<td>Principles of Cryptography</td>
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</table>

Total Credits 24  

Minimum number of credits required: 24  

SPECIALIZED GRADUATE CERTIFICATE IN database design and administration  

<table>
<thead>
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<tbody>
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<td>Web Enabled Information Systems</td>
<td>4</td>
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<tr>
<td>ICT 4400</td>
<td>Database Administration</td>
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<td>ICT 4405</td>
<td>Database Design and Implementation</td>
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<tr>
<td>ICT 4410</td>
<td>Data Warehousing Design</td>
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Total Credits 16  

SPECIALIZED GRADUATE CERTIFICATE IN information systems security  

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<td>Computer and Physical Security</td>
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</tr>
<tr>
<td>ICT 4845</td>
<td>Network Security with Lab</td>
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</table>

Total Credits 16  

SPECIALIZED GRADUATE CERTIFICATE IN mobile application development  

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<tr>
<td>ICT 4510</td>
<td>Advanced Website Design and Management</td>
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or ICT 4570  Web Scripting with JavaScript

Total Credits  16

**SPECIALIZED GRADUATE CERTIFICATE IN project management**

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<thead>
<tr>
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<tbody>
<tr>
<td>ICT 4100</td>
<td>Principles of Project Management</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4105</td>
<td>Project Contracts and Procurement</td>
<td>4</td>
</tr>
<tr>
<td>ICT 4110</td>
<td>Project Risk and Quality Management</td>
<td>4</td>
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<tr>
<td>ICT 4115</td>
<td>Project Management Dynamics</td>
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</table>

Total Credits  16

**SPECIALIZED GRADUATE CERTIFICATE IN software design and programming**

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<tr>
<td>ICT 4300</td>
<td>Web Enabled Information Systems</td>
<td>4</td>
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<tr>
<td>ICT 4305</td>
<td>Object-Oriented Methods</td>
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<tr>
<td>ICT 4310</td>
<td>Distributed Computing</td>
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<td>ICT 4315</td>
<td>Object-Oriented Programming</td>
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Total Credits  16

**SPECIALIZED GRADUATE CERTIFICATE IN telecommunication technology**

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**SPECIALIZED GRADUATE CERTIFICATE IN technology management**

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<tr>
<td>ICT 4015</td>
<td>Managing Technology for Strategic Value</td>
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<td>ICT 4100</td>
<td>Principles of Project Management</td>
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<td>ICT 4020</td>
<td>Business Forecasting and Planning</td>
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<td>ICT 4025</td>
<td>Technology and Innovation Management</td>
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Total Credits  16

**SPECIALIZED GRADUATE CERTIFICATE IN Cybersecurity Management**

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**SPECIALIZED GRADUATE CERTIFICATE IN web design and development**

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Total Credits  16
Courses

ICT 20005 ICT Transfer (1-12 Credits)

ICT 4000 ICT Business Foundations (4 Credits)
This course provides an overview of the relationships between business needs and Information & Communications Technology solutions. The course focuses on fundamental attributes of business research and analysis in the ICT field. Applying appropriate research methods is a critical course requirement. Students demonstrate the critical skills required to define a problem, establish a business and technical context, perform appropriate research, propose and analyze alternative solutions, identify decision criteria, and make recommendations based on such considerations as benefits, technical feasibility, costs, risks, and resources. Students assess the relevance of research findings, considering the credibility of the source, relevance to the research question, and validity of the underlying data. Taking into account current industry trends and customer/user needs, students apply the product development process to create a product or service proposal, including business requirements and a detailed business case. The course establishes the professional and academic framework for the ICT master's degree program, setting a relevant industry context for all ICT concentrations.

ICT 4005 ICT Technical Foundations (4 Credits)
This course provides a substantive review of the technology at the core of the ICT industry. Coverage includes hardware, networking technology, databases, information services, applications, and content in enterprise contexts. The application development process is briefly reviewed. A framework is developed around data at rest, data in transit, and data being processed. This framework is used to detail the roles of a variety of hardware and software artifacts, and their use in the production, processing, protection, and use of organizational information. The role of the ICT user interface and web systems in providing user access to content anywhere anywhere is reviewed. The security requirements associated with a variety of information types are introduced, along with the current best practices used in information security.

ICT 4007 Creative Problem Solving and Programming Concepts (4 Credits)
In this course students will develop, or improve upon, their problem-solving skills. Students will learn to use those problem-solving skills to analyze problems and determine how to create solutions. Students will document their solutions (e.g., in pseudocode or UML diagrams) and, by the end of the course, translate their solutions into running programs written in at least two languages (e.g., Python and C#). Students will learn programming concepts including the use of variables, program input and output, flow control (if-then-else, looping, etc.), and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as X-code and MS Visual Studio on their personal computers in which they will write programs.

ICT 4010 Enterprise Architecture (4 Credits)
In this course, students learn how to effectively and efficiently integrate information and communications technologies to support business goals. The course provides an overview of the global, enterprise-wide architectural framework that drives business decisions regarding selection and implementation of ICT systems and solutions. Topics include supporting and transforming Global Value Chains, e-business designs; creating enterprise architecture; and the various methodologies, tools and techniques used in the design and implementation of the enterprise architecture. The course encompasses all aspects of information and communications technology, including data networks, applications, operating systems, database systems, telecommunications systems, and hardware components in the context of a total enterprise-wide framework.

ICT 4015 Managing Technology for Strategic Value (4 Credits)
In this course, students acquire an in-depth understanding of the key management skills necessary to manage technology for strategic value. It concentrates on providing in-depth knowledge of strategic planning, the role of technology in business, and business process automation. It also provides students with the management skills and tools to prioritize technology investments, and manage technology products and projects. Topics include strategic planning and business alignment, managing business applications, business process automation, the role of web 2.0 in business processes, technology management, budgeting and capital investment prioritization, and build/buy decision-making in regards to custom-built and off-the-shelf solutions.

ICT 4020 Business Forecasting and Planning (4 Credits)
Business forecasting and planning brings together a wide diversity of skills: economic, financial, marketing, and technical analysis. This course brings together these concepts and extends prior coursework with coverage of budgeting, finance, costing, business planning, revenue forecasting, profit and loss statements, and balance sheet analysis as applied to information systems and services. Coverage includes the economics of software and other intellectual property, network effects, usage and sharing effects, sunk costs and monopoly effects, capacity and resource planning issues, and an introduction to the related regulatory issues. Students develop budgets or business plans for several increasingly difficult scenarios addressing a range of technology applications and services.

ICT 4025 Technology and Innovation Management (4 Credits)
Leaders of innovative firms build commitment to new directions, re-design structures to support new missions, and transform cultures. This course concentrates on the implementation of business strategy through effective structures and systems. Students learn why only 7% of companies are able to revitalize their organization once growth has stalled; students also learn what to do about it. Students analyze key aspects of strategic deployment, including organizational structure, cross-functional teams, product development, business model design, and change management. The course concludes with students developing a strategy for implementing an innovation. In this course students integrate the areas of knowledge covered in the ICT Foundations courses and the Technology Management concentration. It should be taken as the last of the four required courses in the Technology Management concentration. Prerequisites: ICT 4010, ICT 4015, ICT 4020, ICT 4100.
ICT 4030 Enterprise Architecture Frameworks (4 Credits)
This course covers the application of Enterprise Architecture (EA) frameworks as systems of methods, tools, and standards for transforming the operations of business, non-profit, and government organizations. The course concentrates on TOGAF, The Open Group Architecture Framework, as the primary instructional vehicle, but also outlines other EA frameworks and illustrates their individual purposes. The course demonstrates how EA frameworks can be combined and customized to meet specific objectives. The class starts with a high-level overview of EA, TOGAF; and other EA frameworks, then moves toward covering each component of the TOGAF framework. As the course moves through each component of TOGAF, key concepts such as governance, building blocks, views, viewpoints, and stakeholders are presented in context. Students will choose and apply EA frameworks with transition planning to current industry case studies and scenarios.

ICT 4035 Applied Enterprise Architecture Solutions (4 Credits)
This course addresses how Enterprise Architecture (EA) frameworks and associated methodologies can be combined and customized for targeted organizations for their specific, overarching EA program/capability. It then lays out how to construct a strategic architecture initiative using the customized EA capability, which will include the use of full life cycle transformation activities, leading EA graphical languages and a variety of EA planning and modeling tools. The first half of the course will provide students with the information necessary for them to develop their customized EA capability. The second half will focus on applying the capability for a robust business transformation initiative in their respective final projects. Prerequisite: ICT 4030.

ICT 4045 Information Technology Service Assurance (4 Credits)
In today's technology-centric work environment, simply delivering IT services is no longer sufficient. Organizations must provide "assurance" that IT services and the underlying data assets are reliable, highly available and secure. IT Service Assurance or IT Quality Assurance includes many functions including IT service delivery, service level management, quality assurance testing and monitoring, change and release management, project management, security, and compliance, all within a risk management framework. This course evaluates these functions as integrated components of a service assurance program and their impact on the organization. It also investigates how service assurance is intertwined with the strategic and tactical initiatives of the organization. The use of case studies and actual IT related challenges and opportunities are utilized to anchor the course concepts. The combined in-class meetings and online course structure lend itself to ongoing interaction, collaboration, and sharing of ideas.

ICT 4100 Principles of Project Management (4 Credits)
This course is designed to provide students with practical skills in project management and the students who are continuing in the Project Management course sequence with a framework for the concepts and tools covered in the remainder of the program. The various elements of the project management processes, tools and techniques are explored, applying the software used in managing projects. Topics include a review of processes to initiate, plan, execute, monitor and control, and close a project. Project integration, scope (including requirements), time, cost management, and planning human resources are emphasized. Students learn project management skills through hands-on exercises using project management tools and techniques and project management software to emphasize the real world of managing a project.

ICT 4105 Project Contracts and Procurement (4 Credits)
This course is designed to provide students with practical skills in project contracts and procurement. This course introduces the various elements of the contract and procurement process, including exposure to procurement plans, Request for Information (RFI), Request for Quote (RFQ) and Request for Proposal (RFP), as well as the various types of contracts and change order procedures. The course builds upon the framework from the remainder of the program. Topics include how to develop a procurement plan, what type of RFs to use and why, selection criteria for vendors, and contract selection. Students learn project management skills through hands-on exercises developing procurement plans, RFx's and contracts. No prerequisites.

ICT 4110 Project Risk and Quality Management (4 Credits)
This course introduces students to project risk and quality management and develops advanced skills in applying the project management tools and techniques learned in ICT 4100 (prerequisite course). A focused examination of scheduling, cost, quality, and risk management processes using advanced tools and techniques is included. Emphasis is placed on the project planning, execution, and monitoring and controlling processes. This course is on the Project Management Institute's (PMI) certification track. Prerequisite: ICT 4100 or equivalent knowledge.

ICT 4115 Project Management Dynamics (4 Credits)
This is an advanced course that applies the knowledge and skills learned in the prerequisite courses to a complex program. The planning, monitoring and controlling, and project close process groups are explored using case analyses of program and project plans. Learning is based on reading case material and the practical application of project management tools and techniques. Students receive hands on simulation experiences in planning and running subprojects, and work in Project Management Office (PMO) roles. Students develop a workable change management system, exercise project integration and communication skills, and demonstrate the ability to keep an overall program on track. They also demonstrate decision making skills, with emphasis on making tradeoffs based on solid business rationale. This course is on the Project Management Institute's (PMI) certification track. Prerequisites: ICT 4100 and ICT 4110.

ICT 4120 Lean Six Sigma-Getting Started (4 Credits)
Students use Lean tools and techniques to define and scope a problem, determine project objectives and benefits, and create a project charter. The students also learn to define the ‘as is’ process, validate the measurement system and measure outputs, and quantify process performance.

ICT 4125 Lean Six Sigma-Analyze (4 Credits)
Students apply Lean tools and techniques to identify potential causes (x’s), investigate the significance of x’s, identify significant causes, and provide a preliminary definition of process outcomes as a function of causes \( y=f(x) \).

ICT 4130 Lean Six Sigma: Improve and Control (4 Credits)
Students apply Lean tools and techniques to generate potential solutions, select and test a solution, develop an implementation plan, and create a control and monitoring plan. The students also learn the methods and techniques for implementing a full scale solution and finalizing transition.
ICT 4305 Strategic Alliances in the Technology Sector (4 Credits)
Strategic alliances are one of the key drivers in today's global economy and have gradually replaced vertical integration as the chief method of corporate expansion. Business-to-business alliances provide organizations with a variety of benefits, including enhancing the capability of organizations and helping to extract maximum value from available resources. While applicable to any industry, strategic alliances are particularly important in the technology sector. This course defines and discusses the roles of various types of strategic alliances in the technology sector, including informal alliances, partnerships, joint ventures, and outsourcing arrangements. It also explores strategies for managing profitable and exploiting these external business relationships. Case studies will be an integral part of the learning experience. Successful and unsuccessful alliances will be analyzed from the perspective of each alliance participant, 3rd-party vendors, customers, and a variety of other stakeholders.

ICT 4160 Advanced Methods for Complex Projects (4 Credits)
This course explores the planning and execution challenges that often cause complex projects to fail. The course provides a historical perspective regarding project management practices, and reviews evidence regarding trends in project outcomes. For example, despite the use of commonly accepted methods for project management and systems engineering, the success rate of NASA and DoD programs, as measured by schedule, budget, and requirements performance, is trending downward. The evidence shows similar trends in commercial industries (e.g., the Airbus A380 and Boeing 787 aircraft programs). The course addresses why the methods embodied in the Project Management Institute's (PMI) A Guide to the Project Management Body of Knowledge (PMBOK Guide) are sometimes insufficient to assure project success. The course then explores remedies drawn from recent research and cases in complex systems development and global teaming case studies. The instructor will host online reviews of readings and discussion. Students will learn and leverage visual modeling and simulation tools for the design of complex projects. Participation is voluntary, but recommended. Methods to handle complex, concurrent, and mutual dependencies across organizations and cultures will be applied. Based on case studies, the instructor will introduce Project Design methods, including student access to TeamPort project modeling and simulation software. The course culminates with teams in an online role play exercise to demonstrate collaborative planning and decision-making using these advanced methods. This exercise will require dedicated, synchronous interaction with other team members. Prerequisite: ICT 4100 or equivalent experience.

ICT 4165 Project Collaboration with SharePoint (4 Credits)
This course focuses on the role of collaboration as a critical success factor in project planning and execution. Complex projects typically entail cross-functional teams that are often geographically distributed, culturally diverse, and require collaboration across both organizational and corporate boundaries. This course covers best collaboration practices and the use of collaborative websites to facilitate communication, create shared understanding of processes and deliverable, and apply tools to achieve successful project completion. Hands-on assignments are used to illustrate how collaborative sites allow a project team to post, edit, and jointly work on documents of all types, such as project charters, project plans, WBS, requirements, budgets, schedules, procurement activities and closeout activities. Students collaborate within the course to learn how collaborative sites can be used to control project documentation and enforce the security levels associated with those documents. Students also learn how these sites can be used for such activities as assigning tasks, building a project calendar, setting up logs for gathering information, and performing other typical project management duties. The lab portion of the courses uses SharePoint as a template and shows how to set up a site to create folders, lists, tasks lists, calendars, and set the associated security levels. A SharePoint site is created for each student and students have access to both the class site and their individual sites.

ICT 4170 Agile Techniques and Practices in Project Management (4 Credits)
Is the Agile vs. traditional project management debate over? At least in the world of software development, the debate is largely over, as evidenced by the widespread adoption of Agile methods. For example, according to Gartner, in 2012 Agile development methodologies will be used in 80 percent of all software development projects. As the term implies, however, the techniques and best practices for the successful application of Agile project management processes are not static, they will continue to evolve. And, Agile principles and practices are used across many project domains, each with their own unique characteristics and challenges. So, best Agile project management practices will continue to be dynamic. The Agile debate is now turning from the tactical to the strategic. Realizing the full benefits of Agile (e.g., faster time to market, improved responsiveness to customers, higher quality, and greater efficiency), means more than improving project execution. It requires transforming the business into an Agile enterprise. This course examines both the Agile processes and practices for delivering projects, and the cultural and programmatic challenges encountered in transforming the business into an Agile enterprise. The course content, in addition to reading assignments, uses practical assignments such as case studies, projects, and simulations to provide applied experience with Agile practices.

ICT 4300 Web Enabled Information Systems (4 Credits)
This course is an introduction to the design of web enabled information systems. The course reviews modern design and programming principles, introduces database design and object oriented principles, and introduces security issues and best practices related to web application development. The course introduces object-oriented modeling methods, including use cases, class, and activity diagrams that describe the informational and behavioral content of a system's objects. Basic OOM design tools are introduced. The class addresses organizational concerns around web applications, exploitation of technology in today's market, and retention of data integrity. This should be the first course taken in each of the following specialties: Software Design and Programming, Database Design and Administration, Web Design and Development, and Information Systems Security.

ICT 4305 Object-Oriented Methods (4 Credits)
This course introduces the object-oriented view of software analysis, modeling, and design. It defines all of the relevant concepts needed to understand the paradigm. A complete graphical notational scheme is taught for the purpose of diagramming objects and object interactions. The course covers the design, evolution, modification, and test/verifications phases of object-oriented development in some depth. Since project management plays a key role in the success of object-oriented development, its relation to the development process is discussed. The course also surveys the various object-oriented languages and tools available.
ICT 4310 Distributed Computing (4 Credits)
This course provides a practical introduction to client-server applications and programming. The course examines key aspects of client-server computing such as systems requirements for operating systems, middleware, networks, servers and clients. The course develops students' understanding of alternative client-server architectures to meet business requirements, the selection of application development tools, and the use of object-oriented analysis and design practices to implement client-server applications. Students also develop client applications using a variety of techniques. Prerequisite: ICT 4300.

ICT 4315 Object-Oriented Programming (4 Credits)
This course covers modern programming techniques using object-oriented methods. The course familiarizes the student with development tools and the syntax of a programming language by developing simple programs that use control flow techniques and basic input/output techniques. Basic methods to harden code against malicious attack are introduced, and basic verification techniques presented. Prerequisites: ICT 4300 and ICT 4305.

ICT 4351 .NET Programming with C# (4 Credits)
Students identify and describe the fundamentals of the .NET architecture, explain various .NET components, their respective responsibilities and functions, identify and explain .NET design issues and development solutions; identify and describe the fundamental .NET components; explain CLR execution, and have some familiarity with predominant .NET languages.

ICT 4361 Java Programming (4 Credits)
This course enhances the student’s experience in object-oriented design and software development by performing and discussing object-oriented design for re-use of general purpose applications and small Java applications, including using the Java Collection API and Swing user interface classes. Topics include the use of Java as an object-oriented programming language, including encapsulation, simple inheritance, and polymorphism; design of Java classes using Java interfaces and packages; implementation of design patterns in working Java code; and use of Java Base Classes. The course also addresses the use of JAVA IDEs such as Eclipse and NetBeans. Note: This course does not address JavaScript. Prerequisites: ICT 4300, ICT 4305, ICT 4315.

ICT 4370 Python Programming (4 Credits)
This course starts with an introduction to Python programming covering basic programming concepts and Python syntax. It then continues to deepen students’ knowledge of Python by teaching how to access data (text files, databases and other data storage technologies), and process and manipulate that data. Basics of creating front-end interfaces with Python are covered in order to allow students to produce more intuitive interaction with application users. Beyond core Python libraries, other commonly used Python libraries will also be utilized in the course. The course will focus on good programming practices and solving problems effectively. At the successful completion of the class, students will be able to create a number of different types of projects and execute them in Python, as well as continue learning and applying Python skills to data analytics, GIS and other areas of focus. Prerequisite: ICT 4300.

ICT 4400 Database Administration (4 Credits)
This course introduces the roles and responsibilities, as well as the critical knowledge and skills needed to function as a database administrator. The course focuses on Oracle and Microsoft SQL Server, the two dominant global database platforms. Core components include installation and configuration of both database products and implementation of appropriate account privileges. Lab environments are used for hands-on lab assignments in the course, as well as in subsequent courses in the ICT Database Design and Administration concentration. Primary job responsibilities of database administrators are examined, including monitoring, maintaining, and administering database platforms and schemas, while applying best practices in database security. Broader topics, such as metadata, business intelligence, and data warehousing are examined from an organizational perspective. Prerequisite: ICT 4300.

ICT 4405 Database Design and Implementation (4 Credits)
This course concentrates on the relational database model and the conceptual, logical, and physical phases of database design and development. Entity-relationship modeling, data normalization, and Structured Query Language programming are core components of the class. The role and responsibilities of a database administrator are examined; and the concepts of database integrity and transaction management, concurrency protocols, and security schemes are examined. In addition, emerging data warehouse technologies are introduced. The course culminates in a project that allows students to demonstrate an understanding of all phases of the database life cycle (DBLC). Prerequisites: ICT 4300, ICT 4400.

ICT 4410 Data Warehousing Design (4 Credits)
Organizations with vision and courage are gaining competitive advantage by implementing data warehouses. Under the guidance of an executive sponsor, a team of data administrators, database specialists, and organizational analysts creates these contemporary decision support environments. Building a data warehouse is fundamentally different than building a subject area database for an operational system. In this course students use such data warehouse (DW) concepts as partitioning, granularity, record of source, and metadata as they learn how to build a viable decision support environment. Students further their understanding of such topics as architect development, data migration and integration, use of operational data stores, and transactional systems. Prerequisite: ICT 4400.

ICT 4415 Database Backup and Recovery with Lab (4 Credits)
This course explores basic database backup and recovery strategies and tactics using an Oracle database system. Topics include preparing backup, recovery and disaster plans, and performing complete and incomplete database recoveries using the Oracle Export/Import utility. Using hands-on activities and labs, students also gain experience with Oracle troubleshooting utilities, RMAN architecture and setting up Oracle standby databases. Prerequisites: ICT 4300, ICT 4400, ICT 4405.
ICT 4430 Database Security (4 Credits)
Information Technology has become increasingly data-driven, requiring I.T. professionals to dramatically rethink how we protect corporate assets. This course strives to provide a perspective that intersects several technology disciplines: database administration, web-based application development, and technology management. Taking a defense-in-layers perspective, Database Security will provide students with an opportunity to gain an understanding of how data is protected from the perimeter to the data. Students will understand the nature of the types of threats and vulnerabilities to the web-based applications and underlying databases, and how to develop strategies to most effectively protect an enterprise's data.

ICT 4451 Database Programming: Oracle PL/SQL (4 Credits)
This course builds on ICT 4405 Database Design and Programming, allowing students to transform a database schema design into a database application prototype using Oracle's PL/SQL. Topics include advanced SQL DDL, DML, and scripting, PL/SQL constructs, stored procedures, modular design and development, software development processes, views, sequences, cursors, dynamic SQL, error handling, locking, as well as performance and tuning, and database security. Using virtual E-Labs, students design and develop a database and related PL/SQL applications.

ICT 4461 SQL Server with Lab (4 Credits)
This course is an introduction to Microsoft SQL Server for both the DBA and Developer. The key new features of SQL Server are introduced and explored, and the various editions of SQL Server are contrasted. In-depth coverage is provided on how to use the new Microsoft SQL Server Management Studio for both administrative and development tasks. Special emphasis is given to query optimization techniques. An introduction to SQL Integration Services, SQL Analysis Services and SQL Reporting Services is also presented. Prerequisites: ICT 4300 and ICT 4405.

ICT 4462 Transact - SQL Programming (4 Credits)
Transact-SQL is the primary programming interface between applications and the Microsoft SQL Server database. Transact-SQL can be sent from programs or applications to the SQL Server database or can be built into reusable database stored procedures. This course focuses on Transact-SQL in a stored procedure context. Topics include: basic and advanced SQL, SQL functions, stored procedure declaration and execution, cursors, temp tables, error handling, transaction management, security, and performance issues. The course uses a combination of lecture, textbook reading assignments, and hands-on lab assignments to meet its objectives.

ICT 4485 NoSQL Databases (4 Credits)
Relational database systems have been dominant in the market for over forty years, and remain so today. However, the emergence of distributed and cloud computing, as well as the increasing need for storage of large datasets, have created the need for alternate data storage solutions. A number of different models / database management systems have been developed, that as a group are being referred to as NoSQL databases. A number of large, well-known companies use such databases. Some of the companies use more than one variety of NoSQL databases. This course will examine different non-relational (NoSQL) data models, those being Key-Value, Document, Column, Graph and the Object-Oriented database models. Students will learn about advantages and disadvantages of the different approaches. The class will include hands-on experience with a representative sample of NoSQL databases. Computing developments that spurred the existence of NoSQL databases, such as big data, distributed and cloud computing, will also be discussed. Prerequisites: ICT 4300 and ICT 4405.

ICT 4505 Website Design and Management (4 Credits)
This course extends student web design and development skills, and includes advanced HTML techniques and enhanced page design capabilities using CSS. The key to great web design is rooted in a solid foundation, which requires a plan or a "blueprint". We explore best-practices in information architecture (IA) and how to incorporate user-centered design (UCD) techniques as a standard practice in web design. Students also develop an understanding and working knowledge of Cascading Style Sheets (CSS). Through the use of readings, examples, hands-on projects, and discussions the class builds an understanding of the foundations and applications of user-centered design to plan, build and manage a website. Through participation in a project and regular discussions, class members experience working as active and contributing members of the class and knowledge-building community. Prerequisite: ICT 3500, ICT 4300 or equivalent experience.

ICT 4510 Advanced Website Design and Management (4 Credits)
This course explores advanced techniques for web programming using current client-side web technologies. Use of JavaScript, jQuery and Ajax are covered. HTML5 technologies such as Forms, Local Storage and Web workers are introduced. Students create an interactive website. This is a hands-on course where students apply what they learn as they learn it. Students demonstrate mastery of the materials by applying the principles introduced in class to laboratory exercise, class discussions, and projects. Prerequisite: ICT 4505.

ICT 4515 Usability Design for Websites (4 Credits)
This course expands the student's basic knowledge of Web page and website development (ICT 4505) by providing in-depth understanding of how to design Web applications with the user in mind. Students gain knowledge about how the fields of human factors engineering and psychology (e.g., visual perception, cognition, learning, and memory) relate to usability design as well as how usability assessments are conducted. Usability guidelines, design problems and design strengths, and best practices for common functions such as Web navigation, menus, scrolling, graphics and icons are explored. The class is a combination of lectures and lab experiences, culminating in the student's developing a website, conducting a usability evaluation, and reporting on the results and recommendations from the evaluation.

ICT 4520 User Experience: A Human-Centered Approach to Product Design (4 Credits)
This course is an introduction to User Experience (UX) design. The course will take theoretical and practical approaches to guiding students through the principles, practices, process, and tools to design usable, useful, and desirable experiences. Students will explore the methods for conducting UX research to determine needs, processes for designing products that meet those needs, and effective techniques for presenting designs to stakeholders. Throughout the process, students will consider the "why" behind each phase of the approach. The course will culminate in the application of UX best practices to build a functional prototype. Prerequisites: ICT 4505 Website Design & Development.
ICT 4540 XML and Data in Application Development (4 Credits)
XML is an open, text-based markup language that provides structural and semantic information to data. This "data about data," or metadata, provides meaning and context to the application using it, and supports manipulation and display. The course focuses on techniques to make this data useful for business applications, as well as for browser display. Hands-on experience with the XML formats and manipulation, which includes programming techniques, forms the weekly assignments, culminating in a summary project. Other standards, such as JSON, are discussed, as well as use of CSS for display of XML data. Some JavaScript is introduced to illustrate the document model and techniques for integration of data. Prerequisites: Students should have familiarity with constructing HTML web pages and data concepts. Familiarity with a data manipulation or programming language will be helpful.

ICT 4555 Introduction to Animate CC (4 Credits)
This course introduces students to rich media design, animation, and interactive development for the web, desktop, mobile, and more using Adobe Animate CC. Students learn the fundamentals of working in the Adobe Animate CC authoring environment to produce web assets, small animations, and basic interactive modules for multiple target platforms.

ICT 4560 Web Graphics Production (4 Credits)
This course introduces the fundamental concepts and techniques of digital graphics creation and image processing for both online publication and website interface design. Students learn the basics of correcting and modifying images, bitmap painting tools, vector drawing tools, typography, masking, web production techniques, and advanced image compositing. Integration of images and generated code into a website layout employing CSS is also covered.

ICT 4561 Web Development with PHP (4 Credits)
This course introduces students to programming Web applications using PHP and MySQL. Topics include processing form data, file uploads, object-oriented programming and database access. Students leverage a PHP framework and learn to install and configure a local development environment to test and develop their Web applications. Prerequisite: ICT 4510 or previous programming experience.

ICT 4570 Web Scripting with JavaScript (4 Credits)
This course presents students with the principles necessary to design and develop client-side scripts used to build dynamic websites and applications. JavaScript concepts such as data types, control structures, functions and objects are discussed. Students learn how to write beginner and intermediate scripts. In addition, students are introduced to advanced JavaScript topics, including module development, distributed computing and security. Students are presented with real world examples of JavaScript and build an interactive and dynamic client-side application. Technologies covered in the course include JavaScript/ECMAScript, jQuery (a JavaScript library), JSON (a JavaScript-friendly data format), JavaScript as the J in AJAX, and JavaScript in HTML5 form interaction and validation. Prerequisite: Knowledge of HTML, ICT 4505, or previous programming experience.

ICT 4576 Native Application Development on Mobile Devices (4 Credits)
During this course students learn how to use a set of languages and tools to build business and media-centric applications that run on mobile devices such as laptops, tablets, smartphones, and eReaders running on Windows, MAC OS, iOS, and Android. This course illustrates best practices for reusing code, structuring projects, and submitting applications to app stores. Throughout the course students utilize an IDE such as FDT or IntelliJ, MXML, and ActionScript to build cross-device native applications. Students also learn how to add functionality to their Adobe AIR native applications by leveraging third-party Native Extensions to access native features. Prerequisite: ICT 4300 or previous programming experience.

ICT 4580 Mobile Application Development with Web Standards (4 Credits)
This course enables students to take advantage of web standards (HTML5, CSS3, JavaScript) along with various popular frameworks and tools in the generation of both mobile web applications for the browser and packaged mobile applications for devices. We examine the fundamentals behind good user and interaction design when targeting mobile devices and see what is appropriate for implementation on these platforms. We also employ a popular cross-compilation tool to perform distribution onto multiple platforms. Prerequisite: ICT 4300 or previous programming experience.

ICT 4585 Web Development with Ruby on Rails (4 Credits)
Ruby is a dynamic, general-purpose, object-oriented programming language that has an associated web application framework, Rails. The Ruby on Rails (RoR) web application paradigm is powerful and flexible, and has been widely adopted by other frameworks. It allows for the rapid and agile creation of dynamic web applications with little of the overhead associated with other approaches. The student learns how to quickly develop, test, and deploy dynamic web applications using RoR. The student also learns how to manage both the user experience and a backend database from within the RoR framework. Prerequisite: ICT 4510 or previous programming experience.

ICT 4605 Principles of Information Security (4 Credits)
This is a comprehensive Information Systems Security management course covering the eight basic principles of Information Assurance and Information Systems Security. The course follows the Common Body of Knowledge (CBK) convention established by the International Information System Security Certification Consortium, Inc. (ISC)². This course serves as an introduction to the eight domains of information systems security with the emphasis on management issues. It provides the foundation of information systems security and the methodologies that organizations apply to analyze and achieve their security goals. Students learn about significant computer security laws and regulations, system security engineering, the development of effective security policies, system access controls, network security, encryption and security models. The course also covers specific security measures to include, but not limited to, physical security controls, network security, cloud security, telecommunications, and cryptography. Information covered includes contemporary issues of cybercrime, and business continuity and disaster recovery planning. The course applies a systems approach to security issues to analyze and develop security solutions. All topics are discussed in the context of a total enterprise-wide framework. Prerequisite: ICT 4300.
ICT 4610 TCP/IP Networks (4 Credits)
This course explores the operation of the TCP/IP protocol stack including its history, development, current applications, and future implications. The full range of TCP/IP protocols from IP and TCP to basic RPC issues and application protocols such as DNS, SMTP, FTP, SNMP and HTTP are studied. Students also study TCP/IP capabilities, alternatives, and performance issues. Security-specific protocols including SSL and IPSec are examined along with the security aspects of all other protocols. Mechanisms for Internet connectivity for homes and businesses are also covered. The course concludes with a survey of modern topics including Real-Time Communications and IPv6.

ICT 4615 Computer and Physical Security (4 Credits)
Controlling access to computers and controlling access to a building can no longer be viewed as two separate worlds. Today, IT access control and physical security need to be integrated if organizations are to be fully protected from threats. This course concentrates on seeing IT access control as integrated with physical security within an organization. Students investigate how various technologies and methodologies can work together to manage access to computer systems; how to manage elements of physical security; and the issues involved in creating a unified and complete enterprise security system. Security technologies to physically protect an organization’s people, facility and resources, access control techniques and administration, identification and authentication techniques and methods of attack are emphasized. Prerequisites: ICT 4300 and ICT 4605.

ICT 4670 Disaster Recovery and Operations Security (4 Credits)
This course focuses on the planning and operations security required to effectively recover from natural disasters and security attacks and to ensure the operations and integrity of computer systems and staff. Topics include defining continuity requirements, choosing appropriate recovery strategies and understanding the key elements of a continuity plan. Students create a Business Continuity Plan including business impact analysis, recovery strategies, and recovery plan implementation. The course also provides an understanding of controls over resources, facilities, hardware, systems, and the people who create, modify, and use them. Control mechanisms and operations security "best practices" are identified.

ICT 4675 Information Systems Security in Healthcare (4 Credits)
This course will introduce students to information security risks facing the healthcare industry. Students will learn how to better protect healthcare organizations and their patients’ data. Students will learn about recent security breaches, the impact of those breaches on healthcare organizations, and all of the key players involved. This course also covers the evolution of healthcare IT and the continuously evolving risk and regulatory landscape. Students will explore the regulations of HIPAA and how they relate to day-to-day operations in healthcare organizations. Additionally, this course will prepare students to support information security initiatives in order to protect the organization while furthering the advancement of healthcare IT capabilities. This is not a technical course, however we will be learning about how security is impacted by technology and what we must do across technology in order to secure our healthcare systems, our organizations, and our patients.

ICT 4680 Principles of Cryptography (4 Credits)
E-commerce has made cryptography a cornerstone of modern information systems security. Cryptology is one of the 10 domains required for the CISSP, and is a core component of all other recognized information security certifications. Surprisingly, it is the least understood of the information security disciplines. This course focuses on the terminology and concepts needed to understand how cryptographic techniques are used to protect sensitive information. Topics include: Advanced Encryption Standard (AES), the Secure Hash Algorithm (SHA), Digital Signatures and Message Authentication Codes, Diffie-Hellman Key Exchange, public key infrastructure (PKI), secure sockets layer (SSL), and IPsec among others. Lecture and reading materials are reinforced by hands-on experimentation with cryptographic software tools. Internet resources are used to tie the course material to current technology trends. No programming experience or advanced mathematical skills are required for this course. Prerequisite: ICT 4605.

ICT 4685 Cloud and Internet Law (4 Credits)
The legal ramifications of Cloud Computing, Cyber and Internet Law are effecting dynamic change in our country and all throughout the world. This course explores the laws of the new paradigm of Cloud Computing, Cyber and Internet Law and describes the types of issues and concerns that exist. Such issues include the civil and criminal laws, rules and regulation, privacy issues, contractual agreements between parties (on many levels from providers in numerous different states and countries), the impact of differing cultural standards and mores from all over the world, and legal methods of protecting companies from these issues and worries in the world of Cloud Computing, the Internet and Cyber Law.

ICT 4690 Computer Forensics with Lab (4 Credits)
This course is concerned with providing an overview of the methods and tools utilized for collecting and preserving electronic digital evidence for the computer forensic process; the forensic examination, analysis, and report writing; and preparing for courtroom testimony about the forensic results. The course is supplemented by hands-on-exercises, case studies, and a moot court exercise in which each student will testify.

ICT 4695 Application Security (4 Credits)
In this course, students explore the security principles and practices that apply to application software development throughout the entire software development lifecycle (SDLC). Topics include characteristics of secure and resilient applications, proven best practices for secure software, and designing for security and resilience. The course also provides an overview of programming best practices. Other topics include testing custom application, testing off-the-shelf commercial applications, implementing development security methodologies, and evaluating the models used to measure the maturity of software development organizations. Prerequisites: ICT 4300 and ICT 4605.

ICT 4701 Topics in Information and Communication Technology (4 Credits)
From time to time a special topics course may be offered that addresses a new issue, a developing concept, industry trends, or new technology.
ICT 4800 Network Communications and the Internet (4 Credits)
This course focuses on the fundamental concepts and technologies of communications networks and the Internet, including the information theory that is the foundation of modern communication systems. It emphasizes application of these concepts to the analysis and design of network solutions to meet various service provider and IT business requirements. Topics include network media, communications protocols and standards, LAN and WAN network architectures, the Public Switched Telephone Network, and current trends in networking via the Internet. Network components, such as modems, routers, switches, and voice communications systems are analyzed. The various transport media of copper, fiber, and wireless infrastructures are compared. Critical thinking is emphasized via discussions of current and future trends in network technology, global regulatory and political issues in voice/data/video communications, and Internet governance.

ICT 4815 Managing Global Telecommunications Projects (4 Credits)
Set in the context of today’s convergence from the traditional telco/telephony world to next generation all-IP networks brought about by the Internet revolution, this course addresses managing across borders, cultures, time zones, and continents. In addition, the course explores managing conflicts of interest between carriers and over-the-top (OTT) players such as Apple, Google/Android and Skype. Related topics include the challenges and opportunities in vendor management between the old telco vendors of the West and their new competitors from the East. Finally, the course analyzes stakeholder management at the C- and SVP-level of the organization. A variety of assignments create opportunities for students to work in teams, and at other times to work individually on a set of real-world case studies derived from typical projects at leading global network operators and telecom vendors. This course applies project management best practices to the typical challenges faced by project managers in today’s fast-paced, complex and highly competitive global telecom industry. Case studies are used to exemplify core project management challenges at an advanced level. Prerequisites: two courses in any of the following areas: Project Management, Technology Management, Telecommunications Technology.

ICT 4830 Broadband Wireless Networks (4 Credits)
This course examines the key broadband radio technologies at the center of today’s rapid innovation in wireless networks. Wireless telecommunications networks are studied with an emphasis on the challenges and the approaches to deal with the immense wireless data traffic explosion from devices such as the iPhone, iPad, Android smartphones and connected laptops, as well as broadband services like VoIP and mobile video. The dominant wireless telecom technologies and protocols are presented, including 4G LTE, 5G, OFDM, MIMO, mobile IP, WiMAX, Wi-Fi and WPANs. The "triple play" convergence of voice, video, and data over wireless networks is analyzed. The wireless telecom industry is studied from standards, carrier, and technology perspectives, with an emphasis on radio networks as well as key application use cases.

ICT 4835 Advanced Network Technologies (4 Credits)
Technological advancements in networking within the last few years are revolutionizing concepts of networking for both Enterprises and Service Providers. This course demystifies these latest advancements in network technologies. Topics include in-depth coverage of modern networking elements, network requirements, Network Virtualization technologies, Software Defined Network (SDN), and Network Function Virtualization (NFV). Coverage of latest technology requirements includes elastic traffic, big data, mobility, QoS, QoE, and more. The course discusses SDN and NFV components, architecture, protocols, and use cases. Virtualization technologies include VLANs, OpenFlow, VPNs – IPSec and MPLS-based. The course emphasizes deep understanding, analyses, and evaluation of modern network architectures. Prerequisites: ICT 4800 (required), ICT 4830 (strongly recommended).

ICT 4840 Next Generation Wireless Networks and Services (4 Credits)
The rapid innovation in wireless networks that is at the center of today’s ICT industry takes place in the four areas of broadband radio, core & edge networks, wireless services, as well as devices and smart objects. This course focuses on the key next generation technologies at the core network, service and object layers. First, the role of the Internet Protocol Multimedia Subsystem (IMS) in the core network is examined, which is at the heart of many next generation deployments. At the service layer, this course explores wireless service architecture, including popular applications such as mobile real-time messaging, TV/video and mobile web services. The Internet of Things (IoT) plays an increasingly prominent role at the object layer of modern wireless network designs. A case study approach is taken to highlight core use cases from key industries including Smart Cities, the Smart Grid and Industry 4.0. Finally, wireless product development, deployment and operations are examined in the critical context of the conflict between over-the-top (OTT) and network operator based ecosystems. Prerequisite: ICT 4800 or departmental permission.

ICT 4845 Network Security with Lab (4 Credits)
This course examines the key broadband radio technologies at the center of today’s rapid innovation in wireless networks. Wireless telecommunications networks are studied with an emphasis on the challenges and the approaches to deal with the immense wireless data traffic explosion from devices such as the iPhone, iPad, Android smartphones and connected laptops, as well as broadband services like VoIP and mobile video. The dominant wireless telecom technologies and protocols are presented, including OFDM, MIMO, mobile IP, WiMAX, LTE, and WPANs. The “triple play” convergence of voice, video, and data over wireless networks is analyzed. The wireless telecom industry is studied from standards, carrier, and technology perspectives. Important radio network concepts are addressed, including network design, cell selections and traffic concepts, mobility handoff signaling, radio resources management, location updates, roaming, as well as authentication and encryption. Prerequisite: ICT 4800 or departmental permission.
ICT 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and who can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.

ICT 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

ICT 4903 Applied Capstone Seminar (4 Credits)
In the Applied Capstone Seminar, students propose, develop and deliver a cloud-based application that demonstrates the ability to apply the technical knowledge developed throughout their program of studies. In addition to demonstrating competence in applying what they have learned to date, students are challenged to expand their skills by virtue of the development environments, tools, and technologies they use to develop and deliver their projects. The primary deliverables are functional software, accompanied by representative design documents. As such, the project represents in microcosm the development processes, practices and deliverables that are typically entailed in producing robust, cloud-based software solutions. Although each student develops an individual project, the seminar also requires student collaboration via such activities as design reviews, quality reviews and peer exchanges on such topics as suggestions for solving problems and improving code. Prerequisite: To register for this course, a student must be accepted as a degree candidate, have completed at least 40 quarter-hours (including all core courses), and have a cumulative GPA of 3.0 or better. In addition, the student must be approved for registration by the course professor and the ICT Director. This seminar is limited to students in the Software Design & Programming, Web Design & Development, Mobile Application Development, and Database Design & Programming concentrations, and who are judged to have the requisite level of technical skills to be successful in this demanding seminar. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Applied Capstone Seminar in one quarter; no incomplete grades are permitted.

ICT 4980 Internship (1-4 Credits)
The ICT internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the ICT master’s degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all ICT students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the ICT degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

ICT 4991 Independent Study (1-4 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

ICT 4992 Directed Study (1-4 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Directed Study form and filed the form with all appropriate offices before registering for the directed study. Directed Study is offered only on a for-credit basis.

**Nonprofit Leadership**
The Nonprofit Leadership program prepares graduates to think critically, act ethically, and lead the changes needed to solve the pressing issues in nonprofits, nongovernmental organizations and civil society abroad. Students will develop practical knowledge, critical thinking, and innovation skills needed to craft fundraising strategy, program operations, and social enterprises that address societal problems through healthy organizations. Coursework engages across the four concentrations of Executive Leadership; Philanthropy and Resource Development; Social Enterprise, Innovation and Entrepreneurship; and Mission-driven Operations and Programs. Courses engage students in legal, ethical, financial, equitable and scalable considerations of program and organizational leadership and management. Faculty are experienced in development and fundraising, social innovation,
governance, program management; they are leadership experts who explore future trends, historical context, and current nonprofit theory and practice with practical and cutting-edge learning. Graduates will increase their community and world impact with tools that make change happen.

This program prepares students to:

• Evaluate leadership behaviors, skills and characteristics that positively impact nonprofit organizational health, governance, performance, and/or community.
• Demonstrate critical thinking that integrates leadership, financial, fund raising, program design, and organizational strategy to influence decision making.
• Demonstrate communication skills that advance nonprofit/nongovernmental organization's mission and community impact.
• Demonstrate the integration of financial knowledge and nonprofit governance into strategic and resource development plans, as well as technological approaches, and/or campaigns to develop organizational health.
• Apply analytic methods to examining problems and designing solutions to nonprofit organization or societal issues.

Master of Science in Nonprofit Leadership with a concentration in philanthropy and resource development

Changes in philanthropy, development and fundraising are shaping the giving environment influencing how nonprofit/nongovernmental organizations plan for funding resources. From crowdsourcing and kick-starting campaigns to capital fundraising and legacy gifts nonprofits must cultivate and retain donors from diverse contexts, prospect for new gifts, and demonstrate impact. Philanthropy and Resource Development students will demonstrate the knowledge and skills to navigate these changing trends to increase the impact and drive ahead their nonprofit's mission through diverse development approaches and fund raising. Students will apply their passion and pragmatism as they learn about the scale and planning needed to develop the resources to carry out their nonprofit's mission.

This degree prepares students to:

• Assess different development approaches to determine the scale and mission appropriateness for nonprofit/nongovernmental organizations of different sizes.
• Synthesize knowledge about different development approaches.
• Apply diverse development strategies to conduct and prepare nonprofit/nongovernmental development plans.
• Demonstrate financial literacy needed to develop successful nonprofit organizations that employ structured fundraising tools and techniques.
• Demonstrate cultural competence and understanding of how fundraising strategies may work across diverse cultural contexts.

Master of Science in Nonprofit Leadership with a Concentration in Social Enterprise, Innovation and Entrepreneurship

Are you a social entrepreneur or aspiring to become one? Is your nonprofit considering a social enterprise? Might a social innovation move the needle on a social issue, problem or challenge about which you are passionate? A focus on social enterprise, innovation and entrepreneurship will sharpen a nonprofit's value proposition and mission driven strategy to address key social problems in your community or the world. Courses in this concentration will develop your understanding, knowledge and skills in taking an idea and launching it as a social enterprise. Students will develop the language and financial insights into funding, prototyping, scaling, marketing and measuring impact of social enterprises and innovations. Practical experience with a nonprofit/nongovernmental organization will enable students to apply theory, strategy and metrics that solve real problems and drive mission impact.

This degree prepares students to:

• Critique social enterprise, innovation, and entrepreneurship approaches for linkages to business and public sectors to solve social problems.
• Examine social enterprise cases to ascertain social impact or new market creation that has social has benefits.
• Cultivate innovation and design thinking process and practices from a customer perspective to test and validate social enterprises approaches.
• Assess organizational capacity for developing market-driven strategies for social enterprise development, scale and impact.
• Critique conceptual innovation frameworks and tools such as lean startup, lean data, and social performance management to determine how they enhance social outcomes and financial sustainability.
• Critically examine the financial structures of social ventures to determine strengths and challenges in developing impactful social enterprises.
• Apply market-driven strategies and critical business analyses that develop data to inform social enterprise development.

Master of Science in Nonprofit Leadership with a Concentration in Executive Leadership and Governance

Leading a nonprofit/nongovernmental organization of any size requires leaders to self-examine their practices and behaviors. Developing a broad spectrum of leadership, change and management tools increases a leader's successful navigation of organizational challenges, navigating transitions,
and sustaining vision and impact. In this concentration students build their knowledge of inclusive leadership, leading through values, leading change, developing an organization's culture, cultivating high performing teams and strategic planning.

This degree prepares students to:

- Assess their leadership strengths, skills, and behaviors to craft personalized leadership development plans.
- Evaluate effective leadership behaviors, skills and characteristics that positively impact nonprofit organizational health, governance, performance, and/or community impact.
- Demonstrate critical thinking skills to help them evaluate different leadership views and arguments that influence decision making.
- Evaluate organizational capacity, operational functions, governance and mission implementation to determine organizational health and/or opportunities for changes.
- Demonstrate financial, fund raising and program planning knowledge and skills that ensure organizational health.
- Examine leadership case examples that balance governance and mission-driven operations.

### Master of Science in Nonprofit Leadership with a Concentration in Executive Leadership and Operations and Management

Program operations and organizational management work together to accomplish a nonprofit organization's mission impact. Organizations need to develop effective program design to include staffing, performance measurements, and the human and financial resources to ensure success. In this concentration students will link financial goals to grants management, partnership cultivation and community-based strategies that further the goals of the organization. Together students will examine the evidence of effective nonprofit programming as grounded in research. Students will identify program evaluation strategies that demonstrate community impact and mission accomplishment. Nonprofit volunteer and advocacy operations are also examined as programming strategies that accomplish a nonprofit's mission.

This degree prepares students to:

- Demonstrate planning practices for effectively resourced nonprofit/nongovernmental program development.
- Evaluate existing nonprofit programs' design using critical thinking to determine resource allocation and impact measurement.
- Demonstrate program-evaluation-planning skills to include collective impact, logic models.
- Examine diverse funding structures, including grants cultivation and management, to determine how best to resource program operations.

### Certificate in Nonprofit Leadership with a Concentration in Philanthropy and Resource Development

The graduate certificate in Philanthropy and Resource Development concentration is offered entirely online to meet the needs of busy adults seeking to expand their skillset or credentials. Changes in philanthropy, development and fundraising are shaping the giving environment influencing how nonprofit/nongovernmental organizations plan for funding resources. From crowdsourcing and kick-starting campaigns to capital fundraising and legacy gifts nonprofits must cultivate and retain donors from diverse contexts, prospect for new gifts, and demonstrate impact. Philanthropy and Resource Development students will demonstrate the knowledge and skills to navigate these changing trends to increase the impact and drive ahead their nonprofit's mission through diverse development approaches and fund raising. Students will apply their passion and pragmatism as they learn about the scale and planning needed to develop the resources to carry out their nonprofit's mission. Students will also gain additional skills and knowledge in organizational leadership through elective coursework.

### Certificate in Nonprofit Leadership with a Concentration in Social Enterprise, Innovation and Entrepreneurship

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The graduate certificate in Philanthropy and Resource Development concentration is offered entirely online to meet the needs of busy adults seeking to expand their skillset or credentials. Students will also gain additional skills and knowledge in organizational leadership through elective coursework.

### Certificate in Non-Profit Leadership with a Concentration in Executive Leadership and Governance

Leading a nonprofit/nongovernmental organization of any size requires leaders to self-examine their practices and behaviors. Developing a broad spectrum of leadership, change and management tools increases a leader's successful navigation of organizational challenges, navigating transitions, and sustaining vision and impact. In this concentration students build their knowledge of inclusive leadership, leading through values, leading change,
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CERTIFICATE IN NONPROFIT LEADERSHIP WITH A CONCENTRATION IN MISSION-DRIVEN OPERATIONS AND MANAGEMENT

Program operations and organizational management work together to accomplish a nonprofit organization’s mission impact. Organizations need to develop effective program design to include staffing, performance measurements, and the human and financial resources to ensure success. In this concentration students will link financial goals to grants management, partnership cultivation and community-based strategies that further the goals of the organization. Together students will examine the evidence of effective nonprofit programming as grounded in research. Students will identify program evaluation strategies that demonstrate community impact and mission accomplishment. Nonprofit volunteer and advocacy operations are also examined as programming strategies that accomplish a nonprofit’s mission. Students will also gain additional skills and knowledge in organizational leadership through elective coursework.

SPECIALIZED GRADUATE CERTIFICATE IN MISSION-DRIVEN OPERATIONS AND MANAGEMENT

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Changes in philanthropy, development and fundraising are shaping the giving environment influencing how nonprofit/nongovernmental organizations plan for funding resources. From crowdsourcing and kick-starting campaigns to capital fundraising and legacy gifts nonprofits must cultivate and retain donors from diverse contexts, prospect for new gifts, and demonstrate impact. Students in the specialized graduate certificate in Philanthropy and Resource Development will demonstrate the knowledge and skills necessary to navigate these changing trends to increase the impact and drive their nonprofit’s mission through diverse development approaches and fund raising. Students will apply their passion and pragmatism as they learn about the scale and planning needed to develop the resources to carry out their nonprofit’s mission.

SPECIALIZED GRADUATE CERTIFICATE IN EXECUTIVE LEADERSHIP AND GOVERNANCE

Leading a nonprofit/nongovernmental organization of any size requires leadership that is flexible, inclusive, ethical and effective. Leading a broad spectrum of leadership, change and management tools increases a leader’s successful navigation of organizational challenges, navigating transitions, and sustaining vision and impact. In the specialized graduate certificate in Executive Leadership and Governance students build their knowledge of inclusive leadership, leading through values, leading change, developing an organization’s culture, cultivating high performing teams and strategic planning.

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SPECIALIZED GRADUATE CERTIFICATE IN SOCIAL ENTERPRISE, INNOVATION AND ENTREPRENEURSHIP

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Master’s Degree Admission

Degree and GPA Requirements

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

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

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

English Conditional Admission: Master’s degree applicants who do not meet the required level of English proficiency may be considered for conditional acceptance if all other admission criteria are met. Prior to enrolling in any graduate-level coursework, English Conditional Acceptance

**Certificate Admission**

**Degree and GPA Requirements**

- Bachelors degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

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

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- Minimum CAE Score: 169

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

**Master of Science in Nonprofit Leadership**

**Master of science in nonprofit leadership with a concentration in nonprofit leadership**

**Degree Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td><strong>Core coursework requirements</strong></td>
<td></td>
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<tr>
<td></td>
<td><strong>NFP 4010</strong> Leading Nonprofit/Nongovernmental Organizations</td>
<td>4</td>
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<tr>
<td></td>
<td><strong>NFP 4015</strong> Healthy Nonprofit/Nongovernmental Organizations</td>
<td>4</td>
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<td></td>
<td><strong>NFP 4020</strong> Legacy and Trends of Nonprofits Organizations and Civil Society</td>
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<td></td>
<td><strong>NFP 4905</strong> Graduate Social Research Methods</td>
<td>4</td>
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<td></td>
<td><strong>NFP 4901 or NFP 4920</strong> Capstone Project/Portfolio Capstone</td>
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<tr>
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<td><strong>Concentration requirements</strong></td>
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<td><strong>NFP 4100</strong> Philanthropy Principles, Roles, and Systems in Nonprofits</td>
<td>4</td>
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<td><strong>NFP 4105</strong> Applied Development Practices: Fundraising and Donor Relations</td>
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<td></td>
<td><strong>NFP 4110</strong> Development Strategy, Fund Management, and Complexity</td>
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<td></td>
<td><strong>NFP 4115</strong> Leading Nonprofit Financial Health</td>
<td>4</td>
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<td></td>
<td><strong>Elective requirements (Choose three courses)</strong></td>
<td>12</td>
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<td></td>
<td><strong>Total Credits</strong></td>
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</tr>
</tbody>
</table>
Minimum number of credits required: 48

Students will work with their academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

**MASTER OF SCIENCE IN NONPROFIT LEADERSHIP WITH A CONCENTRATION IN Social Enterprise, Innovation and Entrepreneurship**

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<td>NFP 4400</td>
<td>Principles and Practices in Social Enterprise, Innovation and Entrepreneurship</td>
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<td>NFP 4405</td>
<td>Strategies and Tools for Nonprofit Social Enterprise</td>
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<td>NFP 4410</td>
<td>Social Enterprise Practicum</td>
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**MASTER OF SCIENCE IN NONPROFIT LEADERSHIP WITH A CONCENTRATION IN Executive Leadership and Governance**

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<tr>
<td>NFP 4115</td>
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<tr>
<td>NFP 4200</td>
<td>Executive and Board Roles, Responsibilities and Leadership</td>
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<td>NFP 4205</td>
<td>Leading Strategically</td>
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### MASTER OF SCIENCE IN NONPROFIT LEADERSHIP WITH A CONCENTRATION IN MISSION DRIVEN OPERATIONS AND MANAGEMENT

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<td>NFP 4300</td>
<td>Operational Strategy and Structures</td>
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<tr>
<td>NFP 4305</td>
<td>Nonprofit Program and People Management</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4310</td>
<td>Community Organizing, Voice and Empowerment</td>
<td>4</td>
</tr>
</tbody>
</table>

**Elective requirements (Choose three courses)**

<table>
<thead>
<tr>
<th>Credits</th>
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<tbody>
<tr>
<td>12</td>
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**Total Credits**

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
</tr>
</tbody>
</table>

Minimum number of credits required: 48

Students will work with their academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

### Certificate in nonprofit leadership with a concentration in philanthropy and resource development

**Program Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFP 4100</td>
<td>Philanthropy Principles, Roles, and Systems in Nonprofits</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4105</td>
<td>Applied Development Practices: Fundraising and Donor Relations</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4110</td>
<td>Development Strategy, Fund Management, and Complexity</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4115</td>
<td>Leading Nonprofit Financial Health</td>
<td>4</td>
</tr>
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</table>

**Elective requirements (Choose two courses)**

<table>
<thead>
<tr>
<th>Credits</th>
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<tbody>
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<td>8</td>
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**Total Credits**

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
</tr>
</tbody>
</table>

Minimum number of credits required: 24

Students will work with their academic adviser to determine the best set of courses for their electives.

### Certificate in nonprofit leadership with a concentration in social enterprise, innovation and entrepreneurship

**Program Requirements**
Certificate in Nonprofit Leadership with a Concentration in Executive Leadership and Governance

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFP 4115</td>
<td>Leading Nonprofit Financial Health</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4200</td>
<td>Executive and Board Roles, Responsibilities and Leadership</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4205</td>
<td>Leading Strategically</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4210</td>
<td>Leading Policy and Advocacy</td>
<td>4</td>
</tr>
<tr>
<td>Elective requirements (Choose two courses)</td>
<td>8</td>
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<tr>
<td>Total Credits</td>
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</table>

Minimum number of credits required: 24

Students will work with their academic adviser to determine the best set of courses for their electives.

Certificate in Nonprofit Leadership with a Concentration in Mission-Driven Operations and Management

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFP 4115</td>
<td>Leading Nonprofit Financial Health</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4300</td>
<td>Operational Strategy and Structures</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4305</td>
<td>Nonprofit Program and People Management</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4310</td>
<td>Community Organizing, Voice and Empowerment</td>
<td>4</td>
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<tr>
<td>Elective requirements (Choose two courses)</td>
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<tr>
<td>Total Credits</td>
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</table>

Minimum number of credits required: 24

Students will work with their academic adviser to determine the best set of courses for their electives.

Specialized Graduate Certificate in Philanthropy and Resource Development

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NFP 4100</td>
<td>Philanthropy Principles, Roles, and Systems in Nonprofits</td>
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<tr>
<td>NFP 4105</td>
<td>Applied Development Practices: Fundraising and Donor Relations</td>
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<tr>
<td>NFP 4115</td>
<td>Leading Nonprofit Financial Health</td>
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</table>
SPECIALIZED GRADUATE CERTIFICATE IN Executive leadership and governance

Program Requirements

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<tr>
<td>NFP 4200</td>
<td>Executive and Board Roles, Responsibilities and Leadership</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4205</td>
<td>Leading Strategically</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4115</td>
<td>Leading Nonprofit Financial Health</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4210</td>
<td>Leading Policy and Advocacy</td>
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SPECIALIZED GRADUATE CERTIFICATE IN Mission-Driven operations and management

Program Requirements

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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFP 4300</td>
<td>Operational Strategy and Structures</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4305</td>
<td>Nonprofit Program and People Management</td>
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<td>NFP 4115</td>
<td>Leading Nonprofit Financial Health</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4310</td>
<td>Community Organizing, Voice and Empowerment</td>
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<tr>
<td>Total Credits</td>
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</tbody>
</table>

SPECIALIZED GRADUATE CERTIFICATE IN social enterprise, innovation and entrepreneurship

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFP 4400</td>
<td>Principles and Practices in Social Enterprise, Innovation and Entrepreneurship</td>
<td>4</td>
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<tr>
<td>NFP 4405</td>
<td>Strategies and Tools for Nonprofit Social Enterprise</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4115</td>
<td>Leading Nonprofit Financial Health</td>
<td>4</td>
</tr>
<tr>
<td>NFP 4410</td>
<td>Social Enterprise Practicum</td>
<td>4</td>
</tr>
<tr>
<td>Total Credits</td>
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</tbody>
</table>

Courses

NFP 4010 Leading Nonprofit/Nongovernmental Organizations (4 Credits)

NFP 4015 Healthy Nonprofit/Nongovernmental Organizations (4 Credits)

Healthy nonprofit organizations link their leadership, financial planning, programs and operations, impact measurement, and fund development together into successful tapestries emblematic of their missions. Students will examine nonprofit business models, legal designation/IRS status, and the organizational life-cycle to understand organizational evolution and growth possibilities. Students will put this knowledge toward ensuring that the mission, vision, values are exemplified in the organizational culture and structure to better engage employees, stakeholders, donors and the community.

NFP 4020 Legacy and Trends of Nonprofits Organizations and Civil Society (4 Credits)

NFP 4100 Philanthropy Principles, Roles, and Systems in Nonprofits (4 Credits)

Foundations, government agencies, and individual donors shift their giving strategies over time. Nonprofit/nongovernmental organizations must also adjust their development approach and practices to respond to changes in the giving environment. Students will examine how nonprofit and development leaders guide their organizations’ mission, vision and values to determine impactful development efforts in light of economic, social, environmental and political changes. Students will link development systems and practices to an organization’s finances, programs and development lifecycle to meet organizational needs. Students will learn the donor cultivation process as it connects to a giver’s passions and nonprofit’s mission. Students will identify the nonprofit development structures and approaches that support the development goals set by the organization’s leaders and board of directors.
NFP 4105 Applied Development Practices: Fundraising and Donor Relations (4 Credits)
NFP 4110 Development Strategy, Fund Management, and Complexity (4 Credits)
NFP 4115 Leading Nonprofit Financial Health (4 Credits)
NFP 4400 Principles and Practices in Social Enterprise, Innovation and Entrepreneurship (4 Credits)
NFP 4405 Strategies and Tools for Nonprofit Social Enterprise (4 Credits)
NFP 4410 Social Enterprise Practicum (4 Credits)
This course brings together the knowledge, skills, and practices students develop in the first three courses in the Social Enterprise, Innovation and Entrepreneurship concentration. Students will simulate a consultancy by applying social enterprise strategies and tools to a proposed nonprofit social enterprise as a part of their practicum. Students will work with an experienced faculty instructor who will guide the student consultant in the research, design thinking, process applications, problem solving, and metric development needed to support the nonprofit in launching a successful social enterprise. Students will be empowered to offer ideas, analyze data, research markets, and make decisions that will support the enterprise’s development process within the nonprofit/nongovernmental organization. Students will prepare final projects based on their practicum experience. The practicum should be taken as one of the last social enterprise classes.

NFP 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, unconditional acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better, and a B or better in MALS 4020. A final grade of B or better must be earned in this course to meet degree requirements.

NFP 4905 Graduate Social Research Methods (4 Credits)
Graduate Social Research Methods is an exploration of the methods and purposes of social science research from the perspective of the researcher as well as that of the informed professional and consumer of information. Students will learn about the process of research, including the development of research questions, the purpose of various social science research methods, the role of professional ethics, and general approaches to the analysis and interpretation of data. Students will develop the ability to read and critique basic social science research articles and to implement simple research designs. Students will develop and write a research proposal around a specific research question informed by a review of the literature. Technical requirements include the ability to read and modify Microsoft Excel documents. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment. A final grade of C or better must be earned in this course to meet degree requirements.

NFP 4920 Portfolio Capstone (4 Credits)
The Portfolio Capstone course provides students the opportunity to reflect on the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the Portfolio Capstone course produce deliverables which include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field, is an applied project that is a relevant contribution to the field. Students must complete the Portfolio Capstone with a grade of B- or better.

Transportation Institute at the University of Denver

Office: Transportation Institute at the University of Denver
Mail Code: University Hall, 2197 S. University Blvd. Suite 359, Denver, CO 80208
Phone: 303-871-7449
Email: du-dti@du.edu (du-dti@du.edu)
Web Site: http://www.du.edu/transportation/

Master of Science in Transportation Management

The University of Denver offers an MS in Transportation Management designed to prepare transportation professionals for leadership roles in the transportation, supply chain, and logistics industries, which are becoming increasingly intermodal, international, and interdependent. This professionally oriented degree combines a rigorous academic program delivered by highly qualified industry practitioners and faculty with insight from a board of directors composed of transportation industry leaders, thereby ensuring that course content remains relevant and current. Throughout the program, students learn to effectively address the wide-ranging management and business challenges facing today’s global transportation industry while gaining an understanding of the broad range of transportation modes and options available to meet these challenges.

The program's unique format, a week-long residency held each quarter for six consecutive quarters and a week-long international trip, allows students to continue working full-time while earning their graduate degree. It also affords students professional networking opportunities that offer significant professional advantages for the future. Upon earning a Master of Science in Transportation Management from the Transportation Institute
at the University of Denver, program participants join a group of distinguished alumni who have gone on to play pivotal roles in the transportation industry.

Students will do the following as a part of the program:

- Create strategies to build and actively contribute to professional networks consisting of executive cohort members, board, and alumni
- Develop strategies to enhance professional and personal management skills in classroom and career settings
- Compare and contrast transportation, operational, and managerial processes in the United States and internationally to make informed process-related decisions
- Solve real-world problems by: applying principles from core management disciplines in transportation contexts; analyzing, evaluating, and responding to transportation challenges within and between modes; and measuring, theorizing, and assessing financial and operational management problems using quantitative methods

Master of Science in Transportation Management with a Concentration in Supply Chain Operations

The Denver Transportation Institute DTI concentration in Supply Chain prepares leaders in the Transportation and Logistics industry with advanced-graduate-level knowledge in Supply Chain to supplement the Transportation Management topics offered in the Transportation Management degree. The concentration highlights graduates’ advanced knowledge in critical Supply Chain topics such as supply chain management analysis through both national and international lenses.

This degree prepares students to do the following:

- Articulate principles of supply chain management to construct models to address supply chain problems.
- Analyze the impact of various concepts related to modes of supply chain to both shape and respond to supply chain trends.
- Articulate the complexities of international supply chain issues to inform strategies that positively impact the global economy.

Graduate Certificate in Supply chain management

Supply chains are everywhere, from the local store to a large multinational electronics manufacturer operating halfway across the world. From cradle to grave, it is the supply chain management system that links all of the numerous stakeholders into one strategic plan for us as customers in markets. These systems link processes such as product design, sourcing, forecasting, planning, manufacturing, distribution, logistics, retailing and material disposal and reuse. In today’s fast paced markets driven by globalization and technology, knowledgeable professionals in supply chain management are increasingly important for companies to achieve their business objectives. Some of the most successful manufacturers (e.g., Apple and Samsung) and retailers (e.g., Wal-Mart and Amazon) are winning as a result of their supply chain strategies. Especially as markets change rapidly, supply chain management professionals will be integral to a company’s success.

The graduate certificate in Supply Chain Management was developed in partnership with the Transportation Institute at the University of Denver and Daniels College of Business. The purpose of a Supply Chain Management certificate is to provide a student with a baseline of knowledge, skills, and abilities to succeed in various types of supply chain management roles at the entry levels of an organization. It is designed as a four course program, starting with the basics of an end to end supply chain system, and then diving deeper into the planning and execution aspects of a supply chain, and with a capstone course as a practicum to focus on a specific focus areas relating to a student’s interest. Students will also gain additional skills and knowledge in supply chain management through elective coursework.

This degree prepares students to do the following:

- Articulate the six pillars of supply chain management to diagram the process to appraise their role in the market system.
- Apply the six pillars of supply chain management to realistic problem scenarios to develop strategies to diagnose and address future supply chain problems.
- Assess supply chains using a multidimensional perspective that includes connections between supply chain processes and fundamental business topics such as financial management and technology.
- Solve supply chain problems using a nonlinear process that addresses connections between supply chain pillars, market trends, and business best practices.
- Apply best practices to address an authentic supply chain problem in a work setting.
specialized graduate certificate in supply chain management

The specialized graduate certificate in Supply Chain Management provides a student with a baseline of knowledge, skills, and abilities to succeed in various types of supply chain management roles at the entry levels of an organization. The certificate is designed as a four course program, starting with the basics of an end to end supply chain system, and then diving deeper into the planning and execution aspects of a supply chain, and with a capstone course as a practicum to focus on a specific focus areas relating to a student’s interest. At the end, the student will be successfully able to move forward in his/her career in a chosen field based on theoretical, strategic, and practical knowledge and applied research.

Master of Science in Transportation Management

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

Other Requirements
- Organizational Sponsorship Form: http://www.du.edu/transportation/media/documents/du-dti-support.pdf

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each subscore
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

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

Master of Science in Transportation Management

Degree Requirements
Students must complete 60 quarter hours of coursework credit.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Leadership and Organizational Excellence</td>
<td></td>
</tr>
<tr>
<td>TRAN 4400</td>
<td>Excellence in Leadership for Transportation</td>
<td>2</td>
</tr>
<tr>
<td>TRAN 4410</td>
<td>Executive Management Practices in Organizations</td>
<td>1</td>
</tr>
<tr>
<td>TRAN 4420</td>
<td>Leading with Integrity</td>
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</tr>
<tr>
<td>TRAN 4870</td>
<td>Individual Leadership Development Project</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Finance Accounting and Economics</td>
<td></td>
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<tr>
<td>TRAN 4430</td>
<td>Applied Micro Economics &amp; Pricing</td>
<td>4</td>
</tr>
<tr>
<td>TRAN 4460</td>
<td>Financial &amp; Managerial Accounting</td>
<td>2</td>
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<tr>
<td>TRAN 4470</td>
<td>Financial Analysis &amp; Capital Structures</td>
<td>2</td>
</tr>
<tr>
<td>TRAN 4480</td>
<td>Capital Decision Making and Capital Markets</td>
<td>2</td>
</tr>
<tr>
<td>TRAN 4490</td>
<td>Global Trade &amp; Economics</td>
<td>4</td>
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<tr>
<td></td>
<td>Marketing and Sales</td>
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<tr>
<td>TRAN 4440</td>
<td>Marketing &amp; Sales Management Strategies</td>
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<tr>
<td></td>
<td>Legal and Compliance</td>
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<tr>
<td>TRAN 4450</td>
<td>Legal Studies: Contracts &amp; Regulation</td>
<td>2</td>
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<tr>
<td></td>
<td>Advanced Supply Chain and Global Transportation Management Courses</td>
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<tr>
<td>TRAN 4800</td>
<td>Analysis of Passenger &amp; Freight Transportation Business Segments</td>
<td>2</td>
</tr>
<tr>
<td>TRAN 4810</td>
<td>Big Data &amp; Analytics</td>
<td>4</td>
</tr>
<tr>
<td>TRAN 4820</td>
<td>Principles of Supply Chain Management</td>
<td>4</td>
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<tr>
<td>TRAN 4830</td>
<td>Advanced Transportation &amp; Supply Chain Management</td>
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</table>
## MASTER OF SCIENCE IN TRANSPORTATION MANAGEMENT with a CONCENTRATION in Supply chain operations

**Degree Requirements**

Students must complete 60 quarter hours of coursework credit.

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<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
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<td>Leading with Integrity</td>
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<tr>
<td>TRAN 4870</td>
<td>Individual Leadership Development Project</td>
<td>4</td>
</tr>
<tr>
<td><strong>Finance Accounting and Economics</strong></td>
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<tr>
<td><strong>Marketing and Sales</strong></td>
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<tr>
<td>TRAN 4440</td>
<td>Marketing &amp; Sales Management Strategies</td>
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<tr>
<td><strong>Legal and Compliance</strong></td>
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<tr>
<td>TRAN 4450</td>
<td>Legal Studies: Contracts &amp; Regulation</td>
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<tr>
<td><strong>Supply Chain Operations</strong></td>
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<tr>
<td>TRAN 4820</td>
<td>Principles of Supply Chain Management</td>
<td>4</td>
</tr>
<tr>
<td>TRAN 4830</td>
<td>Advanced Transportation &amp; Supply Chain Management</td>
<td>4</td>
</tr>
<tr>
<td>TRAN 4850</td>
<td>International Transportation &amp; Supply Chain Management Analysis</td>
<td>4</td>
</tr>
<tr>
<td>TRAN 4890</td>
<td>International Study Seminar</td>
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<tr>
<td><strong>Global Transportation Management</strong></td>
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<tr>
<td>TRAN 4800</td>
<td>Analysis of Passenger &amp; Freight Transportation Business Segments</td>
<td>2</td>
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<tr>
<td>TRAN 4810</td>
<td>Big Data &amp; Analytics</td>
<td>4</td>
</tr>
<tr>
<td>TRAN 4840</td>
<td>Passenger-Freight Multimodal Transportation Systems</td>
<td>4</td>
</tr>
<tr>
<td><strong>Capstone: Applied Business Planning and Value Creation</strong></td>
<td></td>
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<tr>
<td>TRAN 4860</td>
<td>Senior Management: Executives &amp; Issues Seminar</td>
<td>4</td>
</tr>
<tr>
<td>TRAN 4880</td>
<td>Business Planning Thesis Project</td>
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<tr>
<td><strong>Total Credits</strong></td>
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### Specialized Graduate Certificate in Supply Chain Management

**Degree Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>Required Courses</strong></td>
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</tr>
<tr>
<td>TRAN 4100</td>
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<td>TRAN 4130</td>
<td>Supply Chain Management Practicum</td>
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<td><strong>Total Credits</strong></td>
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Graduate Certificate in Supply Chain Management

Degree Requirements

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Electives

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<tr>
<td>TRAN 4140</td>
<td>Supply Chain Technology and Systems</td>
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<td>TRAN 4150</td>
<td>Supply Chain Finance</td>
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Total Credits 24

Courses

TRAN 4010 Introduction to Freight and Passenger Transportation (2 Credits)
This course will provide an overview of the freight and passenger transportation sector of the North American economy, focusing on all of the modes. It will include a discussion of the vision of a transportation system for the future: one that moves people and goods efficiently, economically, safely and securely, and in an environmentally benign manner on an integrated, seamless, ethical transportation system that uses the strengths of all modes and minimizes their weaknesses. The course will discuss how such multi-modal systems for freight and intermodal systems for passengers operate in an impact the development and growth of the US and global economies.

TRAN 4020 Applied Micro Economics for Transportation (4 Credits)
This course will discuss basic microeconomic concepts used in the analysis of transportation with a focus on pricing for the firm relative to costs, market framework, and competitive issues both within the mode and between modes. In addition, the course will involve fieldwork observing and discussing the physical elements underlying the economics of the firm and its pricing.

TRAN 4030 Quantitative Tools for Transportation Management (4 Credits)
This course will introduce the quantitative transportation tools of GIS and statistics; GIS to help solve data management, modeling, and visualization challenges, and statistics for analysis of transportation data to support decisions. GIS addresses (1) the challenge of “big data” which is a current discussion topic in business, (2) modeling (including linear programming) of networks, routing/scheduling, and location analysis, and (3) the visualization output and how it is used for decision making. The statistics component would focus on the framing, tools, and appropriate applications of the statistical processes and how statistics can be correctly used in different data analysis situations in transportation.

TRAN 4050 International Transportation Survey and Analysis (4 Credits)
This course will survey and analyze at a macro level the international freight and passenger operations, policies, and other concepts covered in fundamental courses, as applied to the locations and facilities included in the planned International Transportation Seminar. In addition, this course will explore the specific passenger and freight transportation structure and systems operation for transportation in these international locations and facilities.

TRAN 4060 Transportation Marketing and Sales Tools (4 Credits)
The marketing mix is presented as it relates to both freight and passenger transportation services. Demand forecasting and market analysis for transportation markets. Understanding capacity, marginal costs of capacity market segmentation, pricing capacity and revenue maximization within available capacity constraints will be addressed. Customer service is discussed fully in terms of understanding both the freight- and passenger-customer perspectives and relating this information to marketing and management decision making, especially with regard to the intermodal industry.

TRAN 4070 US and International Law (4 Credits)
This course will survey the main issues facing transportation professionals in managing and operating a safe and secure intermodal transportation system. Particular attention will be given to labor and management practices that have proven effective in addressing these issues and to their potential for intermodal transportation. Topical content will include the history of labor relations, fatigue in transportation, personnel safety, ergonomics, negotiation strategies, ethical issues, security issues, and others.

TRAN 4080 Transportation Law, Policy, and Regulation (4 Credits)
This course addresses the history of transportation and its regulation, constitutional law, regulatory agencies and administrative procedures, railroad regulation, motor carrier regulation, taxicab regulation, air carrier regulation, pipeline regulation, carrier liability (passengers and cargo), labor law, safety regulation, environmental law, antitrust law, and disabilities law as well as issues of intermodalism.
TRAN 4100 Fundamentals of Supply Chain Management (4 Credits)
This course will provide a broad overview of the discipline of supply chain management, providing to students an understanding of "people, processes, and technologies" related to the field. Supply Chain Management is the discipline that brings together B2B and B2C markets, and the University of Denver's model defines this as an end to end system within six pillars that has a goal of a "cradle to cradle" system. Participants will learn of the key operating, financial, and technical measures and tools of supply chain management, which is necessary to be a successful professional in the field. Specific current and future trends will be covered, including the implications across local, national and global systems. The focus will be on learning and applying how supply chain will continue to transform in the future, but from an understanding of the end to end system and its principles as the foundation.

TRAN 4110 Fundamentals of Supply Chain Planning (4 Credits)
This course focuses on the first three pillars of the supply chain management system, design, source, and schedule, the steps that are taken before a product is made. Supply Chain Planning is focused on how agents in the front end of the supply chain system are centered on how to create, procure, and plan/forecast within the overall process within and across companies. Students are exposed to concepts and practical examples of how front-end activities are achieved within the overall supply chain model. The course introduces concepts and tactics in product and supply chain design, strategic sourcing, forecasting, demand planning, and supplier management. Upon completion of this course, the student will understand how these three pillars are critical to an overall successful supply chain strategy. The student will be introduced on how to apply these concepts and practical applications within a real world market environment. Prerequisite: TRAN 4100.

TRAN 4120 Fundamentals of Supply Chain Execution (4 Credits)
This course focuses on the final three pillars of the supply chain management system, make, deliver, and sustain, the steps that are taken as and after the product is made. Supply Chain Execution is focused on how agents in the back end of the supply chain system are centered on how to make, deliver and reuse within the overall process within and across companies. Students are exposed to concepts and practical examples of how back-end activities are achieved within the overall supply chain model. The course introduces concepts and tactics in materials resource planning (MRP), manufacturing, transportation, warehousing, distribution, retailing and sustainability. Upon completion of this course, the student will understand how these three pillars are critical to an overall successful supply chain strategy. The student will be introduced to how to apply these concepts and practical applications within a real world market environment. Prerequisite: TRAN 4100.

TRAN 4130 Supply Chain Management Practicum (4 Credits)
This course provides opportunities for students to apply concepts covered in the first three courses of the program to an individual project through the completion of a structured problem-solving exercise in an area of study related to the student's specific area of interest. Potential topics will either relate to one of the six pillars in the SCM model, or a specific area of interest as a special topic, such as sustainable supply chains, supply chain structure, supply chain risk management, etc. Upon completion of this course, the student will possess a deeper understanding in an area of focus related to application of the student's future interests. The student will be introduced to how this topic area can be applied in a company in a real market setting. Prerequisites: TRAN 4100, TRAN 4110, TRAN 4120.

TRAN 4140 Supply Chain Technology and Systems (4 Credits)
The key to an effective supply chain are its people and processes, but technology and systems are often the glue that keeps everything together. Even since its inception, technology and systems have been critical to supply chain strategy; given the complexity and fast paced nature, it can be a key determinant of a company's success or failure. Because technology is so rapidly changing, it is critical to understand how to develop a successful plan to enhance the overall supply chain strategy. In this course, we will not focus on a specific technology or system, but rather the fundamental concepts and how it intersects to people and processes. Specific technologies will be addressed, such as ERP, WMS, and TMS systems. As well, the course will focus on how a company's strategy and business requirements should be developed into process flows, and a technology/system strategy. The course will also address how companies make technology and system solutions, as well as special topics related to supply chain strategy. Note that this course is only for a six class SCM certificate; it will need to be determined whether this course occurs before or after the SCM Practicum. TRAN 4100, 4110, 4120, 4130.

TRAN 4150 Supply Chain Finance (4 Credits)
A successful supply chain strategy must be effective not just in its material flow within the six pillars and the information flow from its systems, but its financial flow as well. Companies and their corresponding supply chains can achieve improved cost management that leads to greater top line revenue growth through improvements in financial flows achieved waste reduction, inventory carrying cost, capital investment and management and terms with suppliers and customers, to name a few. How the financial flow of the company and its supply chain is dependent on the entity's material and information flows, and vice versa. This course will provide an understanding of how these flows work in conjunction with one another, and how supply chain professionals must understand the role of financial management fundamentals in the process. Note that this course is only for a six class SCM certificate; it will need to be determined whether this course occurs before or after the SCM Practicum. Prerequisites: TRAN 4100, 4110, 4120, 4130.

TRAN 4310 Freight Transportation Executives Seminar (4 Credits)
Through the use of transportation executives in the classroom, this course will explore in depth some of the key concepts covered during the course of the program to include topics such as applied transportation finance, shipper transportation metrics/requirements, global freight flows to/from North America, government/military transportation, etc. In addition, in a case study, students will propose options for a real-world challenge using knowledge and data from current-event case material and guest executive presentations.
TRAN 4320 Transportation Management, Leadership and Values (4 Credits)
This course will address personal behavior; understanding yourself as a leader and organizational behavior issues such as organizational structures, motivation, power and politics, culture and change management. The course will focus on ways of dealing more effectively with the organizational upheaval that comes with change, including planning and information-sharing techniques to help keep your team focused on solutions. Developing leaders: creating a vision, gathering resources, motivating others, handling conflict- together with advice about how to create a climate that encourages others to take initiative and develop their own potential will be a vital part of the course. Strategies in human resource with a system level macro focus will be discussed.

TRAN 4330 Principles of Supply Chain: Management and Technologies (4 Credits)
This course will assist students in gaining awareness, knowledge, and understanding of the distribution patterns and relationships that play a key role in determining company success. We will view perspectives within the context of the global marketplace and across both freight and passenger transportation. We will address external value chains and internal value chains; stakeholder relationship management; the supply chain and the demand chain complexities; strategies of E-business; the strategic use of IT; strategic planning to gain a competitive advantage; end-to-end supply chain visibility and the strategis use of technologies in the enterprise-wide system.

TRAN 4340 Freight Transportation in Supply Chains (4 Credits)
As freight can be two-thirds of logistics costs, this course expands on a traditional Supply Chain course, providing detailed concepts and application for freight transportation in supply chains. This will include modal comparisons and contrasts of operational, financial, marketing, and information technology tools/software in the freight industry. Collaboration and competition between and among the modes will be explored to understand specific tactics to improve modal and supply-chain efficiencies in both the global and domestic arenas. Additionally, current trends in freight transportation and supply chain management across the globe will be studied and discussed for strategies and tactics to shape, manage, and respond to those trends.

TRAN 4400 Excellence in Leadership for Transportation (2 Credits)
This course will provide an integrated exploration of current topics most important for leadership success within the transportation industry. Current best leadership practices will be reviewed, and common leadership challenges within transportation will be analyzed for successful resolution.

TRAN 4410 Executive Management Practices in Organizations (1 Credit)
This course will provide a comprehensive view of best practices for executive management in transportation workplaces. Organizational situations will be assessed from a variety of viewpoints and policies analyzed for optimal execution of strategy.

TRAN 4420 Leading with Integrity (1 Credit)
This course will explore ethical decision making and values-based leadership. Values, ethics and organizational philosophies will be assessed for best application in various corporate settings within the transportation industry.

TRAN 4430 Applied Micro Economics & Pricing (4 Credits)
The course will involve fieldwork and U.S. site visits observing and discussing the physical elements underlying the long-term and marginal economics of the firm and its pricing strategies and policies. In addition, the course will discuss basic microeconomic concepts used in the analysis of business services, including the concepts of market size; marginal, average, short-run, and long-run costs; and production levels as they relate to revenue and contribution with a focus on pricing for the firm relative to its fixed and variable costs, market share framework, and competitive issues both within the mode and between modes.

TRAN 4440 Marketing & Sales Management Strategies (4 Credits)
This course will examine the foundations of marketing as well as the process of developing, assessing and implementing marketing strategies in the transportation and supply chain industries. The foundations are grounded in an understanding of customers’ wants and needs and a commitment to satisfying those needs within the resources of the organization, the long-term benefits of society and the economy, and the highest ethical and moral standards in this global economy. Based on this foundation, students will learn the process of formulating marketing strategies, such as segmentation, targeting, positioning and the four P's of marketing: product, price, place and promotion.

TRAN 4450 Legal Studies: Contracts & Regulation (2 Credits)
This course will focus on the fundamentals of creating and implementing effective contracts, whether with customers, suppliers, or labor. The contract discussion will be framed by regulatory and policy realities both in domestic and international contexts, including an understanding of federal and international laws, liability, regulations, policies, programs, and agencies impacting contracts.

TRAN 4460 Financial & Managerial Accounting (2 Credits)
This course will cover the basic theory, principles and practice of financial accounting and examine accounting statements including income and cash flow statements and balance sheets. Discussions include managerial use of accounting data useful in making investment and cost decisions, assessing cash flows, and the use of the organization resources to produce profit. Additional topics will include reading and understanding the 10-K, basic accounting standards and practices, and assessing the quality of financial information found in the accounting reports.

TRAN 4470 Financial Analysis & Capital Structures (2 Credits)
Complementing 4460, this course will use ratio analysis to determine relative performance of companies and the industry to enable management to assess operating efficiency, profitability and effective use of capital. Capital structure concepts, fixed and variable cost considerations, the use of operating and financial leverage and the concepts of business and financial risk will be discussed. The course also includes a basic review of the principle of time value of money.
TRAN 4480 Capital Decision Making and Capital Markets (2 Credits)
This course will examine the management decision process for making capital expenditures that enhance the value of the firm, cash flow estimation for capital budgeting purposes, decision models for capital budgeting, weighted average cost of capital, decisions in capital constrained situations, sensitivity analysis, and a review of the capital markets.

TRAN 4490 Global Trade & Economics (4 Credits)
This course will examine the World Trade Organization and the regional trade agreements, such as NAFTA, EU, and ASEAN, with regard to their impact on North American transportation, trade, and economy overall including their relationship to account deficits and their significance; and their impact on disputes and how trade disputes are settled. In addition, the course will address the global economy and economics and its drivers, comparing and contrasting North America, China/Asia, the European Union, and selected emerging economies to include impacts on global trade, such as trading patterns, outsourcing, and changing production areas.

TRAN 4610 Multimodal Passenger-Freight Transportation Systems (4 Credits)
The purpose of this course is to explore the multimodal characteristics of transportation systems with emphasis on shared assets and the interactions between freight and passenger flows. The students will learn about how passenger transportation systems are planned and operated, and the potential impacts on freight movements. At the end of the course, students will have a better understanding of how both public and private sector transportation decisions affect one another.

TRAN 4700 Transportation Roles in Global Trade (4 Credits)
This course will examine the World Trade Organization and the regional trade agreements, such as NAFTA, EU, and ASEAN, with regard to their impact on North American transportation, trade, and economy overall including their relationship to account deficits and their significance; and their impact on disputes and how trade disputes are settled. In addition, the course will address the global economy and economics and its drivers, comparing and contrasting North America, China/Asia, the European Union, and selected emerging economies to include impacts on global trade, such as trading patterns, outsourcing, and changing production areas.

TRAN 4710 Transportation Finance (4 Credits)
This finance course focuses on the transportation managers ability to understand and analyze financial statements. Topics covered will be the basics of major accounting statements, income and balance sheets, use of operating leverage, ratio analysis to determine relative performance of companies and the industry individual modes and across modes. An emphasis will be placed on time value of money and capital expenditure analysis and decision models for capital budgeting. Exploring markets and the sources of financial capital, securities, public and private financing will be discussed.

TRAN 4800 Analysis of Passenger & Freight Transportation Business Segments (2 Credits)
This course will provide an overview of the freight and passenger transportation sectors of the North American economy, focusing on various modes and their financial profiles, including aggregate revenue, income, market share and investment. The course will include a discussion of the vision of a transportation system for the future—one that moves people and goods efficiently, economically, safely and securely, and in an environmentally benign manner on integrated, seamless, ethical transportation processes using the strengths of all modes and minimizing their weaknesses. The course will discuss how such multi-modal systems for freight and intermodal systems for passenger operate in and impact the development and growth of the U.S. and global economies.

TRAN 4810 Big Data & Analytics (4 Credits)
This course will cover the principles of big data and analytics with a focus on applying quantitative methods within the transportation and logistics sector, including a review of technology-based tools that support problem solving with data management, modeling, and visualization. This course will address (1) the challenge of real-world application of "big data" with a focus on ROI and outcomes, (2) modeling (including linear programming) of networks, routing/scheduling, and location analysis, and (3) visualization output and how it is used for decision making. The course covers statistical analysis including framing, tools, and appropriate application of statistics within the transportation sector.

TRAN 4820 Principles of Supply Chain Management (4 Credits)
This course will provide an overview of the basic principles of supply chain management, giving students an understanding of supply chain processes from sourcing to finished goods and customers to suppliers, identifying the five core supply chain processes and examining the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management that impact the users and providers of services. Additionally, current trends in the technology of supply chain management, including applicable global trends, will be covered.

TRAN 4830 Advanced Transportation & Supply Chain Management (4 Credits)
Transportation costs and inventory considerations are significant drivers of total logistics and supply chain management costs. This course expands on the earlier Principles of Supply Chain Management course, providing detailed concepts and applications for freight transportation and inventory considerations in supply chains. This will include modal comparisons and contrasts of operational, financial, marketing, and information technology tools/software available in the freight and supply chain industries. Collaboration and competition between and among the modes will be explored to understand specific tactics to improve modal and supply chain efficiencies and competitive alternatives in both the global and domestic markets. Additionally, current trends in freight transportation and supply chain management across the globe will be studied and discussed to consider strategies and tactics to shape, manage, and respond to those trends.

TRAN 4840 Passenger-Freight Multimodal Transportation Systems (4 Credits)
The purpose of this course is to explore the multimodal characteristics of transportation systems with emphasis on shared assets and the interactions between freight and passenger flows. Students will learn how passenger transit and vehicular transportation systems are planned and operated, the concept of external benefits, and the potential impacts on freight movements. By the end of the course, students will have a better understanding of how public and private sector transportation management and investment decisions affect one another.
TRAN 4850 International Transportation & Supply Chain Management Analysis (4 Credits)
This course will survey and analyze at a macro level the international freight and passenger operations, policies, and other concepts covered in fundamental and advanced courses, as applied to the locations and facilities included in the planned International Transportation Travel Seminar. In addition, this course will explore specific passenger and freight transportation management structures and operations for transportation systems in important international locations and facilities.

TRAN 4860 Senior Management: Executives & Issues Seminar (4 Credits)
Through the use of transportation executives in the classroom, this course will explore in-depth some of the key concepts covered during the course of the degree program, to include topics such as applied transportation finance, merger and acquisition issues, shipper transportation metrics/requirements, global freight flows to/from North America, and government/military transportation. In addition, in case studies, students will propose options for real-world challenges using knowledge and data from current events, degree program courses, case material, and guest executive presentations.

TRAN 4870 Individual Leadership Development Project (4 Credits)
This course will guide students through the process of developing and executing individualized leadership development projects to enhance specific leadership skills and goals within their current management structure or an assigned organization. Through work over the six quarters of the program, the leadership projects will provide a unique opportunity for each student to hone critical aspects of her/his leadership, which, in turn, benefits the students, their organizations, and the larger transportation, logistics, and supply chain community.

TRAN 4880 Business Planning Thesis Project (4 Credits)
This course will guide students through the creation of a comprehensive business development and/or productivity improvement-oriented business plan, with a preferred focus on the transportation industry, to develop a new revenue growth or new service opportunity for their organization or an assigned organization. Through work over the six quarters of the program, this project provides each student with important business planning and development skills to create an implementable business plan, which may provide tangible benefits to their sponsoring organization as well.

TRAN 4890 International Study Seminar (2 Credits)
The Seminar will provide an onsite experience for students as they visit and study freight and passenger-related facilities and governmental agencies in major international locations. This international travel seminar will allow students to see new and emerging technologies in action that may provide significant productivity improvements. Students will also have the opportunity to examine the management and operation of transportation and supply chain operations in other countries. Students will meet with executives, government leaders and local managers of these systems to learn directly about the challenges of serving the global economy.

TRAN 4910 International Transportation Travel Seminar (2 Credits)
This course will provide exposure to real-world issues and problems in the intermodal transportation industry through an intensive four-to-seven-day onsite visit to a major transportation facility in North America. The course will include research and data gathering prior to the actual visit and will result in team projects with the final presentations being made during the final Quarter.

TRAN 4920 Leadership Development in Transportation Project (4 Credits)
This course will guide participants through the process of developing and executing an individualized leadership development plan to enhance specific leadership skills in the transportation or transportation-related industry. With work over the six quarters of the program, the leadership plan will provide a unique opportunity for each participant to hone critical aspects of his/her leadership, which, in turn, benefits the participant, the organization, and the larger transportation and supply chain community.

TRAN 4950 Transportation Business Planning Project (1-8 Credits)
This course will guide participants through the creation of a comprehensive transportation oriented business plan to develop a new or enhanced product or service for a transportation related organization. With work over the six quarters of the program, this project provides the participant with important business planning and development skills and an implementable transportation related business plan, which may provide a tangible benefit to the organization as well.

TRAN 4991 Independent Study (1-10 Credits)

Organizational Leadership
Office: University College Student Support Center
Mail Code: 2211 S. Josephine St., Denver, CO 80208
Phone: 303-871-2291, 800-347-2042
Email: ucolsupport@du.edu
Web Site: www.universitycollege.du.edu

Master of Science in Organizational Leadership with a Concentration in Human Capital Organizations
The Human Capital in Organizations master's degree concentration is offered entirely online to meet the needs of busy adults. Students will learn to determine, cultivate, and maintain the symbiotic relationship between individuals and the organizations for which they work and lead. Strategic human capital can be the winning element of a successful organization; master the process of developing and retaining employees to engage and achieve
objectives, innovate, and maximize organizational and individual success. The master’s degree concentration in Human Capital in Organizations prepares students to ethically develop and maintain human capital while learning the best practices to do so.

Led by instructors who work in the fields in which they teach, classes introduce students to innovative and creative approaches to structuring and sustaining the development of human capital. Students explore knowledge and information management, communication tactics, vertical and horizontal partnerships, and organizational learning to promote the successful development of capital. Students will define the attributes, challenges, and advantages of human capital and strategies for leveraging each while integrating personal and organizational achievement. Customize your Organizational Leadership master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

- Analyze organizational partnerships both vertically and horizontally
- Create a strategy for leveraging the attributes, challenges, and advantages of human capital
- Critique the theories and processes used for integrating knowledge management and organizational learning as a concept for enhancing personal and organizational success
- Evaluate the opportunities, challenges and options to have employees participate in decision making through the use of various techniques
- Assess best practices in ethically developing and maintaining human capital

**Master of Science in Organizational Leadership with a Concentration in Organizational Development**

The Organizational Development master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students learn about organizations. Successful organizations are dynamic entities—adjusting goals, structure, and strategies due to needs and influences. Sometimes these adjustments are large, but quite often there are a series of small to mid-size changes that affect employees and processes, resulting in the need for an organizational development (OD) intervention. Students learn the history, challenges, and successes of OD and the different models and techniques to warrant a productive culture in a variety of organizational sizes, sectors, and types. An OD intervention strategy is created by defining the role of the practitioner as an internal or external consultant and constructing a diagnosis plan, synthesizing data from interviews and observations, and effectively communicating the findings in various applicable formats. Finally, a personal philosophy regarding change is developed and then examined through the context of analyzing organizational values and ethics, culture, and the human impact of change on employees.

The importance of culture and effective intervention strategies is discussed throughout the Organizational Development master’s degree concentration. Customize your Leadership and Organizations master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

- Articulate and define organizational development, history of OD, and challenges and possibilities using an intentional OD intervention.
- Develop and defend a personal philosophy of organizational change.
- Evaluate the impact of organizational culture and core values on OD interventions.
- Integrate the contract for a successful OD intervention with the organizational culture and determine the role of an OD practitioner in each stage of an OD intervention, distinguishing between an internal and external consultant.
- Assess, compare, and contrast different models of change and describe the impact of each model on an OD process.
- Define and organize OD strategies for different types of organizations (sectors, life cycle, size, industry, types of innovation, or other defining characteristics) for maximizing impacts of OD interventions.
- Summarize the importance and impact of the different organizational structures and design on OD strategy and interventions.
- Construct an organizational diagnosis plan by using interviewing, group facilitation, process observation, synthesis of data, and writing effective reports, with providing effective presentations of the findings.
- Analyze the human side of change and build strategies for successful implementation of an OD intervention that honor the loss, resistance and acceptance of changes.

**Master of Science in Organizational Leadership with a Concentration in Project Management**

The Project Management master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students receive hands-on, practical instruction from professional practitioners who work in the fields in which they teach on the tools and techniques of effective project management. Students learn how to develop a clear plan that places a project in the context of an organization’s strategic plan, while considering budgetary, scheduling, and human capital implications.
The content for the Project Management concentration has been developed to parallel the Project Management Institute’s (PMI® Project Management Body of Knowledge (PMBOK®) Guide. It covers all of the relevant areas and prepares the student to do well on the PMI® Project Management Professional (PMP) Certification Exam. In addition, the master’s degree concentration provides practical experience in using the tools and techniques of effective project management. You’ll learn the basic principles of project management and become proficient in the use of project management software and understand how to develop a plan that clearly places a project in the context of an organization’s strategic plan.

This degree prepares students to do the following:

- Summarize and apply the basic principles of project management and become proficient in the use of project management software
- Analyze and apply agile concepts and techniques
- Design a comprehensive risk management plan for a project
- Create strategies to manage the complexity inherent in large-scale projects
- Relate project scope to cost, time, and resource requirements
- Develop procurement plans and assess project contracts

**Master of Science in Organizational Leadership with a Concentration in Strategic Innovation & Change**

The Strategic Innovation and Change master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students learn tactical innovation and change management using vision, values, and mission as an overall guide. Led by professional practitioners who work in the fields in which they teach, leadership classes provide professionals the skills to manage change, encourage innovation, and develop effective strategic initiatives while fulfilling an organization’s mission.

Students can expect to develop environmental scanning skills to identify and evaluate external factors that affect an organization on a micro or macro level and prepare them to be solution-oriented leaders. While learning to take advantage of current realities and seize opportunities for an organization through strategy, degree-seekers explore the change theories and concepts required for effective and ethical change leadership while understanding how the relationships within an organization are affected.

The importance of mission and vision is discussed throughout the Strategic Innovation and Change master’s degree concentration. Customize your Organizational Leadership master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

- Analyze the roles of mission, vision, values, and goals as a start of strategic planning
- Summarize the advantages and limitations of the strategic planning process
- Create strategies to address organizational challenges when implementing innovation and change and assess how this plan relates to customers, competitors, suppliers, and technology
- Evaluate the change theories, concepts, and skills required for effective and ethical change leadership and how the relationships within an organization are affected
- Align financial management strategies and budget and planning requirements with the vision, values, and goals of an organization

**Master of Science in Organizational Leadership with a Concentration in Supply Chain Management**

The Supply Chain Management master’s degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students learn tactical innovation and change management using vision, values, and mission as an overall guide. Led by professional practitioners who work in the fields in which they teach, leadership classes provide professionals the skills to manage change, encourage innovation, and develop effective strategic initiatives while fulfilling an organization’s mission.

In the Supply Chain Management concentration, students learn to build the organizational planning and structures needed to optimize the flow of products along their full journey from raw material sourcing to manufacturing, transportation, and inventory management. Through hands-on projects using the newest technology, students will learn to manage the wide range of organizational issues that impact product flow, all while learning from current leaders in the field.

This degree prepares students to do the following:

- Articulate the six pillars of supply chain management to diagram the process to appraise their role in the market system.
- Apply the six pillars of supply chain management to realistic problem scenarios to develop strategies to diagnose and address future supply chain problems.
• Assess supply chains using a multidimensional perspective that includes connections between supply chain processes and fundamental business topics such as financial management and technology.

• Solve supply chain problems using a nonlinear process that addresses connections between supply chain pillars, market trends, and business best practices.

• Apply best practices to address an authentic supply chain problem in a work setting.

Certificate in Organizational Leadership with a Concentration in Human Capital in Organizations

The graduate certificate in Human Capital in Organizations concentration is offered entirely online to meet the needs of busy adults seeking to expand their skillset or credentials to include leadership knowledge on managing human capital. Certificate students learn to lead, determine, cultivate, and maintain the symbiotic relationship between individuals and the organizations they work for. The graduate certificate in Human Capital in Organizations concentration prepares students to ethically develop and maintain human capital while learning the best practices to do so. Strategic human capital can be the winning element of a successful organization; master the process of developing and retaining employees to engage and achieve objectives, innovate, and maximize organizational and individual success. Students will also gain additional skills and knowledge in organizational leadership through elective coursework.

Explore knowledge and information management, communication tactics, vertical and horizontal partnerships, and organizational learning to promote the successful development of capital. Led by instructors who work in the field they teach in, certificate classes introduce students to innovative and creative approaches to structuring and sustaining the development of human capital. Students define the attributes, challenges, and advantages of human capital and strategies for leveraging each while integrating personal and organizational achievement. Credits earned through this graduate certificate may apply toward a master’s degree in Organizational Leadership.

Certificate in Organizational Leadership with a Concentration in Organizational Development

The graduate certificate in Organizational Development is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students learn about organizations. Successful organizations are dynamic entities—adjusting goals, structure, and strategies due to needs and influences. Sometimes these adjustments are large, but quite often there are a series of small to mid-size changes that affect employees and processes resulting in the need for an organizational development (OD) intervention. Students learn the history, challenges, and successes of OD and the different models and techniques to warrant a productive culture in a variety of organizational sizes, sectors, and types. An OD intervention strategy is created by defining the role of the practitioner as an internal or external consultant and constructing a diagnosis plan, synthesizing data from interviews and observations, and effectively communicating the findings in various applicable formats. Finally, a personal philosophy regarding change is developed and then examined through the context of analyzing organizational values and ethics, culture, and the human impact of change on employees. Students will also gain additional skills and knowledge in organizational leadership through elective coursework.

Certificate in Organizational Leadership with a Concentration in Strategic Innovation & Change

The graduate certificate in Strategic Innovation and Change concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students learn about organizations. Successful organizations are dynamic entities—adjusting goals, structure, and strategies due to needs and influences. Sometimes these adjustments are large, but quite often there are a series of small to mid-size changes that affect employees and processes resulting in the need for an organizational development (OD) intervention. Students learn the history, challenges, and successes of OD and the different models and techniques to warrant a productive culture in a variety of organizational sizes, sectors, and types. An OD intervention strategy is created by defining the role of the practitioner as an internal or external consultant and constructing a diagnosis plan, synthesizing data from interviews and observations, and effectively communicating the findings in various applicable formats. Finally, a personal philosophy regarding change is developed and then examined through the context of analyzing organizational values and ethics, culture, and the human impact of change on employees. Students will also gain additional skills and knowledge in organizational leadership through elective coursework.

Specialized graduate certificate in HUMAN CAPITAL IN ORGANIZATIONS

The specialized graduate certificate in Human Capital in Organizations is offered entirely online to meet the needs of busy adults seeking to expand their skillset or credentials to include leadership knowledge on managing human capital. Certificate students learn to lead, determine, cultivate, and maintain the symbiotic relationship between individuals and the organizations they work for. The graduate certificate in Human Capital in Organizations concentration prepares students to ethically develop and maintain human capital while learning the best practices to do so. Strategic
Degree and GPA Requirements

English Language Proficiency Test Score Requirements

Certificate Admission

Degree and GPA Requirements
English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

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

Master of Science in Organizational leadership with a Concentration in Human Capital Organizations

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>ORL 4500</td>
<td>Leadership Development</td>
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<td>ORL 4510</td>
<td>Building the 21st-Century Organization</td>
<td>4</td>
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<tr>
<td>ORL 4520</td>
<td>Principles of Financing for Organizations</td>
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<td>ORL 4910</td>
<td>Research Practices and Applications</td>
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<td>ORL 4902</td>
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Concentration requirements

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<td>ORL 4190</td>
<td>Value Driven Decision Making</td>
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Elective requirements (Choose three courses):

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>ORL 4110</td>
<td>Fundamentals of Organizational Development</td>
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</tr>
<tr>
<td>ORL 4115</td>
<td>Organizational Culture and Organizational Development Impacts</td>
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<tr>
<td>ORL 4120</td>
<td>Team Interventions</td>
<td></td>
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<tr>
<td>ORL 4125</td>
<td>Evaluate and Sustain Change</td>
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<tr>
<td>ORL 4420</td>
<td>Leading Change for Transformation</td>
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<tr>
<td>ORL 4530</td>
<td>Leading a Culture of Organizational Innovation</td>
<td></td>
</tr>
<tr>
<td>ORL 4980</td>
<td>Internship</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 48

Minimum number of credits required: 48

Students will work with their personal academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Science in Organizational leadership with a Concentration in Organizational Development

Degree Requirements

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<tr>
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<td>ORL 4520</td>
<td>Principles of Financing for Organizations</td>
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### Master of Science in Organizational leadership with a Concentration in Project Management

#### Degree Requirements

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<td>ORL 4510</td>
<td>Building the 21st-Century Organization</td>
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<tr>
<td>ORL 4520</td>
<td>Principles of Financing for Organizations</td>
<td>4</td>
</tr>
<tr>
<td>ORL 4905</td>
<td>Graduate Social Research Methods</td>
<td>4</td>
</tr>
<tr>
<td>ORL 4901</td>
<td>Capstone Project</td>
<td>4</td>
</tr>
<tr>
<td>or ORL 4902</td>
<td>Capstone Seminar</td>
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<td>or ORL 4904</td>
<td>Interdisciplinary Capstone Seminar</td>
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#### Concentration requirements

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<tr>
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<tbody>
<tr>
<td>ICT 4100</td>
<td>Principles of Project Management</td>
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<tr>
<td>ICT 4105</td>
<td>Project Contracts and Procurement</td>
<td>4</td>
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<td>ICT 4110</td>
<td>Project Risk and Quality Management</td>
<td>4</td>
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<td>ICT 4115</td>
<td>Project Management Dynamics</td>
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#### Elective requirements (Choose three courses):

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<tbody>
<tr>
<td>ICT 4015</td>
<td>Managing Technology for Strategic Value</td>
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<tr>
<td>ICT 4155</td>
<td>Strategic Alliances in the Technology Sector</td>
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<tr>
<td>ICT 4160</td>
<td>Advanced Methods for Complex Projects</td>
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</table>

**Total Credits**: 48

**Minimum number of credits required**: 48

Students will work with their personal academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

**Master of Science in Organizational leadership with a Concentration in Strategic Innovation and Change**

**Degree Requirements**

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**Concentration requirements**

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<tbody>
<tr>
<td>ORL 4400</td>
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<tr>
<td>ORL 4410</td>
<td>Principles of Environmental Scanning</td>
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<td>ORL 4420</td>
<td>Leading Change for Transformation</td>
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<tr>
<td>ORL 4530</td>
<td>Leading a Culture of Organizational Innovation</td>
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**Elective requirements (Choose three courses):**

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<tr>
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</tr>
<tr>
<td>ORL 4980</td>
<td>Internship</td>
<td></td>
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**Total Credits**

48

**Minimum number of credits required: 48**

Students will work with their personal academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

**MASTER OF SCIENCE IN ORGANIZATIONAL LEADERSHIP WITH A CONCENTRATION IN supply chain management**

**Degree Requirements**

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<tr>
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<tbody>
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<td>ORL 4905</td>
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**Concentration requirements**

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<tr>
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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>TRAN 4100</td>
<td>Fundamentals of Supply Chain Management</td>
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</table>
TRAN 4110  Fundamentals of Supply Chain Planning  
TRAN 4120  Fundamentals of Supply Chain Execution  
TRAN 4130  Supply Chain Management Practicum  

**Elective requirements (Choose three courses)**  
TRAN 4140  Supply Chain Technology and Systems  
TRAN 4150  Supply Chain Finance  
ORL 4420  Leading Change for Transformation  
ORL 4530  Leading a Culture of Organizational Innovation  
ORL 4160  Integrating Personal and Organizational Success  
ORL 4170  Developing Human Capital in Organizations  

Total Credits 48

Minimum number of credits required: 48

Students will work with their personal academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

### Certificate in Organizational leadership with a Concentration in Human Capital Organizations

#### Program Requirements

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<tr>
<td></td>
<td>Concentration requirements</td>
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<td>ORL 4160</td>
<td>Integrating Personal and Organizational Success</td>
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<td>ORL 4170</td>
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<td>ORL 4190</td>
<td>Value Driven Decision Making</td>
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<td>ORL 4550</td>
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<td></td>
<td>Elective requirements (Choose two courses):</td>
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<tr>
<td>ORL 4110</td>
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Total Credits 24

Minimum number of credits required: 24

### Certificate in Organizational leadership with a Concentration in Organizational Development

#### Program Requirements

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<td>ORL 4125</td>
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Total Credits 24

Minimum number of credits required: 24
## Certificate in Organizational Leadership with a Concentration in Strategic Innovation and Change

**Program Requirements**

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**Elective requirements (Choose two courses):**

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**Total Credits:** 24

Minimum number of credits required: 24

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### Specialized Graduate Certificate in Human Capital in Organizations

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<tr>
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<th>Title</th>
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<tbody>
<tr>
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<td>Integrating Personal and Organizational Success</td>
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<td>Value Driven Decision Making</td>
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**Total Credits:** 16

Minimum number of credits required: 24

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### Specialized Graduate Certificate in Organizational Development

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**Total Credits:** 16

Minimum number of credits required: 24

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### Specialized Graduate Certificate in Strategic Innovation and Change

<table>
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**Total Credits:** 16

Minimum number of credits required: 24
Leadership Org Studies Courses

Organizational Leadership Courses

ORL 4110 Fundamentals of Organizational Development (4 Credits)
This course explores the history of organizational development (OD), definitions, models, approaches, and how OD is and can be used in organizations today. An organizational development professional requires a multitude of skills to be effective. Students will assess their own skills and develop a plan to develop or increase required skills.

ORL 4115 Organizational Culture and Organizational Development Impacts (4 Credits)
Organizational culture encompasses the organization’s vision, mission, values, systems, symbols, structures, language, beliefs, and norms. This course proposes organizational development strategies that match, support, or are synergistic with organizational cultures.

ORL 4120 Team Interventions (4 Credits)
To be successful, organizations of all types depend on teams of people who work together to complete tasks, achieve goals, and to help accomplish organizational change and strategy. As a result, focusing on the effectiveness of teams is a key value in organizational development. In this course, students learn how teams work and what makes them effective. Students investigate the tools and methods needed to conduct team assessments, diagnose the symptoms, and prescribe and evaluate targeted interventions that help teams achieve goals that impact organizational outcomes.

ORL 4125 Evaluate and Sustain Change (4 Credits)
Organizational Development is change. This course explores organization impacts and change processes that are inherent in organizational development in an organization.

ORL 4130 Individual Interventions (4 Credits)
This course explores the theory and practice of an organizational development process as part of an individual intervention, based on unique organizational considerations. This course examines the roles of organizational structure, type of organization, and the depth and breadth of the organizational change affecting individual development strategy and interventions.

ORL 4135 Large Scale Interventions (4 Credits)
This course explores the theory and practice of a large-scale or organization-wide organizational development process— including entering the organization, assessing a strategy for a unique organizational culture, and presenting results—while understanding the human side of change. There are many organizational development strategies that can be used based on unique organizational considerations. This course examines the roles of organizational structure, type of organization, and the depth and breadth of the organizational change affecting organizational development strategy and large-scale interventions.

ORL 4160 Integrating Personal and Organizational Success (4 Credits)
This class explores the dynamics where the organization and the individual are successful and what is the role of the teacher. It analyzes options and opportunities, including the use of a systems thinking model, organizational learning, knowledge management, appreciative inquiry and building an ethical model for success at all levels of an organization; public, private or non-profit.

ORL 4170 Developing Human Capital in Organizations (4 Credits)
This course explores why, with the changes in the workforce, organizations; public, private, and nonprofit; are looking internally for innovation, creativity and strategic change. Based on the premise that organizations continue to evolve or they will become extinct, this course examines the reasons behind developing human capital and discusses concrete strategies for this development, in a sustaining and ethical manner. This course evaluates the advantage of a connected workforce; a shared mission, vision and information, knowledge, reward and communication structures. Stressing that people are an organization’s most important resource, this course identifies the role of the leader in developing and retaining human capital.

ORL 4185 Enterprise Management (4 Credits)
The enterprise management course provides a contextual basis for the application of effective cross-functional management methods within the enterprise. The topics taught in this course come from the traditional academic areas of business, industrial engineering, applied statistics, and project management. This course is designed to present and integrate these fundamental knowledge areas into a multi-dimensional enterprise management knowledge base and skill set.

ORL 4190 Value Driven Decision Making (4 Credits)
This course explores both objective and subjective decision making models. Emphasis is placed on decision making and risk assessment for organizational effectiveness in public, private, and nonprofit organizations. The rational approach is taught via maximization of expected outcomes and decision tree analysis. The irrational side of decision-making is covered through demonstrations and discussion of decision bias and judgment heuristics. The role of the leader is discussed.

ORL 4400 Leading Strategic Planning in Organizations (4 Credits)
Beginning with a clear mission, strategic planning is an iterative, dynamic process of translating the mission into a series of goals and outcomes in public, private, and non-profit organizations. The organization’s vision, values, mission, and goals are the core of the process; strategic planning involves a series of options, understanding opportunities, evaluating risks, developing the plan and building in ethics, communication, implementation, and evaluation. The strengths and limitations of rational planning processes are explored and strategies for coping with unintended consequences are developed. The role of the leader in the process is also discussed.
ORL 4410 Principles of Environmental Scanning (4 Credits)
Environmental scanning is the process of identifying and evaluating external factors that may affect an organization; public, private, or nonprofit; on either a micro or a macro level. The micro level includes the immediate and global competitive environment and the macro level encompasses external trends dealing with the economy, politics, social changes or technology. This course provides students the opportunity to develop a process for environmental scanning and learn to use tools to evaluate trends and the significance of a trend. Casual loop diagrams, systems archetypes and scenario planning are discussed. These tools are useful in all sectors.

ORL 4420 Leading Change for Transformation (4 Credits)
Change is occurring in every type of organization, but since all organizations are composed of people, it is the people who have to change for the organization to change. We’ll explore this relationship throughout the course, and give you the tools to become a change leader. The only thing that is constant is change. Beginning with this premise, this class explores the exciting and opportunity-filled world of change and transition. This course will explore the basic change theories and concepts and skills required for effective and ethical change leadership. Students will examine the notion of transformational change, the various stages of individual and organizational change, essential relationships between leadership and management, and assorted organizational models for leading change. The concept of an adaptive organization for producing extraordinary results will be discussed.

ORL 4500 Leadership Development (4 Credits)
This course explores leadership as a dynamic relationship with the organizational environment, stakeholders, and followers. Leadership in context is an essential concept, as well as the research-based core leadership competencies that effective leaders exemplify. Leaders from the public, private, and non-profit sectors will be studied in an inclusive context to assess their core leadership competencies and those practices that may vary due to the organizational structure. Relevant contemporary leadership topics will be examined to gain a broad perspective on leadership and considering the diversity of human interrelationships. The importance of ethical, strategic, and system wide decision-making is examined from the standpoint that leadership opportunities exist at all levels of organizations, in the community as well as the workplace. Strategies used to influence culture, promote learning, and implement change to move organizations forward are addressed. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

ORL 4510 Building the 21st-Century Organization (4 Credits)
This course examines the purpose and roles of organizations in today’s global economy. The main focus is on the design and structure of organizations based on their industry; the internal and external environment; type of culture; degree of complexity and use of technology; routine and non-routine processes; size; and whether they are global, national or local. Differences between public, private and governmental organizations are illustrated. Organizational culture and its effect on ethics, change management, and innovation are examined. The sources of conflict in organizations are explained and students learn how power, political tactics, and collaboration can be used to resolve conflict. Contemporary challenges facing organizations are identified along with the design and structure options that help mitigate these challenges. Students develop an Organization Design Plan that enables a selected organization to effectively operate within its environment at optimal performance. Designing for performance, sustainability and innovation are key aspects of this course.

ORL 4520 Principles of Financing for Organizations (4 Credits)
This course is designed to enable students to discover how basic financial concepts are similar and different across public, private and non-profit organizations. Students compare and contrast the use of these concepts and processes in different organizational types and structures.

ORL 4530 Leading a Culture of Organizational Innovation (4 Credits)
This course examines a proven process of innovation and how it applies to private, public and non-profit organizations; leading to entrepreneurship. The course identifies how organizational culture can have a positive or negative effect on innovation. The role of the leader is also discussed. Determining the right strategy for effective innovation and how to structure organizations to innovate best is explored. Students describe how to implement management systems to assess ongoing innovation, using metrics throughout the process, and determine how to incentivize innovation in work teams. Using the seven rules of innovation, students assess a selected organization on its degree of innovation and propose a plan for integrating innovation.

ORL 4550 Strategic Organizational Partnerships (4 Credits)
Partnerships extend the capability of the organization; public, private or nonprofit; and help to leverage available resources. Strategic partnerships also provide an alternative to vertical integration and a way to complement the organization’s core competencies. This course defines and discusses the roles of various types of organizational partnerships, including internal and external, strategic partnerships, and joint ventures, and explores strategies for ethically managing these external and internal organizational relationships.

ORL 4580 Innovation and Entrepreneurial Development (4 Credits)
This course examines a proven process of innovation and how it applies to private, public and non-profit organizations, leading to entrepreneurship. The course identifies how organizational culture can have a positive or negative effect on innovation. Determining the right strategy for effective innovation and how to structure organizations to innovate best is explored. Students describe how to implement management systems to assess ongoing innovation, using metrics throughout the process, and determine how to incentivize innovation in work teams. Using the 7 rules of innovation, students assess a selected organization on its degree of innovation and propose a plan for integrating innovation.
ORL 4600 Philanthropy Roles and Practices (4 Credits)
This course critically reviews the history of the philanthropic sector in the United States and how this sector has influenced the development of American socio-political values and continues to influence discussions in the present day. This course critically assesses the impact philanthropy has made in the socio-political movements in the U.S. and around the world such as women’s suffrage, racial segregation, LGBTQ advocacy, and world hunger and poverty. Topics covered will include, but are not limited to: -History of philanthropy in the US -Global philanthropy -Legal and tax considerations -Mission driven organizations -Philanthropic influence in political discussions -Differences nonprofit driven services for a community versus government/public providing those services -The role of the leader in achieving excellence.

ORL 4610 Cultivating and Sustaining Donor Relations (4 Credits)
This course answers the questions of why donors are needed and how to establish and sustain donors for the organization. This class explores the practice of identifying donors and establishing the relationship in an ethical and sustainable manner. Donors may be business, other organizations, individuals or foundations. Based on the premise that first there is involvement, and then transparency and finally donations, how effectively an organization established and sustains donors supports the long term existence of the organization.

ORL 4615 Principles of Finance for Fundraising (4 Credits)
This course provides fundraising professionals an understanding of financial statements, budgets and IRS issues. Topics include: accounting principles, managing the accounting process, cash flow, cost accounting and analyzing financial statements.

ORL 4620 Principles of Strategic Fundraising (4 Credits)
Beginning with a clear mission, strategic fundraising is an iterative, dynamic process of translating the mission into a series of outcomes and support for the organization. With the organization’s vision, values, mission and goals as the core of the process, the fundraising is done with high ethical standards, ensuring accountability to the donors and compliance with all applicable Federal, State and local Laws. Various fundraising strategies and vehicles are discussed, along with the role of the staff and the board in fundraising. Last, there is some discussion of the current larger issues in fundraising.

ORL 4630 Organizing for Successful Fundraising (4 Credits)
Most organizations are unsuccessful with their fundraising efforts, not because their cause isn’t worthy of support, but because they simply are not organized to raise funds. This course covers the basic elements of a mission statement, preparing the case for support by donors, the roles of staff, board, volunteers, and the legal and ethical issues involved. Organizational structures are discussed, with the balance between bureaucracy and innovation/creativity. The role of technology is illustrated. The local, state and federal laws that govern fundraising are discussed.

ORL 4640 Research and Writing for Fundraising (4 Credits)
This course is an in depth exploration of researching and writing effective proposals and grants. Principles of the Institutional Review Board (IRB) are studied and basic training completed. Funding sources are analyzed and the process of competing for a grant is discussed. At the conclusion, students have the knowledge to research, prepare, and present a grant proposal. Prerequisite: ORL 4620.

ORL 4650 Advanced Board Development (4 Credits)
This course explores the opportunities and challenges with a board of directors from a staff perspective. This course evaluates the value of a knowledgeable and effective board of directors in the success of the organization. The role of the board of directors and the role of a staff member, especially in fundraising, is often unclear and the need for clarity and differences in the roles will be discussed. How to develop and maintain a working relationship with the board of directors’ members to move the organization forward is analyzed. Lastly, this course evaluates how to choose members for the board and explores how to design and implement a development plan. Prereq – ORL 4600 - Philanthropy Roles and Practices.

ORL 4660 Database Management and Technology for Fundraising (4 Credits)
This course explains why having reliable information with regular updates is essential in the development and sustaining of a donor base for nonprofits. All aspects of effective technology uses, including: research, email, electronic contributions, volunteer contact lists and mail generation are discussed. Legal, ethical and costs considerations are investigated. Prerequisites: ORL 4600, ORL 4615 and ORL 4620.

ORL 4670 Advanced Fundraising (4 Credits)
This course provides the opportunity for students to build on the knowledge gained in Principles of Strategic Fundraising. Topics include: current trends, legal concerns, professional development for fundraisers and alternative revenue sources. There is an emphasis on understanding and explaining the financial structure of the organization. Prerequisites: ORL 4600, ORL 4615 and ORL 4620.

ORL 4680 Advanced Volunteer Management (4 Credits)
This course focuses on the recruitment, training and retention of the organization’s volunteers, be it public, private or nonprofit. Including a cost benefit analysis, this course is an in-depth analysis of a volunteer program. There is a discussion of the legal and ethical considerations, advantages and disadvantages, of using volunteers in an organization. Prerequisite: ORL 4600.

ORL 4701 Topics in Leadership and Organizations (4 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.
O RL 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study and work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.

O RL 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

O RL 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

O RL 4905 Graduate Social Research Methods (4 Credits)
Graduate Social Research Methods is an exploration of the methods and purposes of social science research from the perspective of the researcher as well as that of the informed professional and consumer of information. Students will learn about the process of research, including the development of research questions, the purpose of various social science research methods, the role of professional ethics, and general approaches to the analysis and interpretation of data. Students will develop the ability to read and critique basic social science research articles and to implement simple research designs. Students will develop and write a research proposal around a specific research question informed by a review of the literature. Technical requirements include the ability to read and modify Microsoft Excel documents. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

O RL 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master’s degree. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

O RL 4980 Internship (1-4 Credits)
The ORL internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the ORL master’s degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all ORL students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the ORL degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.
ORL 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted into a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent study is offered only on a for-credit basis.

ORL 4992 Directed Study (1-10 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

Professional Creative Writing
Office: University College Student Support Center
Mail Code: 2211 S. Josephine St., Denver, CO 80208
Phone: 303-871-2291, 800-347-2042
Email: ucolsupport@du.edu
Web Site: http://www.universitycollege.du.edu

This program empowers aspiring writers to become published authors and, through their work, influence our ongoing cultural conversation. We encourage students to read widely and with professional attention to mastering the craft of their chosen genre. While developing a clear understanding of the literary marketplace, students learn to cultivate their individual identities as writers, create personal brands that forcefully present their writing to the public, and establish connections with the broader community of working writers. Since imaginative writing testifies to truths that would otherwise pass through the world unnoticed or misunderstood, the authors who produce it expand awareness in their readers, and through those readers, enhance the awareness of countless other people. We find this process inspiring, and through this program seek to share that inspiration with all our students.

Program Outcomes
This program prepares students to:

• Craft writing with a keen awareness of the limits and opportunities of the writing’s genre
• Cultivate writing routines and habits that support creative productivity
• Develop a sophisticated knowledge of literary structures and reader expectations
• Apply professional editing standards to evaluate both published writing and writing for their peers
• Assess their own writing and learn how to enhance its strengths and eliminate its weaknesses
• Define their audiences and write in ways that move and entertain them

Master of Arts in Professional Creative Writing with a Concentration in Professional Creative Nonfiction Writing
The Professional Creative Nonfiction Writing Concentration is designed for aspiring writers whose ambition is to become published authors of memoirs, personal essays, travel writing, and other forms of creative nonfiction. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

This degree prepares students to:

• Identify and analyze the basic elements of creative nonfiction as found in the works of master creative nonfiction writers
• Apply their knowledge of creative nonfiction fundamentals and genres to their own creative work
• Discover and cultivate personal habits of thought and behavior that sustain their creative efforts
• Create strategies for developing a professional writing presence designed to cultivate an audience for their work

Master of Arts in Professional Creative Writing with a Concentration in Professional Dramatic Writing
The Professional Dramatic Writing Concentration is designed for aspiring playwrights, screenwriters, and spoken word artists whose ambition is to become published authors of plays, films, and other individual and collaborative forms of professional performance. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.
This degree prepares students to:

• Identify and analyze the basic elements of drama as found in the works of master playwrights, screenwriters, and spoken word artists
• Apply their knowledge of drama’s fundamentals and genres to their own creative work
• Discover and cultivate personal habits of thought and behavior that sustain their creative efforts
• Create strategies for developing a professional writing presence designed to cultivate an audience for their dramatic works

Master of Arts in Professional Creative Writing with a Concentration in Professional Fiction Writing

The Professional Fiction Writing Concentration is designed for aspiring writers whose ambition is to become published authors of short stories, novels, and collaborative works in particular genres. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

This degree prepares students to:

• Identify and analyze the basic elements of fiction as found in the works of master fiction writers
• Apply their knowledge of fiction fundamentals and genres to their own creative work
• Discover and cultivate personal habits of thought and behavior that sustain their creative efforts
• Create strategies for developing a professional writing presence designed to cultivate an audience for their work

Master of Arts in Professional Creative Writing with a Concentration in Professional Poetry Writing

The Professional Poetry Writing Concentration is designed for aspiring poets whose ambition is to become published authors of individual poems and collections of poetry. The coursework helps poets progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

This degree prepares students to:

• Identify and analyze the basic elements of poetry as found in the works of master poets
• Apply their knowledge of poetry fundamentals and genres to their own creative work
• Discover and cultivate personal habits of thought and behavior that sustain their creative efforts
• Create strategies for developing a professional writing presence designed to cultivate an audience for their poetry

Certificate in Professional Creative Writing with a Concentration in Professional Creative Nonfiction Writing

The Professional Creative Nonfiction Writing Certificate is designed for aspiring writers whose ambition is to become published authors of memoirs, personal essays, travel writing, and other forms of creative nonfiction. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work. Students will also gain additional skills and knowledge in professional creative writing through elective coursework.

Certificate in Professional Creative Writing with a Concentration in Professional Dramatic Writing

The Professional Dramatic Writing Certificate is designed for aspiring playwrights, screenwriters, and spoken word artists whose ambition is to become published authors of plays, films, and other individual and collaborative forms of professional performance. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work. Students will also gain additional skills and knowledge in professional creative writing through elective coursework.

Certificate in Professional Creative Writing with a Concentration in Professional Fiction Writing

The Professional Fiction Writing Certificate is designed for aspiring writers whose ambition is to become published authors of short stories, novels, and collaborative works in particular genres. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to
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SPECIALIZED GRADUATE CERTIFICATE IN PROFESSIONAL FICTION WRITING

The specialized graduate certificate in Professional Fiction Writing is designed for aspiring writers whose ambition is to become published authors of short stories, novels, and collaborative works in particular genres. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

SPECIALIZED GRADUATE CERTIFICATE IN PROFESSIONAL CREATIVE NONFICTION writing

The specialized graduate certificate in Professional Creative Nonfiction Writing is designed for aspiring writers whose ambition is to become published authors of memoirs, personal essays, travel writing, and other forms of creative nonfiction. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

SPECIALIZED GRADUATE CERTIFICATE IN PROFESSIONAL POETRY WRITING

The specialized graduate certificate in Professional Poetry Writing is designed for aspiring poets whose ambition is to become published authors of individual poems and collections of poetry. The coursework helps poets progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

SPECIALIZED GRADUATE CERTIFICATE IN PROFESSIONAL DRAMATIC WRITING

The specialized graduate certificate in Professional Dramatic Writing is designed for aspiring playwrights, screenwriters, and spoken word artists whose ambition is to become published authors of plays, films, and other individual and collaborative forms of professional performance. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

Master of Arts in Professional Creative Writing with a Concentration in Professional Creative Nonfiction Writing, Professional Dramatic Writing, Professional Fiction Writing, Professional Poetry Writing

Degree and GPA Requirements

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

English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each subscore
- Minimum TOEFL Score (Paper-based test): 550
Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
Minimum CAE Score: 169

English Conditional Admission: Master’s degree applicants who do not meet the required level of English proficiency may be considered for conditional acceptance if all other admission criteria are met. Prior to enrolling in any graduate-level coursework, English Conditional Acceptance Certificate in Professional Creative Writing with a Concentration in Professional Creative Nonfiction Writing, Professional Dramatic Writing, Professional Fiction Writing, Professional Poetry Writing

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:
- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each subscore
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

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

Master of Arts in Professional Writing with a Concentration in Professional Creative Nonfiction Writing

Degree Requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PWRI 4500</td>
<td>The Writing Life: Concepts, Practices, and Professionalism</td>
<td>4</td>
</tr>
<tr>
<td>PWRI 4510</td>
<td>Literary Genres for Writers</td>
<td>4</td>
</tr>
<tr>
<td>PWRI 4520</td>
<td>The Writers Workshop</td>
<td>4</td>
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<tr>
<td>PWRI 4917</td>
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</tr>
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<td>or PWRI 4920</td>
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Concentration requirements:
- PWRI 4100 Masterworks: Creative Nonfiction 4
- PWRI 4110 Writing Creative Nonfiction: Foundational Concepts, Skills, and Practice 4
- PWRI 4120 Writing the Personal Essay 4
- PWRI 4130 Writing the Memoir 4

Elective requirements (Choose three courses):
- PWRI 4140 Natural Science and Literature
- PWRI 4340 Literature to Film
- PWRI 4410 Writing and Healing
- PWRI 4420 Literary Translation: Crossing Borders to Enrich Your Own Writing
- PWRI 4540 Children's Literature: From Picture Books to Books for Young Adults
- PWRI 4550 From Romance to Realism
- PWRI 4701 Topics in Literature

872  Professional Creative Writing
Minimum number of credits required: 48

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Master of Arts in Professional Writing with a Concentration in Professional Dramatic Writing

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Total Credits 48

Minimum number of credits required: 48

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**Total Credits:** 48

Minimum number of credits required: 48

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### Master of Arts in Professional Writing with a Concentration in Professional Poetry Writing

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<td>PWRI 4220</td>
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Certificate in Professional Writing with a Concentration in Professional Creative Nonfiction Writing

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Total Credits 24

Minimum number of credits required: 24

Certificate in Professional Writing with a Concentration in Professional Dramatic Writing

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Total Credits: 24

Minimum number of credits required: 24
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SPECIALIZED GRADUATE CERTIFICATE IN professional creative nonfiction writing

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SPECIALIZED GRADUATE CERTIFICATE IN professional dramatic writing

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Courses

PWRI 4000 Masterworks: Fiction (4 Credits)
A “masterwork” of fiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer’s point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful fiction works of modern times. Discussions and writing assignments will focus on how exposure to the fiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

PWRI 4001 Portfolio Foundations (0 Credits)
Master’s and certificate-seeking students in Professional Creative Writing must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

PWRI 4010 Writing Fiction: Foundational Concepts, Skills, and Practice (4 Credits)
This course concentrates on the craft of writing fiction, which includes popular subgenres such as literary fiction, science fiction, fantasy, suspense, mystery, historical fiction, satire, romance, and more. The primary focus will be fundamental concepts and techniques common to all subgenres of fiction. Class discussions will emphasize essential writing skills and professional approaches to research (almost all fiction writing requires some level of research), taking advantage of a supportive workshop format. Students will express their ideas about both craft and content and workshop their writing with a view toward professional publication.
PWRI 4020 Writing the Short Story (4 Credits)
The dramatic elements of the short story are distinct from any other form of fiction. This workshop is for writers who plan to seriously study the form of the contemporary short story, and to apply their learning to their own projects. Students focus equally on reading published works and writing/ revising an original short story, as well as discussing aspects of publishing. Weekly writing exercises, readings, and workshops of student stories will be combined to provide the most direct, effective training in this dynamic form. (It is strongly encouraged that students take PWRI 4010 Writing Fiction: Foundational Concepts, Skills, and Practice prior to this course.).

PWRI 4030 Writing the Novella (4 Credits)
This course concentrates on the craft of writing a form of fiction that combines the intense thematic focus of short stories and the complex character development typical of the novel. The novella offers writers the opportunity to create an extended story without juggling the complexities of multiple points of view, intricate plot lines, and difficult-to-manage back stories. Typically concerned with a character's emotional and personal development rather than the interaction of many characters in a complicated social context, the novella usually takes place in one location or in a larger but well-defined setting. Novellas are common in genres such as mystery and science fiction, and because of their strong focus and relative brevity, they are widely considered the perfect form for adaptation to the stage, film, and television.

PWRI 4100 Masterworks: Creative Nonfiction (4 Credits)
A "masterwork" of creative nonfiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful works of modern creative nonfiction. Includes popular sub-genres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Discussions and writing assignments will focus on how exposure to the creative nonfiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

PWRI 4110 Writing Creative Nonfiction: Foundational Concepts, Skills, and Practice (4 Credits)
This course concentrates on the craft of writing nonfiction, which includes popular subgenres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Students will later apply these classic skills in courses devoted to various nonfiction sub-genres, such as memoir. Class discussions will emphasize essential writing skills and professional approaches to research, taking advantage of a supportive workshop format. Students will express their ideas about both craft and content and workshop their writing with a view toward professional publication.

PWRI 4120 Writing the Personal Essay (4 Credits)
The author Dinty Moore describes the personal essay as being for writers who want to capture a bit of life, producing a written record of their better thoughts. Like the short story in fiction, the personal essay is one of the original forms of creative nonfiction. It is a lively form that has tracked through the ages—from ancient archetypes to the school of Enlightenment essayists, 19th-century realists and romantics to robust 20th-century conventionalists, and on to Digital Age innovators where it deeply informs blogs, social media posts, and other contemporary writings. Conventions of the craft are covered in this course, but students will not be expected to embrace creativity-stifling rules. The work will be hands-on, with workshoping that pushed students to pursue new pathways and fresh approaches in their personal essay writing.

PWRI 4130 Writing the Memoir (4 Credits)
This course concentrates on the craft of writing memoir, which includes popular subgenres such as coming of age, spiritual development, addiction/recovery, food writing, travel adventures, accounts of career failure and success, and stories of surviving various kinds of trauma. The primary focus will be on applying fundamentals and techniques of creative nonfiction to the writer's personal experience. Class discussions will emphasize essential writing skills, techniques for exploring and recording memories, and professional approaches to research. Taking advantage of a supportive workshop format, students will express their ideas about both craft and content and to workshop their writing with a view toward professional publication.

PWRI 4140 Natural Science and Literature (4 Credits)
This class will explore the practice – and art – of nonfiction writing about science and nature. Students will begin with an examination of influential historical works and move into contemporary writing on science and nature. The class will be a sort of journey, from ruminative essays on the individual in nature to impassioned (and science-heavy) explorations of ecosystem destruction to exuberant studies of love and sex in the animal kingdom. Students will seek to understand the narrative and linguistic machinery that make these pieces of writing "tick" through discussions, short writing exercises, brief reviews, and workshop participation. This course will also address the development of students' own writing. Specifically, students will seek understanding of the writing techniques that can be used to make the complex fields of science and nature accessible subjects of writing intended for mainstream or literary publications. The key challenge will be to find a topic, a format (memoir, essay, narrative journalism), a structure, and a voice suitable for creating a single, sustained piece of writing that each student will devise, draft, workshop, and polish throughout the course.

PWRI 4200 Masterworks: Poetry (4 Credits)
A "masterwork" of poetry is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way form, structure, style, figurative language, theme, and cultural values work together in some of the most powerful poetic works of modern times. Discussions and writing assignments will focus on how exposure to the poetry of different countries can help us see our own literary and cultural assumptions with fresh eyes.
PWRI 4210 Writing Poetry: Foundational Concepts, Skills, and Practice (4 Credits)
This course is a combination of readings in poetry and poetics, brief lectures, and open discussions focused on the interplay of image, metaphor, rhythm, emotions and ideas in the expressive form of writing called poetry. Students will learn to tap the imaginative sources that all creative writing springs from and flow those energies into poetic form. The instructor will provide examples to illustrate successful uses of key poetic concepts and help students explore, through a range of open-ended exercises, various approaches to expressing themselves fully and clearly. Students will also develop practical critiquing skills with the aim of helping themselves and their classmates write with greater subtlety and power.

PWRI 4220 Writing Traditional Verse and Contemporary Song Lyrics (4 Credits)
This course focuses on the shared building blocks of traditional formal poetry and contemporary song lyrics: meter and rhyme, repetition, and verse/stanza structure. Beginning with simple constructions like limericks and nursery rhymes, and moving swiftly into more sophisticated verse organizations like the sonnet, the villanelle, the ballad, and the popular song, students will explore a variety of existing examples, then produce their own pieces that follow (or break) the established rules of each form. The course will take a workshop format, in which students will generate, share, and receive feedback on their formal experiments; the focus will be on developing a more finely tuned ear for form, and on deploying "traditional" poetic techniques in relevant, radical, and inventive ways. (NOTE: The ability to sing or play an instrument is NOT required for this course; when discussing and writing songs, students will focus on the texts only, not the harmonic/melodic elements of songwriting craft.)

PWRI 4230 Writing Improvisational Verse and Prose Poetry (4 Credits)
This course focuses on the writing of improvisational verse and prose poems, certainly the most popular forms of poetry today both in America and around the world. The course will explore a wide variety of approaches to non-metrical verse and examine how poetry sounds when it appears in prose form. Using a workshop format, students will generate, share, and receive feedback on their poetic experiments, with an emphasis on developing a more finely tuned ear for cadence and phrasing. Robert Frost famously wrote that writing what he called "free verse" was like “playing tennis with the net down.” This course aims to demonstrate why Frost was wrong.

PWRI 4300 Masterworks: Drama (4 Credits)
A "masterwork" of drama is a play or screenplay that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer’s point of view, drawing on them to develop a deeper understanding of the way structure, style, character, imagery, theme, and cultural values work together in some of the most powerful dramatic works of modern times. The course will also explore the impact of stagecraft, the needs of actors, and vision of directors on the way a play is developed. Discussions and writing assignments will focus on how exposure to the drama of different countries can help us see our own literary and cultural assumptions with fresh eyes.

PWRI 4310 Writing Drama: Foundational Concepts, Skills, and Practice (4 Credits)
This course uses readings of dramatic texts, brief lectures, writing assignments, and the performance of those writings to develop the skills required to write for the stage. Students learn the essentials of drama, including the design of effective plots, the creation of vivid characters, and the writing of performable dialogue. Students also explore the effects of drama’s necessarily collaborative process and varieties of stagecraft on the way playwrights shape their texts. Examples illustrate successful uses of key dramatic techniques and help students explore various approaches to expressing themselves fully and clearly through a range of open-ended exercises. Students also develop practical critiquing skills with the aim of helping themselves and their classmates create compelling plays that appeal to both theater professionals and theatrical audiences.

PWRI 4320 Writing the Screenplay (4 Credits)
Screenwriting is the art of telling a story in images. This class focuses on elements of form and structure, with particular emphasis on format, character development, plot and dialogue. Movies are studied to illustrate genre, fixed and fluid characters, tragic flaw, the dynamic of relationships, development of protagonist and antagonist, and other screen elements. Numerous in-class exercises, discussions, workshops and screenings enable students to find the dramatic essence of stories, and write a detailed film synopsis, treatment, and the first act of a feature-length screenplay.

PWRI 4330 Writing for Personal Performance (4 Credits)
This course focuses on writing texts that the authors aim to perform themselves, including spoken word poetry, storytelling, one-person plays, presentations in TED Talk and other formats, and even standup comedy. Using a variety of readings and recorded performances, brief lectures, and writing assignments, the course helps writers develop the skills required to shape their work for public performance. Students learn to distinguish between their "page voice" and their "performance voice" so that they can produce more effective texts for performance. Using a supportive workshop format and class discussions, students will apply practical critiquing skills with the aim of helping themselves and their classmates create compelling performance pieces that appeal to audiences of all kinds.

PWRI 4340 Literature to Film (4 Credits)
In this course, students will examine the adaptation of literary works into films. Through close study of modern literary works and the film interpretations of each, the course will focus on the challenging process of transitioning from one narrative form to another. The course aims at enhancing the critical skill of students as readers and viewers of film as well as their creative abilities as writers. This is accomplished through a combination of close reading, study of the visual vocabulary of film, and scripting workshops designed to highlight the considerations that go into the crafting of film scripts based on previously published works.
PWRI 4410 Writing and Healing (4 Credits)
Many writers attest to the emotional, spiritual, and even physical benefits of writing. In this course, students will explore a variety of ways in which written expression can help them navigate the human journey. Students learn leading theoretical models of journal and poetry therapy (interactive bibliotherapy), assess poems based on their usefulness in personal growth contexts, and participate in experiential discussions and writing exercises. Students focus on the writing and healing process rather than their own self-explorations of healing through writing. Students submit a portfolio of reflection writings, as well as complete a final paper on a writing topic that intersects with a personal growth experience or interest. Cross-listed with MALS 4410 Writing and Healing.

PWRI 4420 Literary Translation: Crossing Borders to Enrich Your Own Writing (4 Credits)
Note: No previous formal language study or fluency in a second language is required. Translation is essential for a genuine exchange of ideas between people of different linguistic and cultural backgrounds. Besides being an essential service for cultural understanding, literary translation is also a form of creative writing. This course includes readings in the history, theory, and practice of literary translation, along with analysis of sample translations by leading translators. Students will also practice translation of literary texts, including poetry and short works of fiction and nonfiction. While increasing the student's awareness of the art of literary translation as an end in itself, the course also demonstrates translation's value in enriching a writer's development in his or her own work. Students should have basic skills in the source language of their choice, but fluency is not required. Cross-listed with MALS 4420 Literary Translation.

PWRI 4500 The Writing Life: Concepts, Practices, and Professionalism (4 Credits)
This course aims to provide aspiring writers a basic knowledge of the creative and professional tools they will need to succeed, whatever their individual goals or life situation. This course tackles questions and challenges common to all writers at one time or another. Primary considerations include: What exactly does it mean to be a writer? What are my motivations for wanting to write? How can I identify and prioritize writing projects? How do I move my writing projects forward from concept to completion? These primary challenges require writers to narrow their creative focus and to cultivate habits of thought and behavior that sustain creative efforts in a world full of distractions, obligations, and competing claims on their time.

PWRI 4510 Literary Genres for Writers (4 Credits)
This course deals with the four core literary genres: Drama, Fiction, Creative Nonfiction, and Poetry. These genres are distinguished from one another in two ways: first, by the relative weight each genre gives to the key cross-genre elements, and second, by each genre's distinctive approach to structure and form. Within each genre, subgenres have evolved over time, each recognizable by particular patterns, each playing by a distinct set of rules. Whether writing within or across or even against those rules, writers need to understand how literary genres work in order to write effectively. This course aims to foster that understanding and prepare students to shape their writing in ways that align with their creative vision.

PWRI 4520 The Writers Workshop (4 Credits)
‘A writer writes’ is the universal mantra of the writing life, but one of the critical steps in developing a work in progress is getting constructive feedback. Unfortunately, all too often, a writer ends up disappointed because the feedback received is superficial, too polite, or little more than proofreading. This course teaches students to workshop in a meaningful way, responding to content, focus, coherence, and organizational issues. Students learn to elicit more feedback from their workshop colleagues, demonstrating the relationship between reader and writer. The class will explore a variety of genres, and each student produces short exercises and longer projects that demonstrate a grasp of various aspects of the writing craft. Periodically, guest authors with different writing specialties join the class to discuss the writing experience and shed light on the workshop process.

PWRI 4540 Children's Literature: From Picture Books to Books for Young Adults (4 Credits)
This course is an introductory study of all levels of children's literature for the student who is interested in literature, the student who is planning to teach, and for those who are or will be parents. It introduces students to types, genres, and varieties of literature for reading to children as well as reading by children. The main focus of this course will be to rediscover the joys and wonders of reading as a child and young adult and to approach the literature selected not as "just a kid's book," but as literature with definable quality standards and offer a firm foundation for critical and analytical discussions.

PWRI 4550 From Romance to Realism (4 Credits)
This course explores novels produced during the period when widespread social, political, and cultural upheaval in Britain generated the continuum, from Romance to Realism, which even today provides the lens through which readers view most genres of fiction. The French Revolution, war with France, the expansion of empire, naval dominance, massive political reforms, and ongoing debates about women created a range of tensions, gaps, and overlaps between these two categories that creative writers still live with today. The course emphasizes both the literature itself and the cultural forces from which the literature developed, with an eye toward helping student writers understand the audience expectations that remain in force today.

PWRI 4570 Topics in Writing (4 Credits)
This course is designed to provide a deep dive into advanced topics of special interest to creative writers. Topics may range from close studies of compositional techniques used in established masterworks to examining the development of new genre forms or wrestling with texts whose approaches are drawn from multiple genres.
PWRI 4901 Professional Creative Writing Capstone Project (4 Credits)
The Creative Capstone Project provides students the opportunity to apply the knowledge and skills gained through the degree program to create a culminating project consisting of three major parts: a creative core (fiction, creative nonfiction, poetry, or some other kind of creative writing); a researched analysis essay exploring an idea, issue, or problem that is closely related to the creative core (however, the essay is not about the creative core); and a reflection essay placing the creative core and the analysis essay in the context of the student’s coursework at University College and his or her writing goals for the future. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the project. Please see the Creative Capstone Project Guidelines for additional details. Note: For the creative core, students should not attempt a genre they have not written in at least one of their University College courses. Prerequisites: earned a C or better in MALS 4915 Research in the Humanities or PWRI 4917 Professional Research for Creative Writers, a Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, and completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.

PWRI 4903 Creative Capstone Seminar (4 Credits)
The Creative Capstone Seminar is a graduate seminar in which students apply the knowledge and skills gained through the degree program to create a culminating project consisting of three major parts: a creative core (fiction, creative nonfiction, poetry, or some other kind of creative writing); a researched analysis essay exploring an idea, issue, or problem that is closely related to the creative core (however, the essay is not about the creative core); and a reflection essay placing the creative core and the analysis essay in the context of the student’s coursework at University College and his or her writing goals for the future. Note: For the creative core, students should not attempt a genre they have not written in at least one of their University College courses. The seminar is dependent upon students thoughtfully commenting on one another’s work under the facilitation of the seminar instructor. Consistent, high-quality engagement in this process is essential. The course is structured to guide students through both the creative and analytical writing processes, with the instructor providing intensive feedback on the capstone process and papers. Students are responsible for generating the course content through ongoing discussion of and peer feedback on the capstone process and individual work, as well as the analysis and contextualization of focused student creative work and papers within the wider degree field of study. Students will professionally and academically communicate their creations and findings through written work and oral presentation. Students must have: acceptance as a degree candidate; completed at least 40 quarter-hours (including all foundations courses) with a cumulative GPA of 3.0 or better, and, earned a B- or better in MALS 4020 Graduate Research & Writing, MALS 4915 Research in the Humanities, or PWRI 4917 Professional Research for Creative Writers. A final grade of B- or better must be earned in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

PWRI 4917 Professional Research for Creative Writers (4 Credits)
This course examines two types of literary fieldwork that all writers who hope to publish must become proficient in. One, navigating the business landscape of the publishing world: agents, editors, publishing houses, submissions, booksellers, author platforms, copyright issues, contract basics, and more). Two, developing skills in content-oriented research to expand the boundaries of a narrative by refining character development, broadening the landscape of setting, and anchoring historical situations in the realities of the period.

PWRI 4920 Portfolio Capstone (4 Credits)
The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the Portfolio Capstone produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field. Students must complete the Portfolio Capstone with a grade of B- or better.

PWRI 4980 Internship (1-4 Credits)
The PWRI internship is designed to offer students a practical educational experience in an industry-related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the PWRI master’s degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all PWRI students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the PWRI degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

PWRI 4991 Independent Study (1-4 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, have obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

PWRI 4992 Directed Study (1-4 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, have obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

Security Management
Office: University College Student Support Center
Master of Science in Security Management with a concentration in Emergency Planning and Response

The Emergency Planning and Response master’s degree concentration is offered online at the University of Denver to meet the needs of busy adults and prepares current or aspiring emergency response professionals to effectively strategize and implement emergency plans. Graduates will learn to compare and contrast plans and responses to various events and disasters, as well as analyze leadership competence while plans are executed. As communication is key to effective emergency preparedness, degree-seekers will take away strategies for effective communication, as well as mitigation, preparedness, response, and recovery.

Whether an emergency is natural or man-made, emergency preparedness is vital to ensure the least possible impact on the welfare of those affected. The Emergency Planning and Response master’s degree concentration covers the strategic plan, the response, and the recovery process. Led by professional practitioners who work in the emergency planning and response field, classes focus on the integrated system at every stage of a disaster, examining the roles of emergency response teams, government agencies, businesses, and private citizens. Customize your Security Management master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

- Compare and contrast plans and responses to various types of events and disasters
- Analyze leadership competence and necessary leadership skills
- Develop and analyze strategies to implement team solutions
- Present a model of effective communication within an emergency response and planning structure
- Plan and report on strategies for mitigation, preparedness, response, and recovery regarding various types of incidents

Master of Science in Security Management with a concentration in Information Security

The Information Security master’s degree concentration is offered entirely online at the University of Denver to meet the needs of busy adults. Pursue an Information Security master’s degree concentration from University College and be prepared to analyze security needs, provide effective solutions, and fill a critical niche in organizations. Students will examine practical issues such as setting up a secure network, securing servers, and handling information security incidents. The practical labs give Information Security master’s degree students the hands-on experience they need using industry-current security tools, effectively training students to apply lessons to real-world challenges.

Graduates are prepared for the security challenges presented across a variety of sectors as they undergo rigorous instruction from professional practitioners who work in information security. Degree-seekers will learn to design secure applications, implement access controls, establish secure operations, and control physical security, all while using encryption, secure networks, and maintain business continuity. Become an indispensable expert in determining Return on Security Investment (ROSI) and develop security policies and procedures that protect your organization from internal and external threats. Customize your Security Management master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

- Design an information security plan for the strategic, planning, and management efforts of private and public sector organizations
- Evaluate and analyze emerging information security issues, regulations, and threats
- Analyze financial implications of information security programs and options
- Protect vital information assets such as people, physical structures and equipment, intellectual property, and information, and maintain post-incident continuity of operations

Master of Science in Security Management with a concentration in Organizational Security

Earned entirely online, the Organizational Security master’s degree concentration examines emerging security issues, regulations, and threats. Current and aspiring security management professionals will benefit from the Organizational Security master’s degree concentration offered by University
College, as students learn the key strategic, planning, and management skills needed to thrive in the security management industry through an examination of emerging security issues, regulations, and threats.

Classes are led by instructors who work in the fields in which they teach, offering security management degree-seekers valuable insight to the industry. Students will learn to implement strategies to protect vital assets such as people, physical structures and equipment, intellectual property, and information, as well as analyze financial implications of security programs and options. Organizational security professionals are fundamental cogs in the business world, as well as in the government, as they may function as a chief security officer, director of loss prevention, director of security, security consultant, investigator, firefighter, or police officer. Customize your Security Management master's degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

- Lead the strategic, planning, and management efforts of private and public sector organizations
- Evaluate and analyze emerging security issues, regulations, threats, and innovations
- Analyze financial implications of security programs and options
- Protect vital assets such as people, physical structures and equipment, intellectual property, and information, and maintain post-incident continuity of operations

**Master of science in security management with a concentration in supply chain management**

Supply chains are everywhere, from the local store to a large multinational electronics manufacturer operating halfway across the world. From cradle to grave, it is the supply chain management system that links all of the numerous stakeholders into one strategic plan for us as customers in markets. These systems link processes such as product design, sourcing, forecasting, planning, manufacturing, distribution, logistics, retailing and material disposal and reuse. In today's fast paced markets driven by globalization and technology, knowledgeable professionals in supply chain management are increasingly important for companies to achieve their business objectives. Some of the most successful manufacturers (e.g., Apple and Samsung) and retailers (e.g., Wal-Mart and Amazon) are winning as a result of their supply chain strategies. Especially as markets change rapidly, supply chain management professionals will be integral to a company's success.

Earned entirely online, in the Supply Chain Management master's degree concentration students learn to apply security principles to the end-to-end flow of products. Students will explore the wide range of security vulnerabilities generated by complex integration of industries and technologies that make up product supply chains, and learn to protect against those risks. Through hands-on learning with current leaders in the field, you'll develop the skills to deliver materials efficiently and safely.

This degree prepares students to do the following:

- Articulate the six pillars of supply chain management to diagram the process to appraise their role in the market system.
- Apply the six pillars of supply chain management to realistic problem scenarios to develop strategies to diagnose and address future supply chain problems.
- Assess supply chains using a multidimensional perspective that includes connections between supply chain processes and fundamental business topics such as financial management and technology.
- Solve supply chain problems using a nonlinear process that addresses connections between supply chain pillars, market trends, and business best practices.
- Apply best practices to address an authentic supply chain problem in a work setting.

**Certificate in Security Management with a concentration in Emergency Planning and Response**

The certificate in Emergency Planning and Response concentration is offered online at the University of Denver to meet the needs of busy adults and prepares current or aspiring emergency response professionals to effectively strategize and implement emergency plans. With an emergency preparedness certificate, graduates will learn to compare and contrast plans and responses to various events and disasters, as well as analyze leadership competence as plans are executed. As communication is key to effective emergency preparedness, graduate certificate students will take away strategies for effective communication, as well as mitigation, preparedness, recovery, and emergency response. Students will also gain additional skills and knowledge in security management through elective coursework.

Certificate students will learn about the strategized plan, the response, and the recovery process of emergency management. Led by professional practitioners who work in the emergency planning and response field, emergency certificate classes focus on the integrated system at every stage of a disaster, examining the roles of emergency response teams, government agencies, businesses, and private citizens. Credits earned through this graduate certificate may apply toward a master's degree in Security Management.
Certificate in Security Management with a concentration in Information Security

The certificate in Information Security concentration is offered entirely online to meet the needs of busy adults seeking to expand their current skillset in information security. An Information Security certificate prepares students to analyze security needs, provide effective solutions, and fill a critical niche in organizations. Certificate students will examine practical issues such as setting up a secure network, securing servers, and handling information security incidents. The practical labs give Information Security graduate certificate students the hands-on experience they need using industry-current tools geared for security. Students will also gain additional skills and knowledge in security management through elective coursework.

Certificate students will be prepared for real-world security challenges with a rigorous education from professional practitioners who work in information security. Certificate students will learn to design secure applications, implement access controls, establish secure operations, and control physical security, all while they use encryption, secure networks, and maintain business continuity. Become an indispensable expert in determining Return on Security Investment (ROSI) and develop security policies and procedures that protect your organization from internal and external threats. Credits earned through this graduate certificate may apply toward a master’s degree in Security Management.

Certificate in Security Management with a concentration in Organizational Security

The certificate in Organizational Security concentration is offered online at the University of Denver to meet the needs of busy adults. Current and aspiring security management professionals will benefit from the certificate in Security Management with a concentration in Organizational Security offered by University College, as students learn the key strategic, planning, and management skills needed to succeed in security management. The certificate program is designed for busy adults seeking to advance their skills in organizational-level security.

The certificate program is ideal for security professionals who currently work in the field, or aspire to, as they will examine emerging security issues, regulations, and threats in classes led by instructors who work in the fields in which they teach, offering security management students valuable insight to the security. Certificate graduates will learn to implement strategies to protect vita assets such as people, physical structures and equipment, intellectual property, and information, as well as analyze financial implications of security programs and options. Students will also gain additional skills and knowledge in security management through elective coursework. Credits earned through this graduate certificate may apply toward a master’s degree in Security Management.

SPECIALIZED GRADUATE CERTIFICATE IN ORGANIZATIONAL SECURITY

The specialized certificate in Organizational Security concentration is offered online at the University of Denver to meet the needs of busy adults. Current and aspiring security management professionals will benefit from the certificate in Security Management with a concentration in Organizational Security offered by University College, as students learn the key strategic, planning, and management skills needed to succeed in security management. The certificate program is designed for busy adults seeking to advance their skills in organizational-level security.

SPECIALIZED GRADUATE CERTIFICATE IN INFORMATION SECURITY

The specialized certificate in Information Security concentration is offered entirely online to meet the needs of busy adults seeking to expand their current skillset in information security. An Information Security certificate prepares students to analyze security needs, provide effective solutions, and fill a critical niche in organizations. Certificate students will examine practical issues such as setting up a secure network, securing servers, and handling information security incidents. The practical labs give Information Security graduate certificate students the hands-on experience they need using industry-current tools geared for security.

SPECIALIZED GRADUATE CERTIFICATE IN EMERGENCY PLANNING AND RESPONSE

The specialized certificate in Emergency Planning and Response concentration is offered online at the University of Denver to meet the needs of busy adults and prepares current or aspiring emergency response professionals to effectively strategize and implement emergency plans. With an emergency preparedness certificate, graduates will learn to compare and contrast plans and responses to various events and disasters, as well as analyze leadership competence as plans are executed. As communication is key to effective emergency preparedness, graduate certificate students will take away strategies for effective communication, as well as mitigation, preparedness, recovery, and emergency response.

Master’s Degree Admission

Degree and GPA Requirements

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

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

English Conditional Admission: Master’s degree applicants who do not meet the required level of English proficiency may be considered for conditional acceptance if all other admission criteria are met. Prior to enrolling in any graduate-level coursework, English Conditional Acceptance

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

English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

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

Master of Science in Security Management with a Concentration in Emergency Planning and Response

Degree Requirements

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<thead>
<tr>
<th>Code</th>
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<tbody>
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<td>or SMGT 4902</td>
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Concentration requirements

- SMGT 4210 | Critical Incident Management               | 4       |
- SMGT 4220 | Hazardous and Radiological Material Preparedness | 4       |
- SMGT 4230 | Mitigation for Emergency Managers          | 4       |
- SMGT 4400 | Emergency Planning                          | 4       |

Elective requirements (Choose three courses):

- SMGT 4150 | Risk Management                            |         |
- SMGT 4300 | Security Administration                     |         |
- SMGT 4400 | Emergency Planning                          |         |
- SMGT 4500 | Human Factors in Security                  |         |

Total Credits 48
Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

Master of Science in Security Management with a Concentration in Information Security

Degree Requirements

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Total Credits 48

Minimum number of credits required: 48

Students may choose from the elective options above, or they may work with their advisor to choose electives.

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Master of Science in Security Management with a Concentration in Organizational Security

Degree Requirements

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SMGT 4400  Emergency Planning  4
SMGT 4500  Human Factors in Security  4

**Elective requirements (Choose three courses)**  12
- SMGT 4200  Integrated Security Systems
- SMGT 4250  IS: Threats in Security
- SMGT 4450  Legal & Ethical Issues in Security Management

**Total Credits**  48

**Minimum number of credits required: 48**

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

**MASTER OF SCIENCE IN SECURITY MANAGEMENT WITH A CONCENTRATION IN supply chain management**

**Degree Requirements**

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**Concentration requirements**

- TRAN 4100  Fundamentals of Supply Chain Management  4
- TRAN 4110  Fundamentals of Supply Chain Planning  4
- TRAN 4120  Fundamentals of Supply Chain Execution  4
- TRAN 4130  Supply Chain Management Practicum  4

**Elective requirements (Choose three courses)**  12
- TRAN 4140  Supply Chain Technology and Systems
- TRAN 4150  Supply Chain Finance
- SMGT 4150  Risk Management
- SMGT 4200  Integrated Security Systems
- SMGT 4250  IS: Threats in Security
- SMGT 4300  Security Administration
- SMGT 4400  Emergency Planning

**Total Credits**  48

**Minimum number of credits required: 48**

Students may choose from the elective options above, or they may work with their advisor to choose electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University's grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of "C" grade. A grade lower than "C" renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
## Certificate in Security Management with a Concentration in Emergency Planning and Response

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**Total Credits**

Minimum number of credits required: 24

## Certificate in Security Management with a Concentration in Information Security

**Program Requirements**

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**Total Credits**

Minimum number of credits required: 24

## Certificate in Security Management with a Concentration in Organizational Security

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**Total Credits**

Minimum number of credits required: 24
specialized graduate certificate in organizational security

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SPECIALIZED GRADUATE CERTIFICATE IN information security

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SPECIALIZED GRADUATE CERTIFICATE IN emergency planning and response

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Courses

SMGT 4050 Security Concepts Overview (4 Credits)
This course provides an introduction to the main principles and issues in business and organizational security management. Topics include protection of, and assessing the loss potential of, personnel, facilities, and information, and continuity of operations. The course makes extensive use of case studies and analyses, field exercises and research.

SMGT 4100 Business Function of Security (4 Credits)
This course covers the role of security in an organization or business context. Topics include budgets, contracts, financial analyses, how the security functions support the overall mission of the organization, and the relationship of security to other essential business functions. Students will also learn how to defend the costs of the security systems and security operations to high-level executives.

SMGT 4150 Risk Management (4 Credits)
Students will learn to identify and manage risks, crises and disasters, and to prepare emergency and contingency plans. Students will learn how to prevent losses, mitigate losses and accelerate recovery from security events or natural disasters. This will be accomplished through case studies and practical exercises.

SMGT 4200 Integrated Security Systems (4 Credits)
This course covers the integration of physical, personnel, and information security, including the use of information technology to enhance physical and personnel security. Students will learn the essential elements of system design, development of procedures, testing and maintenance of integrated security systems. This will be accomplished through case studies and practical exercises.

SMGT 4210 Critical Incident Management (4 Credits)
All communities are vulnerable to a variety of hazards. Emergency management provides a structure for anticipating and dealing with emergency incidents. Emergency management involves participants at all governmental levels and in the private sector. Activities are geared according to phases before, during, and after emergency events. The effectiveness of emergency management rests on a network of relationships among partners in the system. The goal of this course is to introduce students to the fundamentals of emergency management as an integrated system, surveying how the resources and capabilities of all functions at all levels can be networked together in all phases for all hazards. Included is an in-depth look at the four phases of comprehensive emergency management: mitigation, preparedness, response, and recovery.
SMGT 4220 Hazardous and Radiological Material Preparedness (4 Credits)
Hazardous materials plan development is a difficult and challenging job that requires a high level of skill and knowledge from planners charged with these responsibilities. Due to local funding shortages and frequent staff turnover at the state and local levels in the planning arena, and because of the complexity of hazardous materials planning requirements, there continues to exist a significant performance problem and training requirement for hazardous materials planning. This course provides students the assistance and confidence needed to effectively plan for and respond to hazardous materials incidents, through sound emergency planning and with the highest level of safety for response personnel within the student’s jurisdiction. This course also addresses the fundamental principles of radiation as well as the nuclear threat.

SMGT 4230 Mitigation for Emergency Managers (4 Credits)
As the costs of disasters continue to rise, governments and ordinary citizens must find ways to reduce hazard risks to our communities and ourselves. Efforts made to reduce hazard risks are easily made compatible with other community goals; safer communities are more attractive to employers as well as residents. As communities plan for new development and improvements to existing infrastructure, mitigation can and should be an important component of the planning effort.

SMGT 4250 IS: Threats in Security (4 Credits)
This course explores emerging protection concepts for the information age. Students will identify threats to security systems, discover vulnerabilities, and suggest and design protection systems. Topics include management of information security and data processing facilities, data theft, misuses of information technologies, computer viruses and hacking, and network protection. The course also covers information technology laws, privacy issues, and information security planning.

SMGT 4300 Security Administration (4 Credits)
Students apply principles of management to security administration. Topics include personnel management, security planning, organizational leadership and communication, and recruitment and training.

SMGT 4350 Business Assets Protection (4 Credits)
Students examine the application of security knowledge and techniques to the protection of business assets. The security planning process is examined by the study of risk analysis, security surveys, and financial planning and decision making for development of security programs and countermeasures.

SMGT 4400 Emergency Planning (4 Credits)
Students discuss the role of the security manager in the identification, analysis, and response to a variety of human and natural crises. They examine threats resulting from riots, demonstrations, product tampering, work stoppage activities, terrorism, and natural disasters.

SMGT 4450 Legal & Ethical Issues in Security Management (4 Credits)
This course is an overview of important legal and ethical issues with which the business and organizational security management professional must deal. Students examine such issues as personnel law and obligations; negotiations; contract management; constitutional rights of individuals; legal liability of security professionals and organizations; legal compliance; and ethical standards.

SMGT 4500 Human Factors in Security (4 Credits)
This course focuses on historical and contemporary perspectives of human behavior. Theories of behavior in the context of threat-producing activities are discussed. Contemporary issues such as substance abuse, violence, ideologies, and similar themes are examined.

SMGT 4701 Topics in Security Management (1-6 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues from the film industry, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

SMGT 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.
SMGT 4902 Capstone Seminar (4 Credits)
The purpose of this Capstone Seminar is to develop and apply transferable professional skills to persuade decision makers. This is accomplished through the following: investigate questions and issues found within a discipline-specific area of interest. To do this, a clear question/issue will be researched in order to create (a) several different arguments for (b) several different audiences in (c) several different professional contexts. Peer-to-peer discussions will support the development of the questions/issues, and throughout the process, peer-to-peer critiques will take place to foster a developed sense of community where peers rely on one another for what is working, what is not working, and possible ways forward. Part of this process will also include intentional moments spent reflecting upon the process and the knowledge gained by it. Thus, through reflection and meaningful dialogues and conversations, students learn how to be active agents of change where they can successfully contribute to any professional exchange. In sum, the Capstone Seminar focuses on how to investigate problem(s) found within professional settings, how to analyze and critique those problems, and ultimately, how to generate effective arguments for the various stakeholders involved throughout this process. The knowledge gained within this course should transfer forward informing a current or future job.

SMGT 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

SMGT 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master's degree. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

SMGT 4980 Internship (1-4 Credits)
The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

SMGT 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent study is offered only on a for-credit basis.

SMGT 4992 Directed Study (1-5 Credits)
This is an advanced course for students wishing to pursue a directed course of study, which is based on an existing course. However, the existing course is not offered in a reasonable time frame to accommodate the student. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the directed study. Directed study is offered only on a for-credit basis.

Strategic Human Resources
Office: University College Student Support Center
Mail Code: 2211 S. Josephine St., Denver, CO 80208
Phone: 303-871-2291, 800-347-2042
Email: ucolsupport@du.edu
Web Site: www.universitycollege.du.edu
Master of Science in Strategic Human Resources with a Concentration in Human Resources Employment Relations

The Human Resource Employment Relations master’s degree concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults. Successful organizations often have respectful employee–employer relationships. Human Resources can enhance the relationship and employee retention with ethical treatment of employees in terms of compensation, total benefits, achievement of organizational goals, and realistic expectations of performance. All of these functions must operate under laws and regulations that are interpreted and applied appropriately to both employee and organization.

The Strategic Human Resources (SHR) program provides strategic skills in development, operations, and employment relations, and the integral skills needed to succeed in a 21st-century HR marketplace. Human Resources professionals have a unique role and responsibility in organizations to align aspirations and talents of employees with the needs of the organization, in the important contexts of the organizational business strategy, organizational culture, and within the life cycle of the organization. This program provides courses that provide the students tools for this alignment while including human resources practices, ethical consideration, and global implications. Last, this program is designed teach the students how to learn, and HR professionals are required to be lifelong learners due to the constantly changing nature of HR. The Strategic Human Resources master’s degree program provides a comprehensive analysis of the HR profession and positions students for career advancement. Customize your Strategic Human Resources master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

- Analyze the typical phases of an employee experience while employed by an organization.
- Evaluate the compensation considerations for employees based on productivity, current legal and ethical issues in HR and the organization’s domestic and global strategic goals.
- Analyze total benefits as a function of organizational goals, employee performance and retention, and budgeting.
- Identify, locate, and interpret laws and regulations relevant to the organization and the situation.

Master of Science in Strategic Human Resources with a Concentration in Human Resources Management and Development

The Human Resource Management and Development master’s degree concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

Organizations experience various successes and challenges in staying competitive in terms of overseeing employees, dealing with change, and reacting to the various organizational needs. Students will create strategies and plans to examine the HR roles and responsibilities for different stages of change; and manage the interventions, compensation, and benefits issues that accompany that change. Throughout the HR change process consulting methods can be used to ensure organizational objectives are met.

The Strategic Human Resources (SHR) program provides strategic skills in development, operations, and employment relations, and the integral skills needed to succeed in a 21st-century HR marketplace. Human Resources professionals have a unique role and responsibility in organizations to align aspirations and talents of employees with the needs of the organization, in the important contexts of the organizational business strategy, organizational culture, and within the life cycle of the organization. This program provides courses that provide the students tools for this alignment while including human resources practices, ethical consideration, and global implications. Last, this program is designed teach the students how to learn, and HR professionals are required to be lifelong learners due to the constantly changing nature of HR. The Strategic Human Resources master’s degree program provides a comprehensive analysis of the HR profession and positions students for career advancement.

Customize your Strategic Human Resources master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

- Create an organizational change plan that encompasses HR strategies including leadership, teams, managing change and communication.
- Analyze consulting methods used by human resource departments to influence achievement of organizational objectives.
- Examine the business life cycle phases and provide analysis on interventions, compensation, and benefits within an organization.
- Compare and contrast stages of change in an organization to provide HR strategies for managing each of these stages.
- Differentiate strategies comparing HR-led initiatives to organization-led initiatives that include HR as a key team member.

Master of Science in Strategic Human Resources with a Concentration in Human Resources Operations

The Human Resources Operations master’s degree concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults and prepare graduates to understand the current need for analytics and assessment as they
relate to the human resources profession. The Human Resources Operations master’s degree concentration explores the impact of HR Analytics and measures as they relate to effective HR strategy.

Organizations operate differently depending on size, scope, mission, and sector. One common denominator, however, is the need for an organization to recruit, develop, utilize, and retain talented employees. Students use a variety of models and tools including descriptive and predictive analysis, hiring needs, and compensation structures to inform human capital investments and organizational strategies. Local, national, and global implications and ethics are considered when determining the measures to develop employees with respect to diversity, inclusiveness, and accessibility for training and education.

The Strategic Human Resources (SHR) program provides strategic skills in development, operations, and employment relations, and the integral skills needed to succeed in a 21st-century HR marketplace. Human Resources professionals have a unique role and responsibility in organizations to align aspirations and talents of employees with the needs of the organization, in the important contexts of the organizational business strategy, organizational culture, and within the life cycle of the organization. This program provides courses that provide the students tools for this alignment while including human resources practices, ethical consideration, and global implications. Last, this program is designed teach the students how to learn, and HR professionals are required to be lifelong learners due to the constantly changing nature of HR. The Strategic Human Resources master’s degree program provides a comprehensive analysis of the HR profession and positions students for career advancement.

Customize your Strategic Human Resources master’s degree through the Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

• Evaluate the essential principles for developing, utilizing and retaining human resources.
• Analyze the ethical, diversity, and global implications for how information is selected, vetted and presented.
• Evaluate various organizational functions using descriptive and predictive analysis including risk analysis, compensation evaluations and cost, employee turnover and hiring needs.
• Compare and contrast organizational types and provide options supporting a variety of human capital investments to enhance the organization.

**Master of Science in Strategic Human Resources with a Concentration in Learning and Development**

The Human Resource Learning and Development master’s degree concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both. The Learning and Development concentration is designed for early and mid-career learning and development professionals looking to excel as internal or external consultants in a variety of organizational settings and across platforms. This program prepares students in three complementary areas: 1) a strong foundation in the distinct ways adults learn; 2) exposure to and utilization of diverse instructional technologies and strategies; and, 3) advanced facilitation and communication skills. Students acquire advanced knowledge of how adults process information and the specific skills required to meet adult learning needs. Blending traditional training strategies with the latest multimedia technologies and guided by practitioner-faculty, students learn through application by designing and executing projects from start to finish, including needs assessment, design, delivery, implementation, and evaluation. Additionally, students develop advanced communication skills to work with individuals and teams in increasingly global workplaces using multiple modalities.

The Strategic Human Resources (SHR) program provides strategic skills in development, operations, and employment relations, and the integral skills needed to succeed in a 21st-century HR marketplace. Human Resources professionals have a unique role and responsibility in organizations to align aspirations and talents of employees with the needs of the organization, in the important contexts of the organizational business strategy, organizational culture, and within the life cycle of the organization. This program provides courses that provide the students tools for this alignment while including human resources practices, ethical consideration, and global implications. Last, this program is designed teach the students how to learn, and HR professionals are required to be lifelong learners due to the constantly changing nature of HR. The Strategic Human Resources master’s degree program provides a comprehensive analysis of the HR profession and positions students for career advancement. Customize your Strategic Human Resources master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

• Design and execute projects from needs assessment through design, delivery, implementation, and evaluation.
• Analyze adult learning theories, including their key components, contributions, challenges, limits, and new directions in order to assess how to meet organizational needs.
• Identify, analyze, choose, and defend best instructional strategies and techniques to achieve learning objectives.
• Develop advanced facilitation and communication skills to demonstrate the ability to respond appropriately to varied audiences with diverse needs and across platforms.
• Evaluate and communicate impact of projects using most relevant metrics and analytics.
master of science in strategic human resources with a concentration in human capital organizations

The Human Capital in Organizations master’s degree concentration is offered entirely online to meet the needs of busy adults. Students will learn to determine, cultivate, and maintain the symbiotic relationship between individuals and the organizations for which they work and lead. Strategic human capital can be the winning element of a successful organization; master the process of developing and retaining employees to engage and achieve objectives, innovate, and maximize organizational and individual success. The master’s degree concentration in Human Capital in Organizations prepares students to ethically develop and maintain human capital while learning the best practices to do so.

Led by instructors who work in the fields in which they teach, classes introduce students to innovative and creative approaches to structuring and sustaining the development of human capital. Students explore knowledge and information management, communication tactics, vertical and horizontal partnerships, and organizational learning to promote the successful development of capital. Students will define the attributes, challenges, and advantages of human capital and strategies for leveraging each while integrating personal and organizational achievement. Customize your Leadership and Organizations master’s degree through the innovative Professional Options Curriculum using our convenient online degree builder tool, which allows you to select courses that cater to your specific career needs.

This degree prepares students to do the following:

- Analyze organizational partnerships both vertically and horizontally
- Create a strategy for leveraging the attributes, challenges, and advantages of human capital
- Critique the theories and processes used for integrating knowledge management and organizational learning as a concept for enhancing personal and organizational success
- Evaluate the opportunities, challenges and options to have employees participate in decision making through the use of various techniques
- Assess best practices in ethically developing and maintaining human capital

Certificate in Strategic Human Resources with a Concentration in Human Resources Employment Relations

The graduate certificate in Human Resource Employment Relations concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults and will help HR professionals expand their skill set and provide transferable knowledge they can apply today. Certificate students learn to create a respectful, productive, and lawful work environment. Students will also gain additional knowledge in Strategic Human Resources through elective coursework.

Successful organizations often have a respectful employee – employer relationships. Human Resources can enhance the relationship and employee retention with ethical treatment of employees in terms of compensation, total benefits, achievement of organizational goals, and realistic expectations of performance. All of these functions must operate under laws and regulations that are interpreted and applied appropriately to both employee and organization.

The Strategic Human Resources program offers innovative, career relevant graduate certificate courses from compensation to information systems, decision-making to ethics as they each relate to HR. Certificate students can expect a challenging program of study, as they learn to implement strategy for organizational success. Credits earned through this graduate certificate may apply toward a master’s degree in Strategic Human Resources.

Certificate in Strategic Human Resources with a Concentration in Human Resource Management and Development

The graduate certificate in Human Resource Management and Development concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults and will help HR professionals expand their skill set and provide transferable knowledge they can apply today. Certificate students learn to apply business strategy through the development of talent management programs, in addition to how to evaluate, diagnose, and solve organizational change and issues in HR. Students will also gain additional knowledge in Strategic Human Resources through elective coursework.

Organizations experience various successes and challenges in staying competitive in terms of overseeing employees, dealing with change, and reacting to the various organizational needs. Students will create strategies and plans to examine the HR roles and responsibilities for different stages of change; and manage the interventions, compensation, and benefits issues that accompany that change. Throughout the HR change process consulting methods can be used to ensure organizational objectives are met.

Credits earned through this graduate certificate may apply toward a master’s degree in Strategic Human Resources.
Certificate in Strategic Human Resources with a Concentration in Human Resources Operations

The graduate certificate in Human Resources Operations concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults. Organizations operate differently depending on size, scope, mission, and sector. One common denominator, however, is the need for an organization to recruit, develop, utilize, and retain talented employees. Students will use a variety of models and tools including descriptive and predictive analysis, hiring needs, and compensation structures to inform human capital investments and organizational strategies. Local, national, and global implications and ethics are considered when determining the measures to develop employees with respect to diversity, inclusiveness, and accessibility for training and education. Students will also gain additional knowledge in Strategic Human Resources through elective coursework.

Certificate students are effectively prepared to face the advanced challenges of human resources with implementing descriptive and predictive analytics, while at the global level from a strategic, competent perspective with each election, world event, and restructuring. HR professionals with several years of experience who are looking to challenge themselves and become more marketable by learning about the international marketplace will benefit from this graduate certificate. HR analytics and the ability to assess return on investment of new programs is emerging in importance, and certificate students will learn about how all these relate to organizational and HR strategy. Credits earned through this graduate certificate may apply toward a master’s degree in Strategic Human Resources.

SPECIALIZED GRADUATE CERTIFICATE IN HUMAN RESOURCES EMPLOYMENT RELATIONS

The specialized graduate certificate in Human Resource Employment Relations concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults and will help HR professionals expand their skill set and provide transferable knowledge they can apply today. Certificate students learn to create a respectful, productive, and lawful work environment.

Successful organizations often have a respectful employee—employer relationships. Human Resources can enhance the relationship and employee retention with ethical treatment of employees in terms of compensation, total benefits, achievement of organizational goals, and realistic expectations of performance. All of these functions must operate under laws and regulations that are interpreted and applied appropriately to both employee and organization.

SPECIALIZED GRADUATE CERTIFICATE IN HUMAN RESOURCE MANAGEMENT AND DEVELOPMENT

The specialized graduate certificate in Human Resource Management and Development concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults and will help HR professionals expand their skill set and provide transferable knowledge they can apply today. Certificate students learn to apply business strategy through the development of talent management programs, in addition to how to evaluate, diagnose, and solve organizational change and issues in HR.

Organizations experience various successes and challenges in staying competitive in terms of overseeing employees, dealing with change, and reacting to the various organizational needs. Students will create strategies and plans to examine the HR roles and responsibilities for different stages of change; and manage the interventions, compensation, and benefits issues that accompany that change. Throughout the HR change process consulting methods can be used to ensure organizational objectives are met.

SPECIALIZED GRADUATE CERTIFICATE IN HUMAN RESOURCES OPERATIONS

The specialized graduate certificate in Human Resources Operations concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults. Organizations operate differently depending on size, scope, mission, and sector. One common denominator, however, is the need for an organization to recruit, develop, utilize, and retain talented employees. Students will use a variety of models and tools including descriptive and predictive analysis, hiring needs, and compensation structures to inform human capital investments and organizational strategies. Local, national, and global implications and ethics are considered when determining the measures to develop employees with respect to diversity, inclusiveness, and accessibility for training and education.

Master’s Degree Admission

Degree and GPA Requirements

- **Bachelors degree**: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

- **Grade point average**: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master’s degree or higher from a regionally accredited institution supersedes the minimum standards for the
English Language Proficiency Test Score Requirements
The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum TOEFL Score (Paper-based test): 550
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum CAE Score: 169

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

Master of Science in Strategic Human Resources with a Concentration in Human Capital in Organizations

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HRA 4130</td>
<td>Finance for HR Professionals</td>
<td>4</td>
</tr>
<tr>
<td>HRA 4140</td>
<td>Principles and Practice of Human Resources</td>
<td>4</td>
</tr>
<tr>
<td>HRA 4150</td>
<td>Human Resources Across Organizations</td>
<td>4</td>
</tr>
<tr>
<td>or HRA 4160</td>
<td>Human Resources in a Global Economy</td>
<td></td>
</tr>
<tr>
<td>HRA 4910</td>
<td>Research Practices and Applications</td>
<td>4</td>
</tr>
<tr>
<td>HRA 4901</td>
<td>Capstone Project</td>
<td>4</td>
</tr>
<tr>
<td>or HRA 4902</td>
<td>Capstone Seminar</td>
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<td>or HRA 4904</td>
<td>Interdisciplinary Capstone Seminar</td>
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<tr>
<td>ORL 4160</td>
<td>Integrating Personal and Organizational Success</td>
<td>4</td>
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<tr>
<td>ORL 4170</td>
<td>Developing Human Capital in Organizations</td>
<td>4</td>
</tr>
<tr>
<td>ORL 4190</td>
<td>Value Driven Decision Making</td>
<td>4</td>
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<tr>
<td>ORL 4550</td>
<td>Strategic Organizational Partnerships</td>
<td>4</td>
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Elective requirements (Choose three courses):

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>HRA 4160</td>
<td>Human Resources in a Global Economy</td>
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</table>
Master of Science in Strategic Human Resources with a Concentration in Human Resources Employment Relations

Degree Requirements

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<tbody>
<tr>
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<td>or HRA 4902</td>
<td>Capstone Seminar</td>
<td></td>
</tr>
<tr>
<td>or HRA 4904</td>
<td>Interdisciplinary Capstone Seminar</td>
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<tr>
<td>HRA 4600</td>
<td>Human Relations in Organizations</td>
<td>4</td>
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<tr>
<td>HRA 4610</td>
<td>Employee Compensation</td>
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<td>HRA 4620</td>
<td>Employment Total Benefits</td>
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<tr>
<td>HRA 4630</td>
<td>Employment Law</td>
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<tr>
<td>HRA 4160</td>
<td>Human Resources in a Global Economy</td>
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<tr>
<td>HRA 4260</td>
<td>HR Analytics and Research</td>
<td></td>
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<td>HRA 4270</td>
<td>Value and Impact of HR Interventions</td>
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<tr>
<td>HRA 4500</td>
<td>Organizational Leadership, Team Effectiveness, and Communications</td>
<td></td>
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<tr>
<td>HRA 4510</td>
<td>Organizational Lifecycles and HR Implications</td>
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</tbody>
</table>

Total Credits 48

Minimum number of credits required: 48

Students will work with their personal academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of "B" (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
### Master of Science in Strategic Human Resources with a Concentration in Human Resources Management and Development

**Degree Requirements**

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<thead>
<tr>
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</tr>
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<td>Capstone Seminar</td>
<td></td>
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<td>or HRA 4904</td>
<td>Interdisciplinary Capstone Seminar</td>
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</table>

**Concentration requirements**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>HRA 4230</td>
<td>Consulting and Human Resource Applications</td>
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<tr>
<td>HRA 4500</td>
<td>Organizational Leadership, Team Effectiveness, and Communications</td>
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<td>Organizational Lifecycles and HR Implications</td>
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</tr>
<tr>
<td>HRA 4520</td>
<td>HR Change Management</td>
<td>4</td>
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**Elective requirements (Choose three courses):**

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<tbody>
<tr>
<td>HRA 4160</td>
<td>Human Resources in a Global Economy</td>
<td></td>
</tr>
<tr>
<td>HRA 4170</td>
<td>The Inclusive Organization</td>
<td></td>
</tr>
<tr>
<td>HRA 4180</td>
<td>Organizational Politics and the HR Professional</td>
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</tr>
<tr>
<td>HRA 4250</td>
<td>HR Competencies and Talent Management</td>
<td></td>
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<tr>
<td>HRA 4600</td>
<td>Human Relations in Organizations</td>
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</table>

**Total Credits**

48

**Minimum number of credits required:** 48

Students will work with their personal academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

### Master of Science in Strategic Human Resources with a Concentration in Human Resources Operations

**Degree Requirements**

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<thead>
<tr>
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<td>Interdisciplinary Capstone Seminar</td>
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**Concentration requirements**

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<td>HRA 4240</td>
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<td>HR Competencies and Talent Management</td>
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<td>HRA 4260</td>
<td>HR Analytics and Research</td>
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HRA 4270  Value and Impact of HR Interventions  4

**Elective requirements (Choose three courses):**  12

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<tbody>
<tr>
<td>HRA 4500</td>
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<td>HRA 4180</td>
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Total Credits  48

**Minimum number of credits required: 48**

Students will work with their personal academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.

**Master of Science in Strategic Human Resources with a Concentration in Learning and development**

**Degree Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>Core coursework requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRA 4130</td>
<td>Finance for HR Professionals</td>
<td>4</td>
</tr>
<tr>
<td>HRA 4140</td>
<td>Principles and Practice of Human Resources</td>
<td>4</td>
</tr>
<tr>
<td>HRA 4150</td>
<td>Human Resources Across Organizations</td>
<td>4</td>
</tr>
<tr>
<td>or HRA 4160</td>
<td>Human Resources in a Global Economy</td>
<td></td>
</tr>
<tr>
<td>HRA 4910</td>
<td>Research Practices and Applications</td>
<td>4</td>
</tr>
<tr>
<td>HRA 4901</td>
<td>Capstone Project</td>
<td>4</td>
</tr>
<tr>
<td>or HRA 4902</td>
<td>Capstone Seminar</td>
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<tr>
<td>or HRA 4904</td>
<td>Interdisciplinary Capstone Seminar</td>
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<tbody>
<tr>
<td><strong>Concentration requirements</strong></td>
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</tr>
<tr>
<td>COMM 4030</td>
<td>Managing Learning in Organizations</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4200</td>
<td>Instructional Design</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4203</td>
<td>Adult Learning Strategies and Theories</td>
<td>4</td>
</tr>
<tr>
<td>COMM 4235</td>
<td>Integrating Learning and Development Technologies</td>
<td>4</td>
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<table>
<thead>
<tr>
<th><strong>Elective requirements (Choose three courses):</strong></th>
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</thead>
<tbody>
<tr>
<td>HRA 4160</td>
<td>Human Resources in a Global Economy</td>
</tr>
<tr>
<td>HRA 4260</td>
<td>HR Analytics and Research</td>
</tr>
<tr>
<td>HRA 4270</td>
<td>Value and Impact of HR Interventions</td>
</tr>
<tr>
<td>HRA 4500</td>
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</tr>
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<td>HRA 4510</td>
<td>Organizational Lifecycles and HR Implications</td>
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Total Credits  48

**Minimum number of credits required: 48**

Students will work with their personal academic advisor to determine the best set of courses for their electives.

A satisfactory quality of achievement with a grade point average of “B” (3.0) or better is required in graduate coursework accepted for the degree. The average is determined on the basis of the University’s grading system. In no case, may more than one-fourth of the hours accepted toward the degree be of “C” grade. A grade lower than “C” renders the credit unacceptable for meeting degree requirements. Students must earn a grade of B- or better in the Capstone Project or Capstone Seminar.
Certificate in Strategic Human Resources with a Concentration in Human Resources Employment Relations

Program Requirements

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<tr>
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</thead>
<tbody>
<tr>
<td>HRA 4600</td>
<td>Human Relations in Organizations</td>
<td>4</td>
</tr>
<tr>
<td>HRA 4610</td>
<td>Employee Compensation</td>
<td>4</td>
</tr>
<tr>
<td>HRA 4620</td>
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<td>4</td>
</tr>
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<td>HRA 4630</td>
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Elective requirements (Choose two courses):

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</tbody>
</table>

Total Credits 24

Minimum number of credits required: 24

Certificate in Strategic Human Resources with a Concentration in Human Resource Management and Development

Program Requirements

<table>
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<tbody>
<tr>
<td>HRA 4230</td>
<td>Consulting and Human Resource Applications</td>
<td>4</td>
</tr>
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<tbody>
<tr>
<td>HRA 4160</td>
<td>Human Resources in a Global Economy</td>
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<tr>
<td>HRA 4170</td>
<td>The Inclusive Organization</td>
</tr>
<tr>
<td>HRA 4180</td>
<td>Organizational Politics and the HR Professional</td>
</tr>
<tr>
<td>HRA 4250</td>
<td>HR Competencies and Talent Management</td>
</tr>
<tr>
<td>HRA 4600</td>
<td>Human Relations in Organizations</td>
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</tbody>
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Total Credits 24

Minimum number of credits required: 24

Certificate in Strategic Human Resources with a Concentration in Human Resources Operations

Program Requirements

<table>
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<th>Code</th>
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<tbody>
<tr>
<td>HRA 4240</td>
<td>Human Resources Technology Solutions</td>
<td>4</td>
</tr>
<tr>
<td>HRA 4250</td>
<td>HR Competencies and Talent Management</td>
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HRA 4510 Organizational Lifecycles and HR Implications
HRA 4520 HR Change Management

Total Credits 24

Minimum number of credits required: 24

SPECIALIZED GRADUATE CERTIFICATE IN HUMAN RESOURCES EMPLOYMENT RELATIONS

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Total Credits 16

SPECIALIZED GRADUATE CERTIFICATE IN HUMAN RESOURCE MANAGEMENT AND DEVELOPMENT

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Total Credits 16

SPECIALIZED GRADUATE CERTIFICATE IN HUMAN RESOURCES OPERATIONS

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Total Credits 16

Courses

HRA 4130 Finance for HR Professionals (4 Credits)
HR professionals may work in a number of organizational settings and sectors during their careers. This course provides an opportunity to explore how organizations may differ in legal structures, HR models, governmental oversight, records access, type and size, compensation processes, and benefits. The course will use a variety of financial reports, financial ratios, analysis and measurement tools, and ethical situations as a means to increase the student's business acumen.

HRA 4140 Principles and Practice of Human Resources (4 Credits)
This course offers an introduction to HR as a professional field of study, and discusses how HR fits into the workplace. The course presents theories and issues in the HR field, and it defines the HR practitioner as a change agent. The course places HR management in the context of organizational strategy and policy. And it defines the core competencies of HR professionals including recruitment, selection, and placement; job classifications and wage and benefits; employee relations, supervision, counseling, discipline, and employment law.

HRA 4150 Human Resources Across Organizations (4 Credits)
HR professionals may work in a number of organizational settings and sectors during their careers. This course provides an opportunity to explore how organizations may differ in legal structures, HR models, governmental oversight, records access, type and size, compensation processes, and benefits.

HRA 4160 Human Resources in a Global Economy (4 Credits)
In this course, students will explore the proprietorships, partnerships, corporations, nonprofits, multinational corporations, strategic alliances, regulatory agencies, and public organizations that cross sector and national boundaries from an HR impact perspective.
HRA 4170 The Inclusive Organization (4 Credits)
Employees are coming to organizations with differences in race, ethnicity, gender, age, religion, sexual orientation, disability, and other aspects of diversity. How can organizations create a culture of respect, involvement, and positive outcomes for employers, employees, and other stakeholders with individual differences and group affiliations? This course examines these questions.

HRA 4180 Organizational Politics and the HR Professional (4 Credits)
Many programs developed by HR professionals may be impacted by politics, where decisions are made to further individual interests over the interests of other people. Despite the inclusion of best practices in the recommendations, decisions may be made for political reasons, agendas, or actions, and not always for the benefits of the employees. This course explores why and how politics may enter HR decision making, and identifies links between motivation and leadership.

HRA 4230 Consulting and Human Resource Applications (4 Credits)
HR professionals often serve in a consulting role, both as internal and external consultants. This course includes models, tools, and concepts to build effective relationships with key stakeholders; identify, analyze, and diagnose organizational issues; develop and implement value-added solutions; effectively manage the change process; and measure/monitor outcomes. Students utilize a consulting model approach to turn strategy into action.

HRA 4240 Human Resources Technology Solutions (4 Credits)
Technological advances have had a major impact on the use of information for managing human resource functions within both large and small organizations. The quantity of data being collected, stored, and manipulated on computers is growing at a rapid rate. The students in this course strengthen basic technology skills by examining how information is utilized in the functional areas of HR.

HRA 4250 HR Competencies and Talent Management (4 Credits)
Organizational value depends on developing, utilizing, and retaining human resources. This course examines the importance of demonstrating that value along with what is needed to acquire, hire, and retain talented human resources. This includes staffing and forecasting, recruitment, career development, succession planning, and developing competency models. Students will examine how political, economic and social systems can lead to new policies and practices that affect talent management strategies, along with ethical considerations and inclusivity.

HRA 4260 HR Analytics and Research (4 Credits)
This course covers a review of HR metrics, quantitative techniques, and analysis. Students will examine HR research and consider a process to develop practical questions for HR use. Quantitative skills for modeling, spreadsheet analysis, process mapping, and workforce management reporting are developed. Human resource information systems (HRIS) and their role in supporting strategic decision making are examined and evaluated.

HRA 4270 Value and Impact of HR Interventions (4 Credits)
In this course, students will determine the long-term and short-term impact of interventions, especially looking at a cost-benefit analysis. The object is to have a practical strategy to provide decision makers the data for human capital investments support.

HRA 4500 Organizational Leadership, Team Effectiveness, and Communications (4 Credits)
HR professionals are organizational leaders, build teams, and build strong internal communications. The course explores how to lead organizational change, manage organizational crisis, build effective teams, and develop strategic communications.

HRA 4510 Organizational Lifecycles and HR Implications (4 Credits)
This course examines the role of mission, vision, and values. Moving from start-up to mature organizations, the course asks what are HR responses to compensation, benefits, and HR structure. Matching HR structure and policies to organizational strategy is considered.

HRA 4520 HR Change Management (4 Credits)
Human Resources play an essential role in planning, implementing, and sustaining organizational change. This course examines the role of HR professionals in leading and advising on organizational change, including how to apply HR management practices to change management plans, and aligning total compensation and performance management practices to support the goals of change initiatives.

HRA 4600 Human Relations in Organizations (4 Credits)
The purpose of this course is to tie together Human Relations concepts and theories with practical ideas and solutions such that HR professionals can positively impact the employee experience, and, ultimately, drive positive business results. The role of HR professionals in designing and managing organizational programs and systems that are grounded in human relations best practices will be explored, recognizing that positive relationships between the employee, the organization, and its constituents act as drivers of satisfaction and retention.

HRA 4610 Employee Compensation (4 Credits)
This course examines the development and management of employee compensation systems, including motivational, productivity, job classification, and strategic considerations. It explores the history and purpose of a compensation system, today's issues, and key elements of compensation design.

HRA 4620 Employment Total Benefits (4 Credits)
This course develops historical context for employee benefits and the motivational implications. It reviews the wide range of potential benefits and discusses "total rewards" options. The course examines pension plans, social security, ERISA, major benefits legislation, health insurance, flex spending, and budget implications.

HRA 4630 Employment Law (4 Credits)
This course explores current legal issues that affect the HR function in organizations. These include EEO, sexual harassment, managing risk, discrimination, wage and hour, at-will employment, and current Supreme Court decisions. These legal issues will be examined from both the employee and the employer viewpoints.
HRA 4701 Topics in Human Resources (4 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues in the field of strategic human resource management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

HRA 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.

HRA 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

HRA 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

HRA 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master’s degree. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

HRA 4980 Internship (1-4 Credits)
The Strategic Human Resource Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master’s programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all SHRM students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences.

HRA 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only may be used by degree candidates. Prerequisite: Admitted degree candidate.
HRA 4992 Directed Study (1-8 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

General Information
Calendar and Term Definitions (p. 904)
Critical Notification System (p. 904)
Graduate Policy Scope, Adherence and Modifications (p. 905)
Graduate Program Definitions (p. 905)
University Grading System (p. 909)

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

Semester Calendar
The Sturm College of Law academic calendar is divided into autumn, spring and summer session. Each semester is approximately 15 weeks long. Students may complete requirements including summers, or may arrange the normal work of a two-semester academic year in any desirable sequence of semesters.

University College Calendar
University College considers summer to be part of the academic year. The summer quarter is ten weeks long.

Summer Session
Summer session is an avenue for graduate students to accelerate their programs or complete necessary coursework. Elective and required courses are offered in a variety of time frames. Travel and other unique courses, including short, intensive workshops, are part of the summer program.

Visiting students, professionals and individuals from the community are admitted under an open enrollment policy.

Note: University College considers summer to be part of the academic year. The Summer Quarter is ten weeks long.

Interterm
Interterm is the time period prior to each academic quarter, during which short, on-campus and travel courses are offered. Hours completed in interterm are applied as credit toward graduation requirements. Students register for interterm classes through the Special Community Programs office.

Note: Some units may have specific requirements about the maximum number of interterm hours which may be applied toward the degree. Contact the unit for details.

Critical Notification System
Registration Instructions
The University can send voice or text messages to students in the event of an urgent situation. The system will call every contact number provided and leave a voicemail if the call is unanswered. Text messages are optional and sent to only one number. The owner assumes any costs associated with receiving text messages.

You may designate one number to receive text messages. If you have elected to receive a text message, you will receive a text message from the CINS vendor to confirm that you wish to opt in to receive future emergency text messages. You will be responsible for any costs associated with your text messages. Remember this is how we reach you in an emergency.
Students must provide valid contact information in order to receive a text message or voice mail alert. To update contact information, click the Notification Preferences link under Personal Information, which is found under the myWeb tab of PioneerWeb (https://PioneerWeb.du.edu).

**Emergency Contacts**

You may provide the University with contact information for individuals you wish us to contact in the event of an emergency. You may update emergency contact information in Personal Information, which is found under the myWeb tab of PioneerWeb (https://PioneerWeb.du.edu).

**Graduate Policy Scope, Adherence and Modifications**

The policy development mission of the Office of Graduate Education (OGE) is to provide an authoritative, accessible and current repository for University and campus policies that impact the members of the University community across all graduate schools and programs. University policies have broad application throughout the University to help ensure coordinated compliance with applicable laws and regulations, promote operational efficiency, or reduce institutional risk. Individual schools and departments reserve the right to maintain policies particular to their units. However, unit-specific policies do not override university-wide policies. Policies duplicated on other websites or in print may not be the most current version. OGE recommends that graduate programs share content from the Graduate Policies and Procedures rather than creating their own pages with University policies. This will help ensure that everyone is referencing the most current versions of University policies.

- Student Responsibility for Bulletin Information (p. 905)
- Modifications to the Policy in the Bulletin (p. 905)
- Graduate Academic Unit-level Adherence to and Implementation of University Policy (p. 905)

**Student Responsibility for Bulletin Information**

Applicants to the University of Denver as well as admitted and enrolled students are held to the standards and procedures set forth in the University bulletin. Students are responsible for staying informed of the University's policies and procedures.

**Modifications to the Policy in the Bulletin**

The University of Denver reserves the right to make changes in the regulations, rules, fees or other aspects of this University bulletin without advance notice.

Changes within academic units, the University, or applicable law (or other factors) may require modifications to this Graduate Policies and Procedures. Additionally, any unit or member of the Graduate Council may propose a change in policy by submitting a petition to the Vice Provost for Research and Graduate Education.

**Graduate Academic Unit-level Adherence to and Implementation of University Policy**

Each graduate unit must examine the Graduate Policies and Procedures and identify unit-specific policies or practices that conflict with the University policies and procedures. Units shall adjust their practices to conform to University policy. If a unit believes it is necessary to maintain policies or practices that diverge from University policy, it shall petition the Senior Vice Provost for Research and Graduate Education for an exception to policy.

**Graduate Program Definitions**

The University of Denver offers a range of graduate degree and certificate programs:

- Graduate Degree Program (p. 906)
- Formal Dual Degree Programs (p. 906)
- Flexible Dual Degree Programs (p. 906)
- Dual Undergraduate-Graduate Degree Programs (p. 907)
- DU-Illiff Joint PhD Program (p. 908)
- Certificate Programs (p. 909)
- Concurrent Candidacies (p. 909)
Graduate Degree Program

A graduate degree program is a combination of courses and related activities organized under the authority of a dean, the Senior Vice Provost for Research and Graduate Education, Graduate Council, the Provost and the Board of Trustees for the attainment of broad educational objectives leading toward a post-baccalaureate degree.

In general, with the exception of students in the dual undergraduate-graduate program, graduate students must have earned a bachelor’s degree from a regionally accredited college or university before matriculation in a graduate program. However, with approval from the Senior Vice Provost for Research and Graduate Education, students who have already earned a master’s degree, but not a bachelor’s degree, may in rare cases, matriculate without a bachelor’s degree.

Formal Dual Degree Program

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

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

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

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

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (https://www.du.edu/sites/g/files/lmucqz251/files/2018-11/formal_dual_degree_verification_2018-2019.pdf) during the program’s first term. For program details, please contact the school, college or department.

Flexible Dual Degree Program

A flexible dual degree program links two master’s degrees or a master’s program with a JD degree.

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

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

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

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

Proposing a Flexible Dual Degree

To propose a flexible dual degree, the student must first apply to and be admitted by both programs, pay application fees and admissions deposits for both programs, and seek the counsel of an advisor in each program. Admission into each program does not take the place of filing a Flexible Dual Degree proposal (https://www.du.edu/sites/g/files/lmucqz251/files/2018-11/flexible_dual_degree_proposal_forms_and_instructions.pdf) nor guarantee approval of the proposal.

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

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

**Curriculum Structure**

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

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

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

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

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

**Non-Course Requirements**

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

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

**Dual Undergraduate-Graduate Degree Program**

**Dual Undergraduate-Graduate Degree Programs**

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

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

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

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

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

Eligibility for financial aid differs for undergraduate and graduate students and it differs for institutional aid and federal aid. Students enrolled in dual degree programs are considered graduate students for federal financial aid purposes after attaining 198 credit hours even if the student has not met the undergraduate degree requirements. Federal regulations do not allow students in dual degree programs who have completed four academic years (defined as 198 credit hours) to continue to receive undergraduate aid. Students in the law school dual degree program are aided as graduate students after three undergraduate academic years (149 hours for federal aid purposes). While undergraduate merit or need-based institutional grant aid are not available for fifth-year dual-degree students, each graduate department may offer graduate students grant or scholarship funds at their discretion. Students should contact their graduate program for details on available funding for the fifth year.

Institutional Aid Eligibility Differs From Federal Aid Eligibility

Institutional Aid

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

Federal Aid

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

Dual Undergraduate-Graduate Admission and Records Procedures

The following must be followed consistently and accurately:

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

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

DU-Illiff Joint PhD Program

The University of Denver (Colorado Seminary) and the Iliff School of Theology jointly administer a program leading to the doctor of philosophy in the study of religion.

Joint PhD students maintain student status and have access to resources in both co-sponsoring institutions. Students in the Joint PhD program should be referred to as “DU-Illiff Joint PhD Students” and not primarily as either Iliff or DU students.

Students in the Joint PhD program are expected to know the specific policies, procedures, and requirements for both the University of Denver and the Iliff School of Theology.
Certificate Program

A certificate program provides a set of learning experiences concentrated in a specific set of educational goals. At the discretion of the University, academic credit earned in certificate programs may be awarded at the graduate or undergraduate levels. Certificate programs may grant Continuing Education Units (CEUs), or they may include non-credit offerings.

Certificates of Completion may be awarded for completion of workshops, short courses and shorter sequences of credit courses. The certificate issued at the completion of the program does not indicate certification of attainment of any specific level of knowledge or competence. Admission requirements vary by program. Certificates of participation do not appear on transcripts. Certificates of participation may be produced by individual units and should not bear the University seal.

Continuing Education Unit (CEU) Certificates may be awarded for education programs that award CEUs. Continuing education units should be awarded based on standards developed by the International Association for Continuing Education and Training (IACET) or other recognized organization governing professional continuing education. Admission requirements vary by program. CEU certificates and courses appear on a distinct institutional CEU transcript. CEUs do not count toward academic degrees. CEU certificates may be produced by individual units but should be distinct in appearance from that of the academic certificate or institutional diploma.

Certificates of Specialization provide substantial education in an academic discipline and represent the achievement of competence in a well-defined area of study and they are embedded within degree programs. (Units are encouraged to use concentrations to officially denote a specialization within a student’s primary area of study.) Admission requires acceptance and enrollment into the degree program. Certificates of specialization appear on transcripts associated with an awarded degree. Certificates of specialization must be approved through the institutional curriculum approval mechanism.

Academic or Credit Certificate Programs provide substantial education in a specific academic discipline or may be interdisciplinary but center on a coherent and freestanding body of knowledge. The certificate issued at the completion of the program represents the achievement of competence in a well-defined area of study. Academic certificates require a minimum of 24 quarter hours or 16 semester hours of credit. At the discretion of academic units, credits earned in an academic certificate program may count toward a degree at the same level (i.e., graduate or undergraduate). While admission requirements and standards vary by program, applicants must meet minimum requirements for admission to the University. Academic certificates appear on transcripts. Academic certificates must be approved through the institutional curriculum approval procedures.

Credit hours that have already been counted for a previous degree that has been awarded cannot count towards granting a certificate. Contact the unit for details.

Time Limit for Completion of the Program

Certificate program candidates are expected to complete program requirements within three years of beginning their programs, as measured by the matriculation into the degree program.

Failure to complete the program within the established time limits will result in termination unless the student successfully petitions for an extension to the Vice Provost for Research and Graduate Education. The college, school, or department and the student’s advisor must recommend this extension. If it is not approved, the student will be terminated from the program. Students may petition for an extension of time for a minimum of one quarter and up to a maximum of one year per request. For more information, see Exceptions (p. 958) regarding extensions of time.

Concurrent Candidacies

Concurrent candidacies occur when students are enrolled in two programs concurrently.

Admission and program requirements must be fulfilled for each program. There will be no reduction in the number of credit hours required for either degree.

At the time of admission, the student submits written approval from each unit allowing enrollment in two programs simultaneously.

University Grading System

Reporting Grades (p. 910)
Never Attended (p. 910)
Failing Grades (p. 910)
Withdrawal (W) (p. 910)
IP, NR and Incomplete Marks (p. 910)
Last Date of Attendance (p. 910)
 Reporting Grades

Grades must be reported for all registered students by the grade submission deadline. For federal financial aid purposes, non-reported grades may be considered as failing. This can result in financial obligations for the student.

 Never Attended

A Never Attended (NA) grade should be assigned to students who registered for a class (and appear on the roster) but never attended the class.

 Failing Grades

If a student ceases attending class or submitting assignments (and has not earned a passing grade) and has not made arrangements for an incomplete (I), a failing (F) grade must be assigned.

 Withdrawal (W)

For colleges, schools, and departments on the quarter system, official withdrawal during the second to sixth weeks of the term will automatically result in the recording of grades of Withdrawal (W) for all courses. In weeks six through eight W’s will be given with the instructor’s permission. If a student fails to complete a course and does not withdraw, a grade of (F) will be recorded on the transcript.

 Non-Final Grades

Any non-final grade (i.e., incomplete or non-reported grade) must be changed to a final grade prior to graduation.

 Last Date of Attendance

Federal financial aid rules require institutions to record a student’s last date of attendance if the student ceases attending a class.

 Last date of attendance appears on web and paper grade rosters. It is very important the university know that a student received a failing (F) grade because the student ceased attending class. In cases where faculty do not have an exact date, an estimate should be provided (e.g., last assignment date).

 Non-Passing Grades

Students who receive non-passing grades often have all non-passing grades for a term. By federal financial aid rules, the University must consider those students to have withdrawn from the University. If DU does not have accurate records, the University and the student may face financial obligations for federal financial aid.

 Grade Reports

Students may view their final official grades for courses on PioneerWeb. Grades are available on the web as soon as they are rolled and validated by the Office of the Registrar. Privacy regulations prohibit the University from releasing grades or GPA information over the telephone. It is the student’s responsibility to check their transcript to ensure that grades are recorded appropriately for completed courses.

 Please note that grades posted in a supplementary academic support program, such as Canvas or Blackboard, do not necessarily represent the final grade as reported to the Office of the Registrar, and only the grade reported to the Office of the Registrar will be present on the student’s official record. It is the instructor’s responsibility to ensure that any grades posted to a separate program match with those being reported to the Office of the Registrar. If a student finds a discrepancy, the student should reach out to the instructor.

 For most programs at the University of Denver, grade reports are mailed upon request only. Requests to have grade reports mailed are valid through the summer term and must be renewed each academic year. Requests for mailed grade reports must be received by the last day of classes for the academic term. Grade Report Mailer forms are available in the Office of the Registrar.

 Notes: Some units may have more specific grading guidelines and grade reporting procedures. Contact the unit for details.

 Graduate School of Social Work and Graduate School of Professional Psychology do not award grades of D+, D, or D-.
Incomplete Grades

An Incomplete (I) is a temporary grade which may be given at the instructor’s discretion to a student when illness, necessary absence, or other reasons beyond the control of the student prevent completion of course requirements by the end of the academic term.

Incomplete grades may be given only in the following circumstances:

- The student’s work to date is passing; and
- attendance has been satisfactory through at least 60% of the term; and
- an illness or other extenuating circumstance legitimately prevents completion of required work by the due date; and
- required work may reasonably be completed in an agreed-upon time frame; and
- the Incomplete is not given as a substitute for a failing grade; and
- the Incomplete is not based solely on a student’s failure to complete work or as a means of raising the student’s grade by doing additional work after the grade report time; and
- the student initiates the request for an Incomplete grade before the end of the academic term

Appropriate grades must be assigned in other circumstances. A failing grade and last date of attendance should be recorded for students who cease attending class without authorization. Students who are unable to complete a course and who do not meet these circumstances should consider dropping the course.

The instructor will place an Incomplete (I) grade into PioneerWeb along with the rest of their end-of-term grades. It is recommended that the student and instructor lay out the terms of the Incomplete – what work is to be completed, what the time-frame is, etc. – in writing, either in an email or in a written document. There is no required documentation that must be submitted to the Registrar’s Office.

Once the coursework is completed and graded, the instructor must submit the grade using the University’s grade change process. It is in the student’s best interest that incomplete grades are made up by the end of the following academic term. Incomplete grades must be made up and final grades submitted within one calendar year. Only under the most extenuating circumstances may an Incomplete be made up more than one calendar year from the date it is recorded and only with approval of the dean of the unit in which the course was taken. The coursework may be completed while the student is not enrolled.

Incomplete grades will expire on the date selected by the professor when the grade of incomplete is entered. This date will be no more than one academic year from the last day of classes of the quarter in which the incomplete was incurred. If no specific date is entered by the instructor, the date will default to the end of the same term of the next academic year (eg: an Incomplete grade assigned in Winter Quarter of 2019 will have an expiry date of the end of Winter Quarter 2020). Incomplete grades that are not updated by the expiration date will automatically turn into an F. Instructors may still use the PioneerWeb grade change system to change an expired Incomplete grade, but the change will require the approval of the Dean of the academic unit.

Incomplete grades appear on the transcript for up to one year and they do not affect the grade point average. Students must resolve all Incomplete grades by graduation, either by having the grade changed by the instructor or by requesting that an F be taken for the class. (This policy affects incomplete grades given in fall 1995 and thereafter. Prior to 1995, unchanged incomplete grades remain on the permanent record as part of hours attempted and are calculated as a failing (F) grade in the GPA.) Notation of the original incomplete status of the grade remains on the student’s transcript along with the final grade.

An Incomplete grade may not be considered passing for purposes of determining academic standing, federal financial aid eligibility, athletic eligibility, or other purposes.

An Incomplete should not be assigned when it is necessary for the student to attend additional class meetings to complete the course requirements. Students who receive an incomplete grade in a course must not re-register for the course in order to remove the (I). An Incomplete should not be assigned where the normal practice requires extension of course requirements beyond the close of a term, e.g., thesis or project type courses.

Note: Some graduate units may have more restrictive policies.

Markers of Withdrawal, Incomplete or Failing grades on a student’s transcript may impact their satisfactory academic progress for determining federal aid eligibility. Contact the Financial Aid office for further information.
Admission and Enrollment Policies

Program-specific admission requirements are set by individual academic units and published annually. Once published, the admission requirements are in effect for the annual admission cycle and may not be altered until the next admission cycle. Applicants must meet all published admission requirements.

Admission Status (p. 912)
Admission Process and Standards for All Applicants (p. 913)
Additional Standards for International Applicants (p. 916)
Additional Standards for Non-Native English Speakers (p. 917)

Admission Status

A student may be admitted to graduate study in one of the following classifications:

- Regular Degree Student (p. 912)
- Provisional Admission (p. 912)
- Certificate Student (p. 913)
- Non-Degree Student (p. 913)
- English Conditional Admission (ECA) (p. 913)
- Lifelong Learner (p. 913)
- Visiting Scholar (p. 913)

Regular Degree Student

Students enrolled in a graduate degree or certificate program who have satisfied document or academic provisions (if applicable) have regular student status. Regular status is required for advancement to degree candidacy and graduation.

Provisional Admission

Document Provisions

Students are admitted with a document provision when required official documents (e.g., final transcripts, degree certificates, certified English translations, test scores, etc.) were not received before an offer of admission. All required official documents must be received by the start of the first term of enrollment. If documents are not received by this time, a hold will be placed prohibiting future registration. Students admitted with provisions will be changed to regular status when all required official documents have been received.

Please review the graduate policy for Transcripts and Proof of Degree (http://bulletin.du.edu/graduate/admission-and-enrollment-policies/admission-process-and-standards-for-all-applicants/transcripts-and-proof-of-degree) for more information on required credential documents.

Academic Provisions

Students may be admitted with an academic provision when the program stipulates additional academic requirements (e.g., student must receive a B or better in the first 15 credit hours). Academic provisional admission is reviewed on a case-by-case basis and the requirements may be specific to each individual student. These requirements and the timeline for meeting them will be outlined in the provisional admission letter. Students admitted with provisions will be changed to regular status when the conditions of the provision have been met. Students who fail to meet the academic provision as outlined in their admission letter may be terminated from their academic program.

*Applicants who request a Form I-20 for F-1 student status who are admitted with an academic provision will be issued a Form I-20 for non-degree status. If the student later meets the academic provision, a Form I-20 for a change of level to degree status will be issued. SEVP guidance prohibits the issuance of a degree-based Form I-20 for an applicant admitted with academic provisions. For more information, see SEVP Policy Guidance S13.1 (https://www.ice.gov/sites/default/files/documents/Document/2016/sevp-PGS131.pdf).

*Applicants who request a Form DS-2019 for J-1 Exchange Visitor status who are admitted with an academic provision will be issued a Form DS-2019 in the student non-degree category. If the student later meets the academic provision, a Form DS-2019 in a degree category will be issued, but the student will have to leave the US and reenter for the change of category. The U.S. Department of State does not allow a change from student non-degree to student degree in the U.S.
Certificate Student

A certificate student is one who is engaged in a program of study leading to a certificate. Only academic certificates will appear on the student's transcript. Students must be admitted to a certificate program to be awarded the certificate.

Non-Degree Student

Non-degree coursework is suited for individuals interested in taking coursework at the University of Denver for any of the following reasons: (1) explore a program or strengthen academic history before applying for admission to a graduate degree program, (2) complete a course for professional development or for another degree program outside of DU, or (3) take courses for personal growth. Students can take a maximum of three non-degree courses. After three courses, students must apply to a degree-seeking program or submit a petition to continue taking non-degree courses for personal growth only.

Admission as a non-degree student does not guarantee admission to a University of Denver graduate degree program. In the event that the student subsequently wishes to undertake a degree program at the University of Denver, the regular application procedures must be followed, including the submission of the required application fee. No more than three courses earned as a non-degree student may be applied to the degree. All non-degree coursework must be approved for transfer into a degree-seeking program.

All non-degree applicants must have earned a bachelor's degree in order to enroll in graduate level courses. Additionally, non-native English speakers must follow standard graduate admission requirements to demonstrate proof of English language proficiency (http://bulletin.du.edu/graduate/admission-and-enrollment-policies/additional-standards-for-non-native-english-speakers/english-language-proficiency-ielts-toefl). Non-degree students must apply each term.

International non-degree students should contact the University of Denver's International Student and Scholar Services for information on visa eligibility.

Note: Non-degree students interested in taking Iliff School of Theology courses must register at Iliff. The classes will be counted as non-degree credits, not transfer credits, towards the DU-Iliff Joint PhD program with advisor approval upon acceptance into the Joint PhD program.

English Conditional Admission (ECA)

Some graduate programs may offer English Conditional Admission (ECA) to academically qualified non-native English speakers who do not meet the University’s minimum English language proficiency requirements. To apply for a program in an academic department that offers ECA, applicants must indicate on their application to the degree program that they wish to be considered for ECA.

ECA students cannot enroll in any regular degree courses prior to meeting the University’s English requirement. In order to be granted regular status in their graduate degree program and become eligible to take academic classes, ECA students must meet one of the following requirements:

- Successfully complete intensive English courses through the advanced level at the University's English Language Center (http://www.du.edu/intl/elc) (ELC). English language training at centers outside of the University of Denver will not be counted toward meeting English language proficiency requirements.
- Present a departmental qualifying minimum TOEFL, IELTS or C1 Advanced test score before the start of their program.

Lifelong Learners

University College offers courses to non-degree seeking students and non-certificate seeking students. These students are designated as Lifelong Learners. Neither entrance examinations nor a baccalaureate degree are required in order to register for courses as a Lifelong Learner. Students must declare their status as Lifelong Learners during their first quarter of enrollment.

Lifelong Learners may take University College courses for non-credit (NC) or credit. The courses cannot be counted toward a degree or certificate.

Visiting Scholars

Faculty members of other institutions may pursue postdoctoral study for no credit as guests of the University, without paying tuition. Visiting faculty members should apply to the department in which they plan to study. If graduate credit is desired, they must register as non-degree students (http://bulletin.du.edu/graduate/admission-and-enrollment-policies/admission-status/special-status-student) and pay the regular tuition rates.

Admission Process and Standards for All Applicants

All applications for graduate study at the University of Denver require the submission of specific materials as stated by the University or academic unit. These materials must be received in the Office of Graduate Education or appropriate admission unit by the program's published deadline. All documents submitted become property of the University of Denver and cannot be copied or returned to the applicant/student or any other person(s).
The information given on the application must be true and complete without evasion or misrepresentation. Applicants who willfully omit, falsify, or provide incomplete statements may be denied admission or dismissed.

University Admission Criteria

The University of Denver offers admission to graduate applicants who demonstrate the highest potential for successful graduate study. Applicants are evaluated by the individual programs to which they apply on the basis of their prior performance and professional promise as evidenced by academic records, letters of recommendation, standardized test scores, and other supplemental materials. Academic program admission requirements may be higher than University minimal standards. To be admitted as a regular degree student, an applicant must meet the following requirements:

- **Baccalaureate Degree:** Applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- **The minimum baccalaureate GPA for graduate admission consideration at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work). An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. Applicants with graduate coursework who have not earned a master's degree or higher may use the GPA from the graduate work to meet the requirement.** The minimum GPA for all graduate coursework undertaken is a cumulative 3.0 on a 4.0 scale.
- **Standardized Test Scores:** The University of Denver does not require graduate entrance examinations for admission. However, many graduate programs do require standardized exams, such as the Law School Admission Test (LSAT), the Graduate Record Examination (GRE), the Graduate Management Admissions Test (GMAT), or the Miller Analogies Test (MAT) for admission. Some departments may require applicants to take the GRE Subject Test in a specific discipline as well. Please see the published admission requirements for specific academic program admission requirements.

Note: The minimum GPA requirement for the JD in the Sturm College of Law is set according to the standards of the American Bar Association.

Application

Applications for graduate study at the University of Denver must be submitted online by the program's published deadline.

Application Fee

A non-refundable application fee is required for each application.

The non-refundable application fee (bank draft, cash, money order, wire transfer, or personal check) covers the cost of processing application materials. A credit card payment is accepted during online application submission only. Applications will not be processed until the application fee is paid. Application fee waivers are granted to McNair Scholars. Proof of participation must be included with the application. Academic units may offer additional fee waivers. Contact the academic unit for more details.

Transcripts and Proof of Degree

Students are required to submit one official transcript from each post-secondary institution they have attended, or are presently attending, where two quarter hours (or one semester hour) or more were completed including study abroad and college coursework completed in high school. Proof of a bachelor’s, and, if applicable, a master's degree is required from a regionally accredited college or university. Note that during the admission process, unofficial transcripts are accepted. Upon acceptance of an admissions offer, official transcripts must be received by the start of the first term of enrollment, or a hold will be placed on the student's account prohibiting future registration.

The applicant is responsible for obtaining all transcripts. University of Denver students and alumni do not need to provide University of Denver transcripts.

Applicants who have earned a degree outside the U.S. must submit proof of graduation, typically through a degree certificate or diploma. Official study abroad transcripts are required unless the course titles, grades and credits earned abroad appear on another transcript. Applicants educated outside the United States are encouraged to contact the Office of Graduate Education or the appropriate admission office for assistance regarding transcript-related materials.

All official transcripts must include the name and date of degree(s) earned (or supply a separate degree/diploma certificate), if applicable.

The University of Denver will consider paper transcripts official when delivered to the University of Denver in a sealed envelope from the issuing institution provided the following criteria are met:

- The transcripts must have the original signature of the registrar and/or the seal of the issuing institution.
- The transcripts must be enclosed in an envelope with the stamp or signature of the registrar across the sealed flap.
The University of Denver will consider electronic transcripts official from a domestic institution provided the following criteria are met:

- The transcript is certified as official from the college or university using a third-party agency for the certification process. Approved agencies include Army/American Council on Education Registry Transcript System (AARTS), National Student Clearinghouse, Credentials Solutions, Parchment, Royall and Company, and Scrip-Safe. The University of Denver reserves the right to rescind approval of the above-mentioned agencies based on changes in technology utilized by the agency. Upon request, the Office of the Registrar will take into consideration a third-party vendor other than the aforementioned agencies.
- The transcript must be received from the third-party agency by a University official.
- The transcript must be a certified PDF document with no evidence of tampering. The transcript must be retrieved from a secure server. Emailed transcripts will not be accepted.

Certified English translations must accompany all transcripts except for those provided by institutions that issue documents in English. Errors or omissions in English translations may be grounds for refusal or dismissal. Please consult the Office of Graduate Education for specific details.

The University of Denver reserves the right to reject transcripts or request additional information if there is any question about the authenticity of the document. Transcripts with course work in progress will not be considered final and admission will be granted provisionally.

**Supplemental Documents**

Some graduate units require additional materials such as letters of recommendation, essays, personal statements, resumes, or other supplemental application documents. Applicants should review the published admission requirements for specific guidelines.

**Reuse of Supplemental Documents**

Supplemental documents remain on file for 12 months from the date of application. Non-matriculated applicants may request to reuse supplemental documents within that time frame. Otherwise, new documents will be required.

**Admissions Examinations**

Some programs require standardized test scores such as the General Record Examination (GRE). Scores issued directly from the appropriate testing agency must be received by the program’s admission application deadline. The University of Denver’s ETS Institution Code is 4842. Individual graduate programs reserve the right to set test score requirements.

If an exam is required for admission, it must be taken prior to acceptance and the official test score must be received no later than the start of the first term of enrollment or a hold will be placed prohibiting registration.

Test score validation deadlines are set by the testing agency. It is the applicant’s responsibility to ensure official test scores can be reported directly to the University.

*Note: Contact the graduate unit for details on required admission examinations.*

**Admission Offer**

The University of Denver’s admission offer must be officially accepted or declined by the stated deposit deadline in the admission letter. If the offer is declined, the applicant will not be eligible to enroll in a future term without reapplying to the program.

The University of Denver is a signatory on the Council of Graduate Schools (CGS) Resolution Regarding Graduate Scholars, Fellows, Trainees, and Assistants (http://cgsnet.org/april-15-resolution), that binds all departments to an agreement that students admitted for the fall term are under no obligation to respond to offers of financial support (admission) prior to April 15th; earlier deadlines for acceptance of such offers violate the intent of the Resolution.

**Admission Deposit**

A non-refundable deposit is required of all applicants newly admitted to each graduate program. The admission deposit must be submitted by the stated deposit deadline in the admission letter.

The deposit confirms the applicant’s intent to attend the University. Only those who have confirmed their attendance in the program by sending the proper deposit will receive course registration information. Deposit fees vary by program. The deposit is applied to the first term of tuition. However, fully funded graduate assistants and employees using a tuition waiver may request a refund of the deposit from the Bursar’s Office upon matriculation.

**Reactivation of Application**

An applicant may submit a one-time request to reactivate their incomplete application* (or completed application that was withdrawn prior to receiving an admission decision) to the same program, regardless of delivery mode. The request must be made within one year of the start date of the academic
Deferrals and Term Changes

Prior to an admission decision:
• After submitting an application but prior to receiving an admission decision, applicants may request a one-time change to the term to which they originally applied. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.

Admitted Students:
• If an applicant wishes to defer their term of entry after receiving an offer of admission, they must first pay the deposit. Deposited students may submit a formal request prior to the start of term to the College/School in which they were accepted or to the Office of Graduate Education to defer their enrollment for up to one year. Students may request to enroll in an earlier or later start term, but only one deferral will be granted per application.
• A deposited student must request a deferral by the last day for 100% refund for dropped classes of the admission term; otherwise the student’s admission will be withdrawn. A deposited student that misses this deadline can make a one-time request to the College/School in which they were accepted for reactivation of admission into the program. Though previously admitted, there is no guarantee admission will be reactivated. If approved, admission will be reactivated and deferred to the next available term but no later than one year from the original admission term.
*If funding was awarded with the original admission offer, there is no guarantee that it will be offered for the new start term. It is the deposited student’s responsibility to consult with a representative from the College/School of admission to understand the options.

*At the discretion of the College/School, submission of a new application, supporting application materials, and payment of another application fee may be required.

Change of Graduate Degree Program

An applicant or student wishing to change a major, concentration, location, or delivery mode (i.e., on-campus, online) or wishing to change to a lesser or equal degree (e.g., doctoral to master’s level) within the same College/School has the following options:

Applicant:
• After submitting an application and prior to receiving an admissions decision, applicants may request a one-time change to an academic program within the same College/School to which they originally applied. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.
• After an admissions decision has been rendered and before the first day of class, a student can request a one-time change to their academic program within the same College/School with approval by the department. A new application, additional supporting materials, and/or a new application fee may be required at the department’s discretion. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.
*If an applicant wishes to change to a program outside of the College/School to which they originally applied or change to a higher-level degree program, then submission of a new application, supporting application materials, and payment of another application fee are required.

Current Student:
• Starting the first day of class, a student can submit a completed change of major form to the Office of Graduate Education. The College/School reserves the right to request that the student submit a full application for admission, including the application fee.
• A student wishing to change to a degree program outside of the current College/School, or wishing to change to a higher degree (master’s level to doctoral), must submit a full application for admission, including the application fee and supporting application materials. A graduate student who wishes to change to another degree program must be withdrawn/terminated from the program of original admittance and accepted into the new degree program.

Additional Standards for International Applicants

Applicants will be considered international for admission purposes if one of the following statements applies to them:
• The applicant is not a United States national, permanent resident, or citizen.
• The applicant does not hold dual citizenship with the United States and another country.
• The applicant is currently in the United States on an F-1 or J-1 student visa.
• The applicant resides in the United States and holds a non-immigrant visa.

To maintain legal immigration status, international students at the University of Denver must hold an immigration status granted by the U.S. federal government which allows study in the United States. Most students enroll at the University of Denver in F-1 or J-1 immigration status, although other statuses may also permit students to study in the United States.

When an international applicant has been admitted to the University of Denver, for an I-20 or DS-2019 to be issued, the student must submit some combination of the following, as outlined on their Application Status Page:

• Copy of biographical page of passport
• If applicable, copy of dependent(s) biographical page of passport
• If applicable, DU Financial Verification form (http://www.du.edu/isss/media/documents/forms/financial-verification.pdf)
• If applicable, Bank statement or Certificate of Deposit with sufficient funds for the estimated cost of attendance (http://www.du.edu/financialaid/graduate/cost) for one academic year (unless program is shorter) as listed by the Office of Financial Aid
• If applicable, student financial guarantee (FGL) letter from the sponsoring agency/government office

Photocopies or scans of the above documents are accepted. These requirements do not apply to U.S. permanent residents or students not in F-1 or J-1 immigration status. International Student & Scholar Services (ISSS) reviews all documents submitted and determines if an admitted student qualifies for an I-20 or DS-2019.

It is the responsibility of an admitted student who has been issued an I-20 or DS-2019 to apply for a visa at a United States embassy or a change of status with United States Citizenship and Immigration Services. For up-to-date information on immigration policy and procedures, instructions on how to apply for a visa, or to schedule an appointment with an international student advisor, visit https://www.du.edu/isss/. Questions can be directed to isss@du.edu.

Additional Standards for Non-Native English Speakers

English Language Proficiency (p. 917)

English Conditional Admission (ECA) (p. 918)

Required Tests for GTA Eligibility (p. 918)

English Language Proficiency

TOEFL/IELTS/C1 Advanced

Official scores from the Test of English as a Foreign Language (TOEFL), International English Language Testing System (IELTS) or C1 Advanced are required of all graduate applicants, regardless of citizenship status, whose native language is not English or who have been educated in countries where English is not the native language. Applications will not be processed until the required TOEFL, IELTS or C1 Advanced score is received. The TOEFL, IELTS and C1 Advanced scores are valid for two years from the test date and are considered official only when received directly from the testing agency.

TOEFL
The minimum TOEFL score accepted by the University is 80 (iBT) or 550 (paper-based). The institution code for the University of Denver is 4842.

IELTS
The minimum IELTS score accepted by the University is 6.5.

C1 Advanced
The minimum C1 Advanced score accepted by the University is 176.

Notes: Individual graduate programs reserve the right to set higher English language proficiency test score requirements. Graduate Teaching Assistants must meet the Required Tests for GTA Eligibility (p. 918) policy.

If English Conditional Admission (ECA) (p. 918) is permitted by the academic unit, successful completion through the advanced level at the English Language Center (ELC) may satisfy the language proficiency requirement for two years from the completion date.

English Language Exemption

Students are generally exempt from the English proficiency test requirement if they have any of the following:
Secondary/high school diploma from a school where the language of instruction is English.

Have earned a baccalaureate degree or higher from a formally-recognized/accredited university where the institution’s sole language of instruction and examination is English.

Last 30 semester credits (45 quarter credits) of coursework were successfully completed (cumulative 3.0 GPA or higher) from a university or college where English is the sole language of instruction and examination.

Successful completion of the appropriate level of intensive English at the University of Denver’s English Language Center.

Some graduate programs may offer English Conditional Admission (ECA) to academically qualified non-native English speakers who do not meet the University’s minimum English language proficiency requirements. To apply for a program in an academic department that offers ECA, applicants must indicate on their application to the degree program that they wish to be considered for ECA.

ECA students cannot enroll in any regular degree courses prior to meeting the University's English requirement. In order to be granted regular status in their graduate degree program and become eligible to take academic classes, ECA students must meet one of the following requirements:

- Successfully complete intensive English courses through level five at the University's English Language Center (http://www.du.edu/intl/elc) (ELC).
- English language training at centers outside of the University of Denver will not be counted toward meeting English language proficiency requirements.
- Present a departmental qualifying minimum TOEFL, IELTS or C1 Advanced score before the start of their program.

If admitted with ECA, the student’s English language proficiency will be tested by the ELC. The student will be placed in the appropriate class level based on this test. Testing for ELC class levels will take place after a student arrives at the University of Denver’s campus and before the beginning of ELC classes.

Students who are admitted under the ECA option are not eligible for Graduate Teaching Assistantships until they have met the minimum ECA requirements, have been changed to regular status students, and have met minimum GTA eligibility requirements.

International students seeking F-1 immigration status must be issued an English study-only I-20 until they complete their full course of study at the English Language Center. A degree-seeking I-20 will be issued after the student is has regular admission to their degree program.

Financial aid awards for the degree program cannot be applied to the costs for English language training.

**Note:** Some units may not accept students under English Conditional Admission. Those units would not accept ELC completion to meet English language proficiency requirements. Graduate departments may require ELC graduates to submit a TOEFL/IELTS/C1 Advanced score for admission consideration.

**Required Tests for GTA Eligibility**

**TOEFL/IELTS/C1 Advanced**

Any graduate applicant whose native language is not English or is from a country where English is not the native language, who wishes to be considered for any Graduate Teaching Assistantship during any year of study in any graduate department at the University of Denver, must demonstrate fluency in spoken English by scoring a minimum of 26 on the Internet Based TOEFL (iBT) exam speaking section, an IELTS score of 8 on the speaking section or a minimum score of 200 on the C1 Advanced speaking section.

Please note that paper-based TOEFL scores will not be accepted for those applicants who wish to be considered for any Graduate Teaching Assistantship.

**GTA English Language Exemption**

Prospective GTAs may be exempted from submitting TOEFL/IELTS/C1 Advanced scores if they:

- Have earned a baccalaureate degree or higher from a formally-recognized/accredited university where the institution's sole language of instruction and examination is English and have four or more consecutive years of work/instructional experience in countries with an official native language of English and the language of employment/instruction is English.

**Note:** GTA awards may be revoked or restricted to non-teaching assistantship responsibilities at the discretion of the division if the GTA does not demonstrate sufficient English fluency in the classroom.

**English Language Proficiency Assessment**

Students offered a Graduate Teaching Assistant (GTA) position whose native language is not English will be assessed by the University of Denver's English Language Center (ELC) by completing the English Language Proficiency Assessment (ELPA) designed specifically for GTAs.
Prospective GTAs who are awarded a GTA position based on demonstrated fluency in spoken English with TOEFL/IELTS/C1 Advanced minimum scores required for GTAs whose ELPA demonstrates they are not sufficiently proficient may be permitted to hold an assistantship position, but must be restricted to non-teaching responsibilities and will be required to enroll in an ELC bridge course for enrichment.

Students may contact the unit and/or the Office of Graduate Education for additional details.

Tuition, Fees and Financial Aid Policies and Procedures

Financial Aid

Financial aid for graduate students is in large part provided by individual departments based on the mission and goals of the unit. The Office of Financial Aid does not award scholarships, grants, fellowships, or GTA/GRA waivers for graduate students. The student should contact the academic unit in which the student is enrolled or plans to enroll. The Office of Financial Aid offers Federal Work-Study and Federal Direct loans, and provides information on additional financing options, including Federal Direct Graduate PLUS loans and alternative (private) loans.

DU graduate students are eligible for two types of aid:

- Federal and state aid (available to U.S. citizens and permanent residents), which includes the Colorado Graduate Grant, Federal TEACH Grant, Federal Work Study, and Federal Direct loans, and
- Merit-based aid, which includes divisional/departmental scholarships, graduate assistantships, fellowships and other merit-based aid awarded or initiated by the student's academic program of study.

To apply for federal aid and certain types of institutional need-based aid, a student must complete the Free Application for Federal Student Aid (https://fafsa.ed.gov) (FAFSA). Only U.S. citizens, permanent residents and eligible non-citizens can submit a FAFSA. International students are not eligible.

The FAFSA (https://fafsa.ed.gov) is available on October 1st each year and is submitted online. The University of Denver's school code is 001371. Applicants and students are encouraged to submit the FAFSA by the March 15th priority deadline every year. Approximately 30% of financial aid applications are selected by the U.S. Department of Education for review. This process of review is known as verification. If a student is selected for verification, Financial Aid will send an email to the student requesting additional documentation.

Federal Direct Loans

To qualify for Federal Direct Loans, graduate students must be enrolled at least half-time in an eligible degree or certificate program (four credit hours or more per quarter/semester). To receive loans, a student must also make Satisfactory Academic Progress (SAP) in the program of study, not be in default on an educational loan and submit all required financial aid forms. Federal Direct Loans are the most common type of aid for graduate students. Eligibility is determined by information provided on the FAFSA.

Federal Direct Unsubsidized Loan Information

Lender:
U.S. Department of Education

Eligibility Requirements:
Available to students who have submitted a FAFSA, regardless of financial need. If eligible, this loan will be included in your award package.

Maximum Loan Amount:
$20,500 per academic year.

Interest Rate:
This loan has a fixed interest rate (6.60% for 2018-19), and interest accrues while you are in school and during both the grace period and repayment. Interest can be paid as it accrues; if not paid, it will be capitalized at repayment. New fixed interest rates are set on each July 1st for the upcoming academic year.

Fees:
An origination fee (1.066% for 2018-19) is deducted at disbursement of each installment of the loan.

Disbursement Requirements:
To receive funds, you must accept the loan(s) through PioneerWeb, complete both a Master Promissory Note and Entrance Counseling online at www.StudentLoans.gov (https://studentloans.gov/myDirectLoan/index.action), and remain enrolled at least half-time (4 credits).

**Repayment Terms:**
Repayment begins once the 6-month grace period ends after you graduate or after you are no longer enrolled at least half-time. Payments are made to your Direct Loan servicer.

**Repayment Options:**
The standard repayment period is 10 years but can be as long as 30 years depending on total borrowing and chosen repayment plan. Loans may be consolidated with other federal loans.

### Federal Direct Graduate PLUS Loan Information

**Lender:**
U.S. Department of Education

**Eligibility Requirements:**
Available to students who have submitted a FAFSA, regardless of financial need. This loan is not automatically included in award packages (except for law students)—a separate application is required on www.StudentLoans.gov (https://studentloans.gov/myDirectLoan/index.action).

**Maximum Loan Amount:**
Up to total cost of attendance, less all other financial aid.

**Interest Rate:**
This loan has a fixed interest rate (7.60% for 2018-19), and interest accrues while you are in school and during both the grace period and repayment. Interest can be paid as it accrues; if not paid, it will be capitalized at repayment. New fixed interest rates are set on each July 1st for the upcoming academic year.

**Fees:**
An origination fee (4.264% for 2018-19) is deducted at disbursement of each installment of the loan.

**Disbursement Requirements:**
To receive funds, you must accept the loan(s) through PioneerWeb, complete both a Master Promissory Note and Entrance Counseling online at www.StudentLoans.gov (https://studentloans.gov/myDirectLoan/index.action), and remain enrolled at least half-time (4 credits).

**Repayment Terms:**
Repayment begins once the 6-month grace period ends after you graduate or after you are no longer enrolled at least half-time. Payments are made to your Direct Loan servicer.

**Repayment Options:**
The standard repayment period is 10 years but can be as long as 30 years depending on total borrowing and chosen repayment plan. Loans may be consolidated with other federal loans.

### Federal Work-Study/Student Employment Program

This work program, funded by the federal government, provides part-time employment at an hourly wage, which is determined by the demands of the job and the skill and experience of the student employee. The program encourages community service and work related to each student's career goals.

**What is work-study?**
Work-study is a need-based financial aid award that allows students to work on campus (or with an approved off-campus employer) to earn money to help pay for educational expenses. It's not a grant (because you must work to earn it), and it's not a loan (because you don't have to repay it).

**Eligibility:**
Because work-study funding is limited, it's not included in all students' award packages. Priority is given to those who applied for financial aid by the priority deadline, and if eligible, it will be included on their financial aid award letter. If you have been offered work-study, you must accept it on PioneerWeb (https://pioneerweb.du.edu) by July 1st and secure a position by October 15th or it will be cancelled.

You can only apply for work-study positions if you have this award as a part of your financial aid package, and you must be enrolled at least half-time (4 credits) to use it.

**Getting Paid:**
The amount shown on your award letter is the maximum amount you can earn over the academic year (typically $5,000). Actual earnings will depend on your work schedule and hourly rate. Since there is no pre-set pay rate, the amount earned will depend on your position. You'll be paid every two weeks for the hours worked, and your paycheck will be sent directly to you (not applied to the student's bill).
**Other Part-Time Positions:**

There are other work opportunities available! Student Employment maintains an online job board of on-campus positions that do not require work-study and off-campus positions in the greater DU and Denver area. These positions are available to all students, regardless of financial need or work-study eligibility. Access the job board listings through the [Student Employment website](https://www.du.edu/admission-aid/financial-aid-scholarships/student-employment).

For more information about employment opportunities, contact [Student Employment](https://www.du.edu/admission-aid/financial-aid-scholarships/student-employment) at 303-871-6792 or stuemp@du.edu.

**Graduate Assistantships**

Departments assign graduate assistantship positions to eligible students according to the guidelines below. Regardless of terminology a unit or department may use to describe these positions (GXA, GSA, GA, GTI, RSA, etc.), there are only three official assistantship types: Graduate Teaching Assistantship (GTA), Graduate Service Assistantship (GSA) and Graduate Research Assistantship (GRA). Assistantships can be in support of teaching assignments, general administrative duties, or research. These policies and guidelines apply to GTAs, GSAs and GRAs except where specified and must be adhered to by all graduate colleges, schools, departments and recipients.

**Assistantship Types**

Following are descriptions of each type of assistantship:

- **Graduate Teaching Assistant (GTA)**
  Graduate teaching assistants may support faculty by performing instruction-related duties such as teaching lower-level undergraduate courses and labs, developing teaching materials, leading class discussions, tutoring, preparing and giving examinations, and grading examinations or papers. GTAs are funded by the University budget. GTAs must demonstrate fluency in spoken English to be eligible to receive the GTA award. For more information, see the Required Tests for GTA Eligibility (p. 918) policy.

- **Graduate Service Assistant (GSA)**
  Graduate service assistants may perform administrative and support functions or discipline-specific projects for an academic department or business unit. Responsibilities may include administrative support, lab monitoring, equipment management, web site development and maintenance, editorial work for scholarly journals, or routine support for publications or social media. To support professional development, the graduate service assistant should be given the opportunity to apply his/her academic skills to the assigned tasks and develop new administrative skills. GSAs are funded by the University budget.

- **Graduate Research Assistant (GRA)**
  Graduate research assistants may perform research assignments under the direct supervision of a faculty member who generally is the principal investigator on an external grant or contract. The research must be directly relevant to the student’s academic program of study, should relate directly to the student’s degree requirements, and should be reasonably expected to contribute to the student’s dissertation, thesis, or capstone project. The label “GRA” only applies to graduate assistants who receive stipend and waiver from external awards (e.g. grants or contracts).

**Assistantship Eligibility**

An assistantship recipient must be enrolled in an academic program during the terms in which they receive the award, stipend and tuition waiver hours. Departments may stipulate that recipients must be enrolled full-time.

**Assistantship Academic Requirements**

Students must be in good academic standing in order to maintain eligibility for an assistantship position. Students on academic probation or suspension are not eligible for an assistantship position until that status is resolved. After two consecutive terms below 3.0 GPA, a student is not eligible for an assistantship position until the GPA is raised to a 3.0 or better.

**Graduate Teaching Assistantship (GTA) Exams, Credentials and Experience**

Any graduate applicant whose native language is not English or is from a country where English is not the native language, who wishes to be considered for any Graduate Teaching Assistantship during any year of study in any graduate department at the University of Denver, must demonstrate fluency in spoken English by scoring a minimum of 26 on the Internet Based TOEFL (iBT) exam speaking score, an IELTS score of 8 on the speaking section or a minimum score of 200 on the CAE speaking section.

Please note that the paper-based TOEFL scores will not be accepted for those applicants who wish to be considered for any Graduate Teaching Assistantship.

**GTA English Language Exemption**

Prospective GTAs may be exempted from submitting TOEFL/IELTS/CAE scores if they:

- Have earned a baccalaureate degree or higher from a formally-recognized/accredited university where the institution’s language of instruction and examination is English and have four or more consecutive years of work/instructional experience in countries with an official native language of English and the language of employment/instruction is English.
Note: GTA awards may be revoked or restricted to non-teaching assistantship responsibilities at the discretion of the division if the GTA does not demonstrate sufficient English fluency in the classroom.

English Language Proficiency Assessment

Students offered a Graduate Teaching Assistant (GTA) position whose native language is not English will be assessed by the University of Denver’s English Language Center (ELC) by completing the English Language Proficiency Assessment (ELPA) designed specifically for GTAs.

Prospective GTAs who are awarded a GTA position based on demonstrated fluency in spoken English with TOEFL/IELTS/CAE minimum scores required for GTAs whose ELPA demonstrates they are not sufficiently proficient may be permitted to hold an assistantship position, but must be restricted to non-teaching responsibilities and will be required to enroll in an ELC bridge course for enrichment.

Students may contact the unit and/or the Office of Graduate Education for additional details.

To serve as instructor of record for an undergraduate course, graduate teaching assistants must be qualified by appropriate credential or tested experience as defined by the Higher Learning Commission:

- Completed program of study in the discipline, with substantial coursework at least one level above that of the courses being taught or developed.
- Earned degree at least one level above that of the program in which they are teaching, typically a master’s degree, with substantial graduate coursework in the discipline of those courses.

or

- Industry certification and years of experience successfully working in the field.
- Documented recognition of excellence in teaching.
- Expertise, ability, and talent validated through publication or wide critical and public acclaim.

Assistantship Employment

Assistantship Hiring

Assistantship appointments are made on a full-, half-, one-third, or quarter-time basis. Assistantship awards can be made for any one quarter or all four academic quarters.

In general, full-time graduate assistants are expected to devote 20 hours per week to their assignments, half-time graduate assistants devote 10 hours and quarter-time graduate assistants devote 5 hours. However, some academic areas may require different hours.

Assistantship Employment Restrictions

Students who are admitted with provisions who are appointed to an assistantship position must satisfy the provisions in the time frame specified in the admission letter in order to remain eligible for a graduate assistantship.

If a graduate assistant should wish to change his/her major field of study to another college, school or department, the award is not transferable to the new department.

Graduate assistantships should be awarded to eligible students in the same or closely related field as their degree program.

Students cannot simultaneously hold both an assistantship position and a work-study position. However students may hold an assistantship and a work-study position in separate academic terms.

A graduate student cannot hold more than the equivalent of one full-time assistantship (GTA, GSA and/or GRA). Full-time is normally defined as 20 hours per week (1.0 FTE).

Students cannot simultaneously hold both a full-time benefitted staff position and an assistantship position, or any combination of the two exceeding 40 hours per week.

Students cannot serve as a graduate assistant in a course in which they are currently enrolled.

Assistantship Hiring Paperwork

Background Check

- All DU employees are required to complete a background check in order to be eligible to be hired. Students must be cleared as eligible to hire by Human Resources prior to officially being offered the assistantship.

- As long as a graduate assistant is re-hired within 120 days of their previous academic year’s termination, then no additional background check is required to re-hire the student. All inquiries regarding background checks should be made with Human Resources.
Other Hiring Paperwork

Students who have never worked at DU before must also submit the following items to the University’s Human Resource Office:

• I-9: As mandated by the Immigration Reform and Control Act of November 6, 1986, the University administration is required to verify the identity and work eligibility of all employees. All hiring paperwork must be completed by the student through the Human Resource Office. If an international student’s visa status changes after the student has been hired, a new I-9 must be submitted.
• Affirmation Statement: As mandated in House Bill 1017, the law requires employers to take additional steps in verifying work authorization for all new hires.
• W-4: University Payroll requires all new hires complete a new, original W-4. The Human Resource Office is the only University entity authorized to verify and complete the W-4 paperwork for new employees.

Assistantship Termination

If a graduate assistant is proven incapable of performing the responsibilities of the position, the unit has the right to terminate the award prior to the end of the award period. Units should work with Human Resources when pursuing the termination of a graduate assistant.

If the appointment of a graduate assistant is terminated by means other than death or disablement before the end of an academic term, the award recipient is responsible for repayment of the “unearned” share of the award, including waiver hours “borrowed” from the future (GTA and GSA only). Repayment may occur through deductions from the final paycheck or by other means.

With permission from the appropriate budget officer, the program may hire a replacement graduate assistant and reallocate the unused portion of any remaining stipend or waiver award to the new assistant.

Assistantship Stipend and Waiver Awards

Assistantship offers must include both a tuition waiver and monthly stipend unless the student has completed all coursework and is registered for Continuous Enrollment. In that case, the student may be offered a stipend without a tuition waiver.

Awards are made through the graduate college, school, or department. Assistantship awards can be made for any one quarter or all four academic quarters.

Assistantship awards will be full-, half-, one-third, or quarter-time. Graduate Assistants who are less than full-time receive stipend and waivers proportional to their appointment.

Assistantship Stipends

Stipends are paid through payroll and are taxable income.

Assistantship Waivers

Tuition waivers are considered merit-based scholarships and are not taxable income.

The combination of all tuition waivers cannot exceed tuition charges (prior to any assessed fees) and waivers cannot be awarded in cash.

Normally, full-time graduate assistants receive 8-10 hours of waiver for each academic term. Awards in specific colleges, schools, or departments may vary.

There is no tuition-waiver benefit for spouses, dependents, or non-dependents of graduate assistants.

When assistantship recipients have both scholarship and waiver hours available in any given term, scholarship hours will be drawn upon first to pay tuition bills. When assistantship recipients are also employees and have a combination of employee waiver, scholarship and/or assistantship waiver hours available in any given term, the employee waiver will be drawn upon first, then the scholarship hours and finally the assistantship waiver hours will be drawn upon to pay tuition bills.

Because the fiscal year ends before the summer term closes, waivers cannot be carried forward from the spring to the summer term.

Waiver hours cannot be used for interterm courses, noncredit courses, or any other fees or fines, including continuous enrollment fees.

If the student drops courses after or during the refund period for which waiver hours have been used, the waiver will not be re-awarded for future use.

Graduate assistant positions awarded late or after the fall term may affect other financial aid that a student is receiving.

GTA/GSA Award Duration and Use

When awards are made for multiple terms during an aid year (for instance, fall through spring), GTA and GSA waiver hours will be divided equally among the terms, except in the case of term-by-term appointments which should be entered into the specific term for which the award is to be used. Students must inform their program of their plan for waiver hour use. Appointments cannot be effective prior to the term in which the student will
On-Campus Employment Authorization for International Students

actually begin working; i.e., a GTA and GSA appointment cannot begin in the summer if the student will not be working until fall term. “Appointment” means that the student is working and earning a stipend.

When awards are made for a single term, waiver hours will be available for use during the term of appointment only. GTAs appointed term-by-term cannot borrow waiver hours from the future or carry over waiver hours to the next term. GTAs will not receive waiver hours during any term they are not receiving a stipend.

**GRA Award Duration and Use**
GRA awards are for one-quarter duration and GRA waivers cannot carry forward. There is no borrowing from the future and no carry-over from one term to the next, and GRA waivers cannot be made available until the term they are earned. GRA awards are subject to these policies for the life of the research grant.

Neither the stipend nor the waiver portion of a GRA award can cover any period outside of the grant or contract period. For example, if a grant or contract begins or ends at the halfway point of a term, no more than one-half of a full award (stipend and waiver) can be paid during that term.

**Health Insurance Scholarship**
The Graduate Assistantship Health Insurance Scholarship ("Health Insurance Scholarship") covers the cost of the DU Student Health Insurance Plan (SHIP) and the Health and Counseling Fee (HCF).

**Health Insurance Scholarship Eligibility**
To be eligible for the Health Insurance Scholarship, graduate assistants are required to meet the following criteria:

- have a full-time assistantship appointment (GTA, GRA, or combination) for fall, winter, and spring quarters
- successfully complete the requirements of their full-time assistantship appointment for fall, winter, and spring quarters
- have a tuition waiver offer from the department averaging at least eight credit hours for the fall, winter, and spring quarters (for a total of at least 24 credits)
- register for and complete an average of eight credit hours during the fall, winter, and spring quarters (for a total of at least 24 credits of actual coursework, not including Continuous Enrollment)
- must not be registering for Continuous Enrollment (CENR) alone in any one of the three quarters
- must have been charged/assessed the SHIP and HCF fees
- must not waive the SHIP and HCF fees in PioneerWeb
- must accept the scholarship award offer by the fall quarter deadline

**Health Insurance Scholarship Requirements**
Students who wish to receive the Health Insurance Scholarship must accept the terms and conditions of the scholarship and the award in PioneerWeb (https://pioneerweb.du.edu:8447/cas-web/login?service=https%3A%2F%2Fpioneerweb.du.edu%2Fc%2Fportal%2Flogin).

After receiving the Health Insurance Scholarship, failure to comply with any of the terms and conditions may result in a hold being placed on the student's account. The hold will not be removed until the student has re-paid the health insurance charges.

The award (payment) will automatically be applied to the student's account if they have registered for classes, have been assessed the DU Health Insurance Plan (SHIP) and/or the Health and Counseling Fee (HCF) and have not waived the SHIP and/or HCF online.

Students who are on Continuous Enrollment or are not registered for six credits are not automatically assessed the SHIP or HCF each quarter. In order to be assessed the SHIP and HCF and receive the scholarship, students must complete the SHIP and HCF enrollment forms for Continuous Enrollment (available through the Health and Counseling Center) for all applicable terms.

**On-Campus Employment Authorization for International Students**
Federal immigration regulations permit F-1 and J-1 students in lawful immigration status to work on campus at the school or program that holds their SEVIS record. On-campus employment may include graduate teaching assistantships, graduate research assistantships and student worker positions; international students are not eligible for work-study positions due to U.S. citizenship or permanent residency requirements. F-1 students may work on campus without special authorization as a benefit of their immigration status. J-1 students must receive written authorization from an international student advisor or their non-DU program sponsor prior to beginning on-campus employment. J-1 employment authorizations may be approved for on-campus employment for up to 12 months. Unauthorized on-campus employment, or employment in excess of the maximum numbers of hours permitted per week, constitutes a violation of the student's immigration status. International students in other immigration statuses may generally not work on campus without an Employment Authorization Document issued by U.S. Citizenship and Immigration Services (USCIS).

Questions regarding the interpretation and application of immigration regulations governing the on-campus employment benefit of F-1 and J-1 students should be directed to an international student advisor in International Student and Scholar Services (http://www.du.edu/intl/isss).
Maximum Number of Hours per Week
F-1 and J-1 students may work up to 20 hours per week (part-time) during quarters of required enrollment and more than 20 hours per week (full-time) during their annual vacation quarter and during University breaks and interterm periods. These limits apply to the total number of hours worked in a single calendar week among all on-campus positions.

Definition of Employment
For immigration purposes, employment—whether on or off campus—is defined as the exchange of services for compensation, monetary or otherwise. International students must have the appropriate authorization from an international student advisor, the program sponsor, or USCIS prior to beginning any form of employment in the United States.

Definition of On-Campus Employment
Federal immigration regulations define on-campus employment for F-1 and J-1 students as follows:

• Employment for the host school or program on the institution’s premises; or

• Employment for a commercial firm that operates on the premises of the host school or program and that provides direct services to the student population, such as a campus bookstore or cafeteria; or

• Employment at an off-site location that has an established educationally affiliated relationship with the host school or program, generally evidenced by a Memorandum of Understanding.

Start of Employment Authorization
F-1 and J-1 students may begin on-campus employment immediately upon acquiring F-1 or J-1 immigration status. Students beginning a new period of F-1 or J-1 status may begin on-campus employment upon entering the United States, up to 30 days before their program start date. Students transferring from another school or program may begin on-campus employment after the release of their SEVIS record to the University and reporting to International Student & Scholar Services. Students beginning a new program at DU after completing another program may continue working on campus in the interim provided a change of level or program has been authorized by an international student advisor and there is no break in the student’s F-1 or J-1 status.

Curricular Practical Training
F-1 students may request a Curricular Practical Training (CPT) authorization from an international student advisor to participate in a paid internship, practicum experience, or other form of practical training that is an integral or required part of the student’s program of study. More information regarding CPT can be found on the ISSS website (http://www.du.edu/intl/issss).

Academic Training
J-1 students may request an academic training authorization from an international student advisor or their program sponsor to participate in a paid internship, practicum experience, or other form of practical training that is an integral or required part of the student’s J-1 program. J-1 students should consult with ISSS regarding academic training requirements.

Required Documentation to Hire International Students
Departments should refer to the University’s I-9 process for verifying employment eligibility when hiring international students. Please refer to New Hire Checklist: F-1/J-1 Students on the ISSS website (http://www.du.edu/intl/issss).

English Proficiency Requirements
F-1 and J-1 immigration regulations do not require students to have a defined level of English proficiency prior to beginning on-campus employment. However, University policy requires a specific level of achievement in English proficiency for graduate teaching assistantships (p. 918).

Financial Aid Policies
Satisfactory Academic Progress
In order continue receiving financial aid, you must maintain Satisfactory Academic Progress (SAP).

Federal regulations require us to monitor the academic progress of all graduate students—including PhD students—receiving financial aid toward the completion of their degree. (Please note: this policy pertains only to financial aid and is separate from other academic policies published by the institution.) SAP is monitored on a yearly basis—usually in mid-to-late summer—and is effective the following fall term. Certificate program students are an exception; their SAP is monitored at the end of every term. As a financial aid recipient, you must maintain the following minimum standards to continue receiving financial aid:
• You must maintain a Cumulative Grade Point Average (CGPA) of 3.00.
• JD law students must maintain a CGPA of 2.3 (2.70 for all other law students, including master’s, certificate, LLM and graduate tax).
• You must complete and pass a minimum of 66.6% of all courses attempted. This is known as your Cumulative Completion Rate (CCR).
• You must complete your degree within 150% of the minimum credits required to graduate. This is known as the Maximum Time Frame (MTF) limit.


Withdrawal and Financial Aid

Any student who begins classes at DU, applies for financial aid, completes all of the requirements to obtain aid and then withdraws from classes may have their financial aid adjusted according to federal, state and institutional regulations. Students must contact the Office of the Registrar to withdraw officially from the University, and must contact Academic Advising after withdrawing to complete leave of absence information. Leave of absence affects financial aid status upon return to the University; it does not affect withdrawing from the University.

Students who withdraw during the 100 percent refund period (drop/add) for any term may have all of their aid for that term cancelled and returned depending on the type of withdrawal. Students who drop below the number of hours reflected in their financial aid budget during the drop/add period will have their budget adjusted to reflect the new hours and aid will be adjusted accordingly.

Return of Title IV (R2T4) Funds Policy

Title IV (Federal) funds are awarded to you under the assumption that you will attend school for the entire period for which the assistance is awarded. When you withdraw from all courses, for any reason including medical withdrawals, you may no longer be eligible for the full amount of Title IV funds you were originally scheduled to receive.

If you withdraw from all courses prior to completing at least 60% of term, you may be required to repay a portion of the federal financial aid you received for that term. A pro rata schedule is used to determine the amount of federal student aid funds you will have earned at the time of withdrawal.

The return of funds is based upon the concept that students earn their financial aid in proportion to the amount of time in which they are enrolled. Under this reasoning, a student who withdraws in the second week of classes has earned less of his/her financial aid than a student who withdraws in the seventh week. Once 60% of the term is completed, you are considered to have earned all of your financial aid and will not be required to return any funds. If you withdraw during the 100% refund (add/drop) period for any term, all of your aid for that term will be cancelled and returned.


Tuition and Fees

Tuition Charges (p. 926)
Student Fees (p. 926)
Late Charges (p. 927)
Student Financial Liability (p. 927)
Refund Information (p. 927)
Tuition Refund Appeals (p. 927)

Tuition Charges

Tuition for most programs during the regular academic year (fall, winter, and spring quarters) is charged at a flat rate for students carrying 12 through 18 credit hours. Students in a flat rate program will be charged the hourly rate on each hour taken beyond 18 hours per quarter.

Other academic programs, such as Sturm College of Law, Daniels College of Business, University College and some distance education programs, may have a different tuition rate and students in those programs may not be eligible for the flat rate. Tuition charges for residents or non-residents of Colorado are the same. The University reserves the right to make changes in tuition charges or refund policies without advance notice.

Student Fees

In order to enhance opportunities for students’ use of technology in and out of the classroom and to provide multiple modalities of student learning, a student technology fee is charged each quarter to all students. This fee is charged per credit hour taken. The student activity fee is assessed of all registered graduate and professional students (both part- and full-time). Exclusions include students enrolled in degree programs in the Sturm College of Law or University College non-credit courses and non-degree programs.
Late Charges

Registration beginning on the first day of the quarter is considered late registration. All students (continuing, new, returning leaves of absences, and readmitted) who do not register before the first day of the quarter are assessed a late registration service charge that cannot be waived. Once registered, students may drop and add courses freely through the seventh day of the quarter without financial penalty.

Late Registration Service Charge

A service charge of $25 is assessed the first day of the quarter for all students who have not enrolled in at least one course prior to the first day of the quarter. A $50 service charge is assessed from the second through the fifth days of the quarter (business days, Monday–Friday). If registration is available over the weekend during or immediately following the first five business days, the $50 service charge is applied to first-time weekend enrollees (Saturday or Sunday). A $100 service charge is assessed beginning the sixth business day and continuing through the remainder of the quarter. Days are calculated based on the term's academic calendar and not on the class meeting days of specific courses. Tuition, fees and any other charges are due as specified on the billing statement. The service charge is not assessed for adding classes to an existing schedule. The maximum fee assessed for late registration in a given term is $100.

Late Payment Fee

Registered students for a given term who have not paid, or made arrangements to pay, their tuition by the appropriate University deadlines may be assessed a late payment fee. Late fees are assessed every month until a balance is paid in full or payment arrangements are set up.

Student Financial Liability

It is the student's responsibility to abide by the University's payment and refund policies.

If, after completing the registration process, the student does not withdraw from registration by the last day for 100% refund for dropped classes date published on the Academic Calendar (http://www.du.edu/registrar/calendar) on the Office of the Registrar's website, the student agrees to pay the total amount of tuition and other charges set forth. The student understands that if any payment is not made when due, or if the student withdraws, or is required to withdraw, from the University for any reason, then all remaining tuition and other charges are immediately due and payable. All amounts not paid when due may begin to accrue monthly late fees. In addition, the student agrees to pay all collection costs and amounts. If the student has any overdue charges outstanding, the University may recover those overdue amounts by reducing any payments owed by the University to the student.

Students are not removed from classes based only upon non-payment. Students who do not officially withdraw from classes and do not attend have “F” grades assigned and may owe tuition and charges as specified above.

Students with a past due balance for a given term are not allowed to enroll in classes for any subsequent term. Grades, transcripts, and other attendance certifications are withheld and a financial hold placed on the account until payment is received.

Refund Information

The date of withdrawal from a class at the University is the date that the Registrar's Office receives a written notification of withdrawal or the date the student drops the class online.

In order for tuition charges to be reversed at 100% for complete withdrawals, programs on the quarter system (except University College) should refer to the Academic Calendar (http://www.du.edu/registrar/calendar) on the Office of the Registrar’s website, for specific refund dates. Refunds are first applied to any obligations owed to the University, including charges with future dates.

Note: Some units may have different policies regarding tuition, fees and payments. Contact the unit for details.

Tuition Refund Appeals

A student may appeal for an exception to the University refund policy if unusual circumstances exist that are beyond the student's control. A student must officially withdraw from the course prior to beginning the appeals process. The statute of limitations for an appeal is 90 days from the end of the term in which the course for which the tuition being appealed was offered.

Informal Appeal/Automatic Refund

If a student drops all classes for a given term, an informal appeal for a full refund may be made to the Office of the Registrar. An informal appeal requires that the withdrawal is completed and the request for the tuition refund is made prior to the end of the sixth week of the term (defined by the deadline for automatic W). To be eligible for an automatic refund, the condition for withdrawal must meet one or more of the following criteria and must be accompanied by appropriate documentation as specified below:
Criteria and Documentation

Physical and/or mental illness that prevents the student from completing the course(s)
Documentation: A signed, dated, letter on letterhead from the physician for physical illness or psychiatrist or other licensed mental health professional for mental illness. The letter must specifically state that the student was advised to withdraw due to illness.

Death of a student (sixth week deadline for informal appeal waived)
If a student dies after enrolling and paying tuition but before the sixth week of the quarter, the tuition will be refunded without a formal tuition appeal.

After the sixth week of the quarter, a formal appeal must be submitted to the Bursar’s Office.

Documentation: Memorial Service folder, notice published in the newspaper, or copy of the death certificate.

Serious illness or death of immediate family member, which prevents the student from completing the course(s)
Documentation for illness: A signed, dated, letter on letterhead from the physician for physical illness or psychiatrist or other licensed mental health professional for mental illness.

Documentation for death: Memorial Service folder, notice published in the newspaper, or copy of the death certificate.

Job relocation or loss of employer reimbursement eligibility due to involuntary job loss
Documentation: A signed, dated, letter on letterhead from immediate supervisor or human resource administrator.

Unexpected increase in job responsibilities, required change in work schedule, or required travel that prevents completion of all courses
Documentation: A signed, dated, letter on letterhead from immediate supervisor or human resources administrator that specifies dates of increased workload or travel.

The documentation, as listed above, must be submitted to the Office of the Registrar prior to the end of the sixth week of the term. If the documentation is adequate and establishes a condition that prevents the student from completing the course(s), appropriate adjustments are made to the student's account. If conditions do not merit an automatic refund, the student may make a formal appeal. The Office of the Registrar and the Bursar’s Office staff reserve the right to request that a formal appeal be made if in their judgment conditions or documentation are inappropriate or dubious.

Formal Appeal

In cases where circumstances do not fit the criteria for an informal appeal, the end of sixth week (automatic “W”) deadline has passed, or an informal appeal is not accepted, a formal appeal for full or partial refund may be filed. Petitions are filed through PioneerWeb. Select the Student tab, locate Documents/Requests in the upper right hand section of the page and select Request for Tuition Appeal. Completed forms and supporting documentation must be submitted by noon on the first Thursday of the month. Petitions are reviewed and decided by the Tuition Appeals Committee, which meets once per month. The decision of the Committee is final and is communicated to the student by letter.

Notes: In accordance with federal, state and institutional regulations, approval of an appeal may require forfeiture of any financial aid proceeds received, which may result in an outstanding balance being owed to the University.

Academic Requirements, Policies and Procedures

Academic Standards (p. 929)
Change of Degree or Program (p. 931)
Class Attendance (p. 931)
Doctoral Degree Requirements and Standards (p. 932)
Electronic Thesis and Dissertation (p. 937)
Enrollment Status (p. 939)
Graduation Requirements (p. 941)
Internships After Completion of Coursework (p. 944)
Master’s Degree Requirements (p. 944)
Readmission (p. 948)
Registration (p. 949)
Student Responsibility for Policies and Procedures (p. 953)
Student Withdrawal from the University (p. 953)
Students Called for Military Duty (p. 955)
Transfer of Credit (p. 956)

**Academic Standards**

Grade Point Average (p. 929)
Good Academic Standing (p. 929)
Below 3.0 Grade Point Average (p. 929)
Graded Work Accepted for the Degree (p. 929)
Repeating Courses (p. 930)
Candidate Status and Completion of Coursework (p. 930)
Grade Changes (p. 930)
Probation (p. 930)
Suspension (p. 930)
Dismissal and Termination (p. 930)
Administrative Withdrawal (p. 931)

**Grade Point Average**

The grade point average (GPA) is determined by multiplying the credit points (for example, B+ = 3.3) by the number of credit hours for each course. Next, add up the total credit hours attempted, total the credit points, and divide the number of points by the number of hours.

Grades of I, IP, NC, NR, W, NP or P are not included in the grade point average. 'NA' (Never-Attend) grades are treated like 'F' grades and should be counted as such. Incomplete grades that are not completed within one calendar year from the quarter the original course was taken are converted to grades of 'F' in the GPA. All grades for repeated courses are included in determining the GPA.

**Good Academic Standing**

Graduate students must maintain a cumulative GPA of 3.0 or higher to be in good academic standing. Master's students in the Sturm College of Law must maintain a cumulative GPA of 2.7. JD students in the Sturm College of Law must maintain a cumulative GPA of 2.3.

**Below 3.0 Grade Point Average**

Any student whose overall grade point average falls below a 3.0 (2.7 for Law Master’s, 2.3 for Law JD) is no longer in good academic standing and may be warned, put on probation, suspended or dismissed, depending upon the grade point deficiency. Each quarter on probation, the student must contact the advisor to develop a plan to remedy the academic deficit.

If it is numerically impossible for the student to raise the GPA to 3.0 (2.7 for Law Master’s, 2.3 for Law JD), or if in the opinion of the student's advisor, department chair and/or dean, the student is not making academic progress to finish the requirements of the degree, the student will be dismissed from the program.

Students whose GPA falls below a 3.0 may not be eligible for some types of financial aid. For more information, see Satisfactory Academic Progress (SAP) (p. 925), or contact the Office of Financial Aid for details. The student is ineligible to represent the University in intercollegiate activities.

**Graded Work Accepted for the Degree**

In no case may more than one-fourth of the hours accepted toward the degree be grades of "C." A grade lower than "C-" renders the credit unacceptable for meeting University degree requirements. Grades of "C-" or better qualify for graduate credit but may not count towards the degree. Students should consult with their program to understand unit-specific minimum grade requirements.

Students cannot take more than eight-quarter hours beyond the degree requirements in order to make up grade deficiencies. These additional credit hours should be relevant for the degree and approved by the student's advisor. Students whose grades are still deficient after taking the additional eight hours are terminated from the degree program.
Repeating Courses

Unless it is specifically designated as repeatable, a course in which the student has received a qualifying grade may not be repeated for credit.

If a non-repeatable course is taken again, the regular tuition rate is charged, and the course is counted as part of the total credit load. All grades are counted in GPA calculations. The highest grade received in the repeated course fulfills the degree requirements, but hours earned toward degree requirements are counted only once.

All repeated courses appear on student transcripts. Automated advising tools (e.g., the Degree Audit) may show only first grade for the course.

Candidate Status and Completion of Coursework

Advanced degrees are not awarded automatically on completion of the required number of courses or hours of credit, and the candidate’s status is subject to review at any time.

Grade Changes

Grades submitted by instructors at the end of the term are final and are not subject to change by reason of revision of judgment on the part of the instructor. Grades cannot be changed on the basis of a second trial, such as a new examination or additional work undertaken or completed after the grade report has been recorded, or by retaking the course.

In the event of a grade error, the faculty member should change the grade using the University’s grade change process. Any correction or appeal of a grade must take place in the term following the one in which the grade was assigned. Grade changes require the approval of the Chair of the Department and relevant Dean before being approved. Changing an Incomplete grade does not require any outside approval, unless the Incomplete has expired, in which case the Dean must approve the change.

Note: Some graduate units may have more restrictive policies. Contact the academic unit for details.

Probation

Any student whose overall grade point average falls below a 3.0 will be placed on probation. Requirements for probationary status for Sturm College of Law is 2.7 for master’s students and 2.3 for JD students.

Each quarter on probation, the student must contact the advisor to develop a plan to remedy the academic deficit.

If it is numerically impossible for the student to raise the GPA to 3.0 (2.7 for Law Master’s, 2.3 for Law JD), or if in the opinion of the student’s advisor, department chair and/or dean, the student is not making academic progress to finish the requirements of the degree, the student will be dismissed from the program.

Suspension

Students may be suspended from the University for academic or behavioral misconduct and may not be permitted to enroll for a period specified as part of the terms of their suspension.

The University will not accept courses completed at another institution while the student is under suspension.

A suspended student who wishes to re-enroll must request readmission through his/her program’s admission office.

Dismissal and Termination

Academic Dismissal

A student will be recommended for dismissal from their graduate program for the following reasons:

- the student maintains a GPA lower than 3.0 (2.7 for Law Master’s, 2.3 for Law JD) for three consecutive quarters (two semesters)
- if it is numerically impossible for the student to raise the GPA to 3.0 (2.7 for Law Master’s, 2.3 for Law JD), or if in the opinion of the student’s advisor, department chair and/or dean, the student is not making academic progress to finish the requirements of the degree
- the time limit for completing provisions has expired
- severe academic or behavioral misconduct
- violation of the Honor Code

Students who have been dismissed from the academic program are not normally readmitted
Termination

A student will be recommended for termination from their graduate program for the following reasons:

- the time limit for completion for the degree has expired
- the request for an extension of time has been denied
- the student wishes to change to another degree program outside of the college, school, or department in which the student is currently enrolled

Students who have been terminated from their program due to an expired time limit for degree who wish to be readmitted must meet the following criteria outlined in the Readmission for Terminated Students policy (http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/readmission)

1. Submit a new application to the program and meet the current admissions criteria.
2. If admission is granted, the most current program bulletin must be followed, including all curriculum and program requirements.
3. All previous coursework older than five years must be reviewed by the department to determine if it is still relevant for current term of admittance.

Final approval for admission, consideration of coursework from a program in which a student was previously terminated, and timeline for degree completion must be approved by the Vice Provost for Research and Graduate Education.

Notes: Some programs may have more stringent policies. Contact the unit for details.

Requirements and procedures for termination for Sturm College of Law students may be different. Students should consult the unit for appropriate procedures.

Administrative Withdrawal

Students are administratively withdrawn from courses that are canceled by the University.

Canceled courses are deleted from the student's record and tuition charges reversed, if appropriate. Students are notified of the cancellation by the college, school or department responsible for offering, and subsequently canceling, the course.

Change of Graduate Degree Program

An applicant or student wishing to change a major, concentration, location, or delivery mode (i.e., on-campus, online) or wishing to change to a lesser or equal degree (e.g., doctoral to master's level) within the same College/School has the following options:

Applicant:

- After submitting an application and prior to receiving an admissions decision, applicants may request a one-time change to an academic program within the same College/School to which they originally applied. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.
- After an admissions decision has been rendered and before the first day of class, a student can request a one-time change to their academic program within the same College/School with approval by the department. A new application, additional supporting materials and/or a new application fee may be required at the department's discretion. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.

*If an applicant wishes to change to a program outside of the College/School to which they originally applied or change to a higher-level degree program, then submission of a new application, supporting application materials, and payment of another application fee are required.

Current Student:

- Starting the first day of class, a student can submit a completed change of major form (https://www.du.edu/sites/g/files/lmucqz251/files/2018-11/change_of_major_0.pdf) to the Office of Graduate Education. The College/School reserves the right to request that the student submit a full application for admission, including the application fee.
- A student wishing to change to a degree program outside of the current College/School, or wishing to change to a higher degree (master's level to doctoral), must submit a full application for admission, including the application fee and supporting application materials. A graduate student who wishes to change to another degree program must be withdrawn/terminated from the program of original admittance and accepted into the new degree program.

Note: Some units may have alternative procedures for changing degree programs. Contact the unit for details.

Class Attendance

Students must officially enroll for the courses they attend. A student cannot receive credit or a grade for a course without being enrolled in it.

Instructors have the right and responsibility to establish attendance policies for their courses.
Religious Accommodations and Class Attendance

Students are responsible for informing instructors about their absence from class and for completing assignments given during their absence.

Religious Accommodations and Class Attendance

University policy grants students excused absences from class or other organized activities for observance of religious holy days, unless the accommodation would create an undue hardship. Faculty are asked to be responsive to requests when students contact them IN ADVANCE to request such an excused absence. Students are responsible for completing assignments given during their absence, but should be given an opportunity to make up work missed because of religious observance.

Once a student has registered for a class, the student is expected to examine the course syllabus for potential conflicts with holy days and to notify the instructor by the end of the first week of classes of any conflicts that may require an absence (including any required additional preparation/travel time). The student is also expected to remind the faculty member in advance of the missed class, and to make arrangements in advance (with the faculty member) to make up any missed work or in-class material within a reasonable amount of time. The student is to be trusted that he/she will observe the holy day as promised; no proof will be expected.

Examples of reasonable accommodations for student absences might include: rescheduling of an exam or giving a make-up exam for the student in question; altering the time of a student's presentation; allowing extra-credit assignments to substitute for missed class work or arranging for an increased flexibility in assignment due dates; releasing a graduate assistant from teaching or research responsibilities, etc. The student must be given the opportunity to do appropriate make-up work that is equivalent and intrinsically no more difficult than the original exam or assignment. Faculty should keep in mind that religion is a deeply personal and private matter and should make every attempt to respect the privacy of the student when making accommodations (for example, it is not appropriate to announce to the class that a student is doing a presentation or making up an exam at a later date because of their religious observance).

If a student and course instructor cannot agree on an accommodation, the student may bring the matter to the Department Chair for a decision. Additional resources in resolving disagreements over accommodations include the Office of Cultural and Spiritual Life, and the Office of Diversity and Equal Opportunity. If there is still no agreement, the student may bring the matter to the school or college dean's office, where a final decision will be made. Students who believe they have been discriminated against on the basis of religion by the denial of a requested religious accommodation may contact the Office of Diversity and Equal Opportunity to learn about filing a discrimination complaint.

Final Exams

Any final exam for a course must be scheduled during the final exam period. Each quarter, the Office of the Registrar posts the final exam schedule on its website at www.du.edu/registrar. Students must attend all final exams as scheduled by faculty. Students are expected to let their instructors know when they have more than one exam being held at the same time. The Office of the Registrar will attempt to resolve conflicts whenever possible. Final exams are not changed to accommodate student travel plans, and students should only plan travel after the official end date of the term.

Campus Weather Closures

Sometimes severe storms may create such a hazard that the University makes a decision to close and cancel operations for a period of time. Students can receive information about campus weather closures by registering for the Critical Incident Notification System (https://www.du.edu/emergency/notification). The University of Denver homepage will also be updated to reflect a closure due to severe weather.

Certificate Requirements

Time Limit for Completion of the Degree

Postbaccalaureate certificates should be completed within three years of beginning the certificate program with the exception of Certificates of specialization/concentrations, which are earned at the time the master's degree is completed.

Final Procedures for Earning the Certificate

The student must assume full responsibility for meeting all basic requirements for the certificate as well as the specific requirements outlined by the college, school or department. The student must complete the following:

- Students completing an academic certificate must apply for graduation by the deadline. Failure to complete the certificate during the expected graduate term may require a new application and payment of a fee for additional evaluation and services.

Doctoral Degree Requirements and Standards

The doctorate is the highest degree offered by the University. It is conferred on students who successfully complete those requirements that the faculty of the college, school or department have prescribed as the criteria for determining the general proficiency and specialized competence of the candidate in the candidate's chosen field. Total achievement, within the framework of certain accepted standards and uniform course requirements, constitutes the major consideration in awarding the doctorate. Each candidate's program is planned and carried out under the supervision of the
program advisor and committee in accordance with requirements approved by departments, and with regard for the individual nature of the student’s objectives.

Requirements (p. 933)

The Doctoral Dissertation (p. 934)

Doctoral Dissertation Oral Defense (p. 935)

Completing the Degree (p. 936)

Requirements

Credit Requirements

The approved range of graduate credit for the doctoral degree is 90-142 quarter credit hours beyond the bachelor’s degree. However, some colleges, schools and departments may have different requirements; consult the specific graduate program for details.

Students enrolled in a graduate program should not take courses towards another degree program unless the student has been accepted into the second program, and no more than three courses may be earned at the University of Denver and applied towards a degree program before acceptance into that degree program. Graduate coursework and credit hours already applied toward a degree received from the University of Denver cannot be applied towards another graduate degree of the same level or less.

Advanced degrees are not awarded automatically on completion of the required number of courses or hours of credit.

Residency Requirements

Enrollment in at least six quarters (four semesters), minimally 45 credit hours, including at least two consecutive quarters (one semester) of full-time attendance is required for graduation.

Advising

Responsibility for securing approval of a proposed program of study rests with the student. Consultation with the advisor at regular intervals is essential to satisfactory planning and progress toward a degree. The requirements outlined in the college, school, or departmental summaries serve as a guide to program planning and are subject to specific determination in consultation with program advisors, and the student must assume full responsibility for meeting basic requirements and deadlines, as well as the specific requirements outlined by the program advisor.

Research Tool Requirements

Candidates may be required to demonstrate proficiency in the required tools for research and advanced study.

Where required, tool requirements are determined by the candidate’s advisor and committee, and may include one or more languages, statistical methods, laboratory or other research skills. Consult the college, school or department for requirement details.

Advancement to Preliminary Candidacy

The minimum requirements for advancement to preliminary candidacy include formulation and approval of candidate’s general plan of study, achievement of regular status, a minimum grade point average of 3.0 in all work completed to that point, posting of any transfer credit to the candidate’s record and planning of tool requirements.

During or immediately after the first full quarter of doctoral study (normally the first post-Master’s quarter), students should arrange with their college, school, or department for an evaluation of status so they may be recommended for advancement to preliminary candidacy.

Note: Advancement to preliminary candidacy may also require satisfactory completion of entrance qualifying examination, if required by the program. Consult the college, school or department for more details.

Comprehensive/Competency Examination

This examination is either a written or an oral test designed to evaluate the student’s work in the major and related fields. The examination is scheduled at least three quarters (two semesters) prior to graduation. A candidate who fails one or all parts of the examination may petition the college, school or department for re-examination. If granted, a re-examination may not be scheduled until the following quarter.

It is generally expected that students will complete the comprehensive exam prior to defending the dissertation proposal. Students should consult with their unit regarding the timing of the comprehensive exams and the proposal defense.
The Doctoral Dissertation

The dissertation represents the culminating research experience for doctoral of philosophy students through which degree candidates are expected to complete quality original scholarship that contributes to the theoretical/research knowledge base of the candidate’s field of study. The college, school or department determines the amount of credit allowed for research and work on the dissertation. Students should consult the Office of Graduate Education on instructions regarding how to prepare and format the dissertation. (https://www.du.edu/_assets/documents/core/formatting.pdf)

The Graduate School of Professional Psychology requires their doctorate of psychology candidates to complete a doctoral paper instead of a dissertation.

The Morgridge College of Education requires their doctorate of education candidates to complete a doctoral paper instead of a dissertation.

Program-Level Dissertation Proposal Committee

All candidates for the doctorate of philosophy degree must have a dissertation director who is in the student’s graduate program. Programs may require that dissertation proposals be approved by or defended before a committee within the department. Programs reserve the right to determine the composition of the dissertation proposal committee. However, only those who meet the following University requirements may serve as voting members of the oral defense committee.

Doctoral Dissertation Oral Defense Committee

The doctoral candidate’s dissertation oral defense committee will be submitted to the Office of Graduate Education for approval by the Vice Provost for Research and Graduate Education. OGE staff will review the committee to ensure that it meets University policies and the Vice Provost will work with the department/program chair to resolve any concerns that the proposed committee may not adhere to University policies.

Prior to coming to OGE the department/program chair is responsible for confirming the committee membership is appropriate for the dissertation subject matter and for supporting the student’s academic needs. If rejected by the chair or the Vice Provost, the dean or designee can review an appeal of committee membership.

The Thesis/Dissertation Oral Defense Committee Recommendation form should be returned to the Office of Graduate Education as soon as the dissertation proposal has been approved or 30 days following IRB submission but no later than the first day of the quarter in which the student expects to complete the degree.

Composition

Dissertation Director

The dissertation director is ordinarily a tenure-line or research faculty member of the candidate’s graduate program. Under some circumstances, faculty with other designations (e.g., clinical) can serve as the dissertation director with approval of the department/program chair and dean/designee. The process for approval is the same as for other committee members (see below).

It is the dissertation director’s responsibility to ensure that the student’s research meets appropriate academic standards for the discipline in which the degree is being conferred. The dissertation director is a voting member of the committee.

Committee Members

The committee is composed of a minimum of three and a maximum of six voting members, including the dissertation director. This includes the dissertation director but does not include the Oral Defense Committee Chair, who is a non-voting committee member. Tenure-line and research faculty from DU (or approved Iliff faculty for students in the DU-Illiff Joint PhD program), including those outside the student’s program, are automatically eligible to serve on dissertation committees if the dissertation subject is appropriate to their field of expertise.

Faculty with other designations (e.g., clinical, teaching, professor of the practice) are eligible to serve as voting members of the committee if they have been actively involved in research and scholarship in a relevant field and meet the following requirements:

1. Possession of the research doctorate, terminal degree in the field, or equivalent record of research, scholarship, or achievement appropriate for the program; and

2. Professional productivity as evidenced by achievement such as:

   • Publication of a book or books recognized in the field as scholarly work;
   • Publication of articles in recognized, peer-reviewed scholarly journals;
   • Publication of articles in conference proceedings;
   • Current award or completion of an externally-funded project (e.g. grant recipient or program manager);
   • Possess national eminence in the topic field;
   • Juried performances, exhibitions, or creative works that have received significant regional, national, or international recognition.
Department/Program chairs should submit the CV of an individual to the dean or designee for approval. Once approved, the Office of Graduate Education will maintain these approved lists for individual programs for three years without additional review.

Individuals from other institutions may serve as voting members (not director) of the committee. If in a tenure-track or research faculty position in a relevant field at a university or research position in a National Laboratory, they are automatically eligible. If not, individuals must submit a current CV through the department chair for approval by the dean/designee. Once approved, the Office of Graduate Education will maintain these approved lists for individual programs. No more than one committee member can come from outside DU, with the exception of the DU-Illiff joint PhD program, in which case multiple members may come from Illiff.

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[1] (p. ) Actively is defined as contributing to research in the last three to five years

**Oral Defense Committee Chair**

The role of the oral defense committee chair is to ensure a fair examination process that adheres to the policies outlined in the Graduate Bulletin. The chair should provide a non-specialist’s perspective on the quality of the dissertation. The chair must be familiar with the standards for doctoral research and should have some general knowledge of the topic of the student’s dissertation. The chair is expected to have read the dissertation prior to the defense and to participate in the defense as their academic expertise permits, but the chair is not a voting member.

The committee chair must be a tenured member of the DU faculty and must be from a department, school, or college other than that of the candidate[1] (p. ). There will be no exceptions to this element of the policy. When a doctoral degree is interdisciplinary, the defense committee chair should whenever possible be from a discipline not represented in the degree. Exceptions to this policy can be approved by the dean or designee when accompanied by a conflict of interest disclosure. Those faculty holding only courtesy appointments in a program are not considered “within” the program.

It is the responsibility of the student and dissertation director to find an appropriate oral defense committee chair who meets these requirements and agrees to serve. In case of difficulty reaching agreement, the chair of the department/program will make a decision. This decision is not appealable.

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[1] (p. ) Students in the DU-Illiff Joint PhD program may have an outside chair from the Illiff School of Theology, but that faculty member must be outside of the field of specialization represented by the student’s dissertation.

**Appeal of Defense Committee Composition**

If the department/program chair rejects the composition of the dissertation committee, the student can appeal to the dean or designee. The appeal should include CVs of each proposed committee member, along with a statement explaining why the student believes the composition of the committee is appropriate for the project. The appeal must be signed by the dissertation director to confirm their agreement with the student’s proposed committee.

The dean or designee will review the appeal and respond in writing to approve or reject the committee within 10 business days. The decision is final and not subject to appeal.

**Unit-Specific Requirements**

Schools and departments reserve the right to establish additional requirements that exceed the University standards. It is the student’s responsibility to determine whether or not the unit has requirements in addition to University policy and the unit’s responsibility to ensure that those requirements have been met before submitting the Oral Defense Committee Recommendation form to the Office of Graduate Education.

**Doctoral Dissertation Oral Defense**

An oral defense of the dissertation is required and is conducted by the candidate's oral defense committee. The defense is concerned primarily with the dissertation or research project but also may include such other information in the major field as the committee deems pertinent. The defense must be held at least three weeks before the end of the quarter in which the degree is to be granted. All members of the defense committee must receive a copy of the candidate's dissertation at least two weeks prior to the scheduled defense.

The defense is expected to be held with the student present in person at DU unless extenuating circumstances make it impossible for the student to be physically present. Permission to hold a defense with the student participating by conference call, webcast or other medium should be obtained by petitioning the Senior Vice Provost for Research and Graduate Education. Petitions for faculty members to participate by conference call or other medium are not required.

**Scheduling of the Oral Defense**

Prior to scheduling the defense, the student and dissertation director must have established the candidate’s oral defense committee in compliance with the associated policies and have submitted the Thesis/Dissertation Oral Defense Committee Recommendation form to the Office of Graduate Education for review.
The student must make arrangements for the date and time of the oral defense with the dissertation director, committee and oral defense committee chair. Students must submit a completed Schedule of Oral Defense form (https://www.du.edu/sites/g/files/lmucqz251/files/2018-11/schedule_of_oral_defense.pdf) to their academic program and the Office of Graduate Education no later than four weeks prior to the date of the defense.

Conducting the Defense
The Oral Defense Committee Chair will preside over and manage the defense process. The chair is responsible for making certain that the defense is conducted in a professional manner and that the student has a fair opportunity to defend the dissertation. The chair is expected to provide opportunities for each voting member of the oral defense committee to participate in the defense and to ensure that the defense is of high quality while remaining within proper limits of inquiry. Interested faculty members, and in accordance with departmental policy, currently enrolled graduate students also may attend the oral defense. After the oral defense committee has conducted the essential examination of the candidate, questions may be asked by others present if pertinent and appropriate, as determined by the Oral Defense Committee Chair and common practice in the discipline.

When the defense is completed, the chair will request that the candidate and all other persons not on the defense committee leave the room and will call for a motion to pass or fail the candidate. A recommendation to pass can have no more than one negative vote from members of the committee. If the motion is a recommendation to pass, the committee must then agree on the conditions of the recommendation as follows:

- **Pass with no revisions** means that only grammatical, labeling or numbering changes are required. Only a limited number of sentence additions or deletions should be necessary.
- **Pass with minor revisions** indicates that the candidate will be required to reorganize portions of the manuscript and change some of the content.
- **Pass with major revisions** means that a complete chapter or chapters must be rewritten, additional tables are required and interpreted, or the general format must be changed. Responsibility for seeing that needed revisions are made rests with the dissertation director, but committee members also may require their approval before final submission.
- **Fail** indicates that the dissertation content is not of acceptable quality or that the candidate cannot defend the research. In most cases, failing the defense results in the rejection of the student’s dissertation and a new or related study usually will need to be undertaken.

A candidate who fails the oral defense may petition the department/program chair for a maximum of one re-examination. The petition should include the reason for the request and committee composition. The Chair of the program will solicit input from the committee before rendering a decision. In the case the Chair is a member of the committee the petition goes to the Dean or their designee. If granted, the re-defense must be scheduled through the Office of Graduate Education and must occur within normal timelines.

The Result of Oral Defense form must be signed by all committee members and returned immediately to the Office of Graduate Education. All signatures must be original. In rare occasions, when a committee member participates remotely, a faxed or scanned signature will be accepted.

Completing the Degree

Time Limit for Completion of the Degree
The candidate for the doctorate who holds a master’s degree on entering the doctoral program is expected to complete all requirements for the degree no later than seven years after beginning the program, as measured by matriculation into the degree program. Candidates who hold only a bachelor’s degree on entering the doctoral program are expected to meet all degree requirements no later than eight years after doctoral studies begin. Failure to complete the degree within the established time limits will result in termination unless the student successfully petitions for an extension to the Senior Vice Provost for Research and Graduate Education. The college, school, or department chair and advisor must recommend extension in writing. If it is not approved, the student will be dismissed from the program. Students may petition for an extension of time for a minimum of one quarter up to a maximum of one year per request. For more information, see Exceptions (p. 958) regarding extensions of time.

Final Procedures for Earning the Doctoral Degree
The student must assume full responsibility for meeting all basic requirements for the degree as well as the specific requirements outlined by the college, school or department.

Before becoming a candidate for graduation, the student must complete the following:

- The candidate must apply for graduation by the deadline. The deadline to apply for graduation is the eighth day of the quarter prior to the quarter that the student plans to graduate. For example, students planning to graduate in the spring quarter should apply to graduate by the eighth day of the winter quarter. Students apply to graduate on Pioneerweb (https://www.du.edu/registrar/media/documents/graduationappinstructions.pdf). Failure to do so will automatically delay graduation to a subsequent quarter. Failure to complete the degree during the expected quarter will require a new application and payment of a fee for additional evaluation and services.
- Satisfactorily complete all coursework and non-coursework requirements for the degree.
- If the graduate program requires a dissertation, arrange for an oral defense of the dissertation.
  - The Office of Graduate Education should review the oral defense committee as soon as the dissertation proposal has been approved or defended but no later than the first day of the quarter in which the student expects to complete their degree. Formal notification of the oral
defense should be filed in the Office of Graduate Education no later than four weeks before the defense date and in accordance with the University schedule of deadlines when graduation candidacy is in the same quarter as the defense.

• Submit the dissertation to the oral defense committee at least two weeks before the date of the defense.
• Satisfactorily complete the oral defense at least three weeks before the end of the quarter in which the degree is to be awarded.
• Submit electronic copy of dissertation to ProQuest and have faculty approval page submitted to the Office of Graduate Education two weeks prior to the end of the quarter. The student should contact the Office of Graduate Education for the schedule of deadlines and obtain specific instructions for the preparation of the dissertation format.
• If revisions are such that the dissertation in its final form cannot be filed at least two weeks before the end of the quarter, the awarding of degrees will be postponed.
• Students completing a major doctoral research paper should consult with their academic units regarding requirements.
• All Incomplete grades must be removed.

Electronic Thesis and Dissertation

As of spring quarter 2008, all theses and dissertations must be submitted electronically to ProQuest (UMI) unless an exemption is granted using the “opt out” procedure. ProQuest/UMI is widely known and respected as the main searchable database for scholarly work; the University of Denver strongly encourages students to submit their dissertations and theses to ProQuest.

If the student and the dissertation/thesis chair believe submitting the work to ProQuest will create serious ethical, publishing or other issues, the student should request an exception to this process by submitting an academic exception to the Senior Vice Provost for Research and Graduate Education that explains the concerns.

The electronic submission instructions can be found on the Graduate Oral Defense Information (http://www.du.edu/currentstudents/graduates/graduationinformation.html) web page.

Faculty should review the instructions before advising a student about submitting the thesis or dissertation.

Criteria for a Master’s Thesis or Doctoral Dissertation

• Requires an oral defense committee chair and oral defense.
• The scheduling of the oral defense and formatting of the thesis/dissertation must be coordinated through the Office of Graduate Education (https://www.du.edu/info-for/current-students.html) in accordance with the University schedule of deadlines and graduate policy.
• All copyright issues must be cleared before the thesis or dissertation is submitted. The student is responsible for obtaining proper permissions for all material used within the work. Evidence of copyright permission may be required with the student’s submission to ProQuest (UMI) (http://www.proquest.com/products-services/dissertations). For additional information about copyright permission and the copyright process, visit ProQuest (http://www.proquest.com/products-services/dissertations).
• Electronic submission of “publishable” quality scholarly work.

Thesis and Dissertation Publication Options

Embargoes and Restrictions on Accessing Theses and Dissertations

Students should be advised that a thesis or dissertation may be considered to be “previously published” by some publishers if it is put into a searchable digital/electronic repository (e.g. ProQuest). However, it should be noted that the student, not ProQuest (UMI), retains the copyright.

Students should discuss their future thesis/dissertation publication goals with their advisor. Students planning to publish from their thesis or dissertation should consider requesting an embargo of their work.

The student will submit a petition for an academic exception (http://bulletin.du.edu/graduate/academic-and-student-support-services-policies-and-procedures/academic-exceptions-complaints-grievances-and-appeals/exceptions) explaining the reasons for the embargo. The thesis or dissertation chair director will also submit a supporting statement to the Senior Vice Provost for Research and Graduate Education at academicexceptions@du.edu explaining the issue and stating that access to the work needs to be restricted. The Senior Vice Provost must approve the final decision for permission to embargo the work.

During an embargo, ProQuest will completely restrict access to the document for a specified time period. The thesis or dissertation will be held in the ProQuest repository with no access until the embargo expires.

Reasons for Embargo

• The student is interested in pursuing the option of an academic or commercial press acquiring the rights to publish the dissertation or thesis as a book.
• The student is interested in submitting work from the thesis/dissertation to a peer-reviewed journal.
• There are patentable rights in the work for which disclosure may be detrimental to the rights or interests of the author.
• There is an ethical need to prevent disclosure of sensitive or classified information about persons, institutions, technologies, etc. for a time-limited period.

If a student believes that they will need to restrict access for a limited time period, the student can request a six month, one year, or two year embargo. When an embargo expires, the thesis or dissertation will be automatically made available electronically by ProQuest.

Renewing an Embargo

If a student wishes to continue to restrict access for a limited time period, the student can request a six month, one year, or two year renewal on the embargo. The student and the thesis or dissertation chair director will submit a memo to the Senior Vice Provost for Research and Graduate Education explaining the issue and stating that access to the work stills needs to be temporarily restricted. The Vice Provost must approve the final decision for permission to renewal embargo. A student may only request two embargo renewals for a maximum of a six year embargo period. Students with extenuating circumstances should consult the Senior Vice Provost for Research and Graduate Education.

If the embargo extension is approved, the student should contact ProQuest directly at 1-800-521-0600 x77020 or via email at disspub@proquest.com.

University Libraries

ProQuest makes the thesis/dissertation available electronically to the University Libraries. The level of access to the student's work through the University Libraries depends upon embargo choices as described below.

• If the student does not embargo the work, the library will make the work available through the library's online catalog, with links to both ProQuest and the library's digital repository.

If the student embargoes the work for one of the following two reasons, University Libraries will make the work available only to the DU Community and through Inter-Library Loan in a PDF format. The work will not be made available outside the DU Community or over the internet:

• The student is interested in pursuing the option of an academic or commercial press acquiring the rights to publish the dissertation or thesis as a book.
• The student is interested in submitting work from the thesis/dissertation to a peer-reviewed journal.

If the student embargoes the work for one of the following two reasons, University Libraries will restrict access to the work until such time that they are notified by ProQuest that the embargo has been released, or when the author provides written permission directly to University Libraries:

• There are patentable rights in the work or other issues in which disclosure may be detrimental to the rights or interests of the author.
• There is an ethical need to prevent disclosure of sensitive or classified information about persons, institutions, technologies, etc. for a time-limited period.

After the embargo period, the work will be made available through University Libraries online catalog with links to ProQuest and the library's digital repository.

Opt Out Procedure

In some instances a student may wish to use only University Libraries as the repository of their work. In such cases the student work will be submitted digitally to University Libraries, and it will be made available only to the DU Community and through Inter-Library Loan in a PDF format.

The student will submit a petition for an academic exception (http://bulletin.du.edu/graduate/academic-and-student-support-services-policies-and-procedures/academic-exceptions-complaints-grievances-and-appeals/exceptions) explaining the reasons why access to the work needs to be restricted. The thesis or dissertation chair director will also submit a supporting statement to the Senior Vice Provost for Research and Graduate Education at academicexceptions@du.edu explaining the issue and stating that access to the work needs to be restricted. The Senior Vice Provost must approve the final decision for permission to to restrict access to the work.

Permanently Suppress

In rare cases, where the work includes proprietary information such as company data and records or confidential information that should never be made public, such as client records or interviews or some other serious condition that justifies such an action, it may be appropriate for a student to permanently suppress work. In such cases, the student work will be submitted electronically to University Libraries. The work will be retained by the library and listed in catalog system, but it will not be accessible without permission from the author.

The student will submit a petition for an academic exception (http://bulletin.du.edu/graduate/academic-and-student-support-services-policies-and-procedures/academic-exceptions-complaints-grievances-and-appeals/exceptions) explaining the reasons why access to the work needs to be restricted. The thesis or dissertation chair director will also submit a supporting statement to the Senior Vice Provost for Research and Graduate Education at academicexceptions@du.edu explaining the issue and stating that access to the work needs to be restricted. The Senior Vice Provost must approve the final decision for permission to to restrict access to the work.
Enrollment Status

Regular Enrollment (p. 939)
Concurrent Enrollment (p. 939)
Consecutive Term Enrollment (p. 939)
Continuous Enrollment (p. 939)

Regular Enrollment

The University’s definition of full-time graduate study is eight credit hours or more of coursework or research credit per quarter. Half-time students are enrolled in four to seven credit hours. Less than half-time students are enrolled in one to three credit hours.

Some graduate programs and fellowship awards may require more than eight credit hours of enrollment per quarter to be considered full-time. Contact the individual graduate unit regarding specific enrollment requirements.

Concurrent Enrollment

Students may enroll concurrently at another college, school, or university only if they are pursuing a requirement not currently offered at DU and if the concurrent enrollment does not result in an unacceptable credit overload.

The total study load includes all courses taken at the University of Denver and at other institutions concurrently. Courses taken for no-credit (NC) are also applied toward the total study load. The maximum enrollment for any quarter is 20 credit hours.

Consecutive Term Enrollment

All graduate degree-seeking students must be in active status and enrolled for consecutive terms fall through spring.

Enrollment may consist of registration for courses, thesis or dissertation credits, or Continuous Enrollment registration. The minimum thesis or dissertation credit requirements are determined by the individual graduate programs which may require students to register for additional thesis or dissertation credits to maintain degree candidacy. A graduate student who is not in active status and not consecutively enrolled must apply for readmission and pay any continuous enrollment fees owed for previous quarters, if applicable.

Unless a student is on an official leave of absence, a student’s status is rendered inactive after one quarter of non-enrollment. The student will not be able to register for courses and will need to submit a Readmission form to the program.

Students not planning to be consecutively enrolled must apply for a leave of absence from the university.

Note: Academic units and programs may have additional registration and/or enrollment requirements. Contact the unit for more information.

Continuous Enrollment

Registration for Continuous Enrollment (CE) is limited to students who have completed all required coursework (with the exception of independent research hours 4995/5995/5993) and are pursuing academic work/research necessary to complete a degree. CE is designed primarily for students who are working on a thesis, dissertation, or research paper/capstone.

Students who have completed all their coursework and are working on non-thesis research papers, capstones, performance, or other creative work enroll for four credit hours. Students who have completed all their coursework and are working full time on a thesis, dissertation, or major doctoral research paper enroll for eight credit hours. Doctoral students who have completed all coursework are eligible for continuous enrollment during the preparation of the doctoral comprehensive examinations. CE hours will not appear on student transcripts.

Students enrolled in the dual undergraduate-graduate program who have earned the baccalaureate degree and have completed all required graduate coursework and are working on a thesis are eligible for graduate CE.

CE is not to be used for students who are only engaged in required internships and practicums. Students should register for internship and practicum courses through their department.

Students should be enrolled in CE by the end of the 100% reimbursement/drop-add period to be eligible for the university health insurance and health fee, plus loan deferment. Students who do not enroll prior to the first day of classes of a given quarter will be charged late registration fees as determined by the Registrar.
CE enables students to maintain active status with the University and access to university resources including library, email, lab access, participation in the DU Student Health Insurance Plan and Health & Counseling fee services, and part-time student rates at the Coors Fitness Center. Students who are appointed DU employees must pay the Coors Fitness Center faculty/staff rate.

CE is not to be used for enrollment purposes while making up an incomplete grade. An exception is if all other coursework is completed and the student is working on the thesis, dissertation or research paper/capstone while completing the work required for the incomplete grade. It is the responsibility of the student and graduate college, school, or department to make this determination prior to approving eligibility for CE credit.

Registration in Continuous Enrollment

CE requires annual approval by the student’s faculty advisor, the Dean and/or the Senior Vice Provost. Students are responsible for registering themselves in CE each quarter by the appropriate registration deadlines.

Approval by the Senior Vice Provost for Research and Graduate Education is required for all divisions, schools, and colleges.

Permission to enroll in CE is granted for up to one academic year beginning in the fall quarter. Students requiring CE after fall quarter registration must complete and submit the form prior to the beginning of the subsequent quarter (winter, spring and summer) in order to be enrolled in CE. To avoid late fees, the student must submit a new form for fall quarter of the following academic year.

After permission to enroll is granted, students are responsible for registering themselves online for CE each quarter. Registration for CE must follow the Registrar’s deadlines. To avoid late registration charges, students must register for CE prior to the first day of classes. To be eligible for health insurance and loan deferment, students must be registered by the end of the 100% refund period. Hours added after that time will not count towards financial aid eligibility.

There are five course codes for CE. Students register for the appropriate type of CE depending on their thesis/dissertation requirements and financial eligibility status.

- **CENR 4500** Non-Thesis (4 credits): Master's level students working on non-thesis research papers, capstones, performance, or other creative work.
- **CENR 4600** Thesis (8 credits): Master's level students working on a thesis.
- **CENR 5600** Doctoral (8 credits): Doctoral level students working on a dissertation or major doctoral research paper.
- **CENR 4500, CENR 4600, and CENR 5600** registrations will confer loan eligibility or loan deferment if the student is eligible to receive financial aid.

Students with an approved time extension for completion of their degree program, but who are no longer eligible for financial aid because they are past the aid eligibility time limit (seven years master's level, six years for MSW, or ten years doctoral) register for

- **CENR 4700** Master's Level, Non-Financial Aid Eligible (0 credits).
- **CENR 5700** Doctoral Level, Non-Financial Aid Eligible (0 credits).

These courses do not confer loan eligibility or loan deferment.

**Notes:** Students in University College, the Sturm College of Law, Graduate Tax and the Daniels College of Business master’s programs are not eligible for continuous enrollment.

Peace Corps students are NOT to be put on continuous enrollment for the duration of their Peace Corps assignments. These students must follow the Peace Corps’ procedures for maintaining appropriate loan deferment status.

Morgridge College of Education doctoral students and students in the DU-Iliff Joint PhD program are required to register for dissertation hours in addition to continuous enrollment. Contact the unit for details.

Some units may have more stringent policies. Contact the unit for details.

**Fees and Readmission**

Students must register and pay for CE on a quarter-by-quarter basis. In addition to the standard CE fee, technology fees will be assessed based on part/full-time status (four/eight quarter hours).

Students who have finished their coursework but who have become inactive because they were not registered for CE or on an approved leave of absence from the program must complete the Continuous Enrollment Application for Re-Admission. The student must submit transcripts from any institution(s) s/he may have attended during his/her absence from DU.

The student will owe CE and technology fees for the quarters s/he was not enrolled from winter quarter 2005 forward. In addition, a late fee may be assessed at the time of readmission. Paying fees for previous quarters will not make the student eligible for retroactive enrollment, financial aid, or retroactive loan deferment.
**International Students**

Federal immigration regulations require F-1 and J-1 students to enroll full-time for at least three quarters each calendar year (or fall and spring semesters for law students) in order to maintain their immigration status. Exceptions to this requirement may only be authorized by an international student advisor or the program sponsor under very limited criteria.

Federal immigration regulations permit the host institution to define full-time enrollment for F-1 and J-1 students studying at the graduate level. The University defines full-time enrollment for graduate students as eight or more credit hours. To comply with the full-time enrollment requirement, F-1 and J-1 students must enroll in continuous enrollment after all coursework is completed or during the final quarter of coursework, if registered for less than eight credits, while working on the thesis or dissertation, or major doctoral research paper.

CE is not to be used for enrollment purposes in place of registering for required coursework. International students should work closely with their academic programs to ensure that they are able to maintain full-time enrollment in coursework for at least three quarters of each academic year until all coursework is complete (or students are in their final quarter of completing coursework).

F-1 and J-1 students must maintain acceptable levels of health insurance coverage during their academic program, as required of all students by the University. The U.S. Department of State also requires J-1 students to maintain health insurance coverage throughout their exchange program in order to maintain their J-1 immigration status.

F-1 and J-1 students must receive authorization from an international student advisor or their program sponsor prior to dropping below full-time status in an academic quarter when enrollment is required. Failure to receive prior authorization to drop below full-time status is a violation of the student’s immigration status and will result in the loss of the student’s authorization to lawfully study in the United States.

F-1 and J-1 students should enroll in continuous enrollment (CENR 4600 or CENR 5600) in order to comply with the full-time enrollment requirement while working on the thesis or dissertation, or major doctoral research paper, even if they have reached the maximum limits for their degree programs. Registration in continuous enrollment courses does not confer loan eligibility or loan deferment benefits on a student.

**Financial Aid Loan Eligibility and Loan Deferment**

United States citizens and permanent residents participating in CE may be eligible for student loans and loan deferment as long as they are within the maximum time frame allotted for their program.

Students enrolled in CE are eligible for Federal Direct Loans and Federal Work-Study only. The maximum work-study award may be awarded in the amount of $1500, without the option to increase the award.

Students registered in CE are not eligible for waivers, scholarships, or some forms of financial aid that requires the student to be enrolled on a full-time basis (eight credit hours or more). These include the Graduate Studies Doctoral Fellowship and the Graduate Studies Doctoral Fellowship for Inclusive Engagement.

However, students on CE may receive a graduate assistantship (GTA, GSA or GRA) as long as they are not required to be enrolled on a full-time basis (eight credit hours or more) according to departmental guidelines.

Registration in CE does not guarantee eligibility for financial aid.

Students must follow the loan procedures established by the Office of Financial Aid (http://www.du.edu/financialaid) and must contact the Office of Financial Aid for details on eligibility for loans and loan deferment. Satisfactory progress towards the degree must be verified.

Eligibility for loans and in school loan deferment ends after seven years in a master’s program (six years for the MSW), and after ten years in a doctoral program. Time away from the program (e.g. Leave of Absence, Medical Leave of Absence, or other non-enrollment periods) will count against the loan and loan deferment eligibility time limit. There are alternatives to the in school loan repayment deferment that may be applicable. To find out more information about a forbearance or economic hardship deferment, please contact the Office of Financial Aid or your lender. Students are responsible for submitting lender-required loan deferment forms to the Office of the Registrar (http://www.du.edu/registrar).

**Health Insurance and Continuous Enrollment**

Students who are on CE are not automatically assessed the Student Health Insurance Plan (SHIP) or health and counseling fee each quarter. SHIP enrollment is available twice a year, in the fall and spring. The Health & Counseling Fee enrollment is available every quarter. Please contact the Health and Counseling Center to discuss enrollment deadlines and payment options, 303-871-2205.

**Graduation Requirements**

**Student Responsibility for Graduation Requirements**

Students may not receive a University of Denver degree without completing all degree requirements. Students must be in good academic standing and may not receive a degree with fewer than the published number of credits or with a cumulative program GPA below the minimum required for each degree program they are pursuing (2.3 for JD students in Sturm College of Law, 2.7 for master’s students in the Sturm College of Law, 3.0 for all other graduate programs).
Application for Graduation

Students should submit the graduation application two quarters in advance of the intended graduation date. Applications are accepted up to the seventh calendar day of that term. For example, to graduate in the spring quarter (June), the graduation application is due by the seventh calendar day of winter quarter (January). Law students planning on graduating spring or summer semester may apply as of November 1st of that academic year. For those planning on graduating fall semester, the application will be available the first day of that semester.

Prior to applying to graduate, students need to verify that their curriculum records are accurate and up-to-date. Students who did not apply for graduation by the deadline should review the Graduate Request to Participate in Commencement Ceremony for Students Not Graduating (p. 942) policy. All requests for walking in commencement and late petitions for graduation must be approved by the Vice Provost for Research and Graduate Education or the Vice Provost's designee.

Commencement Ceremonies

Formal Commencement ceremonies are held at the University of Denver at the end of the spring and summer terms.

Participating in commencement does not constitute official graduation. It is a celebration that signifies the completion of the appropriate degree requirements and has no academic or legal implications.

Commencement Program

The Commencement program lists the names of all graduation candidates who applied at the appropriate time to receive degrees at that specific commencement ceremony. The appearance of a name in the program does not guarantee a student’s graduation at that time unless all degree requirements have been completed.

Spring Commencement

Spring Semester
The Sturm College of Law's Spring Commencement occurs at the end of the spring semester, normally in mid-May. Students who have completed all graduation requirements during autumn or spring semester of the current academic year are invited to participate in the ceremony.

Spring Quarter
Commencement occurs at the end of the spring quarter, normally in early June. Students who have completed all graduation requirements during autumn, winter, or spring quarters of the current academic year are invited to participate in the ceremony.

Summer Commencement
Summer Commencement occurs at the end of summer session, normally in mid-August. Students who have completed all graduation requirements during summer session are invited to participate in the ceremony.

Request to Participate in Commencement Ceremony for Students not Graduating

Students who have not completed their degrees may request to participate in the Graduate Commencement Ceremony only if the following parameters have been met for each eligible term:

Requirements for Walking in Spring Ceremony

• Submit the Graduate Request to Participate in Commencement Ceremony for Students Not Graduating (http://www.du.edu/media/documents/graduates/walking.pdf) form to the Associate Provost or the Associate Provost’s designee no later than two weeks prior to the graduation date.
• File for graduation within the required time frame.
• Eligibility as a candidate for graduation for the subsequent summer quarter.
• Candidate is within five-credit hours of degree completion, including resolving any incomplete grades.
• Registration for final program requirements in the summer interterm or in summer quarter.
• Complete all non-course degree requirements (e.g., comprehensive examination, practicum, major research paper) two weeks prior to the end of spring quarter. Please note that when a student is registered for an internship course, the internship is considered to be a course-related degree requirement, and the candidate must be within five-credit hours of degree completion.
• If a thesis or dissertation is required for the degree, complete the defense within the first six weeks of the subsequent summer quarter. The defense date must be on file with the Office of Graduate Studies.

Requirements for Walking in Summer Ceremony

• Submit the Graduate Request to Participate in Commencement Ceremony for Students Not Graduating (http://www.du.edu/media/documents/graduates/walking.pdf) form to the Associate Provost or the Associate Provost’s designee no later than two weeks prior to the graduation date.
• File for graduation within the required time frame.
• Eligibility as a candidate for graduation for the subsequent fall quarter.
• Candidate is within five-credit hours of completing the degree, including resolving any incomplete grades.
• Registration for final requirements in or before the subsequent fall quarter.
• Complete all non-course degree requirements (e.g., comprehensive examination, practicum, major research paper) two weeks prior to the end of summer quarter. Please note that when a student is registered for an internship course, the internship is considered to be a course-related degree requirement, and the candidate must be within five-credit hours of degree completion.
• If a thesis or dissertation is required for the degree, the defense must be complete within the first six weeks of the subsequent fall quarter. The defense date must be on file with the Office of Graduate Education.

Forms requesting to walk in either the Spring or Summer commencement ceremonies should be returned to the appropriate student services office for approval from the unit and the Vice Provost for Research and Graduate Education. Students may be approved to walk in commencement up until two weeks before of the end of the term, but a student's name may not appear in the commencement program if requests are received only one month prior to the commencement ceremony.

**Diplomas**
Diplomas are issued eight to ten weeks after the conclusion of the term in which the student graduates and after all holds are cleared.

**Diploma Name Policy**
The student name listed on a diploma or certificate must match the official name on file at the University (first name, middle name, last name), with the following exceptions:

- option of first name or initial;
- option of diminutive or alternate form for the first name;
- option of a first name which conforms with the graduate's genuine expression of gender identity;
- omission of the first name when the middle name is used as a salutary name;
- option of middle name or initial;
- omission of the middle name;
- inclusion of former or maiden name(s);
- inclusion of proper capitalization and accentuation of name; and,
- inclusion of Hispanic maternal surnames.

Neither titles nor degrees previously earned will be included as part of a graduate's name on a diploma.

**Interdisciplinary Programs**

**Background**
The University of Denver administers federal financial aid under standard term rules. Programs that are eligible for federal student aid must follow the federal rules. Under this guidance standard terms may not overlap with one another. Student enrollment in a semester and quarter at the same time can create federal compliance issues with the standard term rules. This policy provides guidance to the university community for the purposes of advising, program development and registration approval. This policy also serves to maintain federal compliance.

**Policy**
The degree program is the determining factor for assigning a student to a quarter program or a semester program. The Office of Financial Aid may process aid for students pursuing two official graduate programs in both semesters and quarters (the law school and another school) based on a student's primary enrollment pattern during their program. The charts below represent the options of simultaneous enrollment. Students enrolled in two separate degree programs that include semesters and quarters must follow the enrollment rules strictly as defined in the charts to avoid overlapping terms.

The student’s enrollment pattern (quarters or semesters) is determined by the program, not the selection of courses. Students solely in a program based on quarter terms may not enroll in semester courses. Students solely in a program based on semester terms (Law) may enroll in some quarters that fit as modules within a semester based on the chart below. Enrollment in courses outside of the student's quarter or semester program must follow the rules for overlapping terms.

**Possible quarter enrollment options for students enrolled in law semester programs**
- Fall Semester/Autumn Interterm: No
- Fall Semester/Autumn Quarter: Yes
- Fall Semester/Winter Interterm: Possible
- Fall Semester/Summer Quarter: No
Internships After Completion of Coursework

• Spring Semester/Winter Quarter: Yes
• Spring Semester/Spring Interterm: Yes
• Spring Semester/Spring Quarter: No
• Summer Semester/Spring Quarter: No

Recognized programs that include semesters and quarters generally establish a degree progress plan whereby students spend most of the academic year in either the quarter or the semester program. As noted above for students in semester programs, enrollment in some quarters is possible while in the semester program.

Registration Approval

Students are not allowed to register simultaneously in quarters and semesters outside of the parameters established in this policy. Students should consult with the proper program chair or delegate who will need to ensure that compliance to the above registration practices are followed.

Consequences of enrolling in overlapping terms

The overlapping term rules apply to all students regardless of financial aid status. Should a student successfully enroll in violation of the practices defined in these rules, the University will notify the advisor and the student that a review and adjustment of course registration is required to maintain compliance. The Office of Financial Aid will not authorize the release of the financial aid for the overlapping terms.

Program Design

Interdisciplinary programs are a hallmark of the University of Denver's long-term vision of supporting students. Several excellent examples for programs that comply with these policies have already been developed (e.g. JD/MBA, Tax/JD, MSW/JD, MSIS/JD). These models use a cohort experience to ensure that the students achieve their degree success with transparency.

Internships After Completion of Coursework

Some students are required to do an internship as part of the degree requirements, but do not receive course credit while on internship status. These students, who have completed all other coursework, must register for internship credits.

Students should consult the Office of Financial Aid (http://www.du.edu/financialaid/graduate) to see if they are eligible for loans and loan deferment. Students who are not required to participate in an internship are not eligible.

Note: There are internship programs available to DU students for credit. General regulations governing loans and loan deferments apply. Contact the Office of Financial Aid (http://www.du.edu/financialaid/graduate) for further information.

Master's Degree Requirements

Requirements (p. 944)

Master's Thesis (p. 945)

Master's Thesis Oral Defense (p. 947)

Completing the Degree (p. 947)

Requirements

Credit Requirements

The range of approved graduate credits required for a master’s degree is 45-92 quarter hours. A minimum of 34 hours of graduate credit must be earned at the University of Denver but vary by unit depending on the number of transferred credits allowed per the transfer of credit policy (http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/transfer-of-credit).

Advanced degrees are not awarded automatically on completion of the required number of courses or hours of credit.

Students enrolled in a graduate program should not take courses towards another degree program unless they have been accepted into the second program, and no more than three courses may be earned at the University of Denver and applied towards a degree program before acceptance into that degree program. Graduate coursework and credit hours already applied toward a degree received from the University of Denver cannot be applied towards another graduate degree of the same level or less.

Advanced degrees are not awarded automatically on completion of the required number of courses or hours of credit.

Residency Requirements

Enrollment as a graduate student in the University of Denver for at least three quarters (two semesters) is required for graduation.
Tool Requirements
Candidates may be required to demonstrate proficiency in the required tools for research and advanced study.

Where required, tool requirements are determined by the candidate's advisor and program and may include one or more languages, statistical methods, laboratory or other research skills. Consult the college, school or department for requirement details.

Advancement to Candidacy
A review of a candidate's plan of study and progress must be conducted as soon as all the minimum requirements have been met and no later than the first day of the term in which the student expects to complete the degree.

Minimum requirements for the review include completion of any provisional admission requirements, an approved plan of study that will lead to meeting the degree requirements, posting of any transfer work to the student's record, completion of tool (if required) and a grade point average of “B” or better in all work completed to that point. Successful completion of the review and approval by the appropriate student services office constitutes Advancement to Candidacy.

Notes: Some units may require satisfactory completion of a qualifying examination for Advancement to Candidacy. Consult the academic unit for information regarding requirements.

Final Examination
The requirement of a final examination for the master's degree is in accordance with the requirements of the candidate's college, school or department. Where required, the examination may be oral or written or both. The examination may focus on overall course content or it may be the final step in the defense of a thesis.

Additional Master's Degree Requirements
In addition to coursework, most master's degree programs require a creative project, internship or practicum, oral comprehensive examination and/or major paper or thesis. Typically such projects are managed within the unit or program.

Master's Thesis
The master's thesis represents the culminating research of the master's degree program. It is a scholarly presentation of original research that is defended as partial fulfillment of requirements for the master's degree. The college, school or department determines the amount of credit allowed for research and work on the thesis. Students should contact the Office of Graduate Education on instructions regarding how to prepare and format the thesis (https://www.du.edu/sites/g/files/lmucqz251/files/2018-11/thesisdissertation_formatting_guidelines18-19.pdf).

Program-Level Thesis Proposal Committee
All candidates for the master's degree must have a thesis director who is a faculty member in the student's graduate program. Programs may require that thesis proposals be approved by or defended before a committee within the department or program. Programs reserve the right to determine the composition of the thesis proposal committee. However, only those faculty who meet the following University requirements may serve as voting members of the oral defense committee.

Master's Thesis Oral Defense Committee
The masters candidate's thesis oral defense committee will be submitted to the Office of Graduate Education for approval by the Senior Vice Provost for Research and Graduate Education. OGE staff will review the committee to ensure that it meets University policies and the Senior Vice Provost will work with the department/program chair to resolve any concerns that the proposed committee may not adhere to University policies.

Prior to coming to OGE the department/program chair is responsible for confirming the committee membership is appropriate for the thesis subject matter and for supporting the student's academic needs. If rejected by the chair or the Senior Vice Provost, the dean or designee can review an appeal of committee membership. The Thesis/Dissertation Oral Defense Committee Recommendation form (https://www.du.edu/sites/g/files/lmucqz251/files/2018-11/oral_defense_committee_recommendation_form.pdf) should be returned to the Office of Graduate Education as soon as the thesis proposal has been approved or 30 days following IRB submission but no later than the first day of the quarter in which the student expects to complete the degree.

Composition
Thesis Director
The thesis director is ordinarily a tenure-line or research faculty member of the candidate's graduate program. Under some circumstances, faculty with other designations (e.g., clinical) can serve as the thesis director with approval of the department/program chair and dean/designee. The process for approval is the same as for other committee members (see below).
It is the thesis director’s responsibility to ensure that the student’s research meets appropriate academic standards for the discipline in which the degree is being conferred. The thesis director is a voting member of the committee.

**Committee Members**

The committee is composed of a minimum of two and a maximum of five voting members, including the thesis director. This includes the thesis director but does not include the Oral Defense Committee Chair, who is a non-voting committee member. Tenure-line and research faculty from DU, including those outside the student’s program, are automatically eligible to serve on thesis committees if the thesis subject is appropriate to their field of expertise.

Faculty with other designations (e.g., clinical, teaching, professor of the practice) are eligible to serve as voting members of the committee if they have been actively involved in research and scholarship in a relevant field and meet the following requirements:

1. Possession of the research doctorate, terminal degree in the field, or equivalent record of research, scholarship, or achievement appropriate for the program; and
2. Professional productivity as evidenced by achievement such as:
   - Publication of a book or books recognized in the field as scholarly work;
   - Publication of articles in recognized, peer-reviewed scholarly journals;
   - Publication of articles in conference proceedings;
   - Current award or completion of an externally-funded project (e.g. grant recipient or program manager);
   - Possess national eminence in the topic field;
   - Juried performances, exhibitions, or creative works that have received significant regional, national, or international recognition.

Department/Program chairs should submit the CV of an individual to the dean or designee for approval. Once approved, the Office of Graduate Education will maintain these approved lists for individual programs for three years without additional review.

Individuals from other institutions may serve as voting members (not director) of the committee. If in a tenure-track or research faculty position in a relevant field at a university or research position in a National Laboratory, they are automatically eligible. If not, individuals must submit a current CV through the department chair for approval by the dean/designee. Once approved, the Office of Graduate Education will maintain these approved lists for individual programs. No more than one committee member can come from outside DU.

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[1] Actively is defined as contributing to research in the last three to five years.

**Oral Defense Committee Chair**

The role of the oral defense committee chair is to ensure a fair examination process that adheres to the policies outlined in the Graduate Bulletin. The chair should provide a non-specialist’s perspective on the quality of the thesis. The chair must be familiar with the standards for master’s thesis research and should have some general knowledge of the topic of the student’s thesis. The chair is expected to have read the thesis prior to the defense and to participate in the defense as their academic expertise permits, but the chair is not a voting member.

The committee chair must be a tenured member of the DU faculty and must be from a department, school, or college other than that of the candidate. There will be no exceptions to this element of the policy. When a master’s degree is interdisciplinary, the defense committee chair should whenever possible be from a discipline not represented in the degree. Exceptions to this policy can be approved by the dean or designee when accompanied by a conflict of interest disclosure. Those faculty holding only courtesy appointments in a program are not considered “within” the program.

It is the responsibility of the student and thesis director to find an appropriate oral defense committee chair who meets these requirements and agrees to serve. In case of difficulty reaching agreement, the chair of the department/program will make a decision. This decision is not appealable.

**Appeal of Defense Committee Composition**

If the department/program chair rejects the composition of the thesis committee, the student can appeal to the dean or designee. The appeal should include CVs of each proposed committee member, along with a statement explaining why the student believes the composition of the committee is appropriate for the project. The appeal must be signed by the thesis director to confirm their agreement with the student’s proposed committee.

The dean or designee will review the appeal and respond in writing to approve or reject the committee within 10 business days. The decision is final and not subject to appeal.

**Unit-specific Requirements**

Schools and departments reserve the right to establish requirements that exceed University standards. It is the student’s responsibility to determine whether or not the unit has requirements in addition to University policy and the unit’s responsibility to ensure that those requirements have been met before submitting the Oral Defense Committee Recommendation form to the Office of Graduate Education.
**Master's Thesis Oral Defense**

The candidate's oral defense committee conducts the oral defense of the master's thesis. The defense must be held at least three weeks before the end of the quarter in which the degree is to be granted.

All members of the defense committee must receive a copy of the candidate's thesis at least two weeks prior to the scheduled defense.

The defense is expected to be held with the student present in person at DU, unless extenuating circumstances make it impossible for the student to be physically present. Permission to hold a defense with the student participating by conference call, webcast or other medium should be obtained by petitioning the Senior Vice Provost for Research and Graduate Education. Petitions for faculty members to participate by conference call or other medium are not required.

**Scheduling of the Oral Defense**

Prior to scheduling the defense, the student and thesis director must have established the candidate's oral defense committee in compliance with the associated policies and have submitted the Thesis/Dissertation Oral Defense Committee Recommendation form to the Office of Graduate Education for review.

The student must make arrangements for the date and time of the oral defense with the thesis director, committee, and oral defense committee chair. Students must submit a completed Schedule of Oral Defense form to the Office of Graduate Education and their academic program no later than four weeks prior to the date of the defense.

**Conducting the Defense**

The oral defense committee chair will preside over and manage the defense process. The chair is responsible for making certain that the defense is conducted in a professional manner and that the student has a fair opportunity to defend the thesis. The chair is expected to provide opportunities for each voting member of the oral defense committee to participate in the defense and to ensure that the examination is of high quality while remaining within proper limits of inquiry. Interested faculty members, and in accordance with departmental policy, currently enrolled graduate students also may attend the oral defense. Before or after the oral defense committee has conducted the essential examination of the candidate, questions may be asked by others present if pertinent and appropriate as determined by the Oral Defense Committee Chair and common practice in the discipline.

When the defense is completed, the chair will request that the candidate and all other persons not on the defense committee leave the room and will call for a motion to pass or fail the candidate. A recommendation to pass can have no more than one negative vote from members of the committee. If the motion is a recommendation to pass, the committee must then agree on the conditions of the recommendation as follows:

- **Pass with no revisions** means that only grammatical, labeling or numbering changes are required. Only a limited number of sentence additions or deletions should be necessary.
- **Pass with minor revisions** indicates that the candidate will be required to reorganize portions of the manuscript and change some of the content.
- **Pass with major revisions** means that a complete chapter or chapters must be rewritten, additional tables are required and interpreted, or the general format must be changed. Responsibility for seeing that needed revisions are made rests with the thesis director, but committee members also may require their approval before final submission.
- **Fail** indicates that the thesis content is not of acceptable quality or that the candidate cannot defend the research. In most cases, failing the defense results in the rejection of the student’s thesis and a new or related study usually will need to be undertaken.

A candidate who fails the oral defense may petition the department/program chair for a maximum of one re-defense. The petition should include the reason for the request and committee composition. The Chair of the program will solicit input from the committee before rendering a decision. In the case the Chair is a member of the committee the petition goes to the Dean or their designee. If granted, the re-defense must be scheduled through the Office of Graduate Education and must occur within normal timelines.

The Result of Oral Defense form must be signed by all committee members and returned immediately to the Office of Graduate Education. All signatures must be original. In rare occasions, when a committee member participates remotely, a faxed or scanned signature will be accepted.

**Completing the Degree**

**Time Limit for Completion of the Degree**

Master's degree candidates are expected to complete degree requirements within five years of beginning their programs, as measured by the matriculation into the degree program.

Failure to complete the degree within the established time limits will result in termination unless the student successfully petitions for an extension to the Senior Vice Provost for Research and Graduate Education. The college, school, or department and the student's advisor must recommend this extension. If it is not approved, the student will be terminated from the program. Students may petition for an extension of time for a minimum of one quarter and up to a maximum of one year per request. For more information, see Exceptions (p. 958) regarding extensions of time.
Final Procedures for Earning the Master’s Degree

The student must assume full responsibility for meeting all basic requirements for the degree as well as the specific requirements outlined by the college, school or department. The student must complete the following:

- Apply for graduation by the deadline. Failure to complete the degree during the expected graduation term may require a new application and payment of a fee for additional evaluation and services.
- If the graduate program requires one, arrange for an oral defense of the thesis. The Office of Graduate Education should review and approve the oral defense committee as soon as the thesis proposal has been approved or defended but no later than the first day of the quarter in which the student expects to complete the degree. Formal notification of the oral defense should be filed in the Office of Graduate Education no later than four weeks before the defense date and in accordance with the University schedule of deadlines when graduation candidacy is in the same quarter as the defense.
- Complete any required final defense, oral or written or both, at least three weeks before the end of the quarter in which the degree is awarded.
- All Incomplete grades must be removed at least three weeks before the end of the term in which the degree is to be awarded.
- Submit electronic copy of thesis to ProQuest and have faculty approval page turned in to the Office of Graduate Education two weeks prior to the end of the quarter. The student should contact the Office of Graduate Education for the schedule of deadlines and obtain specific instructions for the preparation of the thesis format.
- If revisions are such that the thesis in its final form cannot be filed at least two weeks before the end of the quarter, the awarding of degrees will be postponed.

Notes: Students in Dual or Flexible Dual Degree programs must file an application for graduation for both degree programs.

Individual academic units may have more stringent policies. Contact the unit for details.

Readmission

Readmission for Inactive Students

Students who are within their time limits for completion of their degrees, but have interrupted their graduate programs by not registering for one or more consecutive terms (excluding summer) without properly withdrawing by requesting a leave of absence, must submit a readmission form to the program.

Students who still have coursework to complete must submit an application for readmission and indicate the last term attended and the expected term of re-entry. The department must approve the request for readmission and the student must submit transcripts from any institution(s) attended during absence from DU. Once readmission is complete, students may register during the regular registration period, including priority registration, according to the Registrar’s deadlines.

Students who have permanently withdrawn from the university and would like to return must meet the following criteria:

- Date of withdrawal cannot be more than five years
- The student must still be within their time to degree completion per the quarter of matriculation

If a student does not meet this criteria, they will be required to follow the Readmission for Terminated Students policy (http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/readmission). Graduate Units reserve the right to request that the student submit a full application for admission (which includes the application fee) to the appropriate admissions office.

Readmission for Terminated students

Students who have been dismissed from a program or have an expired time limit for degree that wish to be readmitted need to complete the following:

1. Submit a new application to the program and meet the current admissions criteria.
2. If admission is granted, the most current program bulletin must be followed, including all curriculum and program requirements.
3. All previous coursework older than five years must be reviewed by the department to determine if it is still relevant for current term of admittance.

Final approval for admission, consideration of coursework from a program in which a student was previously terminated, and timeline for degree completion must be approved by the Senior Vice Provost for Research and Graduate Education.

Note: Per “Section 484C of the Higher Education Act (HEA) provides that an institution of higher education may not deny readmission to a service member of the uniformed services for reasons relating to that service.”

Please visit the U.S. Department of Education (http://www2.ed.gov/policy/highered/guid/readmission.html) website for full text version of policy and requirements.
Registration

Student Responsibility for Registration Procedures (p. 949)

Registration Offices (p. 949)

Course Registration (p. 949)

Course Information (p. 951)

Student Responsibility for Registration Procedures

Students must register by the appropriate deadlines for all courses they wish to attend.

Students may register for courses through PioneerWeb (https://PioneerWeb.du.edu), in the registration office located in the Office of the Registrar (http://www.du.edu/registrar), or as designated by the college or school the student is attending. Courses requiring special permissions or forms, such as independent study, restricted enrollment, those with unmet prerequisites, or those resulting in a credit-hour overload may require students to register in the Office of the Registrar. Students are expected to check with academic advisors and/or the program requirements in the academic bulletin to identify prerequisites and course restrictions prior to attempting to register for courses.

After priority registration, students may drop or add courses without approval or penalty (except for the late registration fee) through the first seven days of a quarter (summer session excluded) through PioneerWeb (https://PioneerWeb.du.edu) or during regular office hours in the registration office. All students in the following categories who do not register before the first day of the quarter are assessed a late registration service charge: continuing students, new students, students returning from leave of absence and readmitted students. The late registration service charge cannot be waived. Registrations are not processed after the designated registration period of the quarter.

Students may drop or add courses without approval or penalty (except for the late registration fee) through the first seven days of a quarter (summer session excluded) through PioneerWeb (https://PioneerWeb.du.edu) or during regular office hours in the registration office.

Please refer to the Important Dates Calendar for more information regarding registration deadlines.

Registration Offices

Registration is overseen by different offices depending upon the student's program. Questions about registration dates, deadlines or procedures should be directed toward the appropriate registration office.

Graduate students, other than University College, Law, and Social Work, may contact the Office of the Registrar (http://www.du.edu/registrar) at 303-871-4095.

The University College Student Services (http://universitycollege.du.edu) can be reached at 303-871-2291.

The Sturm College of Law (http://www.law.du.edu) can be reached at 303-871-6132.

The Graduate School of Social Work (http://www.du.edu/socialwork) can be reached at 303-871-3463.

Course Registration

Section Changes

Students may change from one section of a course to another with the instructor's approval for the section being added. The section being dropped is deleted from the student's record.

Adding Courses

Generally, courses may be added from the second to eighth week of a ten-week quarter with an instructor's signature. Courses may not be added after the eighth week of the quarter. Deadlines for adding courses may differ for semester, interterm periods, and non-conforming terms that are not the standard ten weeks.

Waitlists

Contact the individual academic units for their policies on waitlisted courses.

Credit Load

A full-time graduate student may enroll for 8 to 18 credit hours each quarter.
A credit-hour load of more than 18 hours requires instructor and advisor approval and the signature of the dean of the unit. Each credit hour taken in excess of 18 hours is charged at the current hourly tuition rate.

**Note:** The total study load includes all courses taken at the University of Denver and at other institutions concurrently. Courses taken for no-credit (NC) are also applied toward the total study load. The maximum enrollment for any quarter is 20 credit hours.

**Dropping Courses**

**Notification by Student of Intent to Withdraw**

Students may notify the Registrar of their intent to withdraw by completing the Withdrawal Form (http://www.du.edu/registrar/forms/WithdrawalForm.pdf) or, if registered for classes, by making notification via the web, in person, by fax or by phone. The completed Withdrawal Form should be submitted to the Office of the Registrar (http://www.du.edu/registrar) (fax: 303-871-4300). The withdrawal date is the date that the student notifies the Office of the Registrar. It will be noted on the form. If the request to withdraw is received by another unit with registration authority, the effective date is the date that office is notified. Students who request a withdrawal via the phone are expected to read the information on the Withdrawal Form as well as that on the Withdrawal Information Sheet and Checklist (http://www.du.edu/learn/graduates/studentresources.html). During the automatic withdrawal period classes will be dropped on the date of notification.

A student must officially drop a course or a failing (F) grade is assigned. The only exception is in the case of an administrative withdrawal.

When a student ceases to attend a course, the student remains enrolled in the course unless the course is officially dropped through the appropriate registration office. A course may be dropped without instructor’s approval through the published date for automatic withdrawal (generally the end of the sixth week of a standard ten-week quarter). A student cannot drop a course after the automatic withdrawal (W) deadline without the instructor’s signature and advisor’s signature. All required signatures must be submitted to the appropriate registration office. If the drop is not requested and approved, the student remains enrolled in the course and will receive a failing (F) grade for the course. The student is liable for payment of all tuition and charges related to the course.

Students may not withdraw from courses after the eighth week of the quarter (or after the fourth week of a five- or six-week course).

In cases where the grade report indicates the student never attended, the Registrar may process the withdrawal request without referral to the Vice Provost’s office or the Graduate Academic Concerns Committee. Section and level corrections are also delegated to the Registrar’s Office.

In some cases, the student may need to submit a formal petition for an exception to academic policy to withdraw from a course.

**Notes:** Some programs may have more stringent policies regarding withdrawal from courses. Contact the unit for details.

**Contact the Sturm College of Law for semester system withdrawal procedures.**

International students who are considering withdrawing from the University should also contact the Office of International Student and Scholar Services (ISSS) in addition to following the Office of Graduate Education procedures.

**Official Drop Periods**

Courses dropped through the first seven days of a ten week quarter (Monday–Sunday, summer session excluded) are deleted from the student’s record. Tuition will be reversed through this time period (first 10 percent of the term), if applicable.

A notation designating a withdrawal (“W”) is assigned for courses officially dropped after the first week of the quarter. The course appears on the student’s record with a withdrawal (“W”) grade notation. Credit hours for the withdrawn course are not earned and the “W” grade notation is not calculated in the GPA. A course may be dropped without instructor approval through the published date for automatic withdrawal (generally the end of the sixth week of a quarter, 60 percent of the term). Withdrawal deadlines and tuition refund schedules are available at www.du.edu/registrar.

**Academic Dishonesty**

A student can be prevented from dropping a course in cases of suspected academic dishonesty, even during the automatic withdrawal (W) period.

In cases of suspected academic dishonesty, the Office of the Registrar (http://www.du.edu/registrar) can reinstate a course that has been dropped without notification to the student. Once the case is heard by the Office of Student Conduct (http://www.du.edu/studentlife/studentconduct) or reviewed by the unit in which the case originated, and if academic dishonesty is determined, an instructor may assign a student a failing (F) grade for the course. A withdrawal (W) for the course is not honored. If the accused student is found innocent of academic dishonesty and there has been an attempt to drop during the automatic withdrawal period, the drop is processed and a notation of withdrawn (W) assigned.

**Requesting Drop when Student is Failing**

An instructor may refuse to give permission to drop a course to a student who is failing the course.

**Drops with Approval**

After the sixth week of a ten-week quarter the instructor’s signature and advisor’s signature are required to drop a course.
Drop Deadlines

Withdrawals during the two weeks (ten class days, Monday through Friday) prior to the scheduled final examination period are not allowed.

The Office of the Registrar (http://www.du.edu/registrar) will maintain these and other important registration activity deadlines.

Notes: Some units may have different policies regarding registration processes, deadlines and procedures for adding/dropping of courses and academic dishonesty. Contact the Office of the Registrar for more details.

Registration deadlines may differ for interterm periods and courses that do not conform to the standard ten week term.

University College, Graduate Tax and the Sturm College of Law may have different policies regarding registration processes, deadlines and procedures for adding/dropping of courses. Contact their registration offices for more details.

Repeating Courses

Repeatable courses include independent research, independent study, topics courses and music performance courses. Unless it is specifically designated as repeatable, a course in which the student has received a qualifying grade may not be repeated for credit.

If a non-repeatable course is taken again, the regular tuition rate is paid and the course is counted as part of the total credit load. All grades are counted in GPA calculations. The highest grade received in the repeated course fulfills the degree requirements, but hours earned toward degree requirements are counted only once.

All repeated courses appear on student transcripts. Automated advising tools (e.g. the Degree Audit) may show only first grade for the course.

Course Information

Course Number Designation

Graduate credit cannot be earned in courses numbered below 3000.

Not all 3000-level courses may be offered for graduate credit. Students should consult the course description in their unit, program, and course schedule prior to enrolling in any 3000-level course to verify it is listed at the graduate level and may count as credit for the graduate degree. 3000-level courses that are not designated as graduate level are not approved to count toward graduate degrees.

The course number consists of a three or four letter subject code that identifies the academic unit offering the course, followed by four numbers that indicate the level of the course.

<table>
<thead>
<tr>
<th>Type of Course</th>
<th>Code Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-collegiate, Remedial, or Continuing Education Unit Courses</td>
<td>0001-0999</td>
</tr>
<tr>
<td>Undergraduate Courses (Lower Division)</td>
<td>1000-1999</td>
</tr>
<tr>
<td>Advanced Undergraduate Courses (Upper Division)</td>
<td>2000-2999</td>
</tr>
<tr>
<td>Advanced Undergraduate and Graduate Courses (Combined)</td>
<td>3000-3999</td>
</tr>
<tr>
<td>Graduate Courses</td>
<td>4000 or Over</td>
</tr>
</tbody>
</table>

Schedule Type

Independent Study

Independent study provides opportunities for the capable student to do special work under individual supervision in areas not covered by class offerings.

Projects must be undertaken within the academic term in which they are registered. Independent study may not be taken instead of, or to modify, a regular course offered by a department. In addition, independent study cannot be used to account for study taken at another university or at the undergraduate level. The study must be conducted with DU faculty at the graduate level.

The department may limit the maximum number of Independent Study credit hours a student may apply towards their degree.

The students should demonstrate qualities necessary for interested and intensive inquiry. The student, with the approval of the instructor and department concerned, must agree upon the topic and outline.

Graduate students must obtain applications for independent study projects from the Office of the Registrar (http://www.du.edu/registrar). Partial applications will not be processed and registration after published registration dates is not permitted. To be eligible for independent study, the student must be in academic good standing (i.e., 3.0 GPA for graduate students). Independent studies must be at least one credit hour and generally not to exceed five hours. Independent study projects appear on the student's transcript with the specific topic as the course title and academic grades (A-F) are assigned.
The responsibilities of the instructor of record are to establish specific requirements for the course of study, see that the grades are submitted, approve the credentials of other faculty involved and agree to assume responsibility if problems arise.

**Independent Research**
Independent research opportunities are available to students primarily for thesis and dissertation research or other independent research. The department may limit the maximum number of Independent Research credit hours a student may apply towards the degree.

Projects must be undertaken within the academic term in which they are registered and registration after published registration dates is not permitted.

Students obtain applications from their academic department. Incomplete or partial applications will not be processed. Upon successful completion of the project or on its termination by request of the department, the research advisor will record a final grade. The department may use the A-F grading system in evaluating the research or record "P" (pass) or "F" (fail) for the course.

The responsibilities of the instructor of record are to establish specific requirements for the course of study, see that the grades are submitted, approve the credentials of other faculty involved and agree to assume responsibility if problems arise.

**Directed Study**
A directed study course is a permanent catalog course delivered on an individual basis when the course is not offered that term. Directed studies are approved under extenuating circumstances to provide an opportunity to complete a required course.

Directed studies use the same forms and processes as independent studies. Partial applications will not be processed. Directed study courses appear on the student's transcript with the specific course title and must be approved by the instructor and department concerned. There can be no change in the basic content of the course. In particular, this means the level, subject code, description, title, grading policy (A-F, P/NP), credits and course content cannot differ from the permanent course. Projects must be undertaken within the academic term in which they are registered. Registration after published registration dates is not permitted.

The responsibilities of the instructor of record are to establish specific requirements for the course of study, see that the grades are submitted, approve the credentials of other faculty involved, and agree to assume responsibility if problems arise.

**Experiential Learning/Internship Credit**
Experiential learning courses consist of supervised experience in an area of specialization that may be conducted either on or off campus with the student making periodic reports to the instructor. These include clinical, practicum, internship, student teaching, and cooperative work experience. They do not include graduate teaching or research assistantships at DU.

**Courses for no credit**
A student may register for no credit (NC) in any course with approval of the course instructor and only where space is available. A no credit registration cannot be changed to a credit registration after the deadline for registration has passed. Furthermore, a student enrolled for credit cannot change to no credit after the end of the sixth week of the quarter. Such courses count as full credit value in determining the total study load allowed. Courses taken on a no credit basis do not apply as part of the minimum credit-hour requirements for any graduate degree. The tuition charge for no credit courses is the same as for credit courses.

If adding the no-credit course creates a course overload, it requires approval from the instructor, advisor and dean of the unit.

No credit courses are listed on the student’s permanent record with a grade of No Credit (NC). Students receiving any type of financial aid, scholarship, grants or tuition waiver should check with the Office of Financial Aid (http://www.du.edu/registrar) before registering for NC as financial aid or waiver may not cover courses taken for no credit.

*Note:* Some units may have more stringent policies regarding no credit courses. Students should consult their registration office for information.

**Auditing Classes**
Auditing privileges are extended only to full-time students who have approval of the course instructor and only where space is available. Students do not officially register for courses that are being audited; therefore, no tuition is charged and no record of the course is made. Students enrolled in a course may change to audit only if the course is dropped within the first seven days of the term.

*Note:* Auditing privileges are not available for Daniels College of Business, Graduate School of Professional Psychology or University College courses.

**Permission for Undergraduates to Register for Graduate Courses**
Undergraduates may request to enroll in graduate courses that are well suited to their programs of study. This opportunity is available to seniors whose academic achievement makes graduate-level work appropriate. This policy applies to graduate courses with course numbers of 4000 and above. Some 3000-level courses are approved for either undergraduate or graduate credit. Undergraduate courses may not be taken for graduate credit.

**Graduate courses for undergraduate credit**
Students must be classified as a senior and have an overall cumulative GPA of at least 3.0. The student must obtain approval of the course instructor; chair or program director of the graduate program; Office of Graduate Education; and the student's major advisor. Graduate courses taken for undergraduate credit may not be subsequently used to satisfy graduate requirements unless the student is in an approved dual undergraduate/graduate degree program.

**Graduate courses for graduate credit**

Students who have been admitted to a DU graduate program do not require permission to register for a graduate course for graduate credit. Otherwise, undergraduate students must be classified as a senior and have an overall cumulative GPA of at least 3.0. The student must obtain approval of the course instructor; chair or program director of the graduate program; and Office of Graduate Education. Courses taken for graduate credit may not be used to satisfy undergraduate requirements unless the student is in an approved dual undergraduate/graduate degree program.

**Student Responsibility for Policies and Procedures**

Students may have questions on a range of topics from academic standards to graduation requirements. To successfully navigate the policies and practices of the institution, we invite you to take some time to read the Graduate Policies and Procedures (p. 9).

Individual schools and departments may have additional policies particular to their graduate programs. Please make sure you understand both; however, it is important to know that unit-specific policies do not override university-wide policies. Please consider contacting the Office of Graduate Education for questions about the university's policies and procedures.

**Student Withdrawal from the University**

Things to Consider Prior to Withdrawing (p. 953)

Withdrawing (Temporary or Permanent) (p. 954)

Personal Leave of Absence (p. 954)

Medical Leave of Absence (p. 955)

Mandatory Withdrawal Policy (p. 955)

**Things to Consider Prior to Withdrawing**

Students who wish to drop all courses in a term and take a leave of absence or withdraw permanently from their programs are advised to consider the impact on the following items:

**Timeline for Degree Completion, Cohort Placement and Degree Requirements**

While on an approved leave of absence, students are guaranteed a place in their current program when they return to the University, provided all deadlines and rules are observed. Some units may have more restrictive guidelines for a leave of absence. Students should consult with their unit and program for more information before deciding to take leave. Students returning from leave have the same registration priority as continuing students. It is important to note that students are still held to the original timeline for completion of the degree, unless a student is on an approved medical leave of absence. Special Status (non-degree seeking) students or students who are beyond the time limit to complete their degrees are not eligible for a leave of absence.

Students who have permanently withdrawn from the university and would like to return must meet the following criteria:

- Date of withdrawal cannot be more than five years
- The student must still be within their time to degree completion per the quarter of matriculation

If a student does not meet this criteria, they will be required to follow the Readmission for Terminated Students policy (http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/readmission). Graduate Units reserve the right to request that the student submit a full application for admission (which includes the application fee) to the appropriate admissions office.

**Tuition and Fee Payment and Refund Schedule**

Outstanding debts must be cleared with the Bursar's Office. A student's leave application will be accepted even if they owe money to the University. However, students will not be allowed to register for future terms if they have any outstanding debts to the University. In the case of extenuating circumstances that are beyond the student's control, a student may appeal for an exception to the University's refund policy.

**Withdrawal Deadlines**

Enrolled students should review the academic calendar (http://www.du.edu/registrar/calendar), and be aware of the important dates and term-specific withdrawal deadlines.
Health Insurance Coverage
University of Denver Health Insurance coverage may be interrupted or discontinued. To learn more about the coverage, students should consult with the staff in the Health and Counseling Center (http://www.du.edu/health-and-counseling-center) at 303-871-2205.

Financial Aid, Scholarships, Work-Study, GTA/GRA and Loan Repayment Terms
Students should be clear about the impact of withdrawal on loan repayment requirements as well as scholarships, teaching assistantships and other forms of University aid. While on a leave of absence, students are not eligible to receive financial aid, including work-study. Some forms of University aid (i.e. GRA, GSA and GTA positions and other scholarships or fellowships) are not guaranteed to be reinstated if a student takes a leave of absence. In addition, student loan repayment terms may be impacted and in some cases repayment may begin when a student goes on leave. It is the students’ responsibility to notify their lender they are taking a leave of absence and will not be enrolled in school.

Students should apply for financial aid well in advance of the term they expect to return to school so their disbursement is available at the beginning of the term. Contact the Office of Financial Aid (http://www.du.edu/financialaid) for additional information.

F-1 or J-1 Visa Immigration Status for International students
International students who are interested in withdrawing should be aware of certain restrictions in the immigration laws. Non-immigrant students may not remain in the United States in F-1 or J-1 immigration status if they are not enrolled full-time in school unless they meet certain criteria and have approval from International Student and Scholar Services (ISSS). In order to take a leave, international students may need to either leave the United States while out of school or change to another non-immigrant status. Before withdrawing and applying for a leave, international students should consult with an adviser in the ISSS office.

University Housing Contract
Housing contracts are for the entire academic year; please see housing policy to understand approved reasons for checking out during the academic year. Students must check out of the apartment within 24 to 48 hours of withdrawing.

Benefits for Veterans
For students receiving veterans’ benefits, the Coordinator of Military Programs in the Office of the Registrar should be notified of withdrawal plans.

Parking Permits and Unpaid Citations
Unpaid citations must be cleared with Parking Services, and parking permits should be returned to avoid additional costs.

University Libraries Books and Overdue Book Fines
All library books should be returned, and overdue book fines should be paid prior to withdrawing.

Contact Information
It is university policy that students maintain a preferred off-campus address and email account. It is each student’s responsibility to keep both a current mailing address and email address updated while on leave. If a student’s address changes while on leave, the address should be updated through PioneerWeb (https://PioneerWeb.du.edu).

Withdrawing (Temporary or Permanent)
Students considering time away from graduate study must communicate with the University prior to taking time off from the graduate program and fill out the appropriate paperwork. There are two types of withdrawals: temporary and permanent. Regardless of withdrawal type, the first step for students enrolled in courses is to officially drop courses.

Temporary Withdrawal
Students planning to resume studies at the University of Denver may qualify for a temporary withdrawal. This type of withdrawal includes personal and medical leaves. The approved Leave of Absence form must be submitted to the Office of Graduate Education prior to leave. JD students in the Sturm College of Law, students in the Daniels College of Business, MSW students in the Graduate School of Social Work, and students in University College return the form to the college’s student service office instead of the Office of Graduate Education.

Permanent Withdrawal
Students wishing to discontinue graduate study must communicate the decision to permanently withdraw from the graduate program in writing to the University.

Personal Leave of Absence
A graduate student may withdraw from the University temporarily or permanently for non-medical reasons. For medical circumstances, see medical leave of absence. Students who wish to withdraw permanently from their programs should notify the University in writing. A graduate student who wants to take time off from the University must fill out the Application for Leave of Absence for Graduate Students. The form must be signed by the student’s advisor and turned into the Office of Graduate Education by the Registrar’s published deadline to drop classes. Students who are currently
enrolled for the quarter during which they wish to begin a leave of absence must first withdraw from courses for the quarter during which they apply for leave. Students who fail to withdraw will be liable for full tuition and fee charges, and a failing grade may be recorded for every course for which the student is registered.

In general, leaves of absence are for students who want to take a period of time away from the University (excluding summer) with the intent to return. The maximum period of time for a single leave of absence is three consecutive quarters, excluding summers. Students who need an additional leave of absence should file a new application for a leave of absence. While on an approved leave of absence, students are guaranteed a place in their current program when they return to the University, provided all deadlines and rules are observed. Some units may have more restrictive guidelines for a leave of absence. Students should consult with their unit and program for more information before making a decision about whether to take a leave. Returning students have the same registration priority as continuing students. It is important to note that students are still held to the original timeline for completion of the degree.

Students who are called to active military duty while enrolled should apply for a leave of absence. Active Peace Corps volunteers may apply for a leave of absence for the term of their Peace Corps service.

Students on a formal internship, cooperative education, or clinical placement program as part of an academic program at DU should not apply for a leave of absence as they may need to be enrolled for internship or practicum credits. Instead, students should work with their graduate unit to be sure they are in compliance with program requirements.

Students who have outstanding judicial sanctions or actions due to violations of the Honor Code will not be considered in good standing with the University of Denver and must first be cleared by Student Conduct before they may be readmitted to DU. Please contact Student Conduct (http://www.du.edu/studentlife/studentconduct) with any questions before applying for a leave of absence.

Prior to returning to the University, students should contact their advisors for information on choosing courses appropriate for each academic program. Please contact the appropriate student services office with questions about returning to the university and registering for courses. International students must contact ISSS (http://www.du.edu/intl/isss/about.html) to obtain proper immigration documents before returning.

Medical Leave of Absence
Medical Leaves and Reentries
A student with a mental health and/or physical health condition may elect to apply for a Medical Leave of Absence from the University. The Medical Leave of Absence and Medical Reentry Policies describe the circumstances under which a student may request a Medical Leave of Absence and the procedures the student must follow.


Mandatory Withdrawal Policy
Mandatory Withdrawal Policy
In extraordinary circumstances, a student may be subject to a mandatory withdrawal if the C.A.R.E. team determines the student exhibits behaviors that substantially impede the student's academic success and/or significantly disrupts the learning environment of others.

Please see full policy here: Mandatory Withdrawal Policy (https://www.du.edu/studentlife/studentsupport/media/documents/care_mandatory-withdrawal-policy.pdf)

Students Called for Military Duty
Introduction
The University of Denver supports students called to active duty in the armed services by providing academic support, tuition relief or refunds, and reinstatement of students whose documented service has required their sudden withdrawal or prolonged absence from their enrollment at the institution. Service is defined by voluntary or involuntary active duty in the Armed Forces, including such service by a member of the National Guard or Reserve. When a University of Denver student is under a call or ordered to active duty, the following provisions will apply.

Purpose
This guideline offers suggestions for ways in which academic and administrative units and faculty may assist students who are called to active military duty.

Student Responsibility
A University of Denver student who receives orders to report for active military duty should provide a copy of those orders (including the date in which the orders were made and the "reporting date") to the Coordinator of Military Programs in the Office of the Registrar. The Coordinator of Military Programs will provide a copy of the orders and an official leave of absence request (if applicable) to the Office of Graduate Education or Office of Undergraduate Academic Resources and the Office of Financial Aid if the student has a scholarship or other financial aid. The Coordinator of Military
Programs will notify the faculty members in all courses in which the student is enrolled and will assist with the arrangement of course completion options. It is generally the student's responsibility to work directly with faculty members to determine appropriate course completion options.

**Note:** Should the student not be capable of providing a copy of such orders to the Coordinator of Military Programs due to the immediacy of the military assignment, the student must submit official orders, 1) upon return to school, or 2) while on duty. The University can only consider a request for changes to grades or tuition charges with official military orders. The University will make appropriate changes to the student's records once the official orders are submitted.

**Course Completion Options**

- Faculty are urged to work with a student who has received military orders to enable the student to complete the course work whenever it is reasonably feasible for the student to do so.
- If a student receives military orders for an extended period of time and it is highly likely that the student will miss most of the class sessions in the course, the student would be well advised to drop the course.
- If the student receives military orders late in the term, faculty members may offer the student the option of an incomplete if such an option is academically appropriate.

**Other Academic Matters**

- Service members and reservists who are temporarily unable to attend class or have to suspend their studies due to service requirements are allowed to re-enter a program provided that satisfactory academic progress is being made by the service members prior to suspending their studies. Students’ re-entry or readmission to the University shall be governed by existing policies for re-entry or readmission.
- While graduate students are on a leave of absence due to military deployment, their time away from the University will not count as part of the time limit set for degree completion.

**Administrative Matters**

- A student who is forced by virtue of military orders to drop selected courses or withdraw from a term should receive a 100% refund of any tuition the student has paid for the courses dropped or withdrawn. Refunds of tuition and fees paid by financial aid or other third parties will be handled by the Bursar and the Office of Financial Aid so as not to disadvantage the student but in accordance with applicable regulations.
- A student on financial aid who is forced by virtue of military orders to drop selected courses or withdraw from a term should not be penalized in terms of financial aid eligibility, making academic progress, or other financial aid criteria.
- If a student has arranged an attempt to complete a course and finds that the nature of the military service prevents the student from completing the course work, the student should notify the faculty member and the Coordinator of Military Programs and request their assistance in determining and implementing an appropriate course of action (e.g., requesting an incomplete, dropping the course, and written official leave of absence if needed).
- Room and board charges will be pro-rated based on the student's official check-out date.
- For new students, an enrollment deposit is required to confirm their acceptance of the offer of admission. If a student is deployed to active duty military service before the beginning of the planned term of enrollment, the deposit will be refunded.
- A student can appeal any administrative decisions that result in his/her required participation in military orders by requesting the procedures for doing so from the Coordinator of Military Programs.

**Transfer of Credit**

**Criteria**

- Credits earned at the University of Denver are not considered transfer credit. Students who would like to apply previously earned DU credits towards a degree or certificate should refer to the degree requirements and policies within their unit.
- The student is responsible for seeing that the transfer of credit is posted on the DU transcript and that the appropriate approval has been received.
- Graduate coursework and credit hours already applied toward a degree or certificate of the same level or less. Graduate credit earned and not applied towards a degree or certificate may be eligible for transfer of credit to a University of Denver degree.
- An official transcript must be on file in the Office of the Registrar.
- The transfer credit must have been earned as graduate credit in a field similar for which the student is currently seeking a degree at an institution accredited by a Department of Higher Education recognized agency. Transfer credit is approved on a course-by-course basis, unless it is a blanket transfer of credit hours for a doctoral program from a previously earned master's degree.
- The credit must have been earned within a five-year period preceding the request for transfer of individual courses. Exceptions to this regulation may be made only by petition with specific justification by the college, school or department to the Senior Vice Provost for Research and Graduate Education.
- Coursework with a “B-” grade may be requested to be transferred, providing the average of all graduate transfer coursework is “B” or better. If only one course is to be transferred, the grade must be “B” or better (a grade of “B-” or lower is unacceptable).
Courses taken on a pass/fail basis are not acceptable for transfer, unless the instructor provides a class syllabus and the student provides proof from the institution that a “Pass” is equivalent to a “B” or better.

Transfer credit is not included in the computation of the grade point average for the current degree.

Coursework Taken Prior to Enrollment at the University of Denver
Credits earned prior to enrollment in a degree program at the University of Denver may be transferred to meet degree requirements at the University of Denver in accordance with the transfer of credit policy and for students entering the University without a previous graduate degree or students entering a University of Denver doctoral program with a master's degree. The request for the transfer should be made prior to or during the first quarter of attendance as a University of Denver degree-seeking student and no later than the term preceding that in which the student wishes to graduate.

Coursework Taken After Enrollment at the University of Denver
If the credit to be transferred is earned while the student is already enrolled in a degree program at the University of Denver, the student may transfer graduate credit earned from a regionally accredited institution to meet degree requirements at the University of Denver in accordance with the transfer of credit policy.

- The student must initiate in writing a request for approval of outside coursework prior to enrolling in the course. The written request, which is submitted to the college, school or department, should include the name of the institution where the course will be taken, the course title, number of credit hours, course description, and the student’s reasons for requesting outside credit.
- The student is responsible for seeing that the Office of Graduate Education has given preliminary approval for the request prior to enrollment. A final review and approval may be granted upon the receipt of the student’s final, official transcript from the transfer institution and/or study abroad institution in the returning quarter and no later than the term preceding that in which the student wishes to graduate. Retroactive transfer credit requests may not be approved.

Transfer of Credit for a Master's Programs
Transfer credit toward a master’s degree is limited to 25% of the minimum number of credits required for the degree. Some programs may have more restrictive limits. Contact the unit for details.

Transfer of Credit for a Doctoral Programs
With approval from the student's advisor and the chairperson of the department, doctoral students may reduce the required hours for a doctoral degree by up to 45 hours with an earned master's degree from a regionally accredited university.

The student must initiate in writing the request for posting the master’s degree through the program of study. The student is responsible for seeing that the department, appropriate student services office of the college, school, or department and the Office of Graduate Education have approved the request.

An official transcript must be on file in the Office of the Registrar and must demonstrate that the student earned a “B” average or better in the master's degree program.

The student’s University of Denver academic department must fill out the Transfer of Credit Request form (https://www.du.edu/sites/g/files/lmucqz251/files/2019-01/Transfer%20of%20Credit%2C18-19.pdf) and provide a statement stating that the student’s master’s degree is appropriate and that the student possesses an adequate background for the doctoral degree being sought.

Fifteen additional quarter hours may be allowed to be transferred provided the credits have been earned after the master’s degree was awarded, and it does not conflict with the doctoral residency requirement that requires enrollment at the University of Denver in at least six quarters (four semesters), including at least two consecutive quarters (one semester) of full-time attendance.

Transfer of Credit for a Certificate Program
Transfer credit toward a certificate is limited to 25% of the minimum number of credits required for the certificate. Some programs may have more restrictive limits. Contact the unit for details.

Note: Some graduate programs may have more stringent policies regarding transfer credit. Contact the unit for details.

Exceptions:
- Morgridge College of Education: Students must complete 90-quarter hours in addition to a master's degree for the PhD program, excluding the PhD in Counseling Psychology and the PhD in Child, Family and School Psychology.
- English: Students must complete 90-quarter hours in addition to a master's degree for the doctoral program.
- GSSW: An MSW (or equivalent) plus 75 credits are required for completion of the PhD program in Social Work. The MSSW and MSSA are equivalent to the MSW.
- DU/Iliff Joint PhD: Students must complete 90-quarter hours in addition to a master's degree for the PhD program.
• Sturm College of Law: In some circumstances, Graduate Legal Studies students may transfer up to 8 semester credits. Please contact the office of Graduate Legal Studies for details.
• University College: Students should submit transfer of credit requests to University College.

Academic and Student Support Services, Policies and Procedures
Academic Exceptions, Complaints, Grievances and Appeals (p. 958)
Disability Services Program (p. 963)
Immunizations and Health Requirements (p. 963)
Professional and Academic Conduct (p. 964)
Student Records (p. 965)
Support Services and Resources (p. 971)

Academic Exceptions, Complaints, Grievances and Appeals
Exceptions (p. 958)
Petition for Unit-Level Exceptions (p. 959)
Discrimination or Harassment Complaint Procedures (p. 959)
Complaints for External Agencies (p. 959)
Procedures for Academic Grievances and Appeals (p. 960)
Procedures for Grade Appeals (p. 962)

Exceptions

Academic Exceptions Policy
Academic policies define institutional standards and ensure equitable treatment of all students. All students are expected to observe the academic policies and practices of the University set forth in the University Bulletin. However, in instances of documented extraordinary circumstances, a student may request an exception to a policy or practice.

The Academic Exceptions Committee is a standing subcommittee of the Undergraduate & Graduate Councils which represents the Councils’ interests as advisory to the Vice Provost for Academic Affairs. As chair of the Committee, the Vice Provost appoints its members and ensures that the Committee is representative of appropriate academic and administrative units. Decisions of the Committee are final.

Purview
The Academic Exceptions Committee considers requests for exceptions to University-wide academic policies affecting students. This is an academic committee that cannot take considerations of convenience, financial cost, or academic standing into the decision.

Exceptions should be submitted within one calendar year after the completion of the quarter in question and prior to a student’s degree being certified and posted to the transcript. Any exceptions that do not meet this expectation should include a rationale for why the request was not made within the appropriate timeframe.

Required Documentation
A valid petition includes, at minimum, the official online request submission through PioneerWeb (https://pioneerweb.du.edu), written documentation from the student and supporting documentation, as appropriate for the petition type. Additional documentation may be required. Documentation may be emailed to academicexceptions@du.edu or faxed to 303-871-4566. It is the responsibility of the student to ensure that all documents are submitted in a timely fashion.

The Vice Provost for Academic Affairs or designee has final determination as to whether the documentation the student has submitted is sufficient.

Petition Review and Status
• It is the responsibility of the students to check the status of their petitions and respond to requests by the Committee representative.
• The student will be notified (via PioneerWeb) of the decision within one week of when the request was reviewed.
• A student has 45 days from the initial submission to complete the petition. If, at the end of 45 days there are still outstanding documents, the petition will be cancelled, and the student will need to resubmit a new petition.

• A student may re-petition if there is new documentation that was not reasonably available at the time of the initial decision.

Petition for Unit-Level Exceptions

Graduate units that wish to be considered for an exception to University policy must provide a request to the Senior Vice Provost for Research and Graduate Education that includes a rationale for the variance.

The Senior Vice Provost will consider the petition and will notify the unit of the decision. A unit whose petition is denied by the Senior Vice Provost has the right to request that the matter be referred to the Graduate Council for review.

Graduate Council may recommend that the Senior Vice Provost reconsider the request in consultation with the Provost. The Senior Vice Provost will make a final determination and report to the Graduate Council on all petitions and outcomes.

Discrimination or Harassment Complaint Procedures

The Office of Equal Opportunity & Title IX established these Procedures to assist in carrying out its responsibilities in the administration and enforcement of the University of Denver’s (“the University”) policies related to nondiscrimination, and in assuring the University’s compliance with applicable laws, including: Executive Order 11246; Title VI and Title VII of the Civil Rights Act of 1964; the Equal Pay Act (EPA) of 1963; the Age Discrimination in Employment Act; Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975; the Americans with Disabilities Act (ADA) of 1990 and as amended by ADA Amendments Act of 2008; the Rehabilitation Act of 1973; the Vietnam Era Veterans’ Readjustment Assistance Act (VEVRAA) of 1974; Uniformed Services Employment and Reemployment Rights Act (USERRA) of 1994; the Genetic Information Nondiscrimination Act (GINA) of 2008; Title 24, Article 34 of the Colorado Revised Statutes; and Denver Municipal Ordinances, and other applicable federal and state anti-discriminatory laws. University Policy and these Procedures are intended to comply with the prohibitions of these laws, as amended, as well as other applicable federal, state, and local anti-discriminatory laws.

The Office of Equal Opportunity & Title IX accepts and investigates complaints alleging discrimination, harassment, violence or retaliation in violation of University of Denver policies and applicable laws. Consistent with federal, state and local law and University policies related to non-discrimination, the Office conducts neutral investigations of complaints of discrimination, harassment, and violence - including pay discrimination - on the basis of race, color, national origin, age, religion, disability, sex, sexual orientation, gender identity, gender expression, marital status, pregnancy, military enlistment, veteran status, or genetic information; complaints of retaliation; alleged violations of the employee consensual relationship policy; and complaints alleging failure to provide reasonable accommodations for disability and religion.

Office of Equal Opportunity Procedures (https://www.du.edu/equalopportunity/policies_procedures)

Complaints for External Agencies

Several external agencies are available to students who have exhausted all other opportunities for resolution within the University.

Colorado Department of Higher Education

The Colorado Department of Higher Education regulates Colorado institutions of higher education. Their complaint policy may be found on the Colorado Department of Higher Education (http://highered.colorado.gov/Academics/Complaints) website.

U.S. State Education Regulatory Agencies

Through distance learning and other programs, the University of Denver provides instruction throughout the world. Students may direct concerns or complaints to regulatory agencies in their state. A list of U.S. state education regulatory agencies can be found on the State Contacts (http://www.du.edu/currentstudents/statecontact.html) page.

Higher Learning Commission

Complaints regarding the institution's ongoing ability to meet the criteria of institutional accreditation may be directed to the Higher Learning Commission. Individuals interested in bringing an appropriate complaint to the attention of the Commission should take some time to compile a complete submission, as outlined below. There is no complaint form.

1. Write a cover letter directed to the Commission containing a brief narrative of the facts of the complaint. In most cases, such a narrative need be no longer than a few pages.

2. Indicate in your complaint why you believe the issues raised in your complaint are accrediting issues. If possible, please review the Commission’s Criteria for Accreditation (http://policy.ncahlc.org/Policies/criteria-for-accreditation.html) on the Commission’s (http://policy.ncahlc.org) website prior to writing this section.
You should also indicate how you believe the Commission can assist you with this matter. Remember that the Commission cannot assist you in understanding your tuition bill, arranging for a refund of tuition, obtaining a higher grade for a course, seeking reinstatement to an academic program, etc.

3. Attach documentation to support your narrative wherever possible. (For example, if you make reference in your complaint to an institutional policy, include a copy of the policy with your complaint.) Helpful documentation might include relevant portions of the catalog, letters or email exchanged between you and the institution, learning agreements, etc.

4. A few reminders:
   • Please type your complaint or print very neatly.
   • Please do not use abbreviations or nicknames (e.g., NMS or USC or U of N).
   • Sign and date the cover letter.
   • Include contact information for future correspondence. Include a street address.
   • If you are writing on behalf of someone else (son/daughter or client), be sure to provide that person's consent in writing to allow you to communicate with the Commission on the student's behalf.

5. Mail the letter and its attachments to the Commission's office at 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1413. The Commission does not have an online complaint system and does not accept complaints via email.

Please note that the Commission will not consider those complaints that are not in writing and do not contain the elements noted here. The Commission's complaint policy precludes it from considering matters more than 5 years old.

The Commission will acknowledge your complaint within thirty days of receiving it and let you know whether your complaint is complete and whether it raises issues that are related to accrediting requirements or whether it is an individual dispute outside the jurisdiction of the Commission's complaint policy.

Email questions to complaints@hlcommission.org

Procedures for Academic Grievances and Appeals

Active students may appeal academic and student status related decisions and/or seek resolution of complaints or grievances through the Academic Grievance and Appeal Procedure during their enrollment at the University of Denver.

Graduate units may have additional requirements specific to their accreditation or professional standards. It is the responsibility of the student to determine whether the graduate unit has specific requirements and the responsibility of the unit to ensure that those requirements are addressed prior to advancing the grievance to the Office of the Provost. In the event of conflict between any grievance process published in unit manuals or websites, the formal grievance process (p. ) will govern.

Eligible and Ineligible Concerns

Eligible Concerns

These procedures may be used only by active students with the following concerns:

• A grievance or appeal regarding academic standing during their enrollment at DU.
• An academic decision made by a faculty or staff member, administrator or committee of the University of Denver that directly and adversely affects the student—e.g., program termination or dismissal, academic suspension, removal from a course, termination of GTA or GRA appointment.
• The grievance or appeal must be based on problems of process or concerns of bias, retaliation, or other impropriety and not on differences in judgment or opinion concerning academic performance.

Note: Students who wish to appeal a termination or dismissal from a program must do so within 45 calendar days of the term following their last term as an active student. For concerns of bias and retaliation based upon a protected class, the grievance will be referred to the Equal Opportunity Office, which may alter the timeline and process.

Ineligible Concerns

These procedures may not be used to resolve the following concerns:

• appeals related to disciplinary actions taken by the Conduct Review Board
• grade appeals
• admission decisions
• appeals or grievances submitted beyond the published timeline
Formal Grievance and Appeal Process

First Level: Informal Resolution
Students are expected to attempt to resolve complaints informally with the faculty or staff member, administrator or committee responsible for the academic decision. This attempt must include discussion of the complaint with the involved party or parties. If all reasonable informal efforts to resolve a complaint fail, the student may file a formal grievance or appeal.

If the complaint involves a charge of unlawful discrimination, the student may report the situation to the Office of Equal Opportunity or an appropriate supervisor who must immediately notify the Office of Equal Opportunity.

Second Level: Submission of the Formal Grievance or Appeal to Program Director/Chair
If a student elects to file a formal grievance or appeal, it must be filed within 45 calendar calendar days into the next quarter after the contested decision or grade was officially recorded and during which the student is enrolled at DU. All grievances and appeals must be filed in writing, signed and dated by the student and include supporting documentation at the time it is filed. The grievant/appellant must minimally provide the following:

- a clear description of the decision being grieved or appealed,
- the basis or bases for challenging the decision,
- the identity of the party or parties who made the decision,
- the specific remedy or remedies requested, and
- a description of all informal resolution attempted.

The decision of the program director or department chair must be issued in writing within 30 calendar days of receiving the grievance and shall include all of the following:

- a copy of the student's formal grievance,
- relevant findings of fact,
- decision and the reasons for the decision reached, and
- the remedy which is either granted or denied and/or any alternative remedies suggested.

Third Level: Submission of the Formal Grievance or Appeal to Dean
The party who finds the resolution unsatisfactory may appeal the decision in writing to the dean of the academic unit within five business days of receiving the program director or department chair's written decision.

The dean may render a decision on the matter or may refer the grievance or appeal to a standing grievance/appeal committee or establish an ad hoc committee to hear the matter. When an ad hoc committee is established, the student who lodges the appeal may designate one of the faculty members who will serve on this committee. This member must be tenured or tenure-track faculty from the University of Denver. Members of the unit involved in the grievance may not serve on the ad hoc committee and must recuse themselves if they are members of the standing committee.

The committee may, at its discretion, receive from the student, relevant faculty or staff members or other individuals, any additional evidence or argument that it deems necessary to resolve the grievance or appeal.

The appeals committee will begin deliberations as soon as possible and provide the dean a written recommendation no later than 30 calendar days after the date that the dean's office received the written, dated request for appeal at this level. The dean will make a final decision and distribute it to all affected parties within five business days after receiving the committee's recommendation.

Fourth Level: Submission of the Formal Grievance or Appeal to Provost
The party who finds the resolution unsatisfactory may appeal the decision to the Provost within five business days of receiving the dean's decision. The Provost will hear only those grievances and appeals based on problems of process or concerns of bias, retaliation, or other improprieties unrelated to protected class status and not on differences in judgment or opinion concerning academic performance. Within five business days after receiving the appeal, the Provost may refer grievances or appeals to appropriate bodies or personnel. If the issue is referred to the Graduate Council, its chair will appoint three members of the Council as a Grievance Committee to hear the case and shall designate one of the committee members to serve as chair.

Anyone called upon by the Provost or the Provost's designee shall submit a written recommendation within 30 calendar days of receiving the case. The Provost is the final authority in the matter and will report the disposition of the case to all involved parties within 30 calendar days of receiving a recommendation from the designee.

Scope of Review
Any University agent charged with reviewing a formal grievance or appeal may gather additional relevant facts if necessary and/or meet with involved parties. The reviewer will base a decision on documented evidence.
Deviation from Procedures
These guidelines provide basic steps for resolving appeals and grievances. The steps may vary based upon the structure of the academic unit or the particularities of the situation. The Provost or the Provost's designee may choose to approve or may direct a deviation from these procedures, for example, postponement of a time limit or elimination or addition of a step in the process, in order to ensure an effective and timely resolution.

Grievance or Appeal Record
Documentation in support of a grievance or appeal will be held by the person responsible for considering the grievance or appeal at that stage and passed along to the person responsible for the next step, if any. A record of meetings or interviews must be made and kept as part of the grievance or appeal record as well. The complete grievance or appeal record will consist of the original grievance or appeal, all documentary evidence and all formal decisions made at each step of the process.

Failure to Meet Deadlines
If after a formal grievance or appeal is filed, the University agent charged with review of the grievance or appeal fails to meet any deadline at any stage of the process, the grievant/appellant may proceed directly to appeal to the next higher University administrator in the manner prescribed by these Procedures, subject to the relevant time limitation calculated from the date of the missed deadline. The failure of any University administrator to meet any deadline shall not entitle the grievant/appellant to any relief requested, nor shall such a failure be construed as tantamount to a decision in the grievant/appellant's favor. Any grievant who fails to meet the deadlines imposed by these Procedures will be bound by the decisions previously made.

* The Provost may refer grievance appeals to appropriate bodies or personnel.

Procedures for Grade Appeals
Scope of Review: Grade appeals must be based on problems of process and not on differences in judgment or opinion concerning academic performance. The burden of proof rests on the student to demonstrate that one or more of the following occurred:

- The grading decision was made on some basis other than academic performance and other than as a penalty for academic misconduct.
- The grading decision was based upon standards unreasonably different from those which were applied to other students in the same course and section.
- The grading decision was based on an unreasonable departure from previously articulated standards.

The chairperson, grade appeal committee or dean may recommend grade changes but shall have the power to alter grades only in cases of clearly established procedural error or substantial capriciousness or arbitrariness in evaluation.

Timeline
The formal procedure must be started within 45 calendar days after the contested decision or grade was officially recorded. The grade appeal process officially begins on the date the Academic Appeal document is received by the faculty member.

Appeal Record
Any appeal must be in writing, dated and headed with the words "Academic Appeal." Once a formal appeal is presented to a faculty member, it must be presented in its original form at all later levels of appeal, although new statements may be added at any time.

Any evidence and all direct and supporting statements once made, become part of the permanent record of the appeal and must be produced at each level of appeal.

At each level of appeal, a written, dated decision and written reasons for the decision must be provided to the affected party or parties-the student, the faculty member and any person who has rendered a decision at an earlier level of appeal.

Students are permitted to submit evidence in writing. At the discretion of the University, students may be invited to present their appeal in person.

Grade Appeal Process
First Level: Appeal to the Faculty Member
A student will, where possible, attempt to resolve the issue informally with the instructor before filing a written grievance. Should attempts at informal resolution fail, the student may wish to file a formal grade appeal. After receiving a formal appeal, the faculty member shall assure that a written decision with express reasons is available or delivered to the student within 30 calendar days. If the student is dissatisfied with the decision or does not receive a response from the faculty member within 30 calendar days, the appeal may proceed to the second level. Should the student fail to take further action within seven calendar days after receiving the faculty member's decision, that decision shall stand.
Second Level: Appeal to the Department Chair/Program Director
If the student elects to continue the appeal, the appeal goes to the chair of the department (or program director if there is no chair). The chair or director shall assure that a written decision or recommendation about the appeal is available or delivered with express reasons within 30 calendar days after receiving the appeal.

If the student is dissatisfied with the decision or does not receive a response from the chair or director within 30 calendar days, the appeal may proceed to the third level. Should the student or faculty member fail to take action on the chair’s decision or recommendation within seven calendar days following its receipt, the accepted recommendation of the faculty member or new decision by the department chair shall be final.

Third Level: Appeal to Dean
If the student elects to continue the appeal after the chair’s decision or recommendation has been received, the appeal may be taken to the dean of the appropriate academic unit (or the dean's designee) within seven calendar days.

The dean shall ascertain within 30 calendar days whether the appeal procedures at the first and second levels have been duly followed; if they have not, the dean will require that they be followed before taking further action.

The appeals committee shall consist of three faculty members chosen by the dean or the dean’s designee. The dean or designee shall serve on the appeals committee as chairperson without vote. All deliberations of the committee will be closed and confidential.

Faculty from the same department as the faculty member involved in the case may not serve on the appeals committee.

The appeals committee should meet as soon as possible, but no later than 30 calendar days after a written, dated request for appeal at this level has been received and the Dean has ascertained that appeal procedures at the first and second levels have been duly followed. The presence of all eligible committee members (the three faculty members and the dean or designee) shall constitute the quorum.

A written recommendation shall be furnished by the appeals committee and transmitted through the office of the dean to all affected parties within seven calendar days after the conclusion of the committee’s deliberations.

The decision of the appeals committee is final.

Note: There is a separate grade appeal procedure for courses taught in the College of Law. Students with grade appeals in College of Law courses should consult the specific guidelines for academic grade procedures for that unit.

Disability Services Program

Disability Services Program (DSP)
The DSP is dedicated to giving students with disabilities an equal opportunity to participate in the University's programs, courses and activities. DSP provides accommodations at no cost to any student who has a documented disability as required by the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. The DSP provides and facilitates accommodations designed to mitigate the impact of a students’ disability, to afford equal opportunity and full participation in University programs for undergraduate and graduate students.

Students who need accommodations for a disability in order to fully participate in University programs, courses and activities should contact the DSP. This contact should be made as far in advance as possible. It is the joint responsibility of the student, DSP and other DU faculty and staff to work together to meet students’ needs. Students should familiarize themselves with the Handbook for Students with Disabilities/Medical Conditions, copies are available in the DSP office and at https://www.du.edu/studentlife/disability-services/index.html.

The DSP requires current supporting documentation of a student’s disability for its files. A student’s documentation is kept separate and private and is not part of the student's DU records. Students can choose to sign a Release of Information form so that DSP staff members are able to speak with others, including but not limited to; the students’ family members, healthcare and/or mental healthcare professional(s), and/or DU faculty and staff on the student’s behalf.

For more information, please visit the DSP website (https://www.du.edu/studentlife/disability-services), or stop by our office in room 440 Katherine A. Ruffatto Hall, or call us at 303-871-3241. DSP office hours are 8 a.m.–4:30 p.m., Monday–Friday.

Immunizations and Health Requirements
Immunization Requirements
Colorado state law and University of Denver policy requires all students to receive two (2) doses of vaccine against measles, mumps, and rubella (MMR) and a review of information regarding Meningococcal disease (meningitis) prior to registration. Additionally, students living in University of Denver on campus housing (dormitories and apartments) must show proof of vaccination for Meningococcal disease within the past five years.
Students must submit the completed *Certificate of Immunization* form to the Health & Counseling Center and must be compliant with the requirements by the program’s registration date. Students that fail to submit proof will not be allowed to register for classes.

*(Colorado Revised Statuses §25-4-901 to 909)*

A downloadable form and instructions can be found on the Health & Counseling Center [website](http://www.du.edu/duhealth). Alternative records, such as a childhood records, may be acceptable upon review of the Health & Counseling Center staff. Please call 303-871-2205 for more information.

**Note:** University College students are exempt from this requirement.

### Health Insurance Requirements

DU requires that all traditional students carry adequate health insurance. The University defines adequate health insurance as having a $500,000 minimum coverage per condition or illness, an affordable deductible, co-pay and co-insurance, a prescription benefit and coverage as required by Federal and Colorado state laws including Affordable Care Act mandates.

Participation in DU’s health care program (which consists of paying the Health/Counseling Fee and purchasing Student Health Insurance Plan) allows students to receive medical and mental health care at our Health & Counseling Center for little or no out-of-pocket costs.

There are two procedures for enrolling in the student health insurance plan and the health and counseling fee:

1. For students registered for six or more quarter hours (eight or more if you are a Law student), the Student Health Insurance Plan and Health/Counseling fees are added to the tuition bill. An informational hold is automatically placed on the student’s account. To remove the hold students should visit [Pioneerweb](https://myweb.du.edu/mdb/twbkwbis.P_GenMenu?name=homepage) and accept or decline coverage. Students who will be receiving the GTA/GRA Health Insurance Scholarship **should not** decline coverage.

2. Degree seeking students carrying less than six credit hours (less than eight credit hours for Law students), enrolled in University College, or on Continuous Enrollment, will need to enroll for the Student Health Insurance Plan (SHIP) at the Health & Counseling Center. SHIP enrollment is available twice a year, once in the Fall and once in the Spring. The Health & Counseling Fee enrollment is available every quarter.

For more information regarding eligibility or enrollment in the Student Health Insurance Plan, please call 303-871-2205 or go to the Health & Counseling Center [website](http://www.du.edu/health-and-counseling-center).

### Professional and Academic Conduct

**Honor Code**

All members of the University of Denver are expected to uphold the values of integrity, respect and responsibility. These values embody the Honor Code for students, faculty, staff and administrators as members of the University community. Our values are defined in the following ways:

- **Integrity:** acting in an honest and ethical manner;
- **Respect:** honoring differences in people, ideas and opinions;
- **Responsibility:** accepting ownership for one’s own conduct.

The complete text of the Honor Code and Honor Code violation procedures relating to students is maintained by Student Rights & Responsibilities [website](http://www.du.edu/studentlife/studentconduct).

**Note:** Some units may have additional or more stringent ethical guidelines. Students should contact the department for details.

**Academic Misconduct**

Faculty have the authority to set standards of academic integrity and define academic misconduct. The faculty member in conjunction with the academic unit determines the appropriate academic sanctions for academic misconduct. Academic sanctions are assessed by an individual faculty member and/or an academic unit and relate to the student’s standing within that course and/or unit. These may include, but are not limited to failure of an assignment, failure of a course and/or termination from a graduate program. When academic misconduct is suspected, the faculty member and/or representative of the academic unit should discuss the situation with the student and then come to a determination regarding appropriate academic sanctions. The exact process by which this is done is left to the faculty member in conjunction with the academic unit. Academic dishonesty is both an academic and behavioral issue. Students who violate the Honor Code are subject to dual consequences, academic sanctions and disciplinary actions. Students may be referred to the Student Rights and Responsibilities Office [website](https://www.du.edu/studentlife/studentconduct).
Appeals

Academic sanctions are not subject to the appellate process outlined in the Honor Code but are instead governed by the Procedure for Academic Grievances and Appeals for Graduate Students (p. 960). Decisions made by faculty members or academic units regarding academic sanctions may be appealed according to the Procedure for Academic Grievances and Appeals for Graduate Students (p. 960). Appeals will only be reviewed in the following circumstances:

• The existence of procedural errors is so substantial that the accused was denied a fair hearing
• A finding of fact made in the original hearing clearly not supported by the facts presented
• New and significant evidence is presented that was not reasonably available at the time of the initial hearing
• The imposition of a sanction that is arbitrary and capricious

Student Records

Disclosure of Student Information (p. 965)

Maintaining Contact Information (p. 967)

Preferred Name Usage (p. 968)

Transcripts (p. 968)

Disclosure of Student Information

The Family Educational Rights and Privacy Act (FERPA) affords eligible students certain rights with respect to their education records. (An "eligible student" under FERPA is a student who is 18 years of age or older or who attends a postsecondary institution.) These rights include:

1. The right to inspect and review the student’s education records within 45 days after the day the University receives a request for access. A student should submit to the Registrar a written request that identifies the record(s) the student wishes to inspect. Request forms are available from the Registrar. The registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the registrar, the registrar shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student’s education records that the student believes is inaccurate, misleading or otherwise in violation of the student’s privacy rights under FERPA. A student who wishes to ask the University to amend a record should write the University official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and the student’s right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to provide written consent before the University discloses personally identifiable information (PII) from the student’s education records, except to the extent that FERPA authorizes disclosure without consent. The University discloses education records without a student’s prior written consent under the FERPA exception for disclosure to University officials with legitimate educational interests. A University official is a person employed by the University in an administrative, supervisory, academic, research or staff position (including law enforcement unit personnel and health staff); a person serving on the board of trustees; or a student, volunteer or employee of a partner organization serving on an official committee, such as an admission, disciplinary or grievance committee, or assisting another University official in performing his or her tasks. A University official also may include a contractor outside of the University who performs an institutional service or function for which the University would otherwise use its own employees and who is under the direct control of the University with respect to the use and maintenance of PII from education records, such as an attorney, auditor or collection agent or a student volunteering to assist another University official in performing his or her tasks. A University official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her institutional duties.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-4605

Directory Information

The law provides that "directory information" may be released without the consent of the student. The University of Denver designates the following student information as "directory information:"

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-4605
The student's name (including prefix/honorific and personal pronouns), addresses, telephone numbers, electronic mail and webpage addresses, employer, job title, photographic images, date and place of birth, field of study, full-time or part-time status, class (e.g., graduate, sophomore, junior), participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, anticipated date of graduation, degrees and awards received, thesis and dissertation titles, the most recent previous educational agency or institution attended by the student.

Students may prevent the University from disclosing directory information by submitting a “Request to Prevent Disclosure of Directory Information” form (available from the Office of the Registrar) to the Office of the Registrar, University Hall, G33.

Disclosure

Students may authorize the University to share information from education records with third parties such as parents. Authorizations may be completed online or by completing an authorization form available in the Office of the Registrar.

FERPA permits the disclosure of PII from students’ education records, without consent of the student, if the disclosure meets certain conditions found in §99.31 of the FERPA regulations. Except for disclosures to University officials, disclosures related to some judicial orders or lawfully issued subpoenas, disclosures of directory information and disclosures to the student, §99.32 of FERPA regulations requires the institution to record the disclosure. Eligible students have a right to inspect and review the record of disclosures. A postsecondary institution may disclose PII from the education records without obtaining prior written consent of the student —

- To University officials, including faculty, within the University whom the University has determined to have legitimate educational interests. This includes contractors, volunteers, or others to whom the University has outsourced institutional services or functions, provided that the conditions listed in §99.31(a)(1)(B)(7)-(a)(1)(B)(2) are met. (§99.31(a)(1))
- To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student’s enrollment or transfer, subject to the requirements of §99.34. (§99.31(a)(2))
- To authorized representatives of the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education or State and local educational authorities, such as a State postsecondary authority that is responsible for supervising the University’s State-supported education programs. Disclosures under this provision may be made, subject to the requirements of §99.35, in connection with an audit or evaluation of Federal- or State-supported education programs or for the enforcement of or compliance with Federal legal requirements that relate to those programs. These entities may make further disclosures of PII to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation or enforcement or compliance activity on their behalf. (§§99.31(a)(3) and 99.35)
- In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid, determine the conditions of the aid or enforce the terms and conditions of the aid. (§99.31(a)(4))
- To organizations conducting studies for, or on behalf of, the University, in order to (a) develop, validate or administer predictive tests; (b) administer student aid programs; or (c) improve instruction. (§99.31(a)(6))
- To accrediting organizations to carry out their accrediting functions. (§99.31(a)(7))
- To parents of an eligible student if the student is a dependent for IRS tax purposes. (§99.31(a)(8))
- To comply with a judicial order or lawfully issued subpoena. (§99.31(a)(9))
- To appropriate officials in connection with a health or safety emergency, subject to §99.36. (§99.31(a)(10))
- Information the University has designated as “directory information” under §99.37. (§99.31(a)(11))
- To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, subject to the requirements of §99.39. The disclosure may only include the final results of the disciplinary proceeding with respect to that alleged crime or offense, regardless of the finding. (§99.31(a)(13))
- To the general public, the final results of a disciplinary proceeding, subject to the requirements of §99.39, if the University determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the University’s rules or policies with respect to the allegation made against him or her. (§99.31(a)(14))
- To parents of a student regarding the student’s violation of any Federal, State or local law, or of any rule or policy of the University, governing the use or possession of alcohol or a controlled substance if the University determines the student committed a disciplinary violation and the student is under the age of 21. (§99.31(a)(15))

As of January 3, 2012, the U.S. Department of Education’s FERPA regulations expand the circumstances under which a student’s education records and PII contained in such records—including Social Security Number, grades, or other private information—may be accessed without the student’s consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education or state and local education authorities (“Federal and State authorities”) may allow access to student records and PII without consent to any third party designated by a Federal or State authority to evaluate a federal- or state-supported education program. The evaluation may relate to any program that is “principally engaged in the provision of education,” such as early childhood education and job training, as well as any program that is administered by an education agency or institution. Second, Federal and State Authorities may allow access to a student’s education records and PII without the student’s consent to researchers performing certain types of studies, in certain cases even when the University objects to or does not request such research. Federal and State Authorities must obtain certain use-restriction and data security promises from the entities that they authorize to receive PII, but the Authorities need not maintain direct control over such entities. In addition, in connection with Statewide Longitudinal Data Systems, State authorities may collect,
compile, permanently retain and share without the student’s consent PII from education records, and they may track participation in education and other programs by linking such PII to other personal information about the student that they obtain from other Federal or State data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student records systems.

**Additional Information**

Questions about these policies and procedures may be directed to the Office of the Registrar at 303.871.3897. Request forms and additional information are available on the web at www.du.edu/registrar or in the Office of the Registrar at 2197 South University Blvd., Room G33, Denver, Colorado 80208.

**Maintaining Contact Information**

**E-Mail**

You will receive an @du.edu email address to use while enrolled at the University of Denver. All emails sent to you by the University will be delivered to your @du.edu email address. Information on accessing your @du.edu email address can be found at http://go.du.edu/office365. Upon graduation, you will have the option to move your email account to an @alumni.du.edu address.

The UTS Computer HelpDesk can assist with logging into PioneerWeb (https://PioneerWeb.du.edu) and answer questions on a variety of other technical topics. To contact the HelpDesk call 303-871-4700, send email to support@du.edu or access support through the UTS website (http://www.du.edu/uts/helpdesk).

The University sends much of its correspondence solely through email. This includes policy announcements, emergency notices, meeting and event notifications, course syllabi and requirements, and correspondence between faculty, staff, and students. The University is not responsible if payment of tuition and fees is not made because a student did not receive a billing notice. Students may be assessed a late fee if payment is not received by the due date printed on the bill. Such correspondence is mailed only to the official university email address. Faculty, staff, and students are expected to check their email on a frequent and consistent basis in order to stay current with University-related communications. Faculty, staff, and students have the responsibility to recognize that certain communications may be time-critical. This policy applies to all members of the University of Denver community; faculty, staff, and students.

**Address Information**

Enrolled students must provide the University with a valid mailing address and are responsible for communications sent to that address. If correct address information is not maintained, students may not receive grades, bills or graduation mailings. Additionally, the University must know how to contact students in case of an emergency.

Students unable to make address changes online can pursue the following options:

- Visit the registrar’s office on the garden level of University Hall or download the Address/Phone/Email Change Request form from http://www.du.edu/registrar.
- Send an email to registrar@du.edu; include student number and indicate which address or addresses are to be changed. (See following address types.)
- Call 303-871-4095. (For security reasons, students are asked to give identifying information.)
- Send a fax to 303-871-4300. (Include student number, month and date of birth, and indicate which address types are to be changed.)

**Types of Addresses**

- **Mailing:** This is the default address used by DU. All constituents should have a correct mailing address.
- **Billing:** Used to send the tuition bill to a different address from the mailing address.
- **Business:** Your place of work. For DU employees, this will be your office address.
- **Grades:** Used to send grades to a different address than the mailing address.
- **Home:** Used to distinguish a permanent (family) address for students from out of the area, or a home address for alumni. International students and employees (visa classes F, M and J) must maintain a valid foreign address in this field.
- **On-Campus:** Used only for University housing addresses. It is populated automatically each term.
- **Parents:** DU can maintain up to two addresses for parents.
- **Seasonal:** Used to override your permanent mailing address for certain times each year—e.g., a summer house.
- **Temporary:** Used to override your permanent mailing address for a single specified period.

**Telephone Numbers**

Students can enter several different types of telephone numbers in their student account: permanent home, business, cell, fax and local (if different from permanent home). Indicate the type and whether the number should be added or deleted on the front of the form. If checked as “unlisted,” the telephone number will only be released to University officials.
Notification preferences

Students may opt to receive emergency notifications and other official University notifications via text message. Notification preferences may be updated in PioneerWeb.

Preferred Name Usage

Preferred Name

The University of Denver is aware that many of its constituents routinely use a first name or full name other than their legal name. As part of being a welcoming and inclusive campus, DU has implemented changes to increase the use of preferred names in the course of DU business and education.

Because use of legal name is necessary in certain records and communications, both the legal name and preferred name (if desired) are stored in DU's information systems. Full implementation of the use of preferred names will be a process that occurs over time. When a student or employee contacts a DU office in person or by phone, the staff in that office may only have electronic access to the legal name.

What is a "Preferred Name?"

DU maintains two types of Preferred Names: 1) A preferred first name; and 2) A chosen/professional name.

A first name by which an individual wishes to be identified that is other than the individual's legal name is a "preferred first name". Students and employees can submit a preferred first name online. DU will work toward using preferred first name in most instances such as correspondence and online applications. In some instances the preferred first name will be displayed in addition to legal name, for example: Stefani Joanne Angelina Germanotta (Lady Gaga).

If an individual’s preferred identity includes a different surname or wishes to limit the display of their legal name, they may specify a "chosen/professional" name. This "chosen/professional name" will replace the legal name in most cases as the University is able to implement them. For example, chosen/professional name of Shania Twain would replace the legal name of Eileen Regina Edwards.

While DU will work toward primary use of the preferred first name or chosen/professional name in most instances, students and employees should be aware that the use of the legal name will continue to be necessary in certain communications and processes due to DU business or legal requirements and/or system limitations.

Students may also specify a "diploma name" to use on DU diplomas. Additional information on diploma names can be found here: http://www.du.edu/registrar/records/diplomas.html.

What are the reasons for using Preferred Names?

Many members of the DU community use a first name or full name that differs from their legal name. These may include individuals who prefer to use:

- a middle name instead of a first name;
- a nickname;
- an anglicized name;
- names with special characters: e.g., Renée, François, Zoë, Sørina, Peña
- a name to which the individual is in the process of legally changing;
- a name that better represents the individual’s gender identity;
- a name that reflects professional activities, publications, etc.

How has DU begun to use Preferred Names?

DU began using preferred names in certain internally developed processes such as the online directory several years ago. Our information systems have recently been enhanced to include preferred names in other places such as the Student Profile and class lists. However, initially, many systems and processes (including, but not limited to: student bills, transcripts, and health records) will continue to display only the legal name. Going forward, and in a manner consistent with legal and/or business requirements, DU will continue to implement processes by which the preferred name, not the legal first name, may be used.

Campus departments are being encouraged to use preferred names in their business practices.

How can I request that my preferred name be entered in DU information systems?

Members of the DU community can submit a preferred first name online now. Log onto PioneerWeb (https://pioneerweb.du.edu). Click the "MyWeb" tab. Expand the menu and click "Personal Information." Click "Update Preferred First Name" and submit your preferred first name. Preferred first names can be removed by clicking Update with nothing in the field.

To update your "chosen/professional name" obtain the Name Change Request Form here: http://www.du.edu/registrar/media/documents/namechange.pdf. Submit the form to the office indicated in the instructions. The form may not be submitted electronically. Chosen/professional names may be removed by the same form.
Where will my Preferred Name be used?
It is the University's intent to use Preferred Name in most public-facing uses. This would include written communications, web displays and internal reports and processes. Preferred Name is already used in the DU online directory, class and grade lists and in selected online applications. Full implementation of the use of Preferred Name will take place over time. Not all University departments will have access to Preferred Name while interacting with students.

Where will my legal name be used?
Use of legal name is necessary for certain data exchanges such as those to government agencies that verify the identity of a student by using the student's legal name. These include (but are not limited to) transcripts, payroll, tax, insurance, banking, financial aid and federal or state reporting.

Can I request any Preferred Name I want?
Individuals may designate a preferred name with which they identify and by which they prefer to be known. DU reserves the right to deny a request to include a preferred name in its information systems if the request is fraudulent, carries connotations offensive to good taste and decency, or violates University Regulations and/or Student Code of Conduct.

Do I have to use a Preferred Name?
No. The decision to submit a request to include a Preferred Name for DU's information systems is entirely optional.

Can I get a new Pioneer card with my Preferred Name?
DU will issue a new ID card, upon request, for students or employees who have requested a chosen/professional name. ID cards do not reflect preferred first names.

Can I get a new email address with my Preferred Name?
DU will provide a new DU email address, upon request, for students or employees who have requested a chosen/professional name. For further information, contact the UTS Computer Help Center: http://www.du.edu/uts/helpdesk/.

Pronoun Usage
Gender Designation & Personal Pronoun Self-identification Changes Summary and FAQ
This is a resource for affiliates making or updating self-identification selections in the University's information systems.

Identity: Legal Sex
Options Offered:

- Male
- Female
- I elect not to self-identify at this time

Explanation: For DU's required reporting, and to avoid even appearance of identity fraud, this must match current government designation.

Identity: *Gender Designation
Options Offered:

- Man
- Woman
- Non-binary
- I elect not to self-identify at this time
- Option not listed

Explanation: Consistent, lived identity. Unlike legal sex or anatomical descriptors, this is the level at which most people interact with others.

Identity: *Personal Pronouns
Options Offered:

- he/him/his
- she/her/hers
• they/them/theirs
• I elect not to self-identify at this time
• Option not listed

Explanation: Term used as stand-in for name in conversation and correspondence.

Identity: Prefix/Honorific
Options Offered:  (e.g., Mr/Mrs/Ms/Mx, Dr, Hon, Prof, Rev)

Explanation: Optional title or honorific used in formal greeting or correspondence. Some are traditionally based on gender, age, and/or marital status.¹

What is changing?
DU is adding fields to its information systems, allowing affiliates the option to self-identify by gender identity and pronouns. This is in addition to existing demographic information already requested of all affiliates.

Why are we asking?
Largely for our legal reporting requirements, the University of Denver already asks affiliates to self-identify by current legal sex (often coded as "gender"), race/ethnicity, veteran status, and disability.

We are expanding optional self-identification categories related to gender identity in order to allow us to understand and acknowledge our constituents more accurately and inclusively.

How will this information be used?
Your legal name and sex will remain the University's default data unless you actively make other selections, adding additional information to your record (e.g. chosen/professional name, gender designation, etc.).

Most immediately, the University will use aggregate information to understand campus demographics better, and to improve our acknowledgement of and services to our diversity of communities. This can include more robust support resources, enhanced training for service providers, more accurate reports, and potential advocacy to external reporting agencies for improving their systems.

If an affiliate has added a chosen/professional name, it is already included in many university systems, and can be used on Pioneer ID cards.  
(www.du.edu/registrar/records/preferredname.html)

With this additional information, we are working to better connect various other campus software systems so that your best name, pronouns and salutations are available from the central database, and are used consistently, accurately and respectfully by all affiliates. Ideally, every University interaction would be informed by the appropriate info: employees having over the phone and in-person conversations, and auto-generated message and online records would all use your correct names and pronouns. However, please note that we cannot yet guarantee that every communication (in person, online, in writing) will use these selections. This is a work in progress.

Who will have access to this information?
With the exception of student “directory information” (see below and www.du.edu/registrar/privacy), access to all affiliate information is restricted by law and policy to University officials, and to those whom students have authorized access.

Like most other personal information, an affiliate’s legal sex and gender designation are not considered directory information and are not released, accessed or used without permission. However, students who sign FERPA releases for their parents/guardians/others should understand that this identifier information can be requested/disclosed.

As part of a student’s name, prefix/honorific, titles are considered directory information and will be used publicly.

All affiliates should consider that providing this information to DU does make it available within restrictions above, and so should provide thoughtfully and intentionally.

Where I can check and/or update my current information?
• Prospective students and employees are asked some basic demographics when applying.
• Affiliates can update personal information through PioneerWeb (https://pioneerweb.du.edu).

The categories offered don't match how I identify.
We recognize that even these expanded options do not represent all the categories that DU affiliates use to describe themselves. (For example, while not DU-specific, a 2010 study of US campuses received more than three thousand distinct gender identity labels.²)
We are using the additional fields and these expanded options to gauge constituent interest and institutional utility. We plan to follow up with various campus constituencies to assess how we might improve descriptors, and potentially offer more and better options in the future.

**What if I do not make a selection in the expansion fields?**
The expanded fields are optional, but encouraged, and a "prefer not to respond" option is available. Unless you indicate something different, your legal name and sex will remain the default in all systems; other fields will note "not available" or be blank.

**Why don't you ask other identities?**
Based in part on participation and usage success of these fields, we are considering whether and how to expand, secure, and use additional categories to describe and serve our communities better. Stay tuned for opportunities to help shape those efforts.

I have additional questions.
Please contact your respective data manager:

- employees: Human Resources & Inclusive Community - sharedservices@du.edu - 303-871-7420
- students: Office of the Registrar – registrar@du.edu – 303-871-4095
- alumni: Alumni Relations - alumni@du.edu - 303-871-2701


**Transcripts**

A transcript is a copy of a student's academic record showing the academic status of the student at the time it is issued. The official transcript includes the complete academic record of courses taken at the University of Denver.

Transcripts are available from the Office of the Registrar (http://www.du.edu/registrar). However, transcripts and diplomas are not issued until all outstanding accounts with the University are paid. Students may check for current holds in PioneerWeb (https://PioneerWeb.du.edu). The Office of the Registrar (http://www.du.edu/registrar) does not hold transcripts pending a change of grade. Issued to Student is stamped on official transcripts sent to or picked up by students.

Unofficial transcripts can be obtained in PioneerWeb (https://PioneerWeb.du.edu).

Transcripts from Colorado Women's College/Temple Buell are also available through the Office of the Registrar (http://www.du.edu/registrar).

**Support Services and Resources**

- Bereavement Policy (p. 971)
- Crisis Assessment Risk Evaluation (CARE) Behavioral Intervention Team (p. 971)
- Pioneers CARE (p. 972)
- Student Death Response and Notification Guidelines (p. 973)

**Bereavement**

The Office of Student Outreach & Support (SOS) is the designated office to help support students in the event of a death in the student's immediate family or household. The student bereavement policy (https://www.du.edu/studentlife/studentsupport/media/documents/student-bereavement-policy.pdf) allows students a certain number of excused absences. Students can request verification of these absences by completing the verification request form (https://cm.maxient.com/reportingform.php?UnivofDenver&layout_id=94). Student Outreach & Support staff will then notify the student's instructors of the verified absences.

**Crisis Assessment Risk Evaluation (CARE) Behavioral Intervention Team**

Dear Campus Community,

As part of our culture of care and support, the University of Denver is committed to providing care and access to resources to create a safe and secure environment for our campus community to maintain our safety, health, and well-being. The C.A.R.E. team is comprised of staff and administrators across campus who are dedicated to crisis support and behavioral intervention in the best interest of the individual student and the campus community. The C.A.R.E. team takes a proactive, objective, supportive, and collaborative approach to the prevention, identification, assessment, intervention, management of, and coordinated response to situations and behaviors that may be disruptive or pose a risk of harm. As we care for both
the individual student and the campus community, the following policies outline the ways in which the C.A.R.E. team intervene, identify behavioral expectations and other support strategies to help the student remain in good standing with the University. While the C.A.R.E. team leads this effort of behavioral intervention, every member of the community has a shared responsibility and shared ownership in the culture of care and support.

In gratitude of our partnership,

The C.A.R.E. team

**Overarching Policy**

The C.A.R.E. team is dedicated to a proactive, objective, supportive, and collaborative approach to the prevention, identification, assessment, intervention, management of, and coordinated response to student situations and behaviors that may be disruptive or pose a risk of harm to the safety, health, and well-being of individuals and the campus community.

Please see full policy here: [Overarching Policy](https://www.du.edu/studentlife/studentsupport/media/documents/care_behavioral-intervention-policy.pdf)

**Individualized Assessment Policy**

If a student is displaying behavior that appears to present a significant disruption or risk of harm to the individual and/or community an Individual Assessment may be enacted.

Please see full policy here: [Individualized Assessment Policy](https://www.du.edu/studentlife/studentsupport/media/documents/care_individual-assessment-policy.pdf)

**Mandatory Withdrawal Policy**

In extraordinary circumstances, a student may be subject to a mandatory withdrawal if the C.A.R.E. team determines the student exhibits behaviors that substantially impede the student’s academic success and/or significantly disrupts the learning environment of others.

Please see full policy here: [Mandatory Withdrawal Policy](https://www.du.edu/studentlife/studentsupport/media/documents/care_mandatory-withdrawal-policy.pdf)

**Student Outreach & Support (SOS) Referral System**

**Student Outreach & Support (SOS) Referral Process**

The Student Outreach & Support (SOS) referral is a process to submit information about a student who may be experiencing a challenging situation and needs help to connect to the appropriate resources. Each referral is reviewed by staff members and then assigned to a Case Manager to outreach to the student and develop a support plan. This referral activates the appropriate University protocol to support both the individual and the campus community in maintaining their safety, health, and well-being.

Please refer to our page on how to recognize and support student in distress (https://www.du.edu/studentlife/studentsupport/student_support) for examples of indicators of concerning behavior. Please also always error on the side of submitting a referral. It is critical for our students and campus community that we receive this information in a timely manner.

Additional signs include:

- Difficulties with family/home environment
- Difficulties with food security and housing
- Difficulties adjusting to the college experience
- Financial Concerns
- Relationship Concerns
- Unable to locate the student
- Witness to an accident

If you know of a student who is experiencing any of the above signs or stressors, we encourage you to submit a SOS referral (https://publicdocs.maxient.com/reportingform.php?UnivoDenver&layout_id=99) through the online referral system.

**A note about confidentiality:**

As a part of this process, we work very hard to maintain confidentiality for students so they trust the work we're doing. As a result, if you submit a referral, we do not generally report back or communicate with you about the details of how we'll be working with individual students.

A SOS referral is not for emergencies. If there is an immediate threat to a student (either through self-harm or interpersonal violence) or the community, please call Campus Safety at 303-871-3000, or if dialing from a campus phone, 1-3000.
If you have a concern about our referral process, please contact the SOS Referral administrator (CARE@du.edu).

**Student Death Response and Notification Guidelines**

**Life Threatening Injury or Death of a Community Member Student and Employee Guidelines for Non-Emergency Situations**

The life threatening injury or death of a student or employee is a tragedy not only for family members and friends but also for the University community. The University of Denver strives to ensure that our responses are thoughtful, caring, professional, coordinated, and consistent. The notification of a tragic event sets in motion a range of protocols by Campus Safety, administrators, medical and mental health professionals, Student Life personnel, faculty, students, and others, depending on the circumstances. **In case of an immediate or continuing threat, call 911 and Campus Safety at 303-871-3000.**

**Notification**

Any member of the university community who receives information regarding a life threatening injury or death of a DU community member should notify Campus Safety at 303-871-2334.

**Course Descriptions**

- Accounting (ACTG) (p. 974)
- Anthropology (ANTH) (p. 977)
- Art - Studio (ARTS) (p. 983)
- Art History (ARTH) (p. 984)
- Biology (BIOL) (p. 988)
- Biophysics (BIOP) (p. 994)
- Business Core (BUS) (p. 994)
- Business Ethics & Legal Studies (LGST) (p. 998)
- Business Information & Analytics (INFO) (p. 1000)
- Chemistry (CHEM) (p. 1002)
- Child, Family & School Psych (CFSP) (p. 1003)
- Clinical Psychology (CPSY) (p. 1008)
- Communication (COMN) (p. 1030)
- Communication Management (COMM) (p. 1036)
- Computer Science (COMP) (p. 1041)
- Conflict Resolution (CRES) (p. 1046)
- Construction Management (CMGT) (p. 1047)
- Continuous Enrollment (CENR) (p. 1049)
- Counseling Psychology (CNP) (p. 1050)
- Curriculum and Instruction (CUI) (p. 1054)
- Economics (ECON) (p. 1064)
- Emergent Digital Practices (EDPX) (p. 1066)
- Engineering (ENGR) (p. 1070)
- Engineering, Bio (ENBI) (p. 1073)
- Engineering, Computer (ENCE) (p. 1074)
- Engineering, Electrical (ENEE) (p. 1076)
- Engineering, Mechanical (ENME) (p. 1077)
- Engineering, Mechatronic Syst (ENMT) (p. 1079)
- English (ENGL) (p. 1080)
- English Language Center (ELC) (p. 1083)
- Entrepreneurship & Venture Mgt (EVM) (p. 1084)
- Environmental Policy & Mgmt (EPM) (p. 1084)
- Environmental Science (ENVI) (p. 1090)
- Executive MBA (XMBA) (p. 1090)
- Executive RCM (XRCM) (p. 1093)
- Finance (FIN) (p. 1096)
• Gender and Women’s Studies (GWST) (p. 1099)
• Geographic Information Systems (GIS) (p. 1099)
• Geography (GEOG) (p. 1102)
• Geology (GEOL) (p. 1109)
• Global Studies (GS) (p. 1110)
• Healthcare Leadership (HC) (p. 1114)
• Higher Education (HED) (p. 1119)
• History (HIST) (p. 1123)
• Human Resource Administration (HRA) (p. 1123)
• Info & Communications Technol (ICT) (p. 1126)
• Info Tech & E-Commerce (ITEC) (p. 1134)
• Intermodal Transportation (TRAN) (p. 1136)
• International MBA (IMBA) (p. 1140)
• International Studies (INTS) (p. 1140)
• Judaic Studies (JUST) (p. 1178)
• K-12 Administration (ADMN) (p. 1179)
• Leadership (LDRS) (p. 1182)
• Liberal Studies (MALS) (p. 1182)
• Library & Information Science (LIS) (p. 1186)
• Management (MGMT) (p. 1190)
• Marketing (MKTG) (p. 1196)
• Materials Science (MTSC) (p. 1200)
• Mathematics (MATH) (p. 1201)
• MBA - General (MBA) (p. 1204)
• Media Film Journalism Studies (MFJS) (p. 1209)
• Music-Academic Classes (MUAC) (p. 1213)
• Music-Ensembles (MUEN) (p. 1226)
• Music-Studio Lessons (MUPR) (p. 1229)
• Organizational Leadership (ORL) (p. 1231)
• Philosophy (PHIL) (p. 1236)
• Physics & Astronomy (PHYS) (p. 1239)
• Professional Writing (PWRI) (p. 1242)
• Psychology (PSYC) (p. 1246)
• Public Policy (PPOL) (p. 1251)
• Real Estate (REAL) (p. 1254)
• Religion (RLGN) (p. 1255)
• Religious Studies (RLGS) (p. 1264)
• Research Methods and Stats (RMS) (p. 1270)
• Security Management (SMGT) (p. 1273)
• Social Sciences (SS) (p. 1275)
• Social Work (SOWK) (p. 1276)
• Statistics (STAT) (p. 1292)
• Taxation (TAX) (p. 1294)
• Teacher Ed Prep (TEP) (p. 1296)
• Theatre (THEA) (p. 1298)

Accounting (ACTG)
Courses

ACTG 4155 Accounting Information Technology Systems and Business Environment (4 Credits)
The course will give students a basic understanding of how to develop a beginning-to-intermediate AIS system. Process flowcharts and entity-relationship diagrams will be used to document the system in Microsoft Visio. The course will explore the database structure used in various accounting IT systems. Students will be Microsoft Access certified by the end of the course. The course will also cover the IT topics contained in the BEC portion of the CPA exam.

ACTG 4176 Accounting Data Analytics (4 Credits)
In this course, students explore overarching trends in big data and the impact to accounting and auditing fields while also gaining hands on experience working with business data sets. In today's information world, accountants must be well equipped to understand and utilize the vast and varying data systems that feed a company's decision making process. This course allows students to develop big data skills by learning the SQL language to query data from mock clients. Students execute Computer Assisted Auditing Techniques (CAATs) using both the SQL language as well as the audit data mining tool, IDEA. Students simulate the process to request client data files, load complex data sets, design and execute query procedures and summarize results for management. Prerequisite: ACTG 4610.

ACTG 4201 Financial Accounting for Management (2 Credits)
This course introduces the student to the fundamentals of financial accounting and reporting with an emphasis on the needs of the user, both internal and external. The goal is to enable the student to become a knowledgeable reader and user of financial statements.

ACTG 4220 Financial Actg & Analysis (4 Credits)
Cross-listed with ACTG 3230.

ACTG 4222 Understanding Financial Statements (4 Credits)
At the conclusion of this course the student should understand: (1) management decisions that impact published financial statements, (2) the fundamentals of interpretation and analysis of financial statements, (3) economic and ethical issues relating to financial reporting, and (4) management attempts to enhance reported operating results. The course addresses the needs of managers and analysts, hence does not cover promulgated financial reporting rules in depth. The financial reporting topics expand on material presented in introductory Accounting and Finance courses. The focus is on the substance of the reported information. This course is not an approved elective for the MACC degree. Cross listed with ACTG 3220.

ACTG 4240 Topics & Cases in Financial Accounting (4 Credits)
This course develops a greater awareness of contemporary accounting issues, focusing on financial reporting. The course is designed to enhance each student's ability to identify, discuss, and resolve open-ended problems (i.e., those having no single "correct" answer) faced by accounting professionals. Each student must commit to being an active participant in the class discussions. Through the use of numerous cases involving all aspects of financial reporting, students identify issues, conduct authoritative research, then present and defend their conclusions using both oral and written presentation formats. Students also write an original research paper on a topic of their choice.

ACTG 4281 Intermediate Financial Accounting I (4 Credits)
The focus of this course is the foundation and content of published financial statements. Specifically it covers the following broad topics: (1) Conceptual Framework of Financial Reporting; (2) Financial Statements and Related Disclosures; (3) Assets: Recognition and Measurement; and (4) Liabilities: Recognition and Measurement. Common to each of the topics is an emphasis on reading GAAP and applying GAAP guidance to fact patterns. At the conclusion of the course, students should be aware of the proper accounting treatment for many common situations; moreover, students should be fully comfortable interpreting GAAP literature to address scenarios involving assets, liabilities, and income that were not specifically covered in the class.

ACTG 4282 Intermediate Financial Accounting II (4 Credits)
This course is a continuation of Intermediate Financial Accounting. The focus of this course is the application of Generally Accepted Accounting Principles to complex business transactions. In this final course of the sequence, we finish our examination of the balance sheet by exploring the issues involved with stockholders’ equity, followed by in-depth study of some of the most complex accounting issues, including revenue recognition, accounting for income taxes, pensions and post-employment benefits, leases, and accounting changes and errors.

ACTG 4284 Consolidated Financial Statements (2 Credits)
This course introduces the student to the preparation of financial statements in compliance with GAAP when the reporting entity has investments in other entities that are other than passive investments. This module explores the financial reporting issues relating to partial or full ownership of one business entity by another. It includes use of the equity method as well as issues involved in reporting the financial results of consolidated entities, both at and subsequent to acquisition or formation.

ACTG 4285 Accounting for Foreign Operations (2 Credits)
Topics covered in this course include the financial statement impact of doing business in a foreign currency, having foreign subsidiaries or operations, and certain hedging activities.

ACTG 4290 Advanced Accounting Theory (4 Credits)
This course analyzes trends in accounting through review of major publications of the accounting profession. It places emphasis on theoretical foundations of accounting theory underlying concepts of assets, income determination, and disclosure. Prerequisite: ACTG 4282 or Test Score AC82 >= 1 and Prerequisite or Co-requisite: ACTG 4284.
ACTG 4340 Topics & Cases in Managerial Accounting (4 Credits)
This course focuses upon innovative forensic, management control, productivity and business valuation approaches used by forensic and managerial accountants. Such strategies and techniques are evaluated through classroom discussion of cases and related articles.

ACTG 4354 Cost Accounting (4 Credits)
Accounting information in manufacturing enterprises, standard costs, and budgets. Open to students not having ACTG 3354 or equivalent. Prerequisite: MBA 4110, MBA 4111, or equivalent.

ACTG 4400 Taxation for Business and Investment Planning (4 Credits)
This is an introductory tax course that emphasizes a conceptual approach to learning the income tax framework applicable to common business and investment transactions. It is designed to sensitize students to the tax implications of business decisions and to cultivate the student's ability to ask good tax questions. This course will illustrate that effective business planning depends on an accurate assessment of relevant tax factors.

ACTG 4410 Federal Income Taxation (4 Credits)
The course is designed for graduate accounting students that wish to study federal income taxation. This is the first course in taxation, which introduces the federal taxation system, the importance of tax authorities, the concepts of gross income and tax deductions and the tax implications of common property transactions. The course generally focuses on property transactions, but the taxation of individuals is emphasized with an objective of students being able to properly prepare complex individual tax returns.

ACTG 4462 Corporate and Partnership Taxation (4 Credits)
The course is designed for graduate accounting, finance or other business students in their study of advanced topics in federal income taxation. This is the second course in taxation which concentrates on taxation of corporations, limited liability corporations, S corporations and partnerships.

ACTG 4520 Forensic Accounting and Auditing (4 Credits)
Students will have an opportunity to learn, study, and discuss practical aspects of accounting as it is used to detect and prosecute fraud. Students will be exposed to improprieties, common fraud schemes, illegalities, and harassments.

ACTG 4551 Auditing (4 Credits)
This course is designed to provide you with a thorough understanding of auditing and related attest services. This includes gaining requisite knowledge about AICPA (U.S. GAAS) and PCAOB auditing standards and how they are applied in conducting a financial statement audit. Application of these standards applies to planning an audit, the risk assessment process including gaining an understanding of internal control, gathering and evaluating evidence, sampling, and issuing an audit report.

ACTG 4552 Advanced Auditing (4 Credits)
This course is designed to build on the foundation of auditing knowledge developed in ACTG 4551 and apply that knowledge to specific accounts and assertions in a financial statement audit. Students also examine selected SEC enforcement actions and discuss what audit procedures may have been beneficial to prevent the misstatement. Prerequisite: ACTG 4551 or ACTG 3551.

ACTG 4557 Fair Value Auditing (4 Credits)
The purpose of this course is to expose students to the accounting, economic and valuation concepts and challenges that are relevant to auditing fair value measurements and disclosures in financial statements. The role of the FASB, PCAOB, SEC and other standards setters on fair value accounting and measurements are explored. Prerequisite: ACTG 4551 or ACTG 3551.

ACTG 4575 Accounting Information System Risk, Control and Audit (4 Credits)
An auditor cannot just "audit the numbers" without strong consideration to the IT systems that generate those numbers. Today's accounting professionals must possess a strong understanding of accounting information system risks and controls. Topics specifically covered in this course include IT security controls, datacenter controls, data backup and disaster recovery planning, SDLC and change control processes. Students perform hands on simulated audit exercises and case studies to truly experience the role of an IT auditor. Prerequisites: ACTG 3551 or ACTG 4551.

ACTG 4607 Not-for-Profit & Governmental Accounting (4 Credits)
The course will focus on Not-for-Profit (NFP) and Governmental (Govt) financial accounting standards and practices employed by governmental and nonprofit organizations. Upon successful completion of the course, students will master the fundamentals of financial reporting of various kinds of governmental accounting and nonprofit organizations. Social, environmental, and ethical issues are addressed in this course. The content of Governmental and Nonprofit Accounting will be linked to sustainability, leadership and governance.

ACTG 4610 Financial Accounting and Reporting (4 Credits)
The purpose of this course is to provide students with an understanding of the financial statements issued by companies to external parties, such as shareholders and creditors. The course covers the fundamentals of accounting, from recording economic events in the accounting records to the preparation of the company's financial statements. In addition, the course examines major transaction categories, accounting policy choices of business firms and their financial statement implications, as well as the content of publicly-traded companies' Form 10-K annual reports.

ACTG 4620 Accounting Ethics (4 Credits)
This course focuses on the idea of community and the ethical and social relationships of accounting leaders and business organizations in their communities. The course focus is on the role of the accounting professional and the unique and special responsibilities associated with that role. This is examined by analyzing a variety of issues that students will face during their careers. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that emerge directly relate to the state Code of Professional Conduct applicable to CPAs, the Code provisions are discussed and analyzed.
ACTG 4660 Strategic Cost Management (4 Credits)
Strategic cost management methods and practices focus on how to help the firm succeed in contemporary business. Topics in the course include balanced scorecard, cost-volume-profit analysis, target costing, standard costing, and management control. The course will enable students to apply strategic thinking to management planning, decision-making, and management reporting.

ACTG 4700 Graduate Seminar in Accounting (1-17 Credits)

ACTG 4701 Special Topics in Accounting (1-5 Credits)

ACTG 4702 Special Topics in Accounting (1-5 Credits)

ACTG 4703 Special Topics in Accounting (1-5 Credits)

ACTG 4704 Special Topics in Accounting (1-5 Credits)

ACTG 4705 Topics in Accounting (1-4 Credits)

ACTG 4710 Managing the Family Business (4 Credits)
Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family “banks,” family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

ACTG 4740 Valuation and Modeling (4 Credits)
The ultimate purpose of the course is to improve professional decision-making skills. Professional decisions are made using a combination of judgment and analysis. Even skilled professionals (in any field) will make incorrect decisions when working with incorrect or insufficient information. Thus, one key to improving decision-making is improving analytical insights and skills. This course emphasizes the definition, construction, uses and limitations of popular financial models and instruments. Further, the class focuses on how the instruments are used, why they are used and how decisions to use such instruments and tools/techniques to value them are made.

ACTG 4750 Valuing a Business (4 Credits)
This course explores all major aspects of business valuation. Students not only study valuation theory, they appraise an actual business and draft a valuation report in compliance with the American Institute of Certified Public Accountants Statement on Standards for Valuation Services (SSVS) and Reporting Standards of the National Association of Certified Valuation Analysts (NACVA). Prerequisite: ACTG 4740.

ACTG 4760 CEOs and Corporate Governance (4 Credits)
This course examines the current and pressing issue of corporate governance, in its ethical, legal, and social dimensions. Students read the latest views of scholars and experts and gain the perspectives of corporate CEOs and other organization leaders. Topics explored include the history of various governance models, public policy on corporate governance, corporate board functions and responsibilities, the dynamics between CEOs and boards, ethical leadership and corporate culture, ethics and compliance programs, executive liability, nonprofit corporate governance, board and audit committee responsibilities, restructuring and governance, executive compensation problems and solutions, shareholder activism, and corporate governance reforms. Cross-listed with LGST 4760.

ACTG 4795 Graduate Research Seminar (1-17 Credits)

ACTG 4880 Internship - Graduate (0-4 Credits)
Hours and times arranged by student.

ACTG 4991 Independent Study (1-10 Credits)
Hours and times arranged by student.

ACTG 4992 Directed Study (1-10 Credits)

ACTG 6300 Behavioral Research in Accounting Seminar (4 Credits)
This seminar will provide students with the tools needed for educated consumption of behavioral research in accounting. We will focus on the theoretical and methodological issues faced by those who conduct this research, as well as the practical implications of the research for business leaders. Students should leave the course with a basic knowledge of behavioral research in accounting and be better able to create, analyze and critique such research.

Anthropology (ANTH)

Courses

ANTH 3000 Anthropology of Tourism (4 Credits)
Considers the interaction of host and visitor cultures in foreign tourism. Explores the effects of tourism on the host culture and the expectations of the visitors. Discusses tourism's relationship to development and the various levels of needs of the tourists.
ANTH 3001 Race, Sex and Evolution (4 Credits)
The course examines the paleoanthropology of race and sex. Our focus is on the nature and evolution of human racial differences, sexual anatomy, reproductive strategies, and gender roles. We will consider the history of thinking about race and sex in anthropology and related disciplines, and the uses to which particular conceptions have been put in our culture. We will discuss and evaluate alternative models for explaining the evolution of alleged biological and behavioral differences between racial groups and between men and women. Evaluation will proceed in light of evolutionary theory, comparative primate anatomy and behavior, the human fossil record, and general anthropological knowledge. Our aim is to examine myth and reality in popular and scientific understandings of these aspects of the human condition and, in the end, the social and political (i.e., policy) consequences of this knowledge. Enforced Prerequisites and Restrictions: ANTH 2105.

ANTH 3020 Native Religions (4 Credits)
A cross-cultural survey of concepts used to understand and talk about "religion," "the supernatural," and associated behavior among Native peoples of Turtle Island. Topics include healing and techniques of controlling and channeling supernatural power; sacred places and their significance; myths and symbols in their cultural contexts; initiation rites; conceptualizations of male and female deities; and responses of indigenous people to attempted missionization.

ANTH 3030 Digital Anthropology (4 Credits)
Digital Anthropology introduces students to computer technology used in anthropological research. Students study and then produce a number of digital products useful in the analysis and interpretation of museum collections, for archaeological mapping and research, and for the dissemination of anthropological knowledge online. This process covers the use of Geographic Information Systems (GIS) for spatial analysis, three-dimensional imaging programs ranging in scale from broad landscape mapping to detailed digital artifact analysis. In addition, the use of geophysical methods for imaging what is below the surface allows students to produce images of what lies below the ground in archaeological contexts.

ANTH 3040 Anthropologies of Place (4 Credits)
This class is an exploration of the relationship between people and places from an anthropological viewpoint. We concern ourselves with a variety of ideas about place, emphasizing not just how places are used, but how they infuse themselves into the lives, histories and ethics of those who interact with them. The course readings include book-length anthropological case studies interspersed with interdisciplinary readings about place and landscape. The course includes seminar-style discussions of readings, workshops and observations in the field. On several occasions, we take our class on the road, working together to think about how people and place interact. By the end of the class, each student creates his or her own anthropology of a place. Must be junior standing or above.

ANTH 3060 Cultural Narratives (4 Credits)
Human beings are natural storytellers. Whether reciting oral traditions or recounting personal experience, people everywhere use narratives as a way to express and to understand themselves. This course approaches cultural narratives from two angles. First, it explores the ways that anthropologists, usually trained in the social sciences, make use of and study narratives, whether through ethnographic observation, conducting an interview, gathering folklore or archaeological interpretation. Second, the class investigates narratives that, although produced by non- anthropologists, engage with anthropological issues such as kinship, gender, work, tradition and identity. The narratives range broadly from fiction, to poetry, to film. These two approaches are framed by theoretically informed readings about narrativity, both from the social sciences and the humanities. The class involves intensive reading and writing, as it makes use of both discussion and workshop formats. Each student in the course completes a research and writing project culminating in his or her own cultural narrative. Must be junior standing or above.

ANTH 3070 Folklore and Cultural Heritage (4 Credits)
Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the "folklore process." Prerequisite: introductory social science course. Cross-listed with ANTH 4070.

ANTH 3080 Memory and Memorialization (4 Credits)
The course focuses on how social groups represent, experience and commemorate the remembered past; it explores issues of construction of memory, particularly how representations of the past and its materialization through monuments, ruins, and landscapes are connected with issues of institutionalized perceptions of national, ethnic, racial and religious identity. Furthermore, it discusses concepts such as "authenticity," "tradition," and "modernity" in the interpretation of cultural heritage and how the interpretation of the past and of culture depend on context (political and historical), experience and point of view. The course aims to develop an interdisciplinary approach to memory and to methodologies and empirical research.

ANTH 3090 God and Giving? Religion and Philanthropy in America (4 Credits)
This course is cross-listed with JUST 3090 and RLGS 3090. The United States is notable for its high levels of religious participation and for its well-established and rapidly expanding nonprofit sector. In this course, we will explore these phenomena from a variety of disciplinary perspectives including anthropology, history, and religious studies in order to understand the intersections of religion and philanthropy. By looking at religious ideologies, social theory, and legal and economic contexts, we will consider how religion, government, and philanthropy shape and are shaped by one another. We will examine a number of case studies including faith responses to Hurricane Katrina, the history of philanthropy in Denver, and U.S.-based religious global giving. We will explore key questions regarding community and social responsibility and ask which actors get to define key societal problems and who is ultimately responsible for responding to these problems.

ANTH 3130 The Archaeology of Gender (4 Credits)
This course examines the ways archaeology can contribute to the study of gender through investigations of the deep through recent past. The class will include readings on gender theory, the uses of archaeological data and specific case studies of engendered lives in the past. Cross listed with GWST 3130.
ANTH 3135 Feasting, Fasting and Food: The Anthropology of Food (4 Credits)
Feasting, Fasting and Food focuses on foodways and food culture. Food and its acquisition and preparation are tied to the historical, social and cultural lives of all peoples. By drawing on historical sources, ethnography and a number of anthropological perspectives, we look at foodways as symbols of identity, culinary tourism, food work as trade or profession, the study of food as art and theater, and food and memory. Prerequisite: ANTH 2010.

ANTH 3155 Native American Resistance in the Digital Age (4 Credits)
Since Europeans first made contact with the Americas five centuries ago, depictions of indigenous peoples have largely been created by and for the colonizers. Only recently have native activists begun to take back control of their image. The course begins with the premise that indigenous peoples have been active producers of their own cultural heritage both before and after European expansion into the Americas. A postcolonial approach will be used to evaluate resistance from a historical standpoint, starting with the colonial period and into the twenty-first century. Primary attention will be placed on the late twentieth century and twenty-first century to better understand how indigenous filmmakers, curators, scientists, healers, artists, and scholars use indigenous knowledge systems to contest Western conceptions of authority. Specific topics include indigenous film and media; indigenous feminisms; the use of indigenous perspectives in natural resource management; indigenous voices in the decolonization of museums; and the role indigenous communities play in educating the public of long-lived environmental contamination of water and other natural resources. The course will be designed to explore the voice and agency of indigenous peoples in each of the aforementioned fields, and to teach the validity of indigenous perspectives. While students will be introduced to indigenous case studies from around the world, primary attention will be given to Native American tribal groups in the United States. Prerequisite: Any ANTH 1000-level course.

ANTH 3170 Applied Heritage Management (4 Credits)
Considers the role of archaeology in preservation and the management of cultural resources in terms of legislation, ethics and practical application, with emphasis of the utility, necessity and reality of doing archaeology today in the public sector. Site report writing, governmental regulations and the business side of archaeology are stressed. Archaeological information from site reports and artifact analysis are compiled and presented in a digital format. Prerequisite: ANTH 2310.

ANTH 3200 Human Origins and Evolution (4 Credits)
Examines the fossil record for human evolution from 6 million years ago to the origin of modern Homo sapiens, including current theories, evidence and controversies. Considers the historical and sociological contexts of human evolutionary studies, popular myths and misconceptions, and alternative scenarios for the future evolution of the human species.

ANTH 3225 Human Rights in Latin America (4 Credits)
This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region’s democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today’s human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we will explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.

ANTH 3255 Ancient North America (4 Credits)
This course examines the history of American Indian cultures from their earliest archaeological traces on this continent up to and including contact with European explorers and colonists.

ANTH 3290 Art and Anthropology (4 Credits)
Study of the concept of art and its multiple roles in society from a cross-cultural and historical perspective. Commodification of culture through tourism and the global art market; arts of resistance and survival; and cultural expression and community development.

ANTH 3310 Indigenous Environment (4 Credits)
The purpose of this course is to introduce students to particular environmental issues that affect indigenous peoples, including subsistence and economic issues; sacred lands; cultural property dilemmas; and the impact that use of traditional cultural properties by others—including nation-state governments, corporations and tourists—have on indigenous peoples’ cultural and social integrity. Particular focus is on one of these issues—travel and particularly “ecotravel” and “ecotourism.”

ANTH 3320 Medical Anthropology (4 Credits)
This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

ANTH 3330 Human Rights of Indg Peoples (4 Credits)
This course introduces students to the concept and definition of "indigenous peoples." It covers the history of resistance, revitalization, and assertion of sovereignty by Indigenous peoples, and why the United Nations felt it necessary to adopt a "Declaration on the Rights of Indigenous Peoples" in 2007. It covers how indigenous identities and indigenous rights issues do or do not "fit" with internationally accepted definitions of human rights. The course will concentrate on the intersection of indigenous autonomy with globalization, neo-liberal ideologies, and nation-state policies. Case studies focus on Iroquois, Cree, Mayan, Mapuche, Zapatistas, Maoris, and Sami.

ANTH 3350 Latin American Archaeology (4 Credits)
Covers the prehistory of the Western Hemisphere south of the Mexico-U.S. border, from initial colonization of the hemisphere by Paleo-Indian people, to the origins of agriculture and the rise of civilization. Olmec, Mayan, Aztec, Chavin, Moche and Inca cultures are covered in detail.
ANTH 3360 Cross-Cultural Perspective: Women (4 Credits)
Confronts question about women's lives and women's status in a global perspective. It addresses issues such as why women have been subordinate to men in so many cultures, how one actually measures dominance and subordination, and whether there is some biological basis for gender inequality. Broad theoretical questions on the status of women are discussed and form the basis for the analytical inquiry which follows. Cross-listed with ANTH 4360.

ANTH 3370 Sex, Class and Race in Latin America (4 Credits)
This course uses an intersectional approach to the study of sex, class and race in Latin America. Intersectionality aims at understanding the interlocking relation between sex, class, race and other aspects, and how these are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. In this course we will aim at understanding such history, culture and peoples with a special emphasis on examining their heterogeneity, and aiming at understanding how such heterogeneity is also related with social inequality. We will also examine some contemporary issues such as women's rights, indigenous movements, human rights, migrations, and economy with an emphasis on their manifestations at the intersections of sex, class, and race.

ANTH 3380 Women and Development (4 Credits)
A case study approach to understanding women's status and the problems of combining productive and reproductive responsibilities in developing countries. Cross-listed with ANTH 4380, INTS 3390.

ANTH 3390 Geoarchaeology (4 Credits)
Use of geological methods to interpret archaeological sites, ancient landscape reconstruction, study of environmental change and habitation.

ANTH 3430 Visions, Utopias and Messiahs (4 Credits)
Ghost dance, peyote religion, cargo cults, peasant revolution, charismatic leaders, messianic movements in cross-cultural perspectives; roles played by cultural systems, historical circumstances and social conditions in generating social movements.

ANTH 3460 Peasant Culture and Society (4 Credits)
The problems, evolution, and variable organization of peasant society cross-culturally. Emphasis on causes of persistence and change in economic, social and ideological aspects of peasantry.

ANTH 3470 Applied Anthropology (4 Credits)
The practical application of cross-cultural knowledge and awareness to the solution of social and cultural problems. Ethnographic methodologies, a review of the history of applied anthropology and a consideration of the ideological and ethical components of applied anthropology are covered.

ANTH 3485 Anthropology and Underdevelopment (4 Credits)
Anthropological approach to some of the developing world's most pressing social problems and how anthropologists can make a relevant contribution in confronting, studying and changing the nature of underdevelopment.

ANTH 3500 Culture and The City (4 Credits)
Examines the past and future of the city as a human built environment that reflects and reproduces social, political, economic, and cultural forces and ideals. Begins with the origin of cities in antiquity and ends with contemporary urban landscapes. Analysis is sensitive to both the technologies and aesthetics of urban form. Emphasis is on the possibilities for urban redesign to meet the problems of 21st century city life.

ANTH 3510 The Ancient City (4 Credits)
The archaeological study of ancient cities around the world is a booming and controversial area of research. This course investigates what we know about the nature of the earliest cities in the great original cradles of civilization: Mesopotamia, Asia, Africa, and the Americas. Our focus is on how the first cities were planned, built, and experienced by citizens.

ANTH 3540 The Nature of Language (4 Credits)
Language as social, psychological, cultural phenomenon; relationship between cultures, semantics; language as medium of cultural unification; relationship between dialects, social structure.

ANTH 3550 Africa: Peoples and Cultures (4 Credits)
Survey course in the anthropology of Africa designed to explore the diversity of African people and cultures. The course examines issues of contemporary life in the continent as well as the way it has been portrayed by the media, anthropologists, historians, and writers. Topics such as geography, history, society, politics, religion, ethnicities, and material culture of different regions are central to the discussion.

ANTH 3620 Ethnoarchaeology (4 Credits)
Ethnography has often been used as an illustrative device to animate archaeological remains, or to develop models of human behavior, regardless of the geographic and chronological distance between the ethnographic and the archaeological data. This course addresses different perspectives and theories concerning the use of ethnoarchaeology to complement archaeological information. It aims to define the role of ethnoarchaeology in the study of human past; to establish an agenda of issues to which their use is relevant; and to provide a critical overview of major approaches to the use of ethnographic analogies and historical information in archaeology.
ANTH 3630 Archaeological Method and Theory (4 Credits)
This class presents methods for gathering archaeological data in the laboratory and then using a variety of theoretical approaches in its interpretation. Students gather archaeological data using museum collections from a variety of sites. Those artifacts include stone tools and ceramics as well as other environmental data and architectural information in a variety of environmental and landscape contexts. For each site studied students are presented with a body of theoretical literature from which to interpret these data. A variety of interpretative methods can potentially be chosen for each site, and in most cases there is no right answer, only answers that can be supported by the data collected and interpreted using the theoretical constructs read. All students are required to write up complete site reports for each project including all raw data collected in the analysis and theoretical approaches used in interpretation.

ANTH 3640 Race and Human Evolution (4 Credits)
Examines the history of thought about the nature and evolution of human racial differences and sexual characteristics, from the mid-19th century to the present day. Considers scientific and popular models for explaining the evolution of racial differences, male-female reproductive behavior and gender roles. These models are examined in light of comparative primate data, ethnographic data and the material record of human evolution. Prerequisite: ANTH 2010.

ANTH 3650 Dynamics of Culture Change (4 Credits)
Considers culture change and the agents of change. Focuses on changes in indigenous cultures around the world resulting from colonialism 1850-1950, forced acculturation, the tension between worldwide economic development and human rights, and the changing nature of the post-colonial world.

ANTH 3660 Anthropological Theory and Context (4 Credits)
History and development of particular schools of thought, paradigms, methods and methodologies that characterize contemporary anthropology. Intellectual, artistic developments, world-wide sociopolitical and economic processes that shaped much of anthropological thinking of the times. Research methods in reconstruction of human history and qualitative ethnographical research.

ANTH 3661 Museums and their Visitors (4 Credits)
This course is designed to be a comprehensive introduction to museums and their approaches to serving visitors, primarily through exhibitions and education. It examines current research and museum practice as it relates to the museum as an environment for meaningful visitor experiences and learning. The course is organized around the following core issues: (1) What do visitor experiences look like in a museum context? (2) How do museums design for different audience types? (3) What do we learn from assessing visitors’ experiences? (4) How do objects, ideas and spaces affect visitor learning and experiences? Cross listed with ARTH 3661.

ANTH 3680 Quantitative Methods-Anthropology (4 Credits)
The use of statistics in all branches of anthropology; data screening; parametric and nonparametric statistics. Prerequisite: any course in basic statistics.

ANTH 3701 Topics in Anthropology (4 Credits)
Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit.

ANTH 3702 Topics in Anthropology (4 Credits)
Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit. Prerequisite: ANTH 1010.

ANTH 3703 Topics in Anthropology (4 Credits)
Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit. Prerequisite: ANTH 1010.

ANTH 3741 Introduction to Conservation (4 Credits)
Introduction to physical properties of materials found in museum artifacts and specimens. Discusses preventative conservation principles and methods.

ANTH 3742 Museum Exhibit Development (4 Credits)
Introduces general principles of planning, development, production and evaluation of museum exhibits. Explores design elements and methods of evaluation. Students have the opportunity to do exhibit mockups and exhibit evaluation.

ANTH 3743 Managing Collections (4 Credits)
Principles and methods regarding acquisition, documentation, conservation and accessibility of collections. Law, registration methods, computerization, policy, development, ethics and preventive conservation are also discussed.

ANTH 3750 Ethnographic Methods (4 Credits)
In this course, students study the art and science of ethnographic research methods, conduct quarter-long field research projects, and write practice ethnographies. The course requires students to apply the American Anthropological Association's Code of Ethics in their research and to write Institutional Review Board applications for their projects. Course readings include texts on ethnographic methods as well as controversial and exemplary ethnographic publications for student dissection and debate.
ANTH 3790 Field Methods in Archaeology (4 Credits)
The purpose of this class is to introduce students to archaeological field methods through a combination of readings, lecture, discussion, and hands-on experience. Training begins with issues of archaeological ethics, legal mandates, and research designs. Students then transition to learning skills and methods both in the classroom and in the field. Methods you will learn will include the basics of site survey and mapping, testing, excavation, artifact recovery and field processing, and data recording in the field. Cross-listed with ANTH 1790. Prerequisite: ANTH 2310.

ANTH 3791 Critical Perspectives in Museum Studies (4 Credits)
This course critically explores museums and heritage complexes as sites of cultural production and consumption at different historical moments and in diverse cultural and national settings. Special attention is given to contemporary issues, debates, and approaches in the context of museum anthropology and heritage studies. The term museum is used to include a wide range of heritage projects that do not rely only on the traditional institution established to collect, conserve and exhibit material culture, but includes intangible heritage, historic built environment and event natural environment that was used and marked by human action.

ANTH 3875 Research Methods in Anthropology (4 Credits)
This course offers an in-depth introduction to anthropological research methods with the aim of providing students with the tools necessary to design a coherent research proposal. Starting with the notion that anthropological research is a scientific endeavor, the course offers knowledge and skills that allow for a systematic application of qualitative and quantitative methods to respond to research questions. Students will learn when and how to use one method, as well as the implications of doing it. Students will also learn how to critically read research reports that use qualitative, quantitative, or mixed methods. The course is organized in two portions. The qualitative portion will focus on a detailed exploration of the continuum that goes from posing a research question, choosing a methodology, carrying it on, and reporting the results. The quantitative portion is concentrated on collecting numerical data, methods of which are often based on a qualitative understanding of people. Quantitative analysis will present tools used to take readings, acquire data, observations, and other information necessary to test hypotheses about people, cultures and how we can understand them from their material remains. The purpose of the quantitative part of the class is to determine what is statistically significant and what ideas about people are supportable using the scientific method. This course is required for all anthropology graduate students, and suggested for advanced undergraduates who are working on senior theses, and have an interest in anthropological research. The course is also open to non-anthropology students interested in anthropological research.

ANTH 3880 Culture, Ecology, Adaptation (4 Credits)
This course is organized around these concepts: "ecology," "adaptation," "landscape," "technology," "artifact," and "architecture." The course focuses on defining and examining adaptation and the role of culture and technology in achieving adaptations, or in not achieving them. This focus will be especially pursued with respect to the concept of landscape—that is, culturally defined physical space—and the cultural artifacts that interpret and modify it in the course of human adaptation to its ecological components.

ANTH 3890 Context of Material Culture (4 Credits)
Examines how material culture both reflects and actively structures political, economic and cultural life. Considers the relationship between people and their material culture (portable objects, non-portable objects, buildings, socially-created landscapes) in Western, non-Western, ancient, and contemporary cultural contexts. Reading materials draw from the fields of ethnology, archaeology, folklore, geography, history, art and architecture.

ANTH 3981 Museum Internship (1-6 Credits)

ANTH 3990 Summer Field School-Archaeology (4-6 Credits)
Archaeological excavation, survey and recordings; analysis and conservation of artifacts in the field.

ANTH 3991 Independent Study (1-15 Credits)

ANTH 3992 Directed Study (1-10 Credits)

ANTH 3995 Independent Research (1-10 Credits)

ANTH 4000 Advanced Anthropology (4 Credits)

ANTH 4040 Historical Archaeology: Theory and Method (4 Credits)
Because it is the archaeology of periods for which there is also written history, historical archaeology is a dynamic and interdisciplinary field. It also has a distinct set of concerns and methods that build upon, but does not replicate, those of prehistoric archaeology. This course is designed to engage students in the practice of historical archaeology through readings, discussions, and the hands-on analysis of archaeological materials. The first class of each week is a discussion of readings in historical archaeology. The readings introduce students to theoretical and methodological issues in the discipline, as well as important case studies. Many of the readings have a North American focus, but address international practice. The second class of each week has a hands-on focus. Backed by readings on historic materials analysis, we discuss and practice the types of research historical archaeologists perform on actual materials, focusing on different material types each week. Students in the course each process and analyze a set of materials excavated from a historic site. Cross-listed with ANTH 2040.

ANTH 4070 Folklore and Cultural Heritage (4 Credits)
Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the "folklore process." Cross-listed with ANTH 3070.

ANTH 4200 Native North America (4 Credits)
Native American cultures north of Mexico. Cross-listed with ANTH 2200.
ANTH 4220 Human Rights in Latin America (4 Credits)
This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region's democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today's human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.

ANTH 4290 Art and Anthropology (4 Credits)
This class introduces students to anthropological approaches to the study of art and visual culture. The first part of the course covers foundational work in the field, introducing key concepts as well as methods for viewing and understanding art from a cross-cultural/comparative and interdisciplinary perspective. We examine the relationships among art, technology and the environment, as well as the importance of form, function, style, meaning, and aesthetics in the study of art. The second part addresses issues of contemporary concern in art and anthropology, such as the influence of market forces and tourism on artistic traditions and cultural expressions; the intersection of art and identity; the politics of cultural representation. The course also explores the ethnographic turn in some forms of contemporary art as well as doing ethnography as art.

ANTH 4320 Medical Anthropology (4 Credits)
This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

ANTH 4360 Cross-Cultural Perspectives of Women (4 Credits)
Cross-listed with ANTH 3360.

ANTH 4370 Sex, Class and Race in Latin America (4 Credits)
This course uses an intersectional approach to the study of sex, class and race in Latin America. Intersectionality aims at understanding the interlocking relation between sex, class, race and other aspects, and how these are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. In this course we will aim at understanding such history, culture and peoples with a special emphasis on examining their heterogeneity, and aiming at understanding how such heterogeneity is also related with social inequality. We will also examine some contemporary issues such as women's rights, indigenous movements, human rights, migrations, and economy with an emphasis on their manifestations at the intersections of sex, class, and race.

ANTH 4380 Women and Development (4 Credits)
Case study approach to understanding women's status; problems of combining productive/reproductive responsibilities in developing countries. Cross-listed with ANTH 3380, INTS 3390.

ANTH 4700 Readings in Anthropology (1-5 Credits)
Directed readings in anthropology under faculty supervision. May be repeated for credit.

ANTH 4701 Special Topics in Anthropology (1-5 Credits)

ANTH 4702 Special Topics in Anthropology (1-5 Credits)

ANTH 4703 Special Topics in Anthropology (1-5 Credits)

ANTH 4704 Special Topics in Anthropology (1-5 Credits)

ANTH 4740 Perspectives-Museum Studies (4 Credits)

ANTH 4744 Museum Anthropology (4 Credits)
This course introduces students to museum anthropology and the ethnography of museums as well as the theoretical and practical sides of museum studies. The course is based on the following premises: Museum anthropology is a form of applied anthropology in which museums are a venue for making anthropological insights and knowledge accessible and relevant to the public; Museums, as institutions of public culture, are a forum for exploring contemporary social issues and concerns; The role of museums in society and civic engagement is at the core of contemporary museum anthropology and Museology.

ANTH 4745 Museum Practicum (2 Credits)
Individually designed practicum in student's area of interest.

ANTH 4981 Museum Internship (1-6 Credits)

ANTH 4991 Independent Study (1-17 Credits)

ANTH 4992 Directed Study (1-10 Credits)

ANTH 4995 Independent Research (1-17 Credits)

Art - Studio (ARTS)
Courses

**ARTS 3055 Advanced Drawing (4 Credits)**
Working with a variety of materials and techniques, students hone their drawing skill and at the same time create finished drawings defined by content. Problems posed encourage independent thinking, experimentation and the development of a personal technical base. Lab Fee. Prerequisite: ARTS 2045 or ARTS 3065 or permission of instructor.

**ARTS 3065 Life Drawing (4 Credits)**
An intensive course in drawing the human figure, clothed and unclothed, to explore the human form in terms of proportion, movement, light and shadow, composition, color and personal expression. Students experiment with a range of materials. Lab Fee. Prerequisite: ARTS 1250 or permission of instructor.

**ARTS 3125 Figure Painting (4 Credits)**
An intensive course in painting the human body—the most timeless subject of art. Students work mainly in oils and experiment with a variety of surfaces and techniques. Students also investigate line, proportion, light and shadow, composition and color. Final project: life-size painting of two figures. Lab fee. Prerequisite: ARTS 2115 or ARTS 3065 or permission of instructor.

**ARTS 3145 Painting Workshop (4 Credits)**
Concentration on selected techniques and approaches to painting. Topics change. Course may be repeated to a maximum of 12 credits. Lab Fee.

**ARTS 3555 Ceramic Workshop (4 Credits)**
Concentration on selected techniques and experimental approaches to ceramics. Topics change. Course may be repeated to a maximum of 12 credits. Lab fee. Prerequisite: ARTS 2515 or approval of instructor.

**ARTS 3635 Advanced Sculpture (4 Credits)**
Students work at an individual pace in production of sculptural ideas and objects. Lab fee. Prerequisite: ARTS 2625.

**ARTS 3655 Sculpture Workshop (4 Credits)**
Concentration on selected techniques and experimental approaches to sculpture. Topics change. Course may be repeated to a maximum of 12 credits. Lab fee.

**ARTS 3701 Topics in Studio Art (4 Credits)**
Selected topics in advanced studio art research. Course may be repeated to a maximum of 12 credits. Lab fee. Prerequisite: instructor's permission.

**ARTS 3966 Studio Art Travel (1-4 Credits)**
A travel course to selected locations to visit galleries, museums and artists' studios. Location and content of course change. Variable credit. May be repeated to a maximum of 12 credits. Lab fee.

**ARTS 3980 Studio Art Internship (1-4 Credits)**
The student is responsible for locating the internship and gaining approval for it, using the internship guidelines and contract form in the art office. Typical internships have been located in commercial galleries, fine art printmaking houses, professional artists' studios and non-profit arts organizations.

**ARTS 3991 Independent Study (1-6 Credits)**
Supervised studies not addressed in this catalog of classes. Advanced projects must be faculty approved. Permission/registration form is available from the Office of the Registrar.

**ARTS 3992 Directed Study (4 Credits)**
This class should only be used when a required ARTS 3000-level course listed in this catalog is not offered in the quarter in which the student must take it. Permission of an instructor and the Director of the School of Art and Art History are required. Permission/registration form is available from the Office of the Registrar.

**ARTS 4910 Grad Advanced Problems in Art (1-12 Credits)**
This course is for MFA candidates who wish to pursue graduate-level independent work under the guidance of a studio art faculty member. Permission of the student's graduate advisor and the studio art instructor must be obtained before enrolling. May be repeated to a maximum of 12 credits.

**ARTS 4991 Graduate Independent Study (1-12 Credits)**
This course is for MFA candidates who wish to pursue graduate-level independent work under the guidance of a studio art faculty member. Permission of the student's graduate advisor and the studio art instructor must be obtained before enrolling. May be repeated to a maximum of 12 credits.

**ARTS 4992 Directed Study (1-10 Credits)**
This class should only be used when a required ARTS 4000-level course listed in this catalog is not offered in the quarter in which the student must take it. Permission of an instructor and the Director of the School of Art and Art History are required. Permission/registration form is available from the Office of the Registrar.

**Art History (ARTH)**
Courses

ARTH 3656 Curatorial Practicum (4 Credits)
Students will work in curatorial teams to plan and execute an effective exhibition of contemporary art. This process may include choosing a theme and selecting works of art, researching artists and themes, budgets, scheduling, developing an exhibition checklist, modeling the gallery, visual exhibition design, conservation and collections management factors, shipping, installation, educational outreach to the public, publicity and other issues related to exhibition planning.

ARTH 3661 Learning in Museums (4 Credits)

ARTH 3701 Topics in Art History (1-4 Credits)
Selected themes and topics from the history of art. Content changes and course may be repeated to a maximum of 12 credits.

ARTH 3702 Topics in Contemporary Art (4 Credits)
This course offers an in-depth exploration of contemporary art and critical theory from a cross-disciplinary, global perspective beginning in the 1960s. We couple intensive reading and writing assignments to meetings with guest creatives and thinkers, visits to local art spaces, and roundtable discussions about new research. The particular art historical topic varies from year to year.

ARTH 3812 From New Republic to the Gilded Age: 19th Century American Art (4 Credits)
This is a thematic study of American art and architecture, 1790-1910, including national identity, domesticity, nature, industrialization, death and mourning, westward expansion, Civil War, spirituality, and internationalism. Lectures, discussions and field trips.

ARTH 3813 Arts of the American West (4 Credits)
This class covers a wide range of art objects and styles from the 17th century to the present in the West of the United States, from buffalo robe paintings and baskets to cowboy art and contemporary abstract landscapes. Particular attention is paid to the diversity of art traditions—Native American, Spanish and Mexican, European, Asian and Latin American—as they converge in this geographic space.

ARTH 3815 American Art and Religion (4 Credits)
This course examines sacred art forms, as well as art that documented or commented upon religious experience in the U.S., from the 17th century to the present. In includes fine, decorative, and popular arts as well as architecture, in slide-lecture-discussions and field trips. The diversity of religious experience and spirituality in American art is emphasized.

ARTH 3817 Gothic Art (4 Credits)
This course examines the art of the Late Middle Ages in Europe, from roughly 1140 to 1400. Gothic architecture, sculpture, painting, stained glass and the sumptuous arts (metal, textiles) are examined within their broader social, political and religious contexts. Particular attention is paid to the Gothic Cathedral - that quintessential window into the medieval world—its beliefs, aspirations, social and political realities.

ARTH 3818 Art of Renaissance Europe (4 Credits)
This course provides an examination of the artistic cultures in Europe during the Renaissance (15th and 16th centuries). Depending upon the quarter, this course will be a general survey of European art during the Renaissance or a more focused exploration of a sub-period, such as painting in fifteenth-century Italy. Chronological and geographic factors determine the overall theme and structure of the course. Students gain both a sound knowledge of key artistic monuments of the period, as well as a conceptual framework according to which they may organize their knowledge. This class may be repeated for a maximum of 8 credits.

ARTH 3822 Northern Renaissance Art (4 Credits)
This course explores the dramatic developments in the arts (particularly panel painting, manuscript illumination and sculpture) in Northern Europe from around 1350 to 1550. From lavishly decorated Books of Hours and the development of stunningly naturalistic oil paintings on panel in the early 15th century through the development of printing and the rise of self-portraiture, genre and landscape depictions, this class traces the important role played by Dutch, Flemish, German and French artists in the transition from late medieval to early modern artistic forms and practices. The role of art in shaping and expressing religious, civic, political and economic concepts are explored, as well as the rise of the social and intellectual standing of the artist. Among the artists examined include Jan van Eyck, Rogier van der Weyden, Albrecht Dürer, Hieronymus Bosch and Pieter Bruegel the Elder.

ARTH 3823 17th-Century European Art (4 Credits)
This course considers European arts of the 17th century. Depending upon the quarter it may be a general survey of European art during the seventeenth century or a more focused exploration of a sub-period, such as Italian Baroque or the Old Dutch Masters: Rembrandt, Vermeer and Frans Hals. This class may be repeated for a maximum of 8 credits.

ARTH 3832 19th-Century Art (4 Credits)
This course surveys the major art movements in Europe from the late 18th century to the end of the 19th century. Major painters, sculptors, printmakers and architects of the following movements will be presented: Neo-classicism, Romanticism, Academic Painting, Realism, the Pre-Raphaelites, Impressionism, Post-Impressionism, Symbolism and Art Nouveau. Their works will be studied in light of the social, political and cultural milieu in which they appeared. Special attention will be paid to representations of race, class, gender and colonialism.

ARTH 3833 20th-Century Art (4 Credits)
This class studies the development of early 20th-century art in Europe and the U.S., as the center of the avant-garde shifted to America around World War II. The class follows the development of modernism and its theories from 1900 to around 1960. Artists and movements will be considered according to stylistic and theoretical development, and also in relation to social, political and cultural developments of their time.
ARTh 3834 Contemporary Art (4 Credits)
This course surveys the development of contemporary art, focusing primarily on recent decades, but making connections to earlier movements from 1970 to the present. This includes painting, sculpture, performance art, installations and new media art. Students become familiar with various issues of recent art theory and criticism to put these works into a theoretical perspective. In addition to an in-depth look at the broad stylistic movements of the past forty years, this course also examines those figures whose work has come to define the major approaches and concerns for the art of our time.

ARTh 3835 Contemporary Painting: Body, Light, Motion (4 Credits)
As prompt for this course, we will expand on an ambitious, open question posed by Jonathan Harris for the 2001 exhibition Hybrids at the Tate Liverpool: “What is contemporary, international, painting?” What knowledge can be derived from such a traditional medium? How have ever-new technologies affected the image, and how have discourses on the human body influenced the painterly practice? What are the many possibilities for materializing, analyzing, and displaying canvases today? And, in what ways has the globality of networks and connectivity destabilized or rejuvenated painting? The practices and philosophies that formulate hypotheses to such ambitious questions will be investigated from cross-cultural perspectives. Our conversations, which will start with an inquiry into modern and postmodern paintings and theories, will expand into contemporary considerations of religion in art, the relationship between the street and the gallery, the impressions of body politics within the event of painting, the dimensions of space and intersections of technology, as well as the dynamics of the global art scene.

ARTh 3838 Connoisseurship (4 Credits)
In this class the historical roots, theoretical and philosophical underpinnings, and actual practice of connoisseurship are studied using objects from the museum’s collection.

ARTh 3839 Topics in Modern Art (4 Credits)
Selected themes and topics from the 18th century to the present. Topics change, and the course may be repeated to a maximum of 12 credits.

ARTh 3850 Art and the History of Science (4 Credits)
This class explores the connections between art and the history of science, using a broad span of visual material, mainly European art from the Middle Ages to the present. Coverage of the material is thematic, focusing on three major categories: Art and the Natural World; Art and the Human Body; and Art and the Human Mind. We read a wide variety of art historical articles and selected chapters that examine works of art related in the first section to astrology, astronomy and alchemy; botanical, zoological and geological illustration; and color theory, perspective, optics, maps, contemporary earthworks and ecology. In the second section, we explore the evolution of anatomic illustration, as well as mythic, religious and genre images related to medicine, pharmacy and healing as well as works by contemporary artists who are concerned with genetic codes, hybridization and cloning. In the third section, we examine depictions of human temperaments, emotions and madness through the images of selected artists.

ARTh 3862 Mesoamerican Art (4 Credits)
This course is an introduction to the art and archaeology of the native peoples of Mesoamerica in Pre-Columbian times, or from about 2000 BC to AD 1521. Cultures covered include the Olmec, Teotihuacan, Mixtec, Zapotec, Aztec and others. This class presents the cultural sequence of Pre-Columbian Mesoamerica and explores how the various civilizations of Mesoamerica shared aspects of world-view, cosmology and daily life. Students will be able to identify and discuss how these elements manifested in the art and architecture of Mesoamerican cultures. Furthermore, the course investigates issues of shamanism, kingship and power, warfare, and human sacrifice. This class may be used to fulfill the non-Western requirement for majors in the School of Art and Art History.

ARTh 3863 Art of the Maya (4 Credits)
This course is an introduction to the art and archaeology of the Maya from about 300 BC to AD 986. Cultures covered include the Olmec, Teotihuacan, Mixtec, Zapotec, Aztec and others. This class presents the cultural sequence of Pre-Columbian Mesoamerica and explores how the various civilizations of Mesoamerica shared aspects of world-view, cosmology and daily life. By the conclusion of the class, students should be able to read their intricate pictures, discuss the strategies of powerful Maya rulers and understand how Maya art and architecture reflect their concepts of time and the cosmos. This class may be used to fulfill the non-Western requirement for majors in the School of Art and Art History.

ARTh 3864 Buddhism and the Fine Arts (4 Credits)
This survey examines the history, practices, ritual contexts, aesthetics and artistic traditions of Buddhism including architecture, calligraphy, sculpture and painting, in terms of its social and historical context, political and religious functions, as well as issues including artistic production, changing techniques and symbols, and the market/audience. The primary goal is to understand Buddhism as reflected in art and culture.

ARTh 3865 Native American Art (4 Credits)
This course is designed as an introduction to the art and architecture of the native peoples of North America from the earliest signs of humans in North America to the present. Cultures covered include those from the Southwest, the Northwest, the Southeast Ceremonial Complex, the Plains and contemporary Native American artists. By the conclusion of the class, students will understand the cultural sequence and geographic dispersion of native North America. Students will also understand how the various civilizations of North America shared aspects of world-view, cosmology and daily life, and be able to identify and discuss how these elements manifested in the art and architecture of native North American cultures. This class may be used to fulfill the non-Western requirement for majors in the School of Art and Art History.

ARTh 3866 Art of the Andes (4 Credits)
This course is designed as an introduction to the art and architecture of the native Pre-Columbian peoples of the Andes. Cultures covered include Chavin, Nasca, Wari and the Inca.
ARTh 3871 Women in Art (4 Credits)
This course considers the roles of women in art and explores the impact of race, class and gender on art produced from the Middle Ages to the present with discussions of women artists, women patrons and images of women. Cross listed with GWST 3871.

ARTh 3872 Introduction to Conservation (4 Credits)
This lecture course familiarizes the student with the concepts and challenges of conservation, its role in museums and the care of collections. Specific emphasis is given to the materials, structure, deterioration and preservation of material culture. Field trips to various museums and/or workshops to make appropriate display mounts and storage containers enhance the understanding gained from readings and lectures.

ARTh 3875 History of Collections (4 Credits)
This course traces the history of collections from the Renaissance to the present, addressing the interconnections between artists, patrons, dealers, art markets, provenance, connoisseurship and the historical development of museums and private collections. Each week's readings of journal articles and chapters focus on different types of collections or themes, including royal and imperial collections, cabinets of curiosities, excavating and transporting antiquities, British country estates and the Grand Tour, the establishment of national museums, the relationship between American collectors and dealers, ethnographic objects in Western collections, Nazi looting, restorers and forgers, and artists' collections, to name a few.

ARTh 3910 Art History Travel (4 Credits)
A travel course to selected locations to study major monuments and collections of art and architecture. Location and content change. This class may be repeated for a maximum of 8 credits. Prerequisite: instructor's permission.

ARTh 3991 Independent Study (1-10 Credits)
This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.

ARTh 3992 Directed Study (1-5 Credits)
This class should only be used when a required ARTh course listed in this catalog is not offered in the quarter in which the student must take it. Permission of an instructor and the Director of the School of Art and Art History are required. Permission/registration form is available from the Office of the Registrar.

ARTh 4301 Seminar in Art History Methods (4 Credits)
This seminar considers the history of art history and the development of various methods that art historians use to interpret and understand art. Required of all MA candidates in art history.

ARTh 4302 Research Practicum (4 Credits)
The goal in this course is to learn professional methods and resources for original research in areas of American art where little or no published research exists. Students learn through short exercises in biographical, object-oriented, internet, and archival research; by tackling a 10-week research project of their choice within the topic for the quarter; and by networking with each other to share resources and progress. Required of all MA candidates in art history.

ARTh 4312 Seminar in Precolubnian Art (4 Credits)
Selected topics in Precolubnian Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTh 4313 Seminar in Islamic Art (4 Credits)
Selected topics in Islamic Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTh 4314 Seminar in Medieval Art (4 Credits)
Selected topics in Medieval Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTh 4321 Seminar in Renaissance Art (4 Credits)
Selected topics in Renaissance Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTh 4331 Seminar in 18th Century Art (4 Credits)
Selected topics in 18th century Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTh 4332 Seminar in 19th Century Art (4 Credits)
Selected topics in 19th century Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTh 4333 Seminar in 20th Century Art (4 Credits)
Selected topics in 20th century Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTh 4334 Selected Topics in Contemporary Art: Public Art (4 Credits)
Selected topics in contemporary art. Advanced research papers and presentations. Content changes. May be repeated for a maximum of 8 credits.

ARTh 4336 Seminar in American Art (4 Credits)
Selected topics in American Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

ARTh 4651 Museum Methods and Principles (4 Credits)
This class surveys the major activities, goals, and organization of the art museum within today's world. Students meet with a variety of museum professionals to discuss the changing dynamics within art museums, as well as ethical and practical issues of museum work. The class reads both classic and current literature on museum issues and practice, and participates in research, collection, and exhibition projects. Required of all M.A. art history students pursuing the Museum Studies option.
ARTh 4652 Museum Internship (0-10 Credits)
Arranged internship in student's area of specialization. Students should take ARTH 4651 Museum Methods and Principles first. Prerequisite: instructor's permission.

ARTh 4991 Independent Study (1-10 Credits)
This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.

ARTh 4992 Directed Study (1-5 Credits)
This class should only be used when a required ARTH 4000-level course listed in this catalog is not offered in the quarter in which the student must take it. Permission of an instructor and the Director of the School of Art and Art History are required. Permission/registration form is available from the Office of the Registrar.

ARTh 4995 Master's Research Paper (4 Credits)
Students should see their advisor for guidelines regarding the Master's Research Paper class.

Biology (BIOL)

Courses
BIOL 3010 Evolution and Speciation (4 Credits)
Theories and supporting evidence explaining evolution from origin of universe to complex interrelationships of species. Prerequisites: BIOL 1010, BIOL 1011 and BIOL 2510.

BIOL 3020 Aquatic Ecology (4 Credits)
An introduction to the ecology of fresh-water and marine organisms including aquatic adaptations, community organization, food chains, nutrient cycling and man's impact on aquatic ecosystems. Prerequisite: BIOL 2010 or instructor's permission.

BIOL 3030 Alpine Ecology (4 Credits)
Ecology of alpine and subalpine regions of Colorado; organization and distribution of communities and populations, succession, energy flow, nutrient cycling, population adaptations in life-history physiology, behavior and morphology. Prerequisite: BIOL 2010.

BIOL 3035 Invasive Species Ecology (4 Credits)
This course investigates those plants and animal species that have dramatically expanded their ranges and cause ecological harm. Topics covered include the mechanisms of ecological impacts across the globe, how invasive species are used to test basic ecological theory, the application of this research for managing real species, and related issues such as the debate within the scientific community about the term "invasive." We use a case-study approach, and students have the opportunity to go into the field as a class to observe the real invasions and learn sampling methods.

BIOL 3044 Coral Reef Ecology (3 Credits)
Ecology of coral reefs; organization and distribution of reefs; review of reef organisms and their interactions with each other and their physical environment; threats to coral reef conservation. Prerequisite: (BIOL 2010 or BIOL 2050) OR (GEOG 1201, GEOG 1202, and GEOG 1203).

BIOL 3045 Coral Reef Ecology Lab (1 Credit)
Ecology of coral reefs laboratory to supplement lecture material; travel to the Caribbean over spring break to observe coral reefs firsthand; introduction to research methods. SCUBA certification and permission of instructor required. A travel and dive fee is associated with this course.

BIOL 3055 Ecology of the Rockies (4 Credits)
A week in residence at the Mt. Evans Field Station prior to the start of fall quarter includes field projects dealing with ecology and environmental issues. On campus classes involve data analysis and interpretation and formal scientific communication. Themes include terrestrial and aquatic ecosystems, taxonomic groups ranging from conifer stands to aquatic insects and mountain goats. Lab fee associated with this course. Prerequisite: BIOL 2010 or permission of instructor.

BIOL 3060 Tropical Ecology (3 Credits)
Biological composition of tropical ecosystems; biodiversity, biogeochemistry; causes and biological consequences of tropical deforestation; ecologically based approaches toward sustainable tropical forest use. Includes laboratory. Prerequisite: BIOL 2010.

BIOL 3070 Ecological Field Methods (4 Credits)
Series of field exercises for students to learn principles and procedures of field methodology, data analysis and technical writing in ecology; problems drawn from population, community and ecosystem ecology. Lab fee associated with this course. Prerequisite: BIOL 2010.

BIOL 3085 Insect Ecology (4 Credits)
A general introduction to insect biology and the science of entomology. Arthropods are the most diverse group of animals on Earth and insects account for more than half of all known living organisms. This course explores the biodiversity of insects on Earth, insect morphology and physiology. The evolutionary history and taxonomy of key orders of insects is emphasized as well as the importance of insects to our everyday lives. Prerequisites: BIOL 1010, BIOL 1011, and BIOL 2010.

BIOL 3090 Microbial Ecology (4 Credits)
Interactions among microorganisms and their environment. Impact of ecological principles on microbial diseases, pollutant degradation, nutrient cycles and global change. Prerequisites: BIOL 1010, BIOL 1020, AND BIOL 2010.
BIOL 3100 Histology: Medical Microanatomy (4 Credits)
Microscopic organization of tissues and organs; correlation of organization of organs with functions and pathologies; emphasis on mammalian systems. Includes laboratory. Lab fee associated with this course. Prerequisite: BIOL 2120.

BIOL 3110 Special Topics: Biology (1-5 Credits)
Topics of special interest to teaching/research faculty of department presented as needed to complement and expand existing curriculum. May be repeated for credit. PREREQUISITES: BIOL 1010.

BIOL 3120 General Microbiology (4 Credits)
Fundamental principles of microorganisms in the world and in disease; role of bacteria in biological phenomena. Includes laboratory. Lab fee associated with this course. Prerequisite: BIOL 2120.

BIOL 3130 Molecular Evolution (4 Credits)
Evolution of macromolecules and reconstruction of evolutionary history of genes and organisms. Prerequisite: BIOL 2510 or permission of instructor.

BIOL 3135 Topics in Cell Motility (4 Credits)
Fibrous elements of the cytoskeleton and associated proteins and their role in cellular motility is examined in detail. The physical forces involved in cellular motile function is applied in understanding cellular motile behavior. Prerequisite: BIOL 2120.

BIOL 3150 Intracellular Dynamics (4 Credits)
Focuses on spatial and temporal control of intracellular processes with an emphasis on neuronal and endocrine cells. Topics include vesicular traffic, protein targeting, dynamics and spatial organization of signaling complexes. Emphasis on modern techniques of cell and molecular biology with examples from primary literature. Prerequisite: BIOL 2120.

BIOL 3160 Biophysics: Ion Channels & Disease (4 Credits)
Examines ion channel structure and function and the ways in which this information provides insight into human disease. The focus is on the use of biophysical techniques in combination with molecular and genetic analysis of channel genes. General Physics recommended. Prerequisite: BIOL 2120.

BIOL 3200 Invertebrate Evolution (4 Credits)
Introduction to remarkable diversity of invertebrate life, both in terms of numbers of species, novel body plan and physiological adaptations. Includes laboratory. Prerequisites: BIOL 1010, BIOL 1011.

BIOL 3230 Nutrition (3 Credits)
Investigation of metabolism, all nutrients and various applications of nutrition to sports and healthy living. Prerequisite: BIOL 3250.

BIOL 3250 Human Physiology (5 Credits)
Functional relationships of human organ systems with coordinated laboratory activities and experiments that demonstrate and test physiological principles. Lab fee associated with this course. Prerequisites: BIOL 1010.

BIOL 3260 Nutrition (3 Credits)
From physiological and biochemical perspectives, this course explores the relationships of energy metabolism, nutrients, vitamins and minerals to human health. Prerequisite: BIOL 3250.

BIOL 3300 Biodiversity-Flowering Plants (4 Credits)
Basic techniques and principles of systematics with application to the origin, evolution, radiation, classification and biodiversity of flowering plants (angiosperms). Lab fee associated with this course. Prerequisites: (BIOL 1010 AND BIOL 1011) or (GEOG 1201, GEOG 1202, AND GEOG 1203), OR instructor's permission.

BIOL 3400 Ornithology (4 Credits)
Biology of birds with emphasis on ecology and behavior; field and laboratory work to stress bird identification and ecological relationships of birds. Lab fee associated with this course. Prerequisites: BIOL 1010, BIOL 1011.

BIOL 3410 Animal Behavior (4 Credits)
This class examines animal behavior from an evolutionary and ecological perspective. The course provides the background needed to understand behavioral evolution, including a focus on the inheritance of behavior, natural selection, sexual selection, and kin selection. This class studies the evolution of a variety of behaviors, including communication and displays, mate choice, parental care, cooperation, mating systems, social behavior, habitat selection, foraging, and anti-predator behavior. The emphasis is on theoretical principles, design of experiments, and interpretation of data. Prerequisites: BIOL 1010 and BIOL 1011, AND BIOL 2010. RECOMMENDED PREREQUISITE: BIOL 2090.

BIOL 3560 Molecular Biology Laboratory (4 Credits)
Laboratory based course that covers techniques in gene excision, cloning and reinsertion and gene sequencing. Lab fee associated with this course. Prerequisite: BIOL 2510, or permission of instructor.

BIOL 3570 Proteins in Biological Systems (3 Credits)
Proteins considered in their biological setting; protein synthesis and degradation; survey of protein functions in vivo; evolution of proteins; introduction to protein biotechnology. Prerequisites: BIOL 2120, CHEM 2451, CHEM 2452 and CHEM 2453.

BIOL 3610 Developmental Biology (4 Credits)
Processes and mechanisms of development, exemplified by higher animal embryogenesis, with consideration of microbial model systems. Prerequisite: BIOL 2510 and BIOL 2120.
BIOL 3620 Vertebrate Embryology (4 Credits)
Development processes in placental mammals; analysis of vertebrate cyto-differentiation and morphogenesis. Laboratory on embryonic anatomy of amphibians, birds and mammals. Prerequisites: BIOL 1010, BIOL 1011 and BIOL 2120. Corequisites: BIOL 1010.

BIOL 3630 Cell Biology of Development (4 Credits)
Every organism has a stereotypical shape, but how does this shape arise? This course examines the cellular and molecular mechanisms that direct the forming of body and tissue shape. Prerequisite: BIOL 2120.

BIOL 3640 Introductory Neurobiology (4 Credits)
Organization and function of vertebrate central nervous system; nature of action potential, biochemistry of neurotransmitters, neuropeptides, functional anatomy of nervous system, phylogeny of nervous system. Prerequisite: BIOL 2120.

BIOL 3641 Systems Neuroscience (4 Credits)
Structure and function of the brain and spinal cord, emphasis on functional systems including sensory perception, motor control and consciousness. Prerequisite: BIOL 3640.

BIOL 3642 Neuropharmacology (4 Credits)
How psychoactive drugs exert their effects on the nervous system; drugs of abuse and drugs used in the treatment of psychotic and neurodegenerative disorders. Prerequisite: BIOL 2120. Recommended prerequisites: BIOL 3640.

BIOL 3643 Developmental Neurobiology (4 Credits)
This course investigates the mechanisms involved in the maturation of neurons, and signals that direct neurons to their proper position in the central nervous system. Prerequisite: BIOL 3640.

BIOL 3644 Neuromuscular Pathophysiology (4 Credits)
Cellular and molecular basis for normal nerve and muscle functions and the alteration of these functions by toxins, trauma and diseases of the brain, nerves and muscles; how specific insults produce clinical symptoms and pathology. Prerequisite: BIOL 2120. Recommended Prerequisite: BIOL 3640 or BIOL 3250.

BIOL 3646 Seminar: Cognitive Neuroscience (2 Credits)
This seminar is the capstone course for the neuroscience portion of the cognitive neuroscience program. Seminar topics include but are not limited to neurological disorders, model systems in neuroscience and sensory systems.

BIOL 3650 Endocrinology (4 Credits)
Mechanisms of hormone action, evolution of vertebrate endocrine systems, analysis of function integration of hormonal responses in maintenance of homeostasis. Prerequisite: BIOL 2120.

BIOL 3655 Molecular Neuroendocrinology (4 Credits)
Advanced laboratory course that uses anatomical/immunological, biochemical and molecular approaches to analyze neuroendocrine pathways in the hypothalamus/pituitary system. Lab fee associated with this course. Prerequisites: BIOL 3650 and instructor’s permission.

BIOL 3670 Molecular Immunology (4 Credits)
The ability to distinguish self from non-self is crucial to all organisms. In humans Organs, cells and other higher animals, this task fall to the immune system. Suppression of this system is key to numerous pathogenic viruses including Ebola and human immunodeficiency virus. The failure to adequately regulate immune response underlies allergic reactions, arthritis and diabetes. This course will introduce students to the organs, cells and molecules that underlie mammalian immune response; immunogenetics and the fundamental mechanisms of cell mediated and humoral immune response; and the relationship of immune system to human disease. Prerequisite: BIOL 2510.

BIOL 3680 Advanced Techniques in Cell Biology (4 Credits)
Advanced laboratory course that covers current techniques used in cell biology research. Lab fee associated with this course. Prerequisite: BIOL 2120.

BIOL 3700 Topics in Ecology (1-4 Credits)
Topics vary; may include plant, animal, biochemical, alpine or aquatic; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: one quarter of undergraduate ecology and/or instructor’s permission.

BIOL 3701 Topics in Genetics (1-4 Credits)
Topics vary; may include genetic methods, molecular genetics, human genetics, chromosomes or population genetics; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: BIOL 2510 and/or instructor’s permission.

BIOL 3702 Advanced Topics in Regulatory Biology (1-4 Credits)
Topics vary; may include endocrinology, physiology or immunology; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: varies with topic and instructor; instructor’s permission usually required.

BIOL 3703 Advanced Topics in Developmental Biology (1-4 Credits)
Topics vary; may include gene expression in development, developmental immunogenetics, developmental biochemistry or aging; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: instructor’s permission.

BIOL 3704 Advanced Topics in Cell Biology (1-4 Credits)
Topics vary; may include supramolecular structure, microscopy, membranes and techniques. May be repeated for credit. Taught from original literature. Prerequisites: BIOL 2120.
BIOL 3705 Advanced Topics in Molecular Biology (1-4 Credits)
Topics vary, but may include biochemistry, supramolecular structure and function, molecular genetics, membrane biology. May be taken more than once for credit. Taught from original literature. Prerequisite: varies with course and instructor; instructor’s permission usually required.

BIOL 3706 Topics in Evolution (1-4 Credits)
Topics vary, but may include molecular evolution, plant evolution and animal evolution. Prerequisite: BIOL 2120 and BIOL 2510.

BIOL 3707 Advanced Topics in Conservation Biology (1-4 Credits)

BIOL 3800 Human Molecular Biology (4 Credits)
Medical Genetics is the 24th member of the American Board of Medical Specialties. This course will introduce students to the fundamentals of molecular biology with an emphasis on understanding of how the field is applied in the context of medical diagnostics, personalized/precision medicine and other commercial applications. Students will be introduced to published research reports and provided with opportunities to critically examine the application of molecular biology to central questions in such areas as oncology, inherited diseases and genetically engineered organisms. Prerequisite: BIOL 2510.

BIOL 3910 Viruses & Infectious Human Diseases (4 Credits)
From sexually transmitted viruses to bacterial pneumonia, infectious pathogens are the number one threat to human health. This course will introduce students to prions, viruses and bacterial pathogens with an emphasis on those commonly encountered in clinical medical practice. Through the use of technical/scientific research journals students will be encouraged to investigate the etiology, pathogenesis and treatment of human infectious disease with an emphasis on the clinical, molecular diagnostic and therapeutic aspects of the disease. Prerequisite: BIOL 2510. Recommended prerequisite: BIOL 3800.

BIOL 3950 Undergraduate Research (1-10 Credits)
Participation in faculty research programs by agreement between student and faculty member. Maximum of 5 quarter hours of BIOL 3950 and/or BIOL 3991 may be applied to the 45-quarter-hour requirement for a major in biological sciences.

BIOL 3991 Independent Study (1-10 Credits)
Topic in biology studied under faculty supervision. Student’s responsibility to identify faculty supervisor before registering for class. Maximum of 5 quarter hours of BIOL 3991 and/or BIOL 3950 may be applied toward the 45-quarter-hour requirement for a major in biological sciences.

BIOL 3992 Directed Study (1-10 Credits)

BIOL 3995 Independent Research (1-10 Credits)

BIOL 4010 Cellular Motile Function (2 Credits)
Current literature in area of cell motility; role of cytoskeletal elements as motile agents.

BIOL 4020 Microbial Genetic Model Syst (2 Credits)

BIOL 4030 Current Concepts in Evolution (2 Credits)
New ideas and theories in field of evolutionary biology.

BIOL 4040 Current Concepts-Animal Phys (2 Credits)
Selected topics in animal physiology.

BIOL 4050 Topics in Plant Biology (2 Credits)
Varying topics; areas of plant-animal interactions, co-evolution, plant ecology, plant biochemistry/physiology.

BIOL 4060 Gene Expression-Development (2 Credits)
Varying aspects of gene control in developing systems, a different aspect each time course is offered.

BIOL 4070 Hormone-Receptor Interaction (2 Credits)
Series of lectures; understanding molecular, cellular basis of hormone action; experimental analysis of binding of hormones with their receptors; structure-function relationships of hormone-receptor interactions; nature and action of mediators generated by hormone-receptor interaction.

BIOL 4080 Biological Membranes (2 Credits)

BIOL 4085 Accelerated Biostatistics (2 Credits)
This is an accelerated online statistics course for graduate students in Biology. Basic probability and hypothesis testing is the foundation of teaching applied statistics, including simple statistics (t-tests, F-tests, and chi square) and more advanced procedures (regression, correlation, analysis of variance). In addition, students learn more complex tools (multiple regression, multi-classification ANOVA, Student-Newman-Keuls tests), including non-parametric Tests (Mann-Whitney U, Sign test, Wilcoxon Rank Sum).

BIOL 4090 Biostatistics (4 Credits)
Statistical on biological research; emphasis on procedures, applications of regression, correlation, analysis of variance, and nonparametric tests. Include instruction on computer aided (Mac and PC) statistical analysis and presentation of results. Cross listed with BIOL 2090.

BIOL 4091 Ecology and Evolution Research Methods (1 Credit)
This course builds upon the concepts in BIOL 4090. Biostatistics, by covering in more detail and specificity issues involved in designing one’s experiment to adequately test the hypotheses or describe the data of interest. Students bring and discuss their specific research projects as case studies to maximize the utility of the course.
BIOL 4100 Microbial Structure & Function (2 Credits)
BIOL 4110 Essentials of Immunology (2 Credits)
BIOL 4120 Human Chromosomes and Mutagenesis (2 Credits)
BIOL 4130 Microevolution (2 Credits)
Microevolution, the change of gene frequencies within populations; examination of forces that cause it, evaluation of its contribution to process of speciation.
BIOL 4140 Protein Biosynthesis (2 Credits)
Processes of protein synthesis in cells; emphasis on posttranslational modifications that occur to secretory proteins prior to secretion.
BIOL 4150 Special Topics in Adv Biology (1-4 Credits)
Topics of special interests to teaching and research faculty presented as needed to complement and expand existing curriculum. May be taken more than once for credit.
BIOL 4155 Leadership in Science (1 Credit)
This course addresses the basic leadership skills necessary to succeed in the dynamic professional environment of the biomedical sciences. Topics covered include leadership strategies and professional negotiation, conflict resolution, and team-building. Students will determine leadership strengths and weaknesses and use case studies to strengthen their leadership practices.
BIOL 4190 Biometry (3 Credits)
BIOL 4210 Grad Sem: Cell Biology (2 Credits)
A series of student presentations focusing on varied topics involving cell biology. May be taken more than once for credit.
BIOL 4211 Advanced Cell Biology (3 Credits)
Students study the subcellular structure and organization of the cell. Organelle structure and function are examined in detail as well as biogenesis and degradation (turnover) of these subcellular structures. Cytoskeletal dynamics are also a major focus. Specific topics covered include cell division, macromolecular synthesis, membrane transport, cell-matrix and cell-cell communication, cell migration, cell differentiation, and mechanisms of cell death. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students. Cross listed with BIOP 4150.
BIOL 4212 Advanced Molecular Biology (3 Credits)
This course focuses on a detailed analysis of regulated gene expression. The topics include lectures and readings of relevant literature in areas covering gene regulation at multiple steps, including transcription, RNA processing, and translation. In particular, the logic of experimental design and data analysis are emphasized.
BIOL 4213 Advanced Cell Signaling (3 Credits)
Students in this course investigate a large array of cellular signal transduction cascades. Specific signaling pathways to be covered include growth factor receptors, cytokine receptors, steroid receptors, integrin-extracellular matrix, heterotrimeric G-protein coupled receptors, monomeric G-proteins, transcription factors, lipids, cytoskeleton, cell cycle, and apoptosis. Each of these topics is examined in the context of normal cell physiology as well as their roles in specific disease processes. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students.
BIOL 4220 Grad Sem: Ecology & Evolution (2 Credits)
A series of student presentations focusing on varied topics involving ecology and evolution. May be taken more than once for credit.
BIOL 4230 Grad Sem: Molecular Biology (2 Credits)
A series of student presentations focusing on varied topics involving ecology and evolution. May be taken more than once for credit.
BIOL 4231 Responsible Conduct in Rsrch (1 Credit)
This course covers several topics regarding guidelines for ethical practices in research. Topics include: data ownership, conflict of interest and commitments, human subjects, animal welfare, research misconduct, authorship, mentoring, peer review, and collaboration. The course includes an online training component and meets one hour each week to discuss these topics.
BIOL 4300 Fall Graduate Reviews in Biol (1 Credit)
Students participate in a required review session that precedes selected departmental seminar presentations by faculty and outside speakers, and participate in a discussion session with the seminar speaker.
BIOL 4301 Wntr Graduate Reviews in Biol (1 Credit)
Students participate in a required review session that precedes selected departmental seminar presentations by faculty and outside speakers, and participate in a discussion session with the seminar speaker.
BIOL 4302 Sprg Graduate Reviews in Biol (1 Credit)
Students participate in a required review session that precedes selected departmental seminar presentations by faculty and outside speakers, and participate in a discussion session with the seminar speaker.
BIOL 4303 Reviews in Biology (1 Credit)
The experience is built around the departmental seminar series offered every quarter.
BIOL 4310 Foundations in Literature: Cell and Molecular Biology (2 Credits)
Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Cell and Molecular Biology.

BIOL 4311 Wntr Selected Top: Reg Bio (2 Credits)
Students participate in a weekly discussion group that focus on recent papers from the primary literature in regulatory biology.

BIOL 4312 Sprg Selected Top: Reg Bio (2 Credits)
Students participate in a weekly discussion group that focus on recent papers from the primary literature in regulatory biology.

BIOL 4322 Selected Tpcs: Molecular Biol (2 Credits)
The syllabus for the Selected Topics series varies each quarter. Each quarter a faculty member sets the theme for the quarter and identify a set of review articles to introduce the topic. The instructor leads the first session and provide important background material on the topic. Students select a paper from the primary literature to present to the class on the topic designated for the quarter.

BIOL 4330 Foundations in Literature: Ecology (2 Credits)
Students participate in a weekly discuss group that focuses on recent papers from the primary literature in Ecology.

BIOL 4331 Foundations in Literature: Evolution (2 Credits)
Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Evolution.

BIOL 4332 Foundations in Literature: Conservation Biology (2 Credits)
Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Conservation Biology.

BIOL 4440 Current Concepts-Animal Phys (2 Credits)

BIOL 4610 Developmental Biology (4 Credits)
The processes and mechanisms of development, exemplified by higher animal embryogenesis, with consideration of simpler model systems. Laboratory sessions use live materials; course finishes with individual projects. Prerequisite: BIOL 2510 or equivalent.

BIOL 4700 Human Molecular Biology (4 Credits)
Molecular basis of heredity and genetic control, using in-vitro systems and microbial and eukaryotic models; molecular basis of heredity and genetic regulation considering in-vitro systems as well as prokaryotic and eukaryotic models. Restricted to MBA Bioenterprize students.

BIOL 4710 Endocrinology: Chemical Communication Systems (4 Credits)
Mechanisms of hormone action, evolution of vertebrate endocrine systems, analysis of function integration of hormonal responses in maintenance of homeostasis. Restricted to MBA Bioenterprize students.

BIOL 4720 Neuropharmacology (4 Credits)
How psychoactive drugs exert their effects on the nervous system; drugs of abuse and drugs used in the treatment of psychotic and neurodegenerative disorders. Restricted to MBA Bioenterprize students.

BIOL 4730 Molecular Lab Techniques (4 Credits)
Techniques in gene excision, cloning and reinsertion; gene sequencing. Restricted to MBA Bioenterprize students.

BIOL 4731 Cell and Molecular Techniques (4 Credits)
Analysis of neuroendocrine systems using a multidisciplinary approach. Anatomical/immunological, biochemical and molecular approaches used to analyze neuroendocrine pathways in the hypothalamus/pituitary system. Restricted to MBA Bioenterprize students.

BIOL 4740 Microbiology (4 Credits)
Fundamental principles; role of bacteriology in biological phenomena. Includes laboratory. Restricted to MBA Bioenterprize students.

BIOL 4750 Immunology (4 Credits)
Organs, cells and molecules that underlie mammalian immune response; relationship of immune system to disease. Restricted to MBA Bioenterprize students.

BIOL 4760 Advanced Cell Biology (4 Credits)
Focuses on spatial and temporal control of intracellular processes with an emphasis on neuronal and endocrine cells. Topics include vesicular traffic, protein targeting, dynamics and spatial organization of signaling complexes. Emphasis on modern techniques of cell and molecular biology with examples from primary literature. Restricted to MBA Bioenterprize students.

BIOL 4850 Laboratory Skills for Forensic Serological Analysis (5 Credits)
This course is designed to provide students with two major educational skills. First, is a thorough understanding of the fundamental science behind the identification and serological analysis of biological evidence in a forensic context. Second, is a rigorously developed set of practical hands-on proficiencies with the major commercial assay systems used by forensic laboratories for the identification of blood, saliva, semen, and other biological material with potential probative value to a criminal investigation.

BIOL 4860 Laboratory Skills for Forensic Genetic Analysis (4 Credits)
This course is designed to provide students with two major educational skills. First, is a thorough understanding of the fundamental science behind the molecular genetic analysis of biological evidence in a forensic context. Second, is a rigorously developed set of practical hands-on proficiencies with the major commercial assay systems and software used by forensic laboratories for the determination and analysis of DNA profiles.
BIOL 4870 Medical Ethics (4 Credits)
This course presents knowledge and discussion of ethical issues that arise from advances in the biomedical sciences and medicine. Several specific ethical issues and policies related to methodologies and procedures, emerging medical technologies, treatment decisions, doctor-patient relationship, informed consent, medical experimentation/clinical research, and health care reform.

BIOL 4880 Capstone in Biomedical Sciences (4 Credits)
This is the capstone course for students enrolled in the Professional Science Master's program. In this course, students integrate advanced knowledge in science and math along with courses taken outside traditional science and math courses as their electives. This course incorporates lectures, guest speakers, and class discussions focusing on current issues or concerns in the chosen concentration. PSM students only. Requires instructor approval.

BIOL 4991 Independent Study (1-17 Credits)
BIOL 4992 Directed Study (1-10 Credits)
BIOL 4995 Independent Research (1-8 Credits)
BIOL 5991 Independent Study (1-17 Credits)
BIOL 5995 Independent Research PhD (1-8 Credits)

Biophysics (BIOP)

Courses
BIOP 4100 Foundations in Biophysics (3 Credits)
Focus of the course is on application of basic physics principles to the study of cells and macromolecules. Topics include diffusion, random processes, thermodynamics, reaction equilibria and kinetics, computer modeling. Must be admitted to the MCB PhD program or related graduate program with instructor approval. Cross listed with PHYS 4100.

BIOP 4150 Cellular Biophysics (3 Credits)
Biophysical approaches to understanding cell function. We emphasize the various experimental approaches that biophysicists use to study basic cellular processes, including a variety of fluorescence images, optical and electrophysiological techniques. Cross listed with BIOL 4211.

BIOP 4210 Current Topics in Biophysics (2 Credits)
This is a seminar course that focuses on current primary literature in the fields of molecular and cellular biophysics. This is the first of a three course, year-long sequence.

BIOP 4992 Directed Study (1-10 Credits)
BIOP 4993 Lab Rotation (2-9 Credits)
Lab rotation in Molecular and Cellular Biophysics before students pass the first phase of their qualifying exam.

BIOP 4995 Independent Research (1-9 Credits)
Independent research in Molecular and Cellular Biophysics before students pass the first phase of their qualifying exam.

BIOP 5991 Independent Study (1-10 Credits)
BIOP 5995 Independent Research (2-9 Credits)
BIOP 6991 Independent Study (1-10 Credits)
BIOP 6992 Directed Study (1-5 Credits)
BIOP 6995 Independent Research (1-10 Credits)

Business Core (BUS)

Courses
BUS 4310 Business Communication for Accounting Professionals (4 Credits)
This course emphasizes critical communications skills for future accounting, tax, auditing and consulting professionals. The course develops written communication skills including but not limited to technical writing, reporting the results of research and explaining complex issues. Oral communication assignments include formal presentations, development of debate skills and boardroom presence. Assignments incorporate business etiquette and teambuilding.
BUS 4330 International Business (2 Credits)

BUS 4400 MBA@Denver Capstone (4 Credits)
The MBA@Denver Capstone Course enables the practical application of key management and leadership competencies, skills and knowledge and is designed to integrate core course learning outcomes. You will integrate what you have learned in the MBA@Denver program to analyze a client problem and provide appropriate recommendations and conclusions prepared for and presented to the client. You are strongly encouraged to work with a small business or not-for-profit organization, completing a social capital project with that enterprise. You will gain an in-depth exposure, perspective and understanding of strategic business processes, opportunities and challenges within an organization. You will work in teams and will select an organization of your choice to work with as the client. The project will end with an oral presentation and written proposal that is delivered to the client organization and the instructor on an assigned date. Project assignments will emphasize the integration of knowledge from multiple academic disciplines and functional business activities. You are required to identify linkages between an organization’s external and internal organization environments in the context of its organizational strengths, weaknesses, opportunities and threats (SWOT). Projects may include new product or technology development, restructuring, relocation, expansion, downsizing, acquisitions, mergers and acquisitions or joint ventures, and/or other relevant operational performance issues. The goal is to increase the organization’s ability to sustain and thrive. The final plan/proposal should include an implementation timeline for the proposed solutions as appropriate. Enforced Prerequisites and Restrictions: MBA@Denver student must be within one quarter of graduation or have the Director’s permission to take the class. This course is open only to MBA@Denver students (MBA-DEN).

BUS 4444 Global Bus, Governance & CSR (4 Credits)
In an increasingly globalized world, civil society, states and businesses are trying to discern how to govern business conduct across the borders of nation-states. Many of the issues our society faces today—global financial crises, environmental degradation, and corruption, to name a few—are impossible to tackle within a given country. Instead, these issues require collaboration and coordination across a variety of actors spread around the globe. Within this framework, businesses are aware of increased pressure to behave responsibly and adopt a corporate social responsibility (CSR) approach to their conduct. Yet, businesses are unsure how to integrate these goals into their business strategy and engage meaningfully with stakeholders. Likewise, governments recognize the importance of having business at the table, but do not have a clear understanding of how to best engage with the private sector. The response to this conundrum is a focus on global governance, which refers broadly to the way in which global affairs are managed. After a brief overview of economic trends and trajectories around the globe, the course will focus on global governance as a mechanism for change. The class will first explore the opportunities and shortcomings of global governance efforts. The class will build on this scholarship by discussing the role business plays in global governance mechanisms. As society has become aware of, and is acutely concerned with, business conduct, the role of the manager and business strategy in these realms has also changed. Students will analyze these trends and study their implications for government, business, or civil society strategy and practice. The final portion of the course will focus on specific issue areas, including: human rights, labor standards, the natural environment, corruption, and microfinance.

BUS 4445 International Business: Strategy and Practice (4 Credits)
This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc. This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc.

BUS 4600 Professional MBA Capstone Project (4 Credits)
The Capstone Project enables the practical application of key management and leadership competencies, skills and knowledge designed to integrate core course learning outcomes. You will integrate what you have learned in the PMBA program to analyze a client problem and provide appropriate recommendations and conclusions prepared for and presented to the client. The course integrates Daniels’ multi-disciplined learning outcomes and experiences to achieve this goal. The course is a combination of site-based practicum, field project and classroom experiential learning. Through these activities, you will gain an in-depth exposure, perspective and understanding of strategic business processes, opportunities and challenges within a non-profit organization. You will work in teams (4-5 individuals) and will select a non-profit organization of your choice to work with as your client. The project will end with an oral presentation and written proposal delivered to the client and to the instructor on an assigned date. Project assignments will emphasize the integration of knowledge from multiple academic disciplines and functional business activities. Students are required to identify linkages between an organization’s external and internal organization environments in the context of its organizational strengths, weaknesses, opportunities and threats (SWOT). Projects may include new product or technology development, restructuring, relocation, expansion, downsizing, acquisitions, mergers and acquisitions or joint ventures, and/or other relevant operational performance issues. The goal is to increase the organization’s ability to sustain and thrive. The final plan/proposal should include an implementation timeline for the proposed solutions as appropriate.

BUS 4610 Leading with Integrity (4 Credits)
Leadership in these uncertain and volatile times is a primary challenge for all who seek success in business. Today’s business environment is increasing characterized by complex questions without obvious or clear answers. Managers must now be leaders, whether they are managing just a few people or the entire enterprise. Traditionally taught analytical skills alone will not meet the challenge of our times; leading with integrity requires managers to understand numerous social and environmental challenges facing businesses along with the monetary challenges. Evaluation of your leadership style, and how ethical integrity can be incorporated into that style, will expand your impact as a leader and follower working with others. Leading with integrity places you and business in an interconnected world where success, organizationally and personally, is determined not only by profit, but by personal and organizational integrity. This course draws on the history of business practice and ethical leadership to provide a foundation for personal self-discovery and professional direction.
BUS 4611 Experiential Outdoor Leadership (0 Credits)
Personal development begins with an introduction to your Insights’ profile and then moves to focus on self-awareness in Leading at the Edge. Within the first few weeks of your graduate program, all PMBA students are taken to a nature retreat center 9,000 feet up into the Rocky Mountains where you will participate in an intensive three-day exercise in self-awareness, outdoor leadership, team building, and problem solving. Unlike most “rocks ‘n ropes” exercises, this weekend includes an intellectually rigorous component, called Leading at the Edge, which is designed to enhance the classwork in which you engage, and is intended to enhance the experience students have in their life outside of the academic environment.

BUS 4612 Business Domestic Immersion (0 Credits)
MBA@Denver students are required to take two immersion experiences. BUS 4620-X includes domestic experiences, held in a U.S. city, generally including visits with business leaders on various topics, experiential experiences, and/or specific topic discussions led by qualified faculty. Students may not take the immersion course at the same destination more than once.

BUS 4614 Business International Immersion (0 Credits)
MBA@Denver online students are required to take two immersion experiences. BUS 4614-X includes international experiences, held in a non-U.S. city, generally including visits with business leaders on various topics, experiential experiences, and/or specific topic discussions led by qualified faculty. Students may not take the same section number (X) more than once, though they may take the course more than once.

BUS 4615 Leading at the Edge (2 Credits)
Connects values, globalization, and innovation through a mix of classroom and outdoor experiential learning formats. The course is a two credit hour complement to The Essence of Enterprise course. Using the metaphor of the 10th Mountain Division, the course builds a foundation for learning at Daniels through introductory looks at leadership, team building, and creative problem solving. Through metaphor and experience, the course bonds the cohorts to each other and enhances self confidence to succeed under difficult and changing conditions. The 10th Mountain Division was created out of a global crisis and trained at Camp Hale Colorado, located between Leadville and Vail, during the 1940s. This experience resulted in fourteen patents, including predecessors to the snow cat, snowmobile, and various other forms of outdoor equipment. Following WWII, members of the 10th were responsible for building the country’s most famous ski resorts, such as Aspen and Vail, along with the 10th Mountain Hut System. Individual members became successful businessmen, social entrepreneurs, and civil servants forming companies such as NIKE, leading organizations like the Sierra Club, and founding the Colorado Outdoor Education Center (where training for this course takes place). The group is renowned for exemplary leadership, passion, team dynamics, innovation, and ethics within a global environment.

BUS 4620 Ethics for the 21st Century Professional (4 Credits)
A fundamental purpose is to engage students in ongoing reflection and dialogue about their responsibilities as managers and leaders. Of particular emphasis are the ethical, professional and social responsibilities of managers and leaders, especially as it relates to numerous stakeholders and communities. This course focuses on the idea of “community” and the social relationships of managers and business organizations in their communities. Roles and responsibilities of managers and business firms are examined by analyzing a variety of issues that managers will face during their careers. These specific issues will be examined in terms of their legal, public policy, and ethical dimensions. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that may emerge in their business careers. Cross-listed with ACTG 4620.

BUS 4630 Creating Sustainable Enterprises (4 Credits)
A sustainable enterprise is defined as any human endeavor with integrity in three interconnected dimensions (environmental, cultural, and economic) and whose collective actions meet the needs of the enterprise and its stakeholders today without compromising the ability of future generations to meet their needs. The fundamental purpose of this course is to help prepare students for careers in which success requires a worldview that extends beyond the enterprise level in order for managers to create sustainable cultural, social, and financial value for the organization and society in a responsible manner.

BUS 4635 Global Enterprise Challenges (2 Credits)
As students complete the integration of material from the Compass sequence, this class provides an opportunity for the students to extensively apply the material through: case analysis, presentation, critique of other presentations, and integration of MBA Compass material and first year MBA Core material as appropriate.

BUS 4640 Innovation Design & Execution (4 Credits)
In the last century, the technologies of the industrial age (telegraph, railroads, electricity, radio, telephone, television, automobiles, airplanes, computers) have dramatically altered not only the way business is conducted, but the way we live and learn. These technologies have also enabled undesirable and unintended consequences: urban sprawl, global warming, terrorism, weapons of mass destruction, stress, obesity. Where is technology taking us? In this course, students look at innovation, creativity, entrepreneurship and design, and the role each can play in creating a better business world, a business world less driven by science fiction than inspired by social fiction, a business world which begins to shift from an industrial age of ever more encompassing technology to a creative economic environment based less on stuff and more on people and their needs.
BUS 4700 Special Topics in Business (1-8 Credits)
BUS 4701 Special Topics in Business (1-6 Credits)
BUS 4702 Special Topics in Business (1-6 Credits)
BUS 4703 Special Topics in Business (1-6 Credits)
BUS 4704 Topics in Business (1-6 Credits)
BUS 4705 Topics in Business (1-6 Credits)
BUS 4802 Executing in a PM Enterprise (4 Credits)
This course is the second course in a three-part required series. Pre-requisite: Must be a Lockheed employee.

BUS 4804 Kaiser Leadership Edge - People Leadership (4 Credits)
The People Leadership course is part of the Leadership Edge program designed specifically for the Kaiser Permanente Colorado organization. The program grows the internal leadership capacity necessary to reach their goal of becoming the best solution in health care. By exploring topics and cases from multiple perspectives and across business areas, participants develop a deeper understanding of the challenges and opportunities that Kaiser faces. Signature needed to register. Must be a Kaiser employee to register.

BUS 4805 Kaiser Leadership Edge - Financial Acumen (4 Credits)
The Financial Acumen course is part of the Leadership Edge program designed specifically for the Kaiser Permanente Colorado organization. The program grows the internal leadership capacity necessary to reach their goal of becoming the best solution in health care. By exploring topics and cases from multiple perspectives and across business areas, participants develop a deeper understanding of the challenges and opportunities that Kaiser faces. Signature required to register. Must be a Kaiser employee to register.

BUS 4806 Kaiser Permanente Strategy, Innovation, and Execution (4 Credits)
The Strategy, Innovation and Execution course is part of the Leadership Edge program designed specifically for the Kaiser Permanente Colorado organization. The program grows the internal leadership capacity necessary to reach their goal of becoming the best solution in health care. By exploring topics and cases from multiple perspectives and across business areas, participants develop a deeper understanding of the challenges and opportunities that Kaiser faces. Signature required to register. Must be a Kaiser employee to register.

BUS 4980 Internship (0-10 Credits)
Faculty supervised Internship.

BUS 4991 Independent Study (1-10 Credits)

BUS 4995 Independent Thesis (6 Credits)

BUS 6000 Research Methods in Business (4 Credits)
Business Research Methods introduces students to the nature, scope, and significance of research and research methodologies. Additionally, the course studies primary and secondary research methods with applications to specific problems, using qualitative and quantitative designs for individual investigation on current problems within a student's area of interest. Topics covered include research design, sampling strategy, data types and collections, measurement approach, testing procedures, ethics in data collection and interpreting findings, and the Institutional Review Board (IRB) process.

BUS 6001 Qualitative Research Methods (4 Credits)
Qualitative methods are important for exploring complex social phenomena and developing theories for understanding dynamic relationships and change. This course is designed to help students develop an understanding of the methods and process for conducting qualitative research in general, and case study research in particular. Students will learn to use qualitative methods to develop theories and managerial solutions for current and future business problems.

BUS 6002 Quantitative Methods I- Making Discoveries with Data (4 Credits)
As a PhD student you will do original research ... making discoveries that nobody else has made before. Data analysis is a key tool that facilitates that. Data analysis tools help you unlock the hidden treasures within your data set. These treasures are knowledge and information that is waiting to be discovered and utilized for your benefit. Specifically, you will become familiar with several of the internationally utilized statistical software packages and with the array of statistical analysis techniques. You will understand which statistical analysis technique to use in which situation, and how to interpret the output from your statistical software packages. These skills support managers for better decision making. Managers in business and industry have the resources to accumulate data, and this course develops the techniques to discover the information that your data provides. You will also gain skills in understanding how data collection and analysis will benefit your research.

BUS 6003 Quantitative Methods II - Making Discoveries with Data (4 Credits)
As a PhD student you will do original research ... making discoveries that nobody else has made before. Data analysis is a key tool that facilitates that. Data analysis tools help you unlock the hidden treasures within your data set. These treasures are knowledge and information that is waiting to be discovered and utilized for your benefit. These skills support managers for better decision making. Managers in business and industry have the resources to accumulate data, and this course develops the techniques to discover the information that your data provides. In this course you will learn how these data analysis tools are used for research, and you will plan how you will use your data analysis skills to perform your own research for your doctoral degree.
BUS 6004 Data Analytics (4 Credits)
The main objective of this course is to provide students with a well-grounded understanding and appreciation of the contemporary methods, tools, and techniques used to make evidence-based managerial decisions. As managers and practitioners in business, industry, and government, you have made substantial investments in putting in place the means to collect and store data, but may not have the basic technical or analytical understanding necessary to chart a road map to discover the full potential of your data. This course intends to provide you with such an understanding and hence help you become a better manager/decision maker.

BUS 6300 Seminar in Cross Disciplinary Decision Making Research (4 Credits)
Leaders are often faced with difficult decisions and the result of these decisions determines their future success. It is important for leaders to understand the cognitive processes which underlie the decision-making process. For example, what factors cause a leader to choose the wrong investment, hire the wrong employee, or select the unethical alternative? This course will provide students with a foundation of seminal theories rooted in Economics, Psychology, and Sociology and a comprehensive perspective of organizational decision-making.

BUS 6301 Research Seminar in Innovation and Creativity (4 Credits)
This course is intended to be a multi-disciplinary doctoral seminar investigating the broad questions of innovation and creativity and its application to entrepreneurship. The course will start with an industry-level view of innovation and how technologies evolve and then move from the micro-individual level of creativity to the organizational level while considering the individual, dyadic and group levels.

BUS 6500 Applied Research Practicum Series: I (2 Credits)
ARP I will introduce students to their ARP Instructor’s research area. As such students will work closely with their ARP instructor to begin to understand his/her research area and focus. This serves as the introduction for the three-part sequence of ARPs resulting in a completed research project. By the end of ARP I, students will complete a systematic review paper of a research area and a set of research questions of interest.

BUS 6501 Applied Research Practicum Series: II (4 Credits)
Students will work closely with their instructor to create a theoretically supported and actionable research proposal that uniquely contributes to our understanding of the larger business field. Proposals can be focused on qualitative and quantitative (or mixed) methods. This part of the ARP series will help students develop research questions into carefully crafted predictions grounded in theory while considering execution of the study.

BUS 6502 Applied Research Practicum Series: III (4 Credits)
Students will design an appropriate scientific method (e.g., survey, experiment or interview) including a data collection and analysis plan per the final proposal submitted in ARP II. Once appropriately designed, under the direction of their ARP professor, students will collect data appropriate to test the study’s hypotheses. Institutional Review Board (IRB) approval must be received prior to data collection which should be of publishable quality (broadly defined).

BUS 6503 Applied Research Practicum IV (4 Credits)
Students, along with oversight and assistance from their respective ARP professor, will analyze data consistent with his/her research proposal (ARP II) and analysis strategy (ARP III). The students will then complete an entire research paper that is ready for presentation and/or publication at appropriate outlets.

BUS 6900 Dissertation Research in Business (2-28 Credits)
Dissertation Proposal Defense Following successful completion of the comprehensive exam, each student will prepare a dissertation proposal and defend the proposal to the dissertation committee. A successful dissertation defense qualifies the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student's advisor and should be available to all committee members at least two weeks prior to the exam. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the research question, motivation for pursuing the research, and the research method design that will be used to answer the research question. The dissertation proposal must be successfully defended within four quarters of passing the comprehensive exam. Successful defense of the dissertation results in agreement between the student and the committee as to what will constitutes successful completion of the dissertation research. The composition of the dissertation proposal committee must comply with the standards specified by the University of Denver Doctoral Degree Requirements and Standards. The dissertation proposal defense is an oral closed exam. If a student successfully defends the dissertation proposal but subsequently switches advisor and hence topic, the dissertation defense must be repeated within one year to ensure capability of the student and feasibility of the project. Dissertation Defense After the dissertation has been completed, the student must defend it in a final oral exam, as specified by the University of Denver Doctoral Degree Requirements and Standards.

BUS 9000 Study Abroad Tongji University (0-18 Credits)
This course facilitates study abroad through an exchange agreement with Tongji University School of Economics and Management in Shanghai China. University of Denver exchange students may take only graduate level courses at Tongji University and only graduate level courses from Tongji are counted for graduate credit at the University of Denver.

BUS 9001 Study Abroad Doshisha University (0-18 Credits)
This course facilitates study abroad through an exchange agreement with Doshisha University, Global Business and Management Studies, Kyoto, Japan.

BUS 9002 Study Abroad University of Stockholm (0-18 Credits)
This course facilitates study abroad through an exchange agreement with the University of Stockholm Business School, Stockholm, Sweden.
Courses

LGST 4198 E-Commerce Law and Ethics (4 Credits)
The changes in technology and business over the past 20 years have been dramatic and far-reaching. Navigating the even more astonishing changes in the future requires some perspective on the developments of the recent past. How did we get to where we are? What technological, economic and political forces have generated the current state of e-commerce? How are these forces likely to change into the future? What are the basic features of e-commerce as it exists today?

LGST 4550 Business Law for Accountants (4 Credits)
This course provides students with a detailed review of the legal considerations in forming, operating, and dissolving the most common forms of business entities: partnerships, limited liability companies, and corporations. The rights, duties and liabilities of the managers, owners and accountants (internal and external) of these entities are extensively examined. The course also provides an overview of federal securities laws impacting these organizations. Prerequisite: ACTG 4620 or BUS 4620 or LGST 2000 (concurrent registration OK).

LGST 4700 International Law (4 Credits)
Offers both an introduction to public international law (the rights and duties of states and intergovernmental organizations [IGOs]) and to private international law (the rights and duties of individuals, businesses, and non-governmental organizations [NGOs] in their international affairs). The purpose of this course is to provide an overview of the content and techniques of international law and to understand the key legal principles and concepts underlying the international legal system. Students are encouraged to consider the diverse ways in which international law operates (including treaties, customary law, precedent, soft law, and normative approaches). The course also explores the ways in which emerging technologies and new modes of governance are likely to shape the future of international law. Prerequisite: BUS 4100.

LGST 4701 Topics in Ethics & Legal Study (1-5 Credits)
This course examines complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and its deviations from it) which can result in Great Leadership. At the heart of Great Leadership one finds a values base. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants gain a deep understanding of and practical experience with - Values Based Leadership in today's world.

LGST 4730 Values Based Leadership in Practice (4 Credits)
The course examines the complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and its deviations from it) which can result in Great Leadership. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants will gain a deep understanding of - and practical experience with - Values Based Leadership in today's world.

LGST 4740 Science & Mgmt. of Org. Ethics (4 Credits)
This course examines our knowledge regarding ethical decision making and behavior in organizational contexts. The course also explores the implications of such knowledge for effectively creating and managing ethical organizations. The course will be conducted as a graduate seminar with students playing a central role in identifying topics, researching content areas, and deciding on course outcomes. We will examine conceptual and theoretical models of ethical behavior in organizations, research empirical studies, and develop managerial implications. The overarching goal is to increase knowledge and understanding so as to strengthen capacities to be ethical leaders and managers. Prerequisite: BUS 4100. Non-business students may take the course with permission.

LGST 4760 CEOs and Corporate Governance (4 Credits)
In the wake of the Sarbanes-Oxley and Dodd-Frank laws, corporate governance has become a compelling issue for business students and executives. Corporate board members and leaders of institutional investors share their insights concerning corporate governance from a strategic, financial and legal perspective. CEO/board dynamics are explored, along with leadership development and executive succession policies. The roles of major board committees, such as the audit, compensation, nominating, and legal compliance committees are given special emphasis. Board responsibilities in corporate crises and re-structuring are examined, along with the legal liabilities of executives, board members, and the corporation. Public policy pressures on corporate governance, including the roles played by the Securities and Exchange Commission and other regulatory bodies are discussed, along with the responses by business organizations, political interest groups, and self-regulatory bodies. Shareholder activism and litigation, along with pressures from other corporate stakeholders are also emphasized in the course. Examples of topics include corporate scandals, executive compensation, global corporate governance systems, and governance reforms. Students engage in a number of case analyses over the course of the quarter, produce a four-part case study, and discuss actual real world solutions with business leaders who have been involved in the issues. Cross-listed with ACTG 4760.

LGST 4780 Leadership, Teams & Values (4 Credits)
This course is designed for Daniel Scholars (who have completed the first quarter of their MBA program including Value Based Leadership) to provide both challenging intellectual discussion and physical engagement around the fundamental ethical dilemma of competition and/or cooperation. The venue for the course is Harbor Island, San Diego, California, and the adjacent waters of San Diego Bay and the Pacific Ocean. Both traditional classrooms and the untraditional learning environment of the off-shore sail boat provide the context of dynamic learning about values, teams and self. Prerequisite: BUS 4100.

LGST 4790 Entrepreneur & Family Business-Organization, Governance Ethics & Leadership (4 Credits)
This course covers the most current legal and ethical issues involving the creation of value, strengthening and growing family businesses through the process of best practices in business governance, coupled with ethical conduct and values based leadership, and legal compliance. Cross listed with LGST 3790. Prerequisite: BUS 4100.
LGST 4980 Internship (1-5 Credits)
LGST 4991 Independent Study (1-10 Credits)
LGST 4992 Directed Study (1-4 Credits)
LGST 4995 Independent Research (1-10 Credits)

Business Information & Analytics (INFO)

Courses
INFO 4000 Foundations of Business (4 Credits)
The Introduction to Business course is an introduction to provides an overview of the business arena, how a business operates, and the supporting functions that are needed in any business enterprise. Students will identify forms of ownership and the processes used in operations, marketing, accounting, finance, personnel, information technology and general management. Moreover, students will learn about social responsibility and business ethics in concurrence with the Daniels College legacy.

INFO 4100 Survey of Business Analytics (4 Credits)
This course provides an overview of business analytics: how business data are collected, processed, and analyzed to support decision making. It will address both how to assess and use data that is readily available as well as how to start with corporate strategy and determine what data is needed, how to generate and process it. The course will also explore how corporate culture, ethics, and globalization can affect data management and analytic decision-making.

INFO 4120 Python Programming (4 Credits)
Python is a popular general purpose programming language which is well suited to a wide range of problems. With the right set of add-ons, it is comparable to domain-specific languages such as R and MATLAB. Python is a scripting language. The following topics will be covered: Importing data, Reading and writing files, Cleaning and Managing Data, Merging and joining DataFrame objects, Plotting and Visualization, Statistical Analysis, Fitting data to probability distributions and Linear models. Packages: Pandas, NumPy, matplotlib, statsmodels, Scikit-learn, and IPython. Principal Content Elements: 1. Introduction to Programming Logic and Design Using Python 2. Data Management 3. Statistical Analysis 4. Advanced Data Management and Statistical Analysis Prerequisites: STAT 4610.

INFO 4140 Business Databases (4 Credits)
This is an introductory database course which covers enterprise database design, modeling and implementation.

INFO 4200 Business Analytics Capstone Planning (2 Credits)
This course prepares the student for the Capstone course by identifying a faculty advisor, company, data, and a business issue to be addressed in the Capstone course in the final quarter. (Must be taken two quarters prior to INFO4400, with the exception of off-cycle students, who will take it the quarter prior to INFO4400.) This course may be taken by MSBA students only.

INFO 4240 Data Warehousing (4 Credits)
This course introduces students to the main components of a data warehouse for business intelligence applications. Students will learn how a data warehouse fits into the overall strategy of a complex enterprise, how to develop data models useful for business intelligence, and how to combine data from disparate sources into a single database that comprises the core of a data warehouse. Students will also explore how to define and specify useful management reports from warehouse data. Prerequisites: INFO 4100, INFO 4140.

INFO 4250 Business Data and Analytics (4 Credits)
Businesses make decisions and improve processes using their own and external data with a variety of data-driven and analytic techniques. This course introduces students to the business data landscape, data management in commercial organizations, and the data-driven decision-making process. Students explore the fundamental concepts behind how data and analytics can improve business performance, using their individual roles and companies as subject matter. Principal Content Elements: 1. Data-driven decision making and performance improvement. 2. Data management in organizations. 3. Organizational transformation based on data-driven insights.

INFO 4280 Project Management (4 Credits)
In this course students examine the science, practice the art, and discuss the folklore or project management to enable them to contribute to and manage projects as well as to judge when to apply this discipline. The course also covers the use of MS Project Professional as a management tool and Crystal Ball as a Monte Carlo simulator for project exercises. Students also learn the fundamentals of process and project simulation for business decision-making. Prerequisite: INFO 4100.

INFO 4281 Project Management (2 Credits)
“Cheaper, better, faster” is the mantra of modern business. Innovation, providing new products and services or using improved business processes, has become a prerequisite for businesses to thrive and flourish. Project Management is a discipline which supports innovation by examining how to facilitate one time events such as constructing a building, installing a software system, taking a product to market, reengineering a marketing process, or merging an acquired company. In this course, we examine the science, practice the art, and discuss the folklore of project management to enable students to contribute to and manage projects as well as to judge when to apply this discipline.
INFO 4300 Predictive Analytics (4 Credits)
This course is designed to prepare students for managerial data analysis and data mining, predictive modeling, model assessment and implementation using large data sets. The course addresses the how, when, why and where of data mining. The emphasis is on understanding the application of a wide range of modern techniques to specific decision-making situations, rather than on mastering the theoretical underpinnings of the techniques. The course covers methods that are aimed at prediction, forecasting, classification, clustering and association. Students gain hands-on experience in using computer software to mine business data sets. Prerequisite: STAT 4610.

INFO 4340 Data Mining and Visualization (4 Credits)
In this course, students create business intelligence tools such as balanced scorecards, data visualization and dashboards to inform business decisions. The course will focus on the identification of metrics, measures, and key performance indicators for a variety of business operations, and will introduce numerous analytic methodologies to support the decisions made with regard to these metrics. The focus will be on the advantages and disadvantages of various modeling methodologies and implementations moving towards performance improvement and business understanding. Prerequisite: STAT 4610.

INFO 4360 Complex Data Analytics (4 Credits)
This course addresses the rapidly-growing demands on businesses created by the prevalence of big and unstructured data. These include management of big data, big-data analytics, analysis of unstructured data (to include text mining), and management and analysis of real-time (streaming) data. The focus will be on enhancing business decision-making in the presence of big data, and on how to create the greatest ROI with large data sets.

INFO 4380 Decision Processes (4 Credits)
This course addresses the process of decision making in the enterprise: who makes what decisions based on what information and for what purpose. Business Intelligence is premised on the HP motto: "in God we trust. All others bring data." But what is the cost of collecting and analyzing the data and presenting the results, and what decisions justify that cost? Is the transformation from data to decision always rational, and what are the common pitfalls for human decision makers? We examine the results of recent experiments from behavior economics and their relevance to making business decisions. Prerequisite: INFO 4100.

INFO 4381 Decision Processes (2 Credits)
The competency we want to begin to develop in this course is the ability to make sound business decisions. A quick Google search can reassure you that there is no lack of information about how to make good decisions. And much of that information is confusing, if not downright contradictory. Since you will be making the decisions which impact your business and your career, you will need to decide what constitutes a good decision as well as a good decision process. In this course, we will explore some of the voluminous material available, use it to make decisions, practice with useful tools, identify traps and pitfalls, assess results, and extract guidelines for a decision process. Then we will iterate to update and refine the process.

INFO 4390 Advanced Predictive Modeling with R (4 Credits)
This course serves as an introduction to advanced predictive modeling and statistical learning using the R statistical software. Specific topics include linear, non-linear, and logistic regression, classification, resampling methods, and non-linear regression, tree-based methods, and support vector machines. The students will learn how to communicate their results (business reports, dashboards, etc.) of the various modeling exercises and projects using RStudio and the RMarkdown suite of tools. Enforced Prerequisites and Restrictions: Info 4300.

INFO 4400 Business Analytics Capstone (4 Credits)
This course gives students an opportunity to apply the knowledge and skills learned in this program to a real-world problem submitted by a partner business. Students take a business problem from model construction and data collection through an analysis and presentation of results to recommendations for specific business decisions. Prerequisite: INFO 4200.

INFO 4401 Quantitative Methods (2 Credits)
Businesses can never have perfect information; therefore, they must employ statistical techniques to improve the decision-making process. This course introduces students to managerial decision-making using probability and other statistical techniques to support and validate the chosen decision. A student project will focus on data collection (primary research), data analysis, decision analysis, written/oral presentation skills, and the development of an infographic.

INFO 4590 Optimization (4 Credits)
This course introduces students to the basic optimization modeling techniques and tools as practiced by business analysts to help their enterprises make better-informed decisions. Applications will include mix, selection, assignment, distribution, transportation, financial management, planning, scheduling, and management implementations in a variety of business settings. The course will focus on problem definitions, problem configuration, spreadsheet solutions, LP Software (LINGO) solutions, and interpreting and implementing results.

INFO 4591 Optimization (2 Credits)
This is a two-credit version of INFO4590, intended for dual-undergraduate/graduate students only. Students have the option of taking the first ten lessons (spreadsheet modeling) or the second ten lessons (solver programming) and completing the deliverables associated with their track only. The students taking the spreadsheet track will focus on LOs 1, 2, and 3. The students taking the solver track will focus on LOs 1, 2, 4, and 5. All students will take the common INFO4590 final. The course is only offered in conjunction with INFO4590 during the Winter quarter.
INFO 4610 Business Statistics and Analytics (4 Credits)
Making high quality business decisions is hard. Using data to make business decisions makes the process better. This course introduces students to a variety of techniques in analytics and statistics that facilitate data driven business decisions. Time will be spend identifying appropriate techniques to apply in various scenarios, applying in detail some of the quantitative techniques, and using analytic outputs to inform business decisions. Both technical skills and clear communication of results and decisions will be covered. Choosing proper techniques, technical work using Microsoft Excel, proper interpretation of results, and decision making are skills practiced in this course.

INFO 4700 Topics in Business Analytics (0-10 Credits)
Exploration of current trends and topics in business analytics. Prerequisite: INFO 4100.

INFO 4991 Independent Study (1-10 Credits)

INFO 4992 Directed Study (1-4 Credits)

Chemistry (CHEM)

Courses
CHEM 3110 Chemical Systems I (3 Credits)
Advanced discussion of modern concepts of organic chemistry; bonding, stereochemistry, reaction mechanisms. Prerequisites: CHEM 2453 and equivalent of one year of physical chemistry.

CHEM 3120 Chemical Systems II (3 Credits)
Interpretation of trends in the chemistry of the elements in terms of orbital interactions. Most examples will be taken from the third row transition metals and the boron and carbon groups. Prerequisites: CHEM 2131, CHEM 3310 and CHEM 3110.

CHEM 3130 Chemical Systems III (3 Credits)
Advanced-level physical biochemistry course intended for advanced-level undergraduates and graduate students. Focuses on kinetic, thermodynamic and dynamic aspects of biopolymers; delineates the relationship of these properties to the mechanism and function of biological macromolecules. Prerequisites: CHEM 3811, CHEM 3812, CHEM 3813, CHEM 3610 or the equivalent.

CHEM 3220 Advanced Analytical Chemistry (3 Credits)
Principles of chemical instrumentation applied to analytical measurements; principles, instrumentation and applications of spectrometric and chromatographic measurements. Prerequisites: CHEM 3210 and CHEM 3621, or the equivalent.

CHEM 3310 Structure and Energetics I (3 Credits)
Fundamentals of quantum chemistry, and introduction to symmetry and molecular structure of small and large systems. Prerequisite: one year of physical chemistry.

CHEM 3320 Structure and Energetics II (3 Credits)
Computational methods in chemistry. Prerequisites: CHEM 3310, one year of physical chemistry.

CHEM 3410 Atmospheric Chemistry (3 Credits)
The concepts of equilibrium thermodynamics, kinetics, and photochemistry will be applied to understanding atmospheric processes. Covers urban air pollution in detail with focus on primary pollutants. Also covers stratospheric chemistry with focus on ozone chemistry and the chemistry of climate change. Prerequisites: (CHEM 2270 or CHEM 2011) and CHEM 2453.

CHEM 3411 Aquatic Chemistry (3 Credits)
The circulation of the oceans and their chemical make-up. 'Classical water pollution problems' like biological oxygen demand and turbidity are discussed. Also presented: aquifer structure and flow, ground water chemistry, pollutant partitioning between stationary and mobile phases, heterogeneous surface chemistry, and the detection of trace contaminants. Prerequisites: (CHEM 2270 or CHEM 2011) and CHEM 2453.

CHEM 3412 Environmental Chemistry & Toxicology (3 Credits)
A survey of environmental toxicology concepts: animal testing, dose-response data, epidemiology, risk assessment. The course includes ecotoxicology, focusing on the alteration of biological and chemical systems beyond the simple response of an individual to an environmental chemical. Prerequisites: (CHEM 2270 or CHEM 2011) and CHEM 2453.

CHEM 3610 Physical Chemistry I (3 Credits)
Fundamentals of thermodynamics, including phase and reaction equilibria, properties of solutions, and electrochemistry needed for advanced study in life sciences and for Physical Chemistry II and III. May be taken for graduate credit by nonchemistry majors. Prerequisites: CHEM 2453, calculus and physics.

CHEM 3620 Physical Chemistry II (3 Credits)
Fundamentals of quantum chemistry, including theories of atomic and molecular structure and spectroscopy. May be taken for graduate credit by nonchemistry majors. Prerequisite: CHEM 3610.

CHEM 3621 Physical Chemistry III (3 Credits)
Fundamentals of kinetic theory and statistical mechanics. May be taken for graduate credit by nonchemistry majors. Prerequisite: CHEM 3620.

CHEM 3703 Topics in Organic Chemistry (3 Credits)
May include organic photochemistry, organic synthesis, organic electrochemistry or natural products. May be repeated for credit. Prerequisites: CHEM 3110 or equivalent and others depending on topic.
CHEM 3705 Topics in Biochemistry (3,4 Credits)
May include physical techniques for exploring biological structure, biological catalysis, and selected fields within biochemistry taught from original literature. May be repeated for credit. Prerequisites: CHEM 3831 and 3813.

CHEM 3811 Biochemistry-Proteins (3 Credits)
Protein structure and function, starting with the building blocks and forces that drive the formation of protein structure and the basic concepts of protein structure, and continuing with enzyme catalysis, kinetics, and regulation. Prerequisites: CHEM 2453 or instructor permission.

CHEM 3812 Biochemistry-Membranes/Metabolism (3 Credits)
Membranes and membrane mediated cellular processes, energy and signal transduction, and metabolic/biosynthetic pathways. Prerequisite: CHEM 3811 or CHEM 3831.

CHEM 3813 Biochemistry-Nucleic Acids (3 Credits)
Molecular processes underlying heredity, gene expression and gene regulation in prokaryotes and eukaryotes. Prerequisites: CHEM 2453 and CHEM 3811.

CHEM 3831 Advanced Protein Biochemistry (3 Credits)
This course provides fundamental insights into the chemistry and physics of proteins. It investigates how amino acids form proteins with highly complex three-dimensional structures and how these structures mediate function. We examine key research articles and their contribution to our current understanding of proteins. Topics range from protein folding to enzyme kinetics and emphasize basic principles. Prerequisites: CHEM 2453 and instructor permission.

CHEM 3991 Independent Study (1-10 Credits)
May be repeated for credit.

CHEM 3992 Directed Study (1-10 Credits)

CHEM 3995 Research in Chemistry (1-10 Credits)
Research project conducted under guidance of a faculty member. Credit hours and projects arranged on an individual basis. May be repeated for credit.

CHEM 4400 Adv. Topics: Organic Chemistry (3 Credits)
Physical organic chemistry; reaction mechanisms, structure reactivity relationships, kinetics, photochemistry, molecular orbital theory, etc.; current literature. May be taken for credit more than once. Prerequisite: CHEM 3110.

CHEM 4900 Chemistry Seminar (1 Credit)
A weekly presentations of research in progress and of current literature by outside speakers. faculty and graduate students.

CHEM 4991 Independent Study (1-10 Credits)

CHEM 4992 Directed Study (1-10 Credits)

CHEM 4995 Independent Research (1-10 Credits)

CHEM 5991 Independent Study (1-10 Credits)

CHEM 5995 Independent Research (1-10 Credits)

Child, Family & School Psych (CFSP)

Courses

CFSP 3900 Child Guidance (5 Credits)
Students in this class explore effective child guidance theories and factors that impact their classroom application with young children from birth to age 8. Empirically-based positive guidance techniques and strategies are reviewed and applied to everyday practice, especially as they relate to establishing pro-social environments, classroom management, and meeting the needs of children and families from diverse backgrounds.

CFSP 3910 Early Childhood Nutrition (3 Credits)
Young children have specific nutritional and physical needs. This course covers the nutritional needs of children, such as how to ensure that they get all the nutrients they need to stay healthy. The course explores what consists of safe foods at various stages in childhood, especially when not all foods can be eaten by infants and toddlers. Learn about the best practices in the field of early education regarding what foods to serve young children that promote positive health, hygiene and physical development.

CFSP 3991 Independent Study (1-10 Credits)

CFSP 3992 Directed Study (1-10 Credits)

CFSP 4000 Assessment for Non-Psychologists (2 Credits)
Foundation and methodology of assessment are considered in the context of informing practices of professionals who construct a variety of test formats including assessment of cognitive abilities, achievement testing, vocational assessment, and assessment of personality.
CFSP 4301 Professional, Legal and Ethical Issues in School Psychology (4 Credits)
This course examines professional, legal, and ethical issues pertinent to working with birth to age 21 populations in school and community settings. Attention is given to federal and state education legislation, special and regular education case law, and psychological practice case law. Professional issues and contemporary service models are reviewed, including an introduction to ethical issues, federal mandates, professional training, and roles and responsibilities. Students engage in casework discussion regarding delivery of assessment, intervention, and consultation services. Special emphasis is given to current mental health and education regulations and reforms. Differential issues facing school psychology professionals in urban and rural settings are discussed, and students become acquainted with a variety of legal and ethical issues affecting practice in public schools, private settings, and higher education. Students learn about ethical standards, reasoning processes, and conduct in applied settings.

CFSP 4302 Special Education & Gifted Education Legal Issues (3 Credits)
This course is designed to provide students with foundational knowledge regarding the legal issues affecting special education and gifted education in early childhood and K-12 educational settings. Attention is focused on federal and state education legislation, special education case law and gifted statutes specific to Colorado. Consideration also is given to the interaction of ethical standards of practice as they relate to legal mandates and court decisions to meet the educational and psychological needs of all students, especially those with disabilities and twice exceptionalities. Students will be exposed to legal issues affecting practice in the public schools community agencies and early childhood environments.

CFSP 4303 Psychopathology: Prevention, Diagnosis, Treatment (3 Credits)
This course is designed to provide students with knowledge of mental health disorders, the diagnostic criteria as well as culturally-relevant prevention and intervention strategies. Participants obtain practical information regarding the assessment, identification, amelioration, facilitative responses, and intervention in school and community settings. Using a strengths-based approach, prevention principles, curriculum, and policy agendas are discussed. Additionally, this course explores implications for school psychologists and other school-based practitioners working with those at risk for or suffering from mental health disorders. Prerequisites: CFSP 4322, 4323, 4324, 4340, 4343.

CFSP 4304 Diversity in School and Community Settings (3 Credits)
This course explores diversity in children and families, and the impact of culture on personal and family development. Emphasis is placed on the intersection of school and community settings' cultures and those of children and families, and how this affects learning and development for individuals and groups of children. Attention is given to students' cultures and cultural experiences, and how these affect the work they do with children and families in school and community settings.

CFSP 4305 Exceptionalities in Education: High Incidence in Disabilities (3 Credits)
This course provides a broad survey of the field ofexceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional educational needs. Biomedical and psychosocial etiologies are reviewed. Implications for child and family interventions and supports also are addressed. Prerequisites: CFSP 4310, 4311, 4312.

CFSP 4308 Early Academic Competencies and Interventions (3 Credits)
This course provides an overview of early language and literacy development across diverse settings and stakeholders, such as families, teachers/professionals, providers, programs, and communities. A comparative analysis of evidence-based early literacy strategies, environments, curriculum, and a review of current evaluation and instructional language and literacy practices for working with teachers, families, and young children are undertaken. Play-based and other informal methods of assessment and intervention are covered, including the integration of technology and strategies to promote early language and literacy with infants, toddlers and preschoolers in natural environments. Prerequisite: CFSP 4310; None for ECSE CERT Students.

CFSP 4310 Early Childhood Development (3 Credits)
This course focuses on early childhood development during, from the prenatal period to approximately five years of age. Major theories of early childhood development and research methods for studying infant and early childhood behavior will be discussed. Emphasis will be on the physical, cognitive, communicative, social, and emotional aspects of development, for children who are typically developing, at risk or with special needs. All-inclusive issues, as well as health, risk and protective factors will be addressed. The importance of investing in early childhood programs, fostering nurturing relationships during the early years, and addressing the diverse needs of families will be emphasized.

CFSP 4311 Child and Adolescent Development (3 Credits)
This course provides an overview of growth and development from age five through 21 years of age. We will explore theories and research in developmental psychology to provide a context for typical child development. Attention will be given to the social, emotional, cognitive, and biological development of the child, with a particular focus on attachment as a framework for healthy development in these domains. Case studies will allow for the application and integration of child development theory and counseling practice.

CFSP 4312 Learning Theories & Behavioral Analysis (3 Credits)
This course examines learning theories and applied behavioral principles. Students learn to apply theories to case studies and fieldwork relating to children along the developmental spectrum and across cultural contexts. Students work to investigate and analyze concepts relating to learning and behavior at home and school, and to develop positive behavioral support and effective learning plans.
CFSP 4315 Professional, Leadership and Ethical Issues in Special Education: Birth to 21 (3 Credits)
This course provides students with an understanding of the roles & responsibilities of an Early Childhood Special Education Specialist and Special Education Generalist. This course serves as the foundation for students who are interested in pursuing a profession in special education and working with children with disabilities from birth to 21 years. This course includes the ethical and professional practice standards and understanding of the multiple roles and complex situations across wide age and developmental ranges. This course also briefly covers the historical laws and legal issues associated with the profession. The course also highlights why special educators engage in professional activities and learning communities that benefit individuals with developmental disabilities and their families, colleagues, and their own professional growth. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice.

CFSP 4317 Topics in Special Education: Learning Differences (1-3 Credits)
This course reviews the challenges that arise in special education settings related to children who exhibit academic and behavioral differences and delays. Academic and behavioral interventions and differentiation strategies will be addressed. Additionally, the course will cover the approaches for addressing children who require additional academic and behavioral support in the classroom.

CFSP 4320 Early Childhood Assessment: Formal & Standardized (3 Credits)
This course is designed to teach students how to assess young children (birth to 5 years) using a variety of formal and standardized methods. Assessment will focus on normed-referenced, standardized measures of cognitive, communication, emotional, social, sensory and physical motor development. Students will gain experience in administering assessments to young children, interpreting assessment results, writing assessment reports, and reporting the results to families and professionals. A variety of assessment tools will be studied for their appropriate use with young children and their families. Prerequisite: CFSP 4310.

CFSP 4322 Psycho-Educational Assessment I (4 Credits)
This course is one of two required courses designed to provide students in School Psychology with expertise in individual intelligence and achievement test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive and achievement measures, with particular emphasis on the Wechsler Scales. Contemporary issues pertinent to the assessment of intelligence are covered. Emphasis is placed synthesizing and integrating information from cognitive and achievement assessment with other sources to produce effective educational recommendations. In addition, the role of these tools in the special education qualification process is highlighted. Important issues regarding the use of such tests are discussed, as well as the use of tests in schools and clinical practice. The focus of the class is primarily on the assessment of school-aged children. Lab fee required. Prerequisites: CFSP 4301.

CFSP 4323 Psycho-Educational Assessment II (4 Credits)
This course is the second of two required courses designed to provide students in School Psychology with expertise in individual intelligence and achievement test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive and achievement measures, with particular emphasis on the Woodcock Johnson Scales. Nontraditional forms of assessment, as well as adaptive behavior measures, are also covered. Integrating results of assessments with other data to provide effective educational recommendations continues to be an emphasis. The focus of the class is on the assessment of school-aged children. Lab fee required. Prerequisites: CFSP 4312, 4322.

CFSP 4324 Assessment III (4 Credits)
This course is designed to provide students with knowledge of the major approaches to assess a school-aged student's social and emotional status. Instruction includes underlying theories, use and interpretation of interviewing techniques, observation methods, objective behavior ratings, self-report measures, sociometric procedures and selected projectives. Emphasis is placed on the integration and interpretation of multimethod, multisource and multisetting data to improve diagnostic accuracy, and the use of assessment results in developing effective intervention strategies. Students learn to incorporate such assessment information using case studies. In addition, students develop skills in writing case reports and making effective presentations of social-emotional assessment results. Consideration is given to contemporary issues in the assessment of children's social emotional functioning. Lab fee required. Prerequisites: CFSP 4310, 4311, 4322, 4323.

CFSP 4326 Early Childhood Assessment: Informal & Play-Based (3 Credits)
This course is designed for students to learn informal and play-based assessment processes for young children (birth-6 years) using a variety of non-standardized, informal and play-based assessment methods. The entire assessment process, including screening, evaluation, interpreting results, writing an integrated report, and providing feedback to families and professionals, will be the focus. Assessment measures will be examined with consideration for and why specific instruments should be used, in addition to the benefits and disadvantages of the instruments. Students will be trained in-depth in the administration and interpretation of a variety of instruments for assessment of the whole child including the cognitive, language, social-emotional, and sensorimotor developmental domains. Prerequisite: CFSP 4310.

CFSP 4330 Family-School Partnering and Consultation (3 Credits)
This course is designed to familiarize educational, mental health, and early childhood service providers with essential attitudes, approaches, and actions necessary to form successful family-school-community partnerships that can foster development and learning, especially for children with disabilities. Ecological, family systems, and family-centered theory and principles serve as the foundation for working collaboratively with families from diverse cultural and social backgrounds within school and community settings. Students gain skills in family interviewing; consultation to identify family strengths, needs, and resources; collaborative problem-solving; and multi-systemic learning. Evidence-based family involvement, education, and intervention strategies contribute to positive family-school partnering relationships are reviewed within a multi-tiered, school-based service delivery framework. Prerequisite: CFSP 4332; None for ECSE Students.
CFSP 4332 School Psychology Consultation and Collaboration (4 Credits)
This course is designed to acquaint students with current directions in classroom management and school-based consultation. Covered are issues related to consultant and consultee characteristics, consultation practices and processes, models and stages of consultation, facilitating desired outcomes in consultation, and evaluation of consultation outcomes. Special emphasis is also given to problems of classroom management and collaboration with parents, teachers and other educational and community personnel. Case analysis and practice are required. Prerequisites: All first year courses as listed in the handbook.

CFSP 4335 Infant & Family Interventions (3 Credits)
This course will describe various models for intervention with infants and toddlers with disabilities, emphasizing intervention within natural environments. Working with children and families in home, childcare, and other community settings will be emphasized and contrasted with intervention in more clinical settings. Students learn how to consult with parents and community professionals in providing coordinated transdisciplinary services when working with children in home and community settings. All areas of development will be addressed. Field experiences with children and families are expected to practice the skills addressed in class. Families will be asked to share their experiences to enable students to gain the "human" side of theory and practice.

CFSP 4336 Preschool Interventions (3 Credits)
This course covers early childhood interventions applicable within community, preschool and home environments. A hierarchy of intervention strategies is addressed including universal, targeted, and intensive approaches. There is a focus on building supportive networks, routine-based intervention strategies, and collaboration to enhance family resources. Students review empirically validated early interventions and curriculum for young children exhibiting both normal and delayed development. Prerequisite: CFSP 4310, 4312; None for ECSE CERT Students.

CFSP 4337 School Age Academic Competencies and Interventions (3 Credits)
The purpose of this course is to review current theories of learning disability and practices that can support the diverse learning needs of school-aged students with and without disabilities. An integrated response to intervention model will be reviewed to identify difficulties, delays, and disabilities in the domains of literacy (oral, writing, speaking, listening), mathematics, and self-regulation. Students will learn to: a) evaluate differentiated instructional environments and adaptations that can support learning; b) employ focused assessments to identify academic strengths and weaknesses; c) formulate instructional hypotheses and learning goals; and d) link assessment results to evidence-based intervention approaches or instructional strategies designed to address phonemic awareness, decoding/phonics, reading fluency, listening/reading comprehension, spelling, written expression, vocabulary, mathematical calculation, mathematical problem-solving, and study/organization/test-taking skills. Effective practices will be reviewed to reduce learning barriers and increase learning supports across school, home, and community settings. Students will collaborate on the development of instructional hypotheses and learning goals that respect cultural diversity and language differences and will develop plans to monitor instructional fidelity and students’ progress over time. These goals are accomplished through critical readings, classroom discussion, homework assignments, demonstrations, modeling, video analysis, and practice with hypothetical and authentic cases referred for learning and academic issues. Prerequisite: CFSP 4312.

CFSP 4338 Exceptionalities in Education: Low Incidence Disabilities (3 Credits)
This course reviews a wide range of neurodevelopmental disorders and low incidence disabilities such as blindness/visual impairment, deafness/hearing impairment, deaf blindness, traumatic brain injury, Fragile X syndrome, Fetal Alcohol Syndrome, traumatic brain injury, and syndromes associated with chromosomal deletions. Implications for assessment and intervention will be outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology will be addressed. Community experts on specific disabilities will be used as guest lecturers.

CFSP 4339 Introduction to Play Therapy (3 Credits)
This course examines the history and theoretical bases of major theories of play to enhance children’s social-emotional and adaptive functioning. Child-centered, interpretive, and structured play therapy models are reviewed. Information is covered regarding preparation, selection of materials and toys, playroom characteristics, facilitative responses, and how to adapt play therapy in school, home and clinical settings. The play therapy process is illustrated from the initial referral and contact through termination, including observing and responding during sessions, facilitation and interpretation, therapeutic limit setting, and group play therapy strategies. Case studies, role play, video and script analysis are incorporated as is brief play therapy and applications with special populations. Efficacy, evaluation and future areas for professional development are reviewed. This course is designed as an introductory experience to prepare students for further supervised practica in play therapy. Prerequisite: CFSP 4310.

CFSP 4340 Counseling Children and Adolescent (4 Credits)
School Mental Health Counseling I is designed to provide in-depth knowledge of major theories behind contemporary school-based mental health counseling approaches for children and adolescents. Students will learn developmentally informed and empirically driven individual and group counseling strategies to enhance interpersonal, emotional, and social functioning within a multi-tiered system of support. Guidelines and ethical principles are reviewed to guide school-based practice and to help build collaborative partnerships between school, home, and community settings. These goals are accomplished through self and peer reflection, critical analysis of therapy research, evaluation of case studies, video modeling, and in-vivo practice and feedback. This course and its contents are a prerequisite to prepare students for School Mental Health Counseling II, an advanced class that incorporates supervised counseling experience. Prerequisite: CFSP 4310, 4304.

CFSP 4342 Crisis Intervention and Prevention (3 Credits)
This course provides knowledge about crisis prevention and intervention theory and effective strategies for use in direct and indirect services for children and staff in schools and in practice with children. Emphasis is on application to child-centered and school-based crises such as bullying, child abuse, death, loss and grief, trauma, community and school-based violence, threats, and suicide. The course provides students with basic knowledge and skills for crisis intervention in school settings. Prerequisites: CFSP 4301, 4304, 4310, 4311, 4340, 4343.
CFSP 4343 School Mental Health Counseling II (4 Credits)
School Mental Heath Counseling II is designed as an advanced counseling class that incorporates supervised counseling experiences to improve interpersonal, emotional and social functioning in young children to adolescents. Students learn to design, deliver and evaluate evidence-based prevention and intervention approaches and consultative mental health services. By working alongside a field site supervisor, students engage in case review, analysis, and delivery of counseling services designed to mirror expectations placed on mental health professionals in school and community settings. Self-reflection, transcript analysis, and peer, instructor, and supervisor feedback are employed to develop professional and personal individual and group counseling skills within a multi-tiered system of support. Prerequisites: CFSP 4310, 4311, 4340.

CFSP 4349 Community Practicum (2 Credits)
Taken during the first year of entry, the Practica is a supervised initial year field experience designed to expose students to a variety of home-, community- and school-based settings that serve families with children who have developmental and special needs, and in the CFSP Clinic. Each week for up to four hours, students are expected to attend, observe, and participate in a range of site-specific team meetings and services offered to families and children. For the MA in Educational Psychology degree, students, during the fall or winter quarter, identify, develop and initiate a research project with input from the faculty. The MA project culminates during the fourth quarter (summer) and serves as the final project in lieu of a comprehensive exam. Prerequisites: CFSP 4301, 4304, 4349 - Must pass all prior quarters as listed in the handbook.

CFSP 4351 School Psychology Practicum: Clinic Assignment (1 Credit)
CFSP Clinic is a supervised field experience in the Morgridge College of Education's Counseling and Educational Services Clinic. Through all experiences, Clinic students will work with students and families within the zero to college age range. Casework may include: interview, assessment, data analysis, report writing for different audiences, diagnostics, data presentation, intervention, and consultation for a variety of psychoeducational and developmental concerns of children and families. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4351 - prior quarters.

CFSP 4353 School Psychology Practicum II (2 Credits)
This is a 500 hour supervised field experience taken after the successful completion of core courses and Practica I experience. Practica is considered a critical professional transition year to help consolidate learning and professional competencies in preparation for a subsequent Internship. Students work throughout the year with Clinic Faculty and a licensed Field Supervisor within the University of Denver psycho-educational clinic and infant, preschool, elementary, middle or high school settings and also attend weekly Practicum seminars or individual supervision sessions with a University Faculty member. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, continued professional development pertinent to the successful practice of School Psychology in urban and rural settings. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4353 - prior quarters.

CFSP 4354 School Psychology Advanced Practicum (2 Credits)
This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeatable). Prerequisite: PhD students only; Pass first year courses and CFSP 4353.

CFSP 4355 School Psychology Internship - EdS (1 Credit)
This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children’s learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

CFSP 4356 School Psychology Pre-Doctoral Internship (4-8 Credits)
Meets 12-month internship requirement in school psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.

CFSP 4357 Early Childhood Practicum (1-4 Credits)
This course provides students with a field experience in an Early Childhood environment for students who are interested in pursuing a profession in Early Childhood Special Education. Field Practicum in Early Childhood Special Education is an off-campus, 600-hour minimum supervised experience taken throughout your coursework. Field Practicum is designed to broaden one’s professional skills and is considered a critical transition of substantial growth. Each student is required to successfully complete 3 practica; an infant/toddler, (Birth to 3 years) a preschool (3-5 years) and an early elementary focused (Kindergarten through 3rd grade). Practicum seminar is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practice. The field practicum is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students work with a licensed Field Supervisor. Students will be placed in infant, preschool, elementary school settings. During practicum, students provide direct and indirect services that support children and/or families in a variety of settings. All students attend weekly practicum seminars facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, and continued professional development and experiences pertinent to successful practice. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice. Restricted to ECSE students only.
CFSP 4359 School Psychology Pre-Doctoral Internship (1 Credit)
This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

CFSP 4361 Supervision in School Psychology (2 Credits)
This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeatable). Prerequisites: PhD Students only; CFSP 4351, 4353.

CFSP 4363 Child, Family, School Psychology Program Development and Evaluation (3 Credits)
This course focuses on theory and practice of program development and evaluation in school and community agency settings. Both qualitative and quantitative methods of program evaluation are discussed. Students have the opportunity to collaborate on a comprehensive evaluation of a specific educational, health, or mental health program. Prerequisites: RMS 4910, CFSP 4332.

CFSP 4365 School Psychology EdS Terminal Internship (1-8 Credits)
Meets 9-24 month internship requirement in school psychology. Prerequisites: Completion of all Practica and Program Permission. Students can only enroll in this course if they're also enrolled in CFSP 4355.

CFSP 4369 School Psychology Pre-Doctoral Terminal Internship (1-8 Credits)
This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 2000 clock hours of supervised field experience across an academic year in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. The student will be closely supervised by a licensed psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisites and Restrictions: Students must be enrolled in the CFSP doctoral program. They must have successfully completed Practicum I, Practicum II and Advanced Practicum. Additionally, they must have successfully passed comprehensive exams and dissertation proposal. All other students must obtain instructor permission. Corequisite: CFSP 4355.

CFSP 4991 MA Independent Study (1-10 Credits)
This course allows MA or EdS Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.

CFSP 4992 Directed Study (1-10 Credits)

CFSP 4995 Research - M.A. Thesis (1-10 Credits)
This course is for students whose program requires completion of a masters level thesis.

CFSP 4999 Advanced Seminar in School Psychology (1-3 Credits)
This course is designed as an advanced topical seminar in which students will focus on the professional literature and research relevant to important topics in the field of School Psychology. There will be analysis and discussion of theses advanced topics with consideration of the implications for research and practice in School Psychology. Required meeting time and assignments would be commensurate with number of credits. (Repeatable).

CFSP 5991 PhD Independent Study (1-10 Credits)
This course allows PhD Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.

CFSP 5992 Directed Study (1-10 Credits)

CFSP 5995 Dissertation Research (1-20 Credits)
This course is for PhD Child, Family, and School Psychology students engaged in completing their doctoral dissertation. Advisor permission required.

Clinical Psychology (CPSY)

Courses
CPSY 4000 Issues in Forensic Psychology I (2 Credits)
Overview of psychological theory, research and practice as used within the legal and criminal justice system; differences between forensic and clinical assessments and interventions; special topic areas (e.g. trauma, abuse, domestic violence, etc.); ethical issues.

CPSY 4010 Introduction to Statistics (3 Credits)
General statistical principles and techniques and their application to psychological and psycho-legal issues. Students will develop computer analytic skills to assist in answering professionally relevant questions.
CPSY 4020 Psychopathology and Diagnosis (3 Credits)
An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

CPSY 4030 Clinical Interviewing and Theories of Psychotherapy (3 Credits)
Theoretical and practical issues related to clinical interviewing within forensic and non-forensic settings; exploration of the process of psychotherapy from various theoretical perspectives.

CPSY 4040 Issues in Forensic Psychology II (3 Credits)
Further exploration of the relationship between the legal system and psychological theory in areas of criminal law (e.g. standards of legal competency, insanity defense, prediction of dangerousness), civil law (civil commitment, personal injury) and family law (e.g. child custody determinations, juvenile issues).

CPSY 4050 Research Methods (3 Credits)
Examination of the research process, including the formulation of questions and utilization of various methodologies to answer hypotheses.

CPSY 4060 Biological Bases of Criminal Behavior: Adult Psychopathology (3 Credits)
Students will develop an understanding of the biopsychosocial vulnerabilities to crime. This course will emphasize the biological, psychological, social, and environmental causes and correlates of violent and criminal behavior. Violence and criminal behavior will be viewed as an evolving construct that may begin in childhood and endure through adolescence and into adulthood. Contemporary issues including terrorism, racial profiling, and gender debates will also be highlighted. Students will be provided with the tools necessary to determine future directions for policy, prevention, and treatment that may help ameliorate the causes and outcomes of crime and violence.

CPSY 4070 Trauma & Crisis Intervention (3 Credits)
Theory, techniques and research relating to various types of trauma (e.g. childhood abuse, combat veterans, natural disaster survivors); crisis intervention techniques as a system of managing trauma related difficulties.

CPSY 4080 Issues in Forensic Psychology III (3 Credits)
Relationship and application of psychological principles and practice to varied law enforcement and correctional functions; assessment of violence in the workplace, trauma debriefing, hostage negotiation. Students will become prepared to assume the role of an expert witness in a variety of psycho-legal settings.

CPSY 4090 Issues in Measurement (3 Credits)
Critical assessment of various psychological tests, with an emphasis on validity, reliability and issues of standardization.

CPSY 4100 Mental Health Law (3 Credits)
The goal of this introductory Mental Health Law course is to provide students with a general understanding of the laws impacting the field of mental health, including those involving professional responsibility and ethics; competency issues; court-ordered evaluations and testimony; family law issues; the rights of differently-abled and historically marginalized persons; and defenses based on mental state. Course objectives include assisting students in locating, understanding, and interpreting laws relevant to the mental health practitioner; recognizing potential legal and ethical dilemmas faced in forensic practice; and applying the principles of mental health law to offer the highest standard of care in their clinical practices.

CPSY 4105 Pyschology, Public Policy, and Advocacy (2,3 Credits)
This course is designed to provide students in clinical training with an overview of the political advocacy process in the United States, its potential impact on the practice of mental health, and opportunities for involvement in public policy discourse.

CPSY 4106 Introduction to Animal Abuse Evaluation and Intervention (2 Credits)
This graduate-level course will introduce the student to the concepts of animal abuse at the individual, clinical, and societal levels. The course covers animal welfare and cruelty issues; the assessment of abused animals; the populations (individuals and groups of all ages) and settings where animal abuse is most prevalent; the evaluation, sentencing, and treatment of perpetrators of violence toward animals; and the link between cruelty to animals and humans. Students will have the opportunity to tailor some assignments to their specific interest areas. The instructor will invite guest lecturers, such as judges and probation officers, with expertise in topics such as sentencing, misdemeanors vs. felonies related to animal abuse, etc.

CPSY 4107 Police Psychology and Violence Risk Assessment (2 Credits)
This course is designed to give students an introduction to the field of police psychology and an overview of violence risk assessment principles.

CPSY 4108 Topics in Forensics Psychology (1 Credit)
This course is designed to address specialized topics in forensic psychology that are not adequately covered in existing required and elective courses. Topics are likely to center around professional development, such as professional identity, presentation, and communication. Topics may also be more specialized, depending on the expertise of the postdoctoral fellow or special topics of interest within MAFP. Such topics might include psychology and law enforcement, psychology and race, immigration and refugee populations, neuropsychology in corrections, juvenile justice issues, outpatient competency restoration, and other topics.
CPSY 4109 Cold Case Review: Application of Forensic Investigative Principles (2 Credits)
This course was developed for mental health trainees so they can apply established investigative technique and methodology in cold case investigations. When investigators no longer have new leads on a case, the investigation is said to have gone “cold”. Some of these cases can benefit from the review of the forensic case files and evidence with a new perspective. This is the goal of the cold case course. This course will aid the activity of a recognized cold case team. Topics to be discussed in lecture and applied in the on-site experience include critical forensic evidence review and case reconstruction. This course is intended to provide our collaborators with information that could assist in organizing, investigating, prosecuting, and bringing these cases to a successful resolution. The course features one of the nation’s leading experts in cold case investigation. Topics will include behavior analysis of the crime scenes and how to conduct interviews in a cold case investigation. Contemporary issues including wrongful conviction, DNA testing, and emerging forensic technologies will also be highlighted.

CPSY 4110 Family Systems and Therapy (3 Credits)
This course examines various approaches to family systems, including an overview of systems theory, plus ideas that have been labelled structural, strategic, and Bowenian. Goffman’s performance theory will also be emphasized, especially as it applies to clinical work. Students will practice rethinking interpersonal conflicts, and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

CPSY 4120 Psychology of Performing Arts (3 Credits)
Students gain an understanding of the psychological factors involved in the performing arts, including theatre, acting, dancing, music, and circus arts. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

CPSY 4130 Organizational Leadership: Center for Performance Excellence (3 Credits)
This course is designed to familiarize CPEX Officers with approaches to effective leadership while engaging in leadership roles within the Center for Performance Excellence (CPEX). Students are exposed to successful leadership strategies from the business world and have the opportunity to implement these strategies into their roles as leaders within CPEX. This course is intended for CPEX Officers only.

CPSY 4140 Exercise Psychology (3 Credits)
In this course, students explore the theory, research, and practice related to psychological aspects of exercise behavior. Students explore research and intervention models in exercise psychology and be able to integrate this knowledge in their practice. Major topics include health behavior change, the impact of exercise on mental health, and exercise motivation and adherence.

CPSY 4150 Psychology of Performance in Business (3 Credits)
Students gain an understanding of the psychological factors involved in the business world. Factors are examined at the individual, team, and organizational level. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

CPSY 4160 Psychology of High Risk Occupations (3 Credits)
In this course, students gain an understanding of the psychological factors involved in high risk occupations. High risk occupations include individuals whose profession directly involves saving lives or placing their own life at risk. Students learn about appropriate psychological interventions for these populations to enhance performance and resilience in the high stress situations required by their jobs. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

CPSY 4200 Practicum I: Professional Orientation (2 Credits)
In this first quarter of a three quarter practicum series, we will discuss issues that have bearing on your work with forensic populations, the central features of which include adapting to the culture of professional psychology by exploring relationships and by engaging in conflict resolution. By the end of the quarter, you will be well versed in the ethical guidelines, standards, and dilemmas facing you as forensic trainees. Also, you will be knowledgeable about issues related to stress and burnout in this field, including topics such as suicide and physical assault risks, and working within a system. Importantly, you will develop the skills needed to best utilize feedback and provide constructive feedback to others.

CPSY 4210 Practicum II: Introduction to Multicultural Issues (1-6 Credits)
CPSY 4220 Practicum III: Lifestyle Development (3 Credits)
CPSY 4230 Practicum IV: Theories of Personality (3 Credits)
CPSY 4240 Practicum V: Theories of Counseling and Behavioral Health Approaches (2-3 Credits)
CPSY 4250 Practicum VI: Professional Identity and Career Development (3 Credits)
CPSY 4260 Psychophysiology and Biofeedback Lab (2 Credits)
This course is designed to be both an introduction to psychophysiology and biofeedback and to its applications, particularly to sport and performance. The principles of psychophysiology, the biofeedback instruments used, the areas of application, the techniques commonly used in conjunction with biofeedback, the diverse field of biofeedback and applied psychophysiology, and the latest uses for optimal self-regulation are covered. The course involves use of biofeedback instrumentation as well as classroom participation and readings and a self-regulation project.

CPSY 4300 Eval and Treat Juv Offender (3 Credits)
Theories of juvenile delinquency and studies concerned with the etiology, development and prediction of such; review of the various psychological treatment options utilization with juvenile offenders; consideration of the legal responses to juvenile crime and the role of the psychologist within the juvenile justice system.
CPSY 4310 Ethical and Legal Issues (3 Credits)
Discussion of ethical and legal conflicts and dilemmas as a psychologist within the legal system, and consideration of ways to resolve such conflicts, including standards applicable to the science and practice of forensic psychology and the role of the expert witness.

CPSY 4320 Cognitive Assessment (3 Credits)
Students learn to administer, score, and interpret the WAIS. There is some exposure to other intelligence tests as well. Students understand diagnostic validity (Bays’ Theorem), how to identify interpretive material, and how to think ideographically about nomothetic data. Through discussions of legal cases, students learn numerous forensic issues to which cognitive assessment is applicable, including for example testamentary capacity, competence to waive Miranda rights, and ability to enter a contract.

CPSY 4321 Assessment Independent Study (1 Credit)

CPSY 4330 Cog Behavioral Interventions (3 Credits)
Theory, techniques and research relating to cognitive-behavioral therapy, focusing on assessment, case conceptualization and intervention approaches within a forensic setting.

CPSY 4335 Introduction to Trial Consulting (3 Credits)
The art of trial consulting is the skill to meld multiple theories, methodologies, and concepts into a working and research-based strategy. This skill is very reminiscent to the art and practice of therapy. As with any practice, be it law, psychology or trial consulting, a solid base is necessary. This course is an introduction into the theory and application of trial consulting techniques in the criminal and civil arena. This overview addresses the key elements in the trial consulting including and introduction into the psycho-legal perspective, the application of research methodologies utilized by trial consultants, and specific interdisciplinary topics within trial consulting. These specific topics include concepts like the theory of persuasion, jury selection, expert testimony, and neuropsychology.

CPSY 4340 Psychopathology, Evaluation & Treatment of the Adult Offender (3 Credits)
Psychological theories related to etiology, development and prediction of violent crime; types of intervention possible within in the criminal justice setting. Topic areas may include special offender populations (e.g. sexual offender, offenders with developmental disabilities or those classified as mentally retarded).

CPSY 4350 Sociocultural Issues in Forensic Psychology (3 Credits)
Explores the impact of identity dynamics, including privilege and oppression, in clinical forensic practice.

CPSY 4360 Personality Assessment: Self-Report (3 Credits)
Administration and interpretation of objective personality instruments and discussion of their utilization within a forensic setting; use of the MMPI-2 and MCMI.

CPSY 4370 Substance Abuse (3 Credits)
Substance use and abuse, with focus on symptom formation, classification, causes socio-cultural factors and treatment modalities; various theoretical approaches to the etiology and treatment of substance abuse; resultant psychological and physiological effects of various drugs.

CPSY 4380 Group Interventions (3 Credits)
Interpersonal dynamics of small groups and larger organizational settings; understanding of group processes (such as group formulations and development, group conflict, and group resistance); skills enabling positive group intervention.

CPSY 4400 Personality Assessment: Projective (3 Credits)
Students learn to administer and interpret the Thematic Apperception Test and Early Memories. These are construed as behavior samples under conditions where the occasioning environment is reproducible, so that the functional relationship between the behavior and the stimulus can be understood carefully. Students learn to write reports that integrate several sources of information to answer referral questions.

CPSY 4410 Criminal Evaluations (3 Credits)
Incidence and prevalence of criminal violence; risk assessment within the context of prediction, supervision and intervention in both a correctional and mental health setting. Special topics will include assessment of various legal competencies, the insanity of defense and assessment of dangerousness.

CPSY 4420 Research in Forensic Psychology: Independent Study (1 Credit)

CPSY 4430 Career Counseling (3 Credits)
This course is designed to teach the theoretical framework of career counseling, and introduce the basic counseling tools used in the career counseling process. The course presents major theories of career development, introduce sources of occupational information, and introduce principles of assessment in career counseling. The impact of diversity and difference on career development and choices, as well as the career counseling process, is also explored. Topics include: the role of interests, skills, values and personality in the career development process; social, cultural and family influences on the career development process; and career development across the lifespan.

CPSY 4500 International Disaster Psychology: Foundations (3 Credits)
This is the first course in a three course sequence designed to provide the entering M.A. student with a fluent understanding of the area of International Disaster Psychology. The course will cover the evolution of IDP from its beginnings to its present status. It will review the different innovations in the area. Potential subject areas include the treatment of refugees, torture victims, child soldiers, internally displaced persons and complex Post Traumatic Stress Disorder.
CPSY 4501 Psychotherapeutic Models of Intervention (3 Credits)
Major psychological models of intervention are the focus of this course. The major theoretical models of personality development, psychopathology and theories of intervention are explored including psychodynamic, family systems, behaviorism, cognitive-behavioral approaches and others.

CPSY 4502 Psychotherapy with Children and Families (3 Credits)
This course provides an understanding of various psychotherapeutic approaches to children and families. The perspectives and techniques of play therapy, behavioral interventions, cognitive-behavioral therapy and integrative work with parents and families are explored.

CPSY 4503 Clinical Interviewing (3 Credits)
Theoretical and practical issues related to clinical interviewing in international and national disaster settings.

CPSY 4505 Cross Cultural Analysis (3 Credits)
The first course in a two part series designed to provide students with an understanding of cross cultural analysis. The course will provide an understanding of diverse cultures. Students will review historical literature in the area of cross cultural understanding. Students will also be taught methodologies for conceptualizing and understanding diverse cultures and cross cultural practices in psychology.

CPSY 4509 Global Mental Health Systems (3 Credits)
This course will focus on the dynamics of mental health systems in developing countries.

CPSY 4510 Preparation for International Internships: Intercultural Competence (3 Credits)
This is the second course in the three part introductory sequence. Students will continue to learn about the field of IDP and future trends for the field. The course will address specific subject areas within the field in order to provide students with the working knowledge needed to continue to pursue advanced training in the area. Potential subject areas will include treatment of refugees, torture victims and working in post conflict areas across the globe.

CPSY 4511 Humanitarian and International Refugee Law (3 Credits)
This course surveys the central rules, complexities and debates of international refugee law, which is both a specialized field of its own and also an intersection of human rights law, migration law, and humanitarian policy. We focus extensively on how courts and the United Nations have attempted to interpret the various refugee definitions found in human rights treaties, and introduce rules of international law governing how refugees should be treated. We also examine the obstacles refugees face today in enjoying their rights.

CPSY 4512 Disaster Mental Health (3 Credits)
This course will explore disaster response systems and their mental health components.

CPSY 4513 International Disaster Psychology Case Conference (2 Credits)
This class meets to discuss case theory, formulation and psychotherapy practice with persons affected by disaster and/or trauma.

CPSY 4515 Ethics (3 Credits)
The course is designed to educate students about the ethical guidelines in psychology applicable to the field of IDP. Students will learn the APA Ethics Code as well as other more specialized ethics guidelines applicable to the field of IDP. Students will be expected to identify, address and resolve potential ethical conflicts. Potential future trends in the development of ethics in the area of IDP will be addressed.

CPSY 4530 Program Evaluation (3 Credits)
Theory and techniques for developing management information and assessment systems for human service programs. Organization evaluation of international organizations will be discussed. Psychosocial interventions will be highlighted.

CPSY 4545 Lifespan Development and the Cultural Context (3 Credits)

CPSY 4550 Seminar: Therapeutic Interventions (3 Credits)
Small group seminar is a small group class designed to provide students a discussion forum to share and integrate their experiences in the IDP Master’s Program. Students are expected to address and share their field placement experiences with other students in their seminar. The seminar will also provide instruction on the implementation of theory in IDP to practice in multiple settings. Faculty will provide supervision for the students’ field placements.

CPSY 4555 Trauma & Child Development (3 Credits)
The course reviews the literature regarding childhood trauma and its implications for child and adult development. Models for the conceptualization of trauma and for treatment of childhood trauma are discussed. Cross-cultural theories of childhood development and trauma are emphasized.

CPSY 4556 Trauma Interventions from Cross-cultural Perspectives (3 Credits)
This course, taught by a different visiting professor each year, will take an in-depth look at trauma and the development of mental health systems and interventions internationally.

CPSY 4557 Global Public Health (3 Credits)
This course will provide an overview to the many issues concerning international public health today. Topics include basic epidemiology, malaria, tuberculosis, HIV/AIDS, diarrheal diseases, injury prevention, and environmental health. Specific attention will be given to examining the intersection between disease prevention and disaster mitigation.

CPSY 4558 Practical Apps Clinical Theory (1 Credit)
This course enables first year Master of Arts in International Disaster Psychology (MAIDP) students to explore the application of coursework in clinical psychology to practice in the field. Articles and case examples that apply ethics, developmental theory, psychotherapeutic models, cross cultural analysis and group interventions are discussed.
CPSY 4560 Humanitarian Law of Armed Conf (3,5 Credits)
This course is a theoretical and practical introduction to international humanitarian law (IHL). IHL is known by many other names such as "humanitarian law," "law of conflict," and "laws of war." All these terms refer to the rules regarding the treatment of civilians and non-combatants. These "rules" are especially important to know if you eventually work for an IO or NGO that finds itself in areas of armed conflict. Cross listed with INTS 4935.

CPSY 4562 Public Policy and Advocacy (2 Credits)
This course focuses on mental health policy and advocacy in the United States and in countries around the world. Students will learn about the World Health Organization policies on mental health and substance abuse and issues of mental-health stigma globally.

CPSY 4563 Family Therapy (3 Credits)
This course examines various approaches to family systems, including an overview of systems theory, plus ideas that have been labelled structural, strategic, and Bowenian. Goffman’s performance theory will also be emphasized, especially as it applies to clinical work. Students will practice rethinking interpersonal conflicts, and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

CPSY 4564 Advanced Spanish Language for Clinical Practice (2 Credits)
The purpose of this course is to help students with intermediate to advanced competency in Spanish to develop their clinical linguistic skills in order to better meet the mental health needs of the Latinx population in the United States, and, in the case of those doing international work, in Latin America. Students will be required to take a Spanish proficiency exam, prior to taking the course. The course will focus on developing Spanish abilities in the following areas: 1) building rapport and demonstrating basic helping skills, 2) explaining the purpose and process of therapy/evaluation, 3) conducting diagnostic interviews and intakes, 4) providing psychoeducation about different diagnoses and mental health problems, 5) conducting crisis assessments, and 6) providing skills-based treatments.

CPSY 4565 Group Dynamics of Organizations (3 Credits)
A comprehensive review of the literature regarding the understanding of systems and organizational structure and dynamics. Methods of assessment and interventions in organizational structure will be presented. Cross-cultural implications will also be addressed.

CPSY 4566 From Triage to Justpeace (3 Credits)
This course examines the inter-disciplinary continuum of integrated work that responds initially to natural and human-made disaster, but then leads to coordinated relief and development projects, and eventually seeks longer-term justpeace. Students learn how normative "regimes" or changed behavior are built and sustained by societal, state, and global actors. Students apply critical interview skills among professionals of diverse disciplines, and in particular, meet the range of development organizations headquartered in Colorado.

CPSY 4567 Field Placement Language Lab: Linguistic Building Blocks for Cultural Humility (1 Credit)
The purpose of this course is to provide IDP students who are preparing for their summer placement with the basic building blocks of the language they will be working in. It is not expected that students would be able to develop proficiency in the language, but rather through directed study, would develop the ability to greet individuals, follow behavioral norms, ask questions, and show cultural humility through a respect for the linguistic foundations of their host country. Students are provided with guidance in setting language development goals, finding learning materials, connecting with a native speaker in the community, and managing their learning process.

CPSY 4569 Integrative Psychotherapy with Children, Adolescents and Parents in Crisis (2 Credits)

CPSY 4570 Crises Intervention (3 Credits)
This course will deal with the clinical approaches to handling psycho-social crises.

CPSY 4580 Psychodynamic Theory (3 Credits)
Traditional and modern theories of psychodynamic concepts will be presented. Students are instructed on the use of such theories as a tool to structure interventions in their field work.

CPSY 4585 Family Systems (3 Credits)
A comprehensive review of family therapy concepts and treatment theories. A review of the applicable literature of family therapy is provided with an emphasis on cross-cultural models and interventions.

CPSY 4590 Psychology of Loss and Grief (3 Credits)
A review of the theory of loss and grief. The course reviews cultural understandings of loss and grief as seen following disaster and conflict. Treatment modalities of loss and grief are also presented.

CPSY 4591 Supervision Group - IDP (1 Credit)
This class is an opportunity for students in field-placements to receive additional supervision for their field-placement work. Students present and receive supervisory consultation about their work in these settings.

CPSY 4595 International Disaster Psychology Internship (6 Credits)
Students will spend one quarter in various international locations working in full time internships with international nonprofit organizations applying the principles and knowledge obtained during their study in the IDP program. Students will work under faculty and professional supervision.
CPSY 4600 Community Psychology in an International Setting: South Africa (5 Credits)
Community Psychology in an International Setting: South Africa combines pre-departure academic study at the University of Denver (DU) with service learning field placements in the Republic of South Africa (RSA). The course requires attendance at four classroom sessions prior to departure, full participation in a field placement while in RSA, and a re-entry meeting upon our return. Overall, the fundamental focus will be on community psychology in RSA - salient issues, challenges, resources, and success in post-Apartheid South Africa. Community psychology both shapes and reflects change. Students will learn about how various historical and current policies in RSA have shaped (and disenfranchised) various communities throughout the country. Field placements will prioritize community psychology issues inherent in the organizations, people, and settings of historically disadvantaged black communities in South Africa. Secondly, academic topics will include the history of RSA (emphasizing pre- and post-Apartheid time periods), current challenges in RSA (ethnicity, immigration, HIV/AIDS, increased crime rate), and cultural aspects of RSA. Pre-departure classes will also focus on the pragmatics of the trip, team-building, and exploring the goals of international service learning.

CPSY 4601 Psychology and Race in an International Setting: South Africa (5 Credits)
Psychology and Race in an International Setting: South Africa combines pre-departure academic study at the University of Denver (DU) with service learning field placements in the Republic of South Africa (RSA). The course requires attendance at four classroom sessions prior to departure, full participation in a field placement while in RSA, and a re-entry meeting upon our return. Overall, the fundamental focus will be on race and psychology in RSA – salient issues, challenges, resources, and successes in post-Apartheid South Africa. Race both shapes and reflects change. Students will learn about how various racially-based historical and current policies in RSA have shaped (and disenfranchised) various communities throughout the country. Field placements will prioritize community psychology issues inherent in the organizations, people, and settings of historically disadvantaged black communities in South Africa. Secondly, academic topics will include the history of RSA (emphasizing pre- and post-Apartheid time periods), current challenges in RSA (ethnicity, immigration, HIV/AIDS, increased crime rate), and cultural aspects of RSA. Pre-departure classes will also focus on the pragmatics of the trip, team-building, and exploring the goals of international service learning.

CPSY 4605 Psychotherapy Interventions (3 Credits)
This course will survey different theoretical models of psychotherapy with an emphasis on specific intervention approaches.

CPSY 4606 Gender-based Violence (3 Credits)
Gender-based Violence will cover issues as they relate cross-culturally. Special attention will be directed towards descriptions of programs approaching these issues and the challenges of designing and implementing such programs in various cultural environments.

CPSY 4610 Exercise Physiology (2 Credits)
This course offers an advanced study of selected areas in physiology of sport and exercise. The applied perspective emphasizes understanding the principles in designing effective conditioning programs for performance, fitness, and health. Empirically valid principles of training for muscular fitness (e.g., strength, power, speed) and energy fitness (i.e., aerobic and anaerobic) are explored. Additionally, environmental influences (e.g., altitude), lifestyle choices (e.g., nutrition), and selected developmental considerations (e.g., as related to gender differences) are discussed. Applications to sport and performance psychology consulting in sport, performing arts, and high-risk professions complement the course content.

CPSY 4615 The Elite Athlete Brain (3 Credits)
The primary goal of this course is to provide students with an understanding of the expert’s brain from sport and performance literature. The course will review landmark and recent publications examining expert-novice contrasts, and those of athlete-non athlete comparisons. Students will review literature on training interventions to accelerate the development of expertise and learn to evaluate the validity of scientific claims of related consumer products. Students will gain a basic understanding of where of state in science in understanding sport related concussions, including diagnostic tools, recovery, and prevention.

CPSY 4620 Kinesiology (2 Credits)
This course is an in-depth exploration of selected areas of kinesiology as a discipline and a profession focusing on human movement. Based on interdisciplinary theoretical and empirical perspectives, the explored areas include: (a) functional anatomy as related to adaptations to training; (b) biomechanics; (c) neurophysiological processes involved in motor learning and motor control; and (d) other relevant biophysical processes (as related to talent selection and development, physiological adaptations to training, etc.). In addition, this course surveys career opportunities in academic study and clinical practice in various areas of sport, fitness, exercise, and physical education.

CPSY 4630 Adept, Professional, Supervisor and Leader (2 Credits)
This course addresses the multiple roles of sport and performance psychology (SPP) consultants from a developmental perspective (i.e., education and training, early years in the profession, and full professional maturity). In-depth examinations of the consultant as an expert, person, performer, and self-regulator are grounded in the SPP literature and theoretical accomplishments in related fields (e.g., counseling psychology). Additionally, the acquisition of fundamental knowledge, skills, and abilities involved in supervision (mentorship) and further socialization to the field of SPP with an emphasis on positive leadership for local, national, and global progress complement the course content.

CPSY 4635 Athletic and Performance Nutrition (2 Credits)
Graduate level course educating student-coaches and administrators and performance specialists to use research and best practices in performance nutrition to achieve athletic and performance enhancement, and general wellbeing. The course will help facilitate students’ ability to influence sporting and general environments to use nutrition as a means to enhance performance, with a secondary examination of preparing students to understand and manage individual differences, needs, and motivations for food choices. Course content will include modeling nutrition, encouraging a sense of family at team meals, leveraging media to internalize nutrition behaviors, and impacting availability of positive nutrition choices.
CPSY 4650 Sport Psychology (3 Credits)
A comprehensive view of the field of sport psychology will be covered. Through participation in this course, students will develop a better understanding of the field of sport and exercise psychology and develop skills that will assist in enhancing their career opportunities. Varied psychology topics (e.g., individual differences/personality, motivational orientations and strategies, applied psychological skills, social influence and group dynamics) with an emphasis on understanding major theories and research and applying those theories and research findings to diverse sport, exercise, and performance settings. Additionally, the psychological effect that participation in a sport or a physical activity has on a performer including anxiety reduction, aggressive behavior, and personality development will be explored.

CPSY 4652 Theoretical Aspects of Sport and Performance Psychology (3 Credits)
This course is an in-depth exploration of selected aspects of the theories of sport psychology along with applications of these theories to other performance domains. An advanced understanding of the field of sport and performance psychology is pursued in relation to psychosocial aspects involved in both the preparation and performance processes among adults, youth, and children who represent all skill levels. The explored areas include: (a) motivation, confidence, and anxiety in sport and performance, (b) selected topics in social psychology and psychobiology, (c) psychological skills training, and (d) special topics (e.g., personality, flow, injuries, burnout).

CPSY 4653 Sport in American Society (3 Credits)
This course examines the influence of the social context on sport. Attention is given to the influence of society on sport as an institution and the role of sport as an agent of social change. This course examines how sport affects the social world we live in. Topics explored include the intersection of sport and: gender, race/ethnicity/culture, socioeconomic class, media relations, violence, deviance, and sexuality.

CPSY 4654 Coaching & Leadership (3 Credits)
This course is a survey of the intersection of coaching, leadership, organizational behavior, organization dynamics, and change management. It examines the definitions, history, theories, and research in the sport and management leadership literature. Students will gain an understanding of how planning, motivation, team building, and leadership impact a team’s or organization’s effectiveness. Students are expected to learn and personally develop the analytical and leadership skills that affect individual and group performance.

CPSY 4655 Social Psychology of Sport (3 Credits)
This course will address the relationship between sport and cultural dynamics, sociological factors underlying competitive physical activity, and behavioral responses of sport participants and supporters to various socio-cultural motivations. This course will be a serious study of organized professional, amateur, and youth sports in North America. Emphasis will be placed on social forces that both impinge on and enhance athletic activities and organizations, and the influence sport has on society.

CPSY 4656 Psychology of Injury (3 Credits)
In this course, students will explore psychological theory, research, and practice in relation to the prevention, occurrence, and rehabilitation of sport injuries. Major topics will include: psychological risk factors for injury, psychological responses to injury, and psychological interventions to prevent sport injuries and enhance sport injury rehabilitation.

CPSY 4657 Motivational Interviewing (2 Credits)
This is an advanced course reviewing the theories and research findings related to motivational interviewing with the goal to apply them to performance (athletic, non-athletic) and exercise contexts. Topics include motivation for behavior change, transtheoretical model of behavior change, self-determination theory as applied to behavior modification, and the relationship between and the influences of emotion and motivation on counseling and sport and performance consultation. This course will place an emphasis on relating current leading theories and research evidence to consulting work. Equally in importance, there will be in-class hands-on activities (e.g., role playing), experiences (e.g., self-reflective tasks) and assignments (e.g., role playing tasks) that will add to the student competence in motivational interviewing.

CPSY 4660 Sport Psychology Interventions and Techniques (3 Credits)
Students will acquire knowledge and increase their comprehension of cognitive-behavioral intervention strategies (e.g., mental skills training) and how they can be applied to achieve optimal performance of athletes and others. The complex interaction between the sport psychology consultant and performer will be explored.

CPSY 4662 Foundation of Counseling Theories (3 Credits)
This course will review major contemporary counseling models, theories, procedures, and the helping relationship. Advanced study of techniques and research findings. Survey of principles underlying individual, family systems, and multicultural approaches to counseling.

CPSY 4663 Applied Motor Learning (2 Credits)
This course is an advanced examination of applied motor behavior theories and research. Emphasis is given to understanding of the processes involved in controlling skilled movement and the principles of skill acquisition to guide designing effective learning environments, practice schedules, and practice units. The examined areas include: (a) the field of study of motor control and learning; (b) performance and learning variables as impacting retention and transfer; (c) information processing model; (d) sensory and central contributions to motor control; (e) individual differences; and (g) instruction, demonstration, and feedback across different stages in motor learning.

CPSY 4664 Practicum in Sport and Performance Psychology III: Business Principles (3 Credits)
This is the third course in a year long, three-part sequence. This course serves the purpose of (a) providing an opportunity for students to learn about sport and performance psychology through observation and experiential opportunities; (b) providing an intimate forum for discussing the practice of sport and performance psychology; and (c) providing information on professional development and conduct. The course requires didactic and experiential activities. Business, consultation, and professional development issues in sport and performance psychology will be addressed. Prerequisite: CPSY 4673.
CPSY 4665 Beh Kinesiology & Physiology (3 Credits)
A study of human movement. Topics will include but are not limited to structural anatomy, biomechanics, and neurophysiology. The biomechanical etiology of various injuries will be studied.

CPSY 4666 Movement Principles for Performance (3 Credits)
This course is an exploration of selected areas of the exercise and sport sciences. The explored areas include: functional anatomy, biomechanics, and exercise physiology.

CPSY 4668 Psychology of Excellence (3 Credits)
The purpose of this course is to examine the theories, research, and intervention strategies related to the pursuit of excellence. This course explores the deliberate interventions necessary to support the development of excellence and expertise. Students will learn the nature of expertise development, the necessary steps to achieve excellence, and common roadblocks. The concept of excellence will be investigated in many contexts, such as sport and performance, intrapersonal, relationships, and life in general. Topics to be explored include: happiness, contentment, life satisfaction, values, character strengths, emotional intelligence, optimism, hope, flow, and resiliency.

CPSY 4669 Consulting Methods & Practices (3 Credits)
This course is an advanced exploration of theories, research findings, and skills related to the practice of consultation in performance settings. Specific topics include: (a) the consultant roles; (b) the major theoretical approaches to consultation (e.g., mental health, systemic); (c) the processes and stages of consultation (e.g., developing interpersonal relationships; design, implementation, and evaluation of service delivery); (d) ethical and multicultural issues; and (e) students' personal strengths and concerns in the role of a consultant (e.g., values interpersonal style, and consultant variables that impact the effectiveness of their role as an agent of behavior change).

CPSY 4670 Psych of Coaching & Leadership (3 Credits)
Examination of psychological components of coaching and talent development. Explores coaching development, coaching models, as well as strategies for dealing with athletes and different coaching contexts. Discussion of talent development theories including influence of genetic and environmental factors.

CPSY 4671 Theories of Performance Excellence (3 Credits)
This course is designed to familiarize students with theories of performance excellence developed by leading practitioners. Each week, students are exposed to a different practitioner’s approach, which often includes an opportunity to observe the practitioner’s style through video. Emphasis is placed on the role of theory in practice, theory-based conceptualizations utilizing a case study format, and comparing and contrasting the different theories.

CPSY 4672 Counseling Methods & Practices (3 Credits)
This course is an introduction to counseling microskills and techniques needed in helping relationships, with attention to building the therapeutic alliance. Emphasis placed on learning skills in small group format. Laboratory experience in demonstrating skills and the ability to form an effective counseling relationship is required. Pre-practicum experience to prepare students to work with clients.

CPSY 4673 Practicum in Sport and Performance Psychology 2 (3 Credits)
This is the second course in a year long, three-part sequence. This course serves the purpose of (a) providing an opportunity for students to learn about sport & performance psychology through observation and experiential opportunities; (b) providing an intimate forum for discussing the practice of sport and performance psychology; and (c) providing information on professional development and conduct. The course requires didactic and experiential activities. Psychological consultation, best practices, and professional development issues in sport and performance psychology will be addressed. Prerequisite: Practicum in Sport and Performance Psychology I.

CPSY 4674 Clinical Issues: Interviewing and Diagnosis (3 Credits)
This course examines adult psychopathology as classified in the DSM. Special emphasis will be placed on the intersection of performance with more traditional psychopathology. Students learn about etiology, symptomology, epidemiology, and treatment issues. Possible causes and contributory factors are examined, as well as theoretical and multicultural considerations. Prerequisites: Theoretical Aspects of SPP, Applied SPP, and Ethical Issues in SPP.

CPSY 4676 Assessment and Measurement (3 Credits)
This course covers the selection, use, and proper interpretation of common sport and performance psychology assessments. Basic principles of educational and psychological measurement, including test construction, validity, and reliability are addressed. The assessments taught include those used for individual assessment, individual selection, and organizational assessment (360 degree feedback, surveys, etc.). Prerequisites: CPSY 4652, CPSY 4690, and CPSY 4682.

CPSY 4677 Motivation, Emotion & Learning (3 Credits)
This is an in-depth course reviewing the theories and research related to motivation, emotion, and learning in performance contexts. Topics include the relationships between motivation, emotion, and learning; and the influences of emotion and motivation on counseling and consultation. The course provides basic information about the human cognitive system. Students are taught the basic principles of learning, with a focus on the principles of learning which are most applicable in sport and performance settings. This course places an emphasis on relating current research to practice.

CPSY 4678 Scholarly Writing Methods and Practices (1-3 Credits)
The primary goal of this course is to familiarize students with the methods and practices of scholarly writing. The course focuses on writing a scholarly review of literature, methodology, results, and conclusions according to APA style. Within the course, students are also asked to review one another's work while developing editing skills and methodological complexity.
CPSY 4679 Field Placement Practicum in Sport and Performance Psychology (3 Credits)
Supervised practice sport & performance psychology in an approved sport or performance setting under licensed practitioners.

CPSY 4680 Sport and Performance Psychology Practicum (3 Credits)
This course will familiarize students with professional issues relevant to the practice of sport and performance psychology. Students will be presenting and analyzing their current applied experiences as coaches and leaders in sport and performance settings in the community. This is a participation-intensive course and the students will receive feedback and suggestions from both the instructor and peers in a group supervision format. Importantly, the ongoing feedback and readings will provide an opportunity for students to understand and apply theories and practice systems of behavior change in sport and performance psychology in the context of their own clients/cases. Students will learn the roles and responsibilities inherent in professional and ethical consultation, with a special emphasis given to the dilemmas of serving as an embedded consultant.

CPSY 4681 Multicultural Issues (3 Credits)
This course covers the research and theories of counseling the culturally different client. Students are expected to develop multicultural skills, including culturally-based conceptualization, assessment, and selection of culturally appropriate intervention strategies. This course will examine these issues in general, with a special emphasis on those in sport and performance cultures. This is both an experimental and seminar-based course, aimed at developing student's personal awareness, knowledge, and skills.

CPSY 4682 Ethical and Legal Issues (3 Credits)
This course introduces the students to the ethical principles, codes, and standards related to the profession of sport and performance psychology. This includes an overview of the regulation of the practice of psychology, the relationships between ethical codes and legal statutes, and the development of a personal model for ethical decision-making.

CPSY 4683 Group Interventions (3 Credits)
This course is a survey of group counseling methods and techniques from a theoretical and applied perspective. The course will include practical application of group counseling interventions. Prerequisites: demonstrated knowledge of ethical principles and departmental consent.

CPSY 4684 Team and Organizational Dynamics (3 Credits)
This course examines the principles, theories, and research of human functioning in performance related teams and organizations. It explores the social and psychological factors influencing behavior in organizations, along with individual differences, dyadic relations and small group behavior. Students learn about the dynamics of team and organizational diagnosis, feedback and learning, intervention, and planned change.

CPSY 4685 Human Growth & Development (3 Credits)
This course is a comprehensive analysis of theories and research relating to human psychological development and learning across the lifespan. It explores the cognitive, affective, academic, physiological, moral, and social/cultural/racial domains. An emphasis is placed on a) the theoretical models underlying character and moral development, and b) adolescent and college student development theories.

CPSY 4686 Practicum in Sport and Performance Psychology: Professional Practice (3 Credits)
This course provides an examination of the critical components of successful and ethical professional practice and career building in sport and performance psychology in conjunction with intensive provision of sport and performance psychology services. The entire body of sport and performance psychology theoretical and applied knowledge as well as the skills that the students have acquired will be utilized. Additionally, rigorous self-reflective activities and ethical decision-making will increase the student professional and personal growth as directly related to effectiveness in the sport and performance psychology practice. Emphasis will be placed on diversifying and integrating theoretical knowledge and applied strategies and skills while simultaneously engaging in supervised independent work in real life sport and performance settings.

CPSY 4687 Psychology of Injury (3 Credits)
This course examines the psychological factors involved in injury, rehabilitation, and return to performance. The effects upon social, personal, and performance adjustment are addressed. The course covers how relevant theory and research can be used to inform practical applications to help the injured performer's rehabilitation and return. It presents the major medical aspects of injury and the rehabilitation process.

CPSY 4688 Seminar in Sport and Performance Psychology (3 Credits)
Advanced seminars offered by sport and performance psychology faculty on topics relevant to the practice and science of sport and performance psychology area.

CPSY 4689 Psychophysiology and Biofeedback (2 Credits)
This course explores the underlying mechanisms and psychophysical determinants of behavior in sport and performance settings. Students learn the use of biofeedback in achieving voluntary self-regulation and control of stress related behaviors.

CPSY 4690 Sport and Performance Psychology Interventions (3 Credits)
This course is designed to familiarize students with the application of sport and performance psychology interventions. Students experience the building of a sport and performance psychology program. This program includes the cardinal skills of relaxation, concentration, imagery, self-talk, and mental routine; followed by broader topics such as goal setting, motivation, confidence, cohesion, engagement, and mastery. The instructor briefly reviews relevant theory and research followed by demonstrations of techniques and strategies, after which students learn by doing. Specific attention is given to blending the science of peak performance with the art of applying science.
CPSY 4691 Practice Development in Sport and Performance Psychology (3 Credits)
The primary goal is to acquaint students with the skills needed to develop and implement a private practice in the profession of sport or performance psychology. The course takes students through the process of business development by using the traditional business plan model, from the necessary startup expenses to the executive summary. Throughout the course students learn the What, When, Where, and How of starting their own consulting practice, while learning the basic components of branding, marketing, and operations. Prerequisite: Must be enrolled in the MASPP program or instructor approval.

CPSY 4692 Entrepreneurship in Sport and Performance Psychology (2 Credits)
The primary goal of this course is to provide students with an overview of skills necessary to succeed in the entrepreneurial profession of sport and performance psychology. The course is flexibly designed to accommodate the students’ desired career paths. Topics covered may include: sales and marketing, developing a practice, job search and interviewing skills, and understanding the job market.

CPSY 4700 Organization and Administration of Sport (4 Credits)
Graduate level course to educate students on the organization and administration of sport and sport coaching. Course content includes emergency action planning, facility management, human resource management, evaluation and development, legal responsibilities, record keeping, finance, and public relations. Students will learn how to lead organizations and coaching staffs to develop fair and safe participation.

CPSY 4705 Sociocultural Aspects of Sport Coaching (4 Credits)
Graduate level course to educate students on the sociocultural and social-psychological aspects of sport coaching and athletic performance. Students will understand how to analyze and apply social, sociological, and social-psychological theory to sport coaching and athletic performance. Consideration will be given to developing a critical understanding of sport coaches’ knowledge development, and how to implement multiple, effective and ethical strategies to enhance coach and athletic performance.

CPSY 4710 Motor Learning and Sport Pedagogy (4 Credits)
Graduate level course to educate students on the science and practice of how athletes learn motor skills and how coaches can facilitate skill acquisition. Course content includes the scientific and theoretical frameworks of motor learning, with a secondary examination of motor control and development. Applied course content will focus on how coaches can use learning strategies such as demonstration, instruction, feedback, and practice planning to improve athletic performance.

CPSY 4712 Tactical Strength and Conditioning Coaching (2 Credits)
The purpose of this course is to educate students on the scientific, theoretical, and practical aspects of tactical strength and conditioning. Students will learn how to design tactical strength and conditioning programs to enhance performance and reduce and lessen the severity of injury. This course is also intended to help students begin to prepare to pass the National Strength and Conditioning Association’s (NSCA) Tactical Strength and Conditioning Facilitator (TSAC-F) certification, and related professional development opportunities.

CPSY 4715 Strength, Conditioning, and Injury Prevention Program Design (4 Credits)
Graduate level course to educate students on the scientific, theoretical, and practical foundations of strength, conditioning, and injury prevention. Students will learn how to design strength and conditioning programs to enhance athletic performance and reduce and lessen the severity of injury. This course is also intended to help students become familiar with the National Strength and Conditioning Association’s (NSCA) Certified Strength and Conditioning Specialist (CSCS) exam, and position statements from several national governing bodies on athlete safety and physical performance.

CPSY 4720 Psychology of Athletic Performance (4 Credits)
Graduate level course to educate students on the psychological aspects of athletic performance, and secondarily coach performance. Course content includes the theoretical and practical application of established mental skills (e.g., motivation, efficacy, arousal, anxiety, focus, self-awareness, goal-setting, imagery, team cohesion). Concepts will be applied to the evaluation and creation of practice and training plans to enhance athletic performance.

CPSY 4722 Social-Psychology of the Body, Health, and Performance (2 Credits)
The purpose of this course is to understand the ways in which people in society understand the body in sport, physical activity and health and wellness. Or in more simple terms, answer the question: why society thinks about the sporting, healthy and physically active body in the ways that it does? In order to acquire this understanding we will explore the complex and powerful historical, social and cultural forces that have shaped the assumptions underpinning the sporting, physically active and healthy body. No prerequisites exist for this course.

CPSY 4723 Applied Sports Technology for Coaches (2 Credits)
This elective graduate level course is designed to educate students on the uses, effects, and ethics of technologies on athletic performance. Students will learn about the breadth of research and uses of technologies in attempts to enhance athletic performance. Course content includes surveying the sports technology field, technology ethics, positive and negative effects of technology, evaluating knowledge claims (i.e., reliability, validity, measurement issues), and common uses of technology to enhance performance (e.g., team communication, athlete monitoring and tracking, instruction and feedback, apps).

CPSY 4725 Philosophy and Ethics of Sport Coaching (4 Credits)
Graduate level course to educate students on the philosophical, social, and ethical foundations of sport and sport coaching. Course content includes the history and formation of sport and sport coaching, social issues (e.g., race, class, gender, inclusivity, etc.), how sport is used for (un)desirable ends and the public good, the coach’s role in demonstrating and encouraging ethical behavior, and promoting a healthy and safe environment for numerous stakeholders. Leadership theory (e.g., transformational and servant leadership, emotional intelligence, athlete-centered coaching) is also touched upon and discussed in relation to the ethics and norms of sport, and the relationship between educational institutions and sport/athletics. There are no prerequisites for this course.
CPSY 4730 Biomechanics of Athletic Performance (4 Credits)
Graduate level course to educate students on the biomechanics of athletic performance. Students will learn quantitative and qualitative methods of biomechanics to analyze and enhance athletic performance and prevent injury. Course content includes knowledge of the musculoskeletal system, force development and how additional factors such as body composition and joint structures influence athletic performance and injuries.

CPSY 4735 Understanding Sport Research (4 Credits)
Graduate level course to educate students on understanding and doing sport research. The primary focus of this course is on facilitating student's understanding of research methods commonly used in sport research. Secondarily, the course will examine how research is actually done, including reviewing the literature and writing and referencing scholarly work. Course content will cover topics such as paradigms and philosophy of science, epistemology and the creation of knowledge, and numerous research designs, methodologies and methods. Content will also include understanding statistics and qualitative methods.

CPSY 4736 Practicum in Strength and Conditioning and Fitness Coaching (1 Credit)
The purpose of the Practicum in Strength, Conditioning, and Fitness Coaching course is to help students gain the knowledge, skills and attitudes to become a quality coach and a reflective practitioner through experiential learning. Students will be provided with a variety of strategies and methods to solve real-world strength, conditioning, and fitness coaching problems in real life settings. Students will draw upon other coursework, research, and practical insights to exercise professional judgement. Students must complete at least 50 hours of coaching throughout the quarter.

CPSY 4740 Practicum 1 in Sport Coaching (1 Credit)
Practicum 1 in Sport Coaching helps students to gain the knowledge, skills and attitudes to become a quality coach and reflective practitioner through experiential learning. Students will draw upon MASC course content and their coaching experiences to reflect upon the complexities of sport coaching to integrate their knowledge and skills to identify and solve problems. Students must complete at least 50 hours of coaching for every one hour of credit enrolled. This course provides basic to intermediate level content and prepares students for Practicum 2. Prerequisites: Passed background check, submitted current CPR/First Aid certificate at level in which student is coaching and valid for the full quarter while enrolled. Student must be enrolled in the MASC program.

CPSY 4745 Practicum 2 in Sport Coaching (1 Credit)
Practicum 2 in Sport Coaching helps students to gain an advanced understanding of the knowledge, skills and attitudes to become a quality coach and reflective practitioner through experiential learning. Students will draw upon MASC course content and their coaching experiences to reflect upon the complexities of coaching to solve vital problems. Students must complete at least 50 hours of coaching for every one hour of credit enrolled. Prerequisites--one earned credit of Practicum 1, passed background check, submitted current CPR/First Aid certificate at level in which student is coaching and valid for the full quarter while enrolled. Student must be enrolled in the MASC program.

CPSY 4750 Sport Coaching Capstone (1-4 Credits)
Capstone literally means "a finishing stone or a structure." Similarly, students will complete a project that demonstrates the student’s initiative and excellence. To help explore the student’s interest and refine a suitable topic, students are encouraged to discuss the capstone project with course instructors early and throughout their time in the MASC program. Students may build off a previous course activity or assignment, but the Capstone Project must reflect new and substantive work appropriate to the number of hours enrolled. While students have the autonomy to negotiate new project ideas, sample projects could include: thesis or original research, review of literature paper, presentation at conference, leading a service learning event, writing a book chapter, authoring a novel or other creative writing, or a webinar. Prerequisites: Students must have completed at least 16 credit hours towards the MASC degree and have completed or being enrolled concurrently in Understanding Sport Research.

CPSY 4801 Evidence-Informed Strength and Conditioning and Fitness Coaching 1 (1 Credit)
The purpose of this course is to expose students to the scientific literature in strength, conditioning, and fitness. Course content will cover historical, pioneering, and contemporary research trends in the field. Students will come to appreciate how scientific knowledge is created, disseminated, and influences human behavior and society. Research topics for this course focus on applied aspects of biology, genetics, physiology, and nutrition in relation to strength, conditioning, and fitness.

CPSY 4802 Evidence-Informed Strength and Conditioning and Fitness Coaching 2 (1 Credit)
The purpose of this course is to expose students to the scientific literature in strength, conditioning, and fitness. Course content will cover historical, pioneering, and contemporary research trends in the field. Students will come to appreciate how scientific knowledge is created, disseminated, and influences human behavior and society. Research topics for this course focus on applied aspects of biomechanics, anatomy, kinesiology, and motor development in relation to strength, conditioning, and fitness.

CPSY 4803 Evidence-Informed Strength and Conditioning and Fitness Coaching 3 (1 Credit)
The purpose of this course is to expose students to the scientific literature in strength, conditioning, and fitness. Course content will cover historical, pioneering, and contemporary research trends in the field. Students will come to appreciate how scientific knowledge is created, disseminated, and influences human behavior and society. Research topics for this course focus on applied aspects of the psychology of strength, conditioning, and fitness.

CPSY 4804 Evidence-Informed Strength and Conditioning and Fitness Coaching 4 (1 Credit)
The purpose of this course is to expose students to the scientific literature in strength, conditioning, and fitness. Course content will cover historical, pioneering, and contemporary research trends in the field. Students will come to appreciate how scientific knowledge is created, disseminated, and influences human behavior and society. Research topics for this course focus on applied sociocultural aspects of strength, conditioning, and fitness.
CPSY 4991 Independent Study (1-17 Credits)
CPSY 4992 Directed Study (1-10 Credits)
CPSY 4995 Independent Research (1-17 Credits)

CPSY 5000 Rad Behav/Func Contextl Models (3 Credits)
CPSY 4000 is designed to provide a historical, philosophical and conceptual background to better understand and appreciate Behaviorist views of "being-in-the world". The course lays the foundation for the sophisticated application of a science of behavior-its theories and methods-to the assessment of clinical problems and the art of doing psychotherapy. The course will invite a little discomfort, disturb some preconceptions, and compel students to address some difficult questions and thorny issues. Among the goals of this course are to see students commit to being more than a psychologist technician, to encourage them to develop a guiding philosophical core in their practice as a psychologist; to assist them in clarifying or deepening whatever philosophical worldview they may hold; and that they will have achieved an informed understanding of radical behaviorism/functional contextualism - whether or not they choose to further pursue these models.

CPSY 5010 Cognitive & Affective Models (3 Credits)
This is the first in a three part sequence that includes Psychophysiology and Clinical Neuropsychology and is designed to introduce students to the current research in cognitive neuroscience and consciousness. This first course focuses on sensation/perception, learning, memory, emotion, language and other higher cognitive functions. Lectures will emphasize current technologies and historical inquiry and the unique contributions made by psychosocial and cultural variables.

CPSY 5020 Psychoanalytic Models (3 Credits)
Psychoanalytic theories, including Freud’s topographic and structural theories, ego psychology, object relations theory and modern relational theories, including self-psychology and intersubjectivity.

CPSY 5030 Systems Models (3 Credits)
Basic concepts of general systems theory and their applications in psychology, focusing on family systems, groups and organizations.

CPSY 5040 History and Systems in Psych (2 Credits)
Basic psychological concepts surveyed from a historical point of view, tracing development of psychological bases of professional practice.

CPSY 5050 Advanced Statistics (3 Credits)

CPSY 5051 Statistics I Lab (1 Credit)

CPSY 5070 Research Methods (2 Credits)
Sequential course that cover fundamentals of structuring, analyzing and critiquing research reports and proposals; strategies to guide and facilitate the writing process; attitude and thinking skills necessary for function as a local clinical scientist; research design tools, methods and strategies for answering different types of questions.

CPSY 5071 Research Methods II (2 Credits)
Sequential courses that cover fundamentals of structuring, analyzing and critiquing research reports and proposals; strategies to guide and facilitate the writing process; attitudinal and thinking skills necessary for function as a local clinical scientists; research design tools, methods and strategies for answering different types of questions.

CPSY 5073 Qualitative Research Methods (2 Credits)
Qualitative research involves obtaining in-depth information about the behaviors and beliefs of people in naturally occurring social settings. This course introduces students to the philosophical underpinnings, history, and key elements of five qualitative approaches: narrative research, phenomenology, grounded theory, ethnography, and case study. We compare theoretical frameworks and methodologies, experience the use of data, and discuss writing strategies. In addition, we read articles that are exemplars or each approach.

CPSY 5075 Program Evaluation Technique (3 Credits)
Theory and techniques for developing management information and assessment systems for human service programs.

CPSY 5080 Diagnosis and Classification (2 Credits)
An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

CPSY 5108 Introduction to Acceptance and Commitment Therapy (ACT) (2 Credits)
Acceptance and Commitment Therapy (ACT) belongs to the movement in clinical psychological science that sees acceptance and openness to experience as an essential addition to change-focused psychotherapeutic treatment strategies. Although consciously based on behavior-analytic thinking, ACT is a hybrid in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist Existential though. The paradox upon which ACT is founded is that only radical acceptance of what cannot be changed empowers people to recognize and change the things that they can. The ACT approach is about embracing necessary suffering in order to make more committed, life-affirming choices and live in accordance with personal values. ACT emphasizes that in a very deep sense all human beings are in the same boat. The technical and theoretical bases of ACT are through normal didactics, but the heart and art of the approach occurs through experiential exercises, group process, and from observation and modeling. Prerequisite: CPSY 5000.
CPSY 5120 Introduction to Animal-Assisted Interventions (3 Credits)
This course serves as an introduction to animal-assisted interventions (AAI) as they are commonly used by mental health care professionals. It is designed to provide students with an overview of the foundations of AAI, the variety of ways in which this modality is used, international perspectives on AAI, various perspectives on ethics and animal welfare, and researchers’ current understanding of the role of the human-animal bond in facilitating AAI treatment efficacy. General topics to be addressed include the characteristics of the species used in AAI, the basic principles of AAI, the use of AAI with a variety of populations, and animal abuse issues. A number of guest lecturers will share their knowledge and experiences with students throughout the quarter.

CPSY 5130 Issues in Measurement (3 Credits)
Validity, reliability and standardization issues in psychological testing; statistical properties of commonly used tests.

CPSY 5131 Issues in Measurement Lab (1 Credit)
Optional. Focused assistance with basic math skills; review and clarification of class topics.

CPSY 5170 Life Cycle: Inf to Mid Chlldhd (3 Credits)
Understanding normal development of children (0-12 years), integrating theory, research and a phenomenological perspective.

CPSY 5180 Life Cycle: Adolescent - Adult (2 Credits)

CPSY 5200 Life Cycle: Late Adulthood (3 Credits)
Theories of aging; social, psychological and biological changes; assessment and intervention methods, emphasizing issues impacting older adults. (65 years and above).

CPSY 5230 Group Dynamics & Interventions (3 Credits)
Provides psychologists in training with multiple learning experiences highlighting that groups and organizations are intensely psychological environments in which most psychologists function professionally and personally and have the potential to impact positively.

CPSY 5231 Social Psychology (3 Credits)

CPSY 5250 Existential and Humanistic Theory and Therapy (2 Credits)
Historical roots and basic assumption of existential and humanistic views. Students encouraged to integrate materials with their personal values and assumptions about human nature and their interaction with clients.

CPSY 5270 Physiological Psychology I (3 Credits)
Terminology and principles of and research in physiological psychology. Where possible, application made to content and practice of clinical psychology.

CPSY 5271 Physiological Lab I (1 Credit)
Optional. Assistance with material covered in CPSY 4170.

CPSY 5273 Physiological Lab II (1 Credit)

CPSY 5290 Clinical Neuropsychology (3 Credits)
Historical, conceptual and clinical foundation for, as well as current developments related to, the field of clinical neuropsychology. Includes exposure to: developmental neuropsychology and neuroanatomy; higher cognitive functions; neuropsychologically informed interviews and standard neuropsychological test batteries; neuropsychological profiles associated with a variety of acquired disorders (both classical neuropsychological and psychological in nature); ethnic, cultural, age and gender considerations; and current status of a variety of professional/ethical issues. Prerequisite: CPSY 5270.

CPSY 5310 Ethical Issues in Psychology (3 Credits)
In-depth consideration of ethical standards applicable to the science and practice of psychology; pertinent laws and legal standards governing the practice of psychology; areas in which legal and ethical standards suggests contradictory actions on the part of the clinical psychologist.

CPSY 5320 Professional Issues in Psych (2 Credits)
Issues, concerns and controversies impacting current practice of professional psychology at the state and national levels; preparation for future alternative systems of service delivery. Emphasis is on professional life after the PsyD. Required for first year students.

CPSY 5340 Social Psychology of Racism and Oppression (3 Credits)
Theoretical and experimental nature of racism and oppression, primarily in the United States, definition of such terms as stereotypes, prejudice, racism, white supremacy and privilege; exploration of various theories regarding these terms and how they manifest themselves historically and contemporarily.

CPSY 5360 Racial/Ethnic Identity Dvlpmnt (3 Credits)
This course will explicate the concept of ethnic identification, and the process by which this central aspect of a person’s overall identity develops. Accordingly, the two central questions that this course will address are: a. who are they? and b. how did they get that way? These questions will be examined utilizing a Descriptive Psychology perspective.

CPSY 5370 Lesbian, Gay, Bisexual and Transgender Issues (3 Credits)
Various aspects of gay, lesbian life explored cross-culturally; nature of homosexuality, including the controversy of heredity vs. choice. Issues of oppression and discrimination will also be explored. The role of psychology and the politics of homosexuality will be studied. Students will also be asked to explore their personal awareness regarding homosexuality in their everyday lives and in a therapeutic context.
CPSY 5380 Culturally Competent Psychotx (3 Credits)
As the final class in the year-long multicultural course sequence, this class will integrate the theoretical content of the preceding classes and focus on their psychotherapeutic implications. This course will address psychotherapy with the following groups - African Americans, Asian Americans, Latinos, Native Americans, and the GLBT community.

CPSY 5385 First-Year Seminar (2 Credits)
This is a clinical and didactic seminar on beginning psychotherapy. The focus will be on case formulation and developing a therapeutic relationship with the client.

CPSY 5386 Assessment and Treatment of Children and Adolescents Seminar (2 Credits)
This seminar involves the evaluation and treatment of children and adolescents (i.e., ages 6 through 18) in the Professional Psychology Center. Supervision is provided from an integrative and relationship-based perspective, and topics relevant child and adolescent assessment and treatment are discussed.

CPSY 5388 Pro Sem: Psychological Assessmt (2 Credits)
Assessment is a central feature of the work of the clinical psychologist. This seminar is an opportunity to hone your knowledge and skills in personality and cognitive assessment. It will involve some lecture, but mainly focus on supervision of assessment cases obtained through the Professional Psychology Clinic. You will be expected to complete four assessments during the year - you certainly can do more if you wish. You also will have the opportunity to present a case you have completed to the seminar during the Spring quarter.

CPSY 5389 Pro Sem: Behavior Therapy (2 Credits)
This advanced professional seminar draws upon pragmatic philosophy and contextualistic worldview as it informs and guides contemporary behavior analytic theory and practice. Students gain experiences using functional analysis as a method for describing and integrating clinical observations and learn to implement a variety of evidence-based, acceptance-inspired interventions designed to facilitate psychological flexibility and values-congruent living in clients from diverse backgrounds. Therapeutic work is conducted in an atmosphere of care, respect, compassion, and commitment, and challenges the client (and therapist) to be more open, aware, vulnerable, and present in their lives.

CPSY 5390 Pro Sem: Forensic Issues (2 Credits)
This seminar will introduce students to the various areas and ways in which psychology interacts with the legal and criminal justice systems. Students will develop their capacity to perform evaluations relating to psychological questions, dilemmas, and disputes that are most frequently requested of forensic psychologists. Focus of the seminar will be on assisting students in clarifying their role as an evaluator and consultant to attorneys, judges, and criminal justice personnel; exploring the ethical responsibilities therein; learning to compose reports for a legal rather than a clinical audience; and preparing to testify as an expert witness. Students will formulate and deliver case presentations, participate in a "mock" testimony experience, and submit reports. Students in past seminars have conducted child custody evaluations, mental status at time of offense evaluations, Social Security disability evaluations, asylum, T-visa, and U-visa evaluations, animal abuse, competency and juvenile placement evaluations; these evaluations allow students the opportunity to conduct full battery psychological assessments, and learn how to apply findings to a legal context. In addition, we have been getting more court mandated therapy clients. Thus, students will get assessment experience as well as individual therapy experience with adults and children. Assessment experience required. If you have not completed all assessment courses, please speak to Lavita. Students are required to complete a combination of 4 assessments/therapy clients during the course of the year. Please note that the forensic seminar requires a substantial time commitment because assessments require longer sessions with clients to administer tests, time to score and interpret tests, and report writing.

CPSY 5391 Professional Seminar: Psychodynamic Therapy (2 Credits)
This seminar focuses on psychodynamic psychotherapy - that is, individual adult psychotherapy with the aim of bringing about meaningful and lasting psychological concepts as they apply to your patients, with a practical, "hands on" focus - for example, what to do and say when your patient shuts down, threatens suicide, act out, comes on to you, misses appointments, gets worse, throws up in your office, and all the other troubling and fascinating things people do from time to time in psychotherapy. Prior or current personal psychotherapy is highly desirable and strongly recommended. Students should be prepared to discuss their clinical work candidly - and help foster an environment of mutual trust, compassion, and respect, in which candid discussion can take place.

CPSY 5392 Pro Sem: Couple and Family (2 Credits)
This seminar allows students more in-depth training in working with systems including couples and families. Students should take Couples Therapy and Family Therapy either before or concurrent with the seminar. Special topics covered include divorce, step families parenting, sex therapy, multicultural issues, and ethics, as well as more general couple and family therapy work.

CPSY 5393 Pro Sem: ACT (2 Credits)
Acceptance and Commitment Therapy (ACT) is a pragmatically based, relatively new and highly experiential form of therapy whose overarching goals are to a) assist clients (and therapists) in accepting what cannot be changed (i.e., the form or frequency of certain private events), while b) helping them fully commit to behaving in accordance with idiosyncratic values. Although consciously based on behavior-analytic thinking, ACT is a hybrid therapy in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist-existential thought. In the seminar, students will learn the technical and theoretical bases of ACT through group process, individual and small group supervision, as well as from observation and modeling. Prerequisite: Behavioral Models course.

CPSY 5394 Professional Seminar: Cognitive-Behavior Relational Therapy (2 Credits)
This is a year-long seminar on integrating cognitive-behavior (CBT) and relational therapy. Trainees learn the theory and practice of CBT and relational therapy through readings, didactic presentations, discussion, and especially case presentations of their clients and themselves. Small-group supervision is also required.
CPSY 5396 Pro Sem: Adv. Psychotherapy (2 Credits)
Seminar will focus on the individual therapy treatment of adult cases. Particular emphasis will be placed on conceptualizing cases from a developmental perspective with no particular emphasis on object relations and the psychology of self. We will evaluate culture, role of trauma, issues of sexual orientation, and developmental history. Students will be encouraged to look at their own and other’s responses in a supportive environment that will foster discussion on counter-transference responses. An in depth exploration of client’s needs will be assessed and model the treatment to those needs, rather than applying the same treatment model to all patients. Previous exposure and readings on the psychology of self and object relations is helpful. Readings to deepen our understanding of the above will be assigned. Must have taken or be currently enrolled in Adult Psychopathology sequence. Prerequisite: Psychoanalytic Models course.

CPSY 5399 Professional Seminar: Gender Issues (2 Credits)
This seminar will focus on gender issues from developmental and psychodynamic perspectives. Topics will include issues relevant to women, men, and transgendered/intersexed individuals. Clients may include adolescents and adults with a variety of presenting concerns including relationship problems, identity issues, eating disorders, pregnancy and postpartum work, parenthood, mood and anxiety disorders, and aging.

CPSY 5404 Prof Sem: Integrative Therapy (2 Credits)
This advanced seminar examines various integrative models of psychotherapy, and students will have the opportunity to develop their own therapeutic “voice” by integrating the major theories already learned at the GSPP. While the seminar will be theoretical in nature, one goal is to help students prepare for practice in the real world by exploring the common factors of therapy, and how to work collaboratively in a client-directed fashion. Clients may include adults, adolescents, and children with a variety of presenting concerns, in individual, couples, family, or group therapy. Students will be expected to present their work regularly on DVD and (in Dr. Cornish’s supervision), occasionally behind the two-way mirror. Competency areas covered include: professionalism, reflective practice, scientific knowledge and methods, relationships, individual and cultural diversity, ethical/legal standard and policy, assessment, and intervention. In addition to supervision on psychotherapy, there may be an option for students to be supervised on their supervision of a first year student in the PPC.

CPSY 5405 Advanced Relational Psychodynamic Seminar (2 Credits)
This seminar focuses on relational psychotherapy from the perspectives of self-psychology and intersubjective systems theory in working with adults. We examine the co-creation of the therapeutic relationship, the making of meaning, emphatic listening, attuning to the other’s affective experience and putting the other’s subjective experience into words. We develop treatment plans and case formulations that are consistent with this perspective.

CPSY 5406 Professional Seminar: Health Psychology (2 Credits)
This advanced seminar focuses on the ways that clients’ physical health concerns affect psychosocial and emotional well-being. We focus on the relationship between the mind and the body and take a holistic and contextual approach to understanding work with clients, keeping in mind relational and cultural variables throughout the seminar. Clients in the PPC that have been in this seminar have had cancer, multiple sclerosis, diabetes, heart failure, chronic pain, autoimmune diseases, etc. As relevant to our work with clients, we discuss pain management, mindfulness, differential diagnosis of depression and anxiety, sleep hygiene, psychosocial oncology, grief and loss, and other empirically supported treatments for issues that clients present. The overarching theoretical framework of the seminar is a health psychology and psychological health-issues in a variety of ways, including examining disability as a multicultural issue. We use readings from interpersonal psycholotherapy, feminist and multicultural therapy, positive psychology, meaning-centered psychotherapy, humanistic/existential therapy, client-centered therapy and post-traumatic growth to guide discussions. Particular attention is paid to helping clients enhance their strengths and find meaning in their lives during times of transition. Since many health settings are focused on a short-term model of treatment, students in seminar have the option of taking on shorter-term cases and we explore the use of time-limited psychotherapy in a health setting. It is expected that most students take on new cases in this seminar.

CPSY 5407 Caregiver and Child Relationships From Pregnancy Through Early Childhood (2 Credits)
This seminar involves the evaluation and treatment of infants, young children, and their caregivers in the Professional Psychology Center. Supervision is provided from an integrative and relationship-based perspective, and topics relevant to perinatal, infant, and early childhood assessment and treatment are discussed. Prerequisite: CPSY 5385.

CPSY 5420 Behav-Analytic Prin 1 (2 Credits)
This course covers philosophical foundations, assumptions, and principles underlying major systems and models of behaviorism. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic tradition. Course 1 specifically targets contingency-shaping selection processes based upon Pavlovian and operant conditioning paradigms. Recommended prerequisite: CPSY 5000.

CPSY 5421 Behavioral Analysis Princ La (1 Credit)

CPSY 5422 Behav-Analytic Prin 2 (2 Credits)
This course covers philosophical foundations, assumptions, and principles relevant to cultural-linguistic practices. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. Course 2 specifically addresses verbal relational contingency selection processes based upon cultural and its verbal community. Prerequisite: CPSY 5420.

CPSY 5423 Behav-Analytic Assess/Case Frm (2 Credits)
This course covers the philosophical foundations, assumptions, and principles relevant to behavioral assessment and case formulation tactics. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets an empirical data-driven approach to idiographic assessment for purposes of developing conceptual analyses from the contextual-functional analytic perspective. Prerequisites: CPSY 5420, CPSY 5422.
CPSY 5424 Behavior-Analytic Intervention (2 Credits)
This course provides an overview of issues, principles and methods basic to clinical practice and intervention. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets a range of commonly used methods of intervention (e.g., counter-conditioning and exposure-based treatments, guided action strategies, acceptance-commitment approaches, Eastern interventions). Issues relevant to the structuring of therapy sessions, the therapeutic relationship, behavioral nonadherence, empirical research, and other topics of therapeutic interest will be reviewed. This course will incorporate the use of experiential exercises, modeled demonstration, and behavior rehearsal methods for training purposes. Prerequisites: CPSY 5420, CPSY 5422, CPSY 5423.

CPSY 5446 Health Psychology (2 Credits)
This course is designed to provide students with a broad overview of the salient empirical and theoretical aspects of health psychology and behavioral medicine. The course will emphasize the role that psychological variables play in the development, exacerbation, treatment and prognosis of both acute and chronic illness. We will also highlight sociopolitical and cultural discourse surrounding end-of-life decision making, healthcare accessibility and the phenomenology of a disabled population.

CPSY 5467 Health Psychology Service Learning Seminar (1 Credit)
The Health Psychology Service Learning Seminar provides the opportunity for students to gain clinical experience with the underserved/underrepresented populations covered in the Health Psychology course (CPSY 5466). Students who enroll in the Seminar must agree to complete 20 hours of supervised clinical service with an agency and supervisor of their choice.

CPSY 5468 Sport and Performance Psychology Practicum in Collegiate Athletics I (2 Credits)
This is the first course in a year long, three-part sequence. This course serves the purpose of providing: a) practice in sport and performance psychology in a NCAA Collegiate Athletic Department under the supervision of licensed practitioners; b) an opportunity for students to learn about sport and performance psychology through observation and experiential opportunities; and c) information on professional development and conduct. The course requires didactic and experiential activities. The didactic component covers the practice of sport and performance consulting, focusing on gaining entry and building working relationships. Current research is integrated with theory, emphasizing empirically validated approaches to best practice.

CPSY 5469 Sport and Performance Psychology Practicum in Collegiate Athletics II (1 Credit)
This is the second course in a year long, three-part sequence. This course serves the purpose of providing: a) practice in sport and performance psychology in a NCAA Collegiate Athletic Department under the supervision of licensed practitioners; b) an opportunity for students to learn about sport and performance psychology through observation and experiential opportunities; and c) information on professional development and conduct. The course requires didactic and experiential activities. Psychological consultation, best practices, and professional development issues in sport and performance psychology are addressed.

CPSY 5470 Sport and Performance Psychology Practicum in Collegiate Athletics III (2 Credits)
This is the third course in a year long, three-part sequence. This course serves the purpose of providing: a) practice in sport and performance psychology in a NCAA Collegiate Athletic Department under the supervision of licensed practitioners; b) an opportunity for students to learn about sport and performance psychology through observation and experiential opportunities; and c) information on professional development and conduct. The course requires didactic and experiential activities. Psychological consultation, best practices, and professional development issues in sport and performance psychology are addressed.

CPSY 5480 Integrated Primary Care (2 Credits)
This course is designed to provide an introduction to the field of Integrated Primary Care (IPC). Primary health care physicians currently serve as the de-facto mental health care providers for approximately 50-80% of the patients they serve. Psychologists are desperately needed to support primary care, yet traditional clinical training does not adequately prepare them to work in this field. Students in this course can expect to acquire a solid knowledge in IPC that will enable them to function effectively in the primary care culture. A clinical exposure component are required so students can experience the pace and problem range seen in the primary care office. Class size is limited. Students not enrolled in the PsyD program must petition the instructor for approval to register.

CPSY 5482 Health Psychology Service-Learning: Clinical Practice in Integrated Primary Care (1 Credit)
This course will be a clinical and didactic seminar for students who are involved in service-learning projects in integrated primary care clinics in the community. Students will participate in service-learning, clinical rotations, and administrative and consultation duties outside of the course time. The course format will include time for clinical supervision of community cases, didactic training on topics of relevance to integrated primary care settings, and lectures from interprofessional community preceptors from the clinics. Prerequisite: Health Psychology CPSY 5466 or permission or the instructor.

CPSY 5500 Diagnosis & Treatment of Children (2 Credits)
CPSY 5505 Diagnosis & Treatment of Adolescents (2 Credits)
CPSY 5550 Couples Therapy (2 Credits)
Theory, techniques and research relating to couples therapy, including theoretical perspectives: behavioral couples therapy, emotionally-focused couples therapy and object relations couples therapy. The course also addresses specific problem areas, including domestic violence, infidelity, depression, anxiety, substance abuse and personality disorders. Prerequisite: CPSY 5030.
CPSY 5560 Family Therapy (2 Credits)
Theory, techniques and research relating to family therapy, including several theoretical perspectives: behavioral, experiential, psychodynamic, multi-generational approaches. Special topics covered include working with community resources, addressing developmental issues of children, working with medical and school systems, utilizing cultural factors in planning programs and interventions and adults in family therapy. Prerequisite: CPSY 5030.

CPSY 5562 Psychological Consultation (2 Credits)
This course provides an overview of the practice of psychological consultation. Theories and models of consultation in various settings including businesses, organizations, health care, and schools are covered. The process and stages of consultation from entry to termination are analyzed. This class differentiates consultation from other types of psychological interventions. Important legal, ethical and multicultural issues in consultation are addressed throughout the course. Students develop their own model for conducting consultation and refine that model through work with local organizations. Students increase their awareness of their strengths and weaknesses in the practice of consultation. Methods of instruction include lecture, discussion, experiential exercises, and interactions with local organizations and professional consultants.

CPSY 5583 Advanced Topics in IECMH (2 Credits)

CPSY 5590 Adult Psychopathology I (2 Credits)
Theoretical understanding and treatment of adults within a developmental, ego analytic framework. First quarter - differences between the neuroses, borderline, and psychoses. Prerequisite: CPSY 5020.

CPSY 5591 Psychodynamic Psychotherapy (2 Credits)
Theoretical understanding and treatment of adults within a developmental, ego analytic framework. Second quarter - the neuroses. Prerequisite: CPSY 5020.

CPSY 5592 Adult Psychopathology III (2 Credits)
This course is a continuation of Adult Psychopathology I and II with an emphasis on complex trauma and the psychotic disorders. Diagnostic understanding, differential diagnosis, and treatment implications are emphasized within a psychoanalytic orientation. Prerequisites: CPSY 5590 and CPSY 5591 or instructor approval.

CPSY 5620 Intersubjective Systems Theory (2 Credits)
This course focuses on psychotherapy from the perspectives of intersubjective systems theory in working with adults. We examine the co-creation of the therapeutic relationship, the making of meaning, empathic listening, attuning to the other's affective experience and putting the other's subjective experience into words. We develop treatment plans and case formulations that are consistent with this perspective.

CPSY 5680 Cognitive Assessment (4 Credits)
Theoretical, professional and clinical issues involving intelligence and its measurement; assessment of cognitive functioning and clinical interpretation of test results, focusing on the WAIS-III (and child equivalents). Prerequisite: CPSY 5130.

CPSY 5685 Introduction to Pediatric Neuropsychological Assessment (2 Credits)
Pediatric neuropsychology integrates many basic sciences including behavioral Neurology, developmental psychology, neuroanatomy, psychopathology, and psychological assessment. The role of pediatric neuropsychologist is to provide comprehensive assessment, consultation, and intervention in the context of a developing child. The course will review important concepts, theories, and empirical research in the field of pediatric neuropsychology. Students will learn the basic rationale in conducting a pediatric neuropsychological evaluation, including a brief review of many common pediatric assessment measures. In addition, many common pediatric disorders will be reviewed from a neuropsychological perspective including: Dyslexia, Attention Deficit hyperactivity Disorder, Pervasive Development Disorders, Traumatic Brain Injury, Seizure Disorders, and Mental Retardation. Upon completion of the course the student will have a greater appreciation of a neuropsychological conceptual framework and have a better understanding of specific pediatric disorders.

CPSY 5686 Suicide Prevention, Intervention and Postvention (2 Credits)
Suicide is a serious public health issue and challenge for the nation, Colorado, and our local communities. In 2009, suicide claimed the lives of almost 34,000 people in the United States and is the second leading cause of death for college students and men ages 25-34. In Colorado, there are many more suicides than motor vehicle deaths. While most clinicians are focused on the assessment and treatment of people at high risk for suicide, a more comprehensive approach is needed to prevent people from becoming suicidal in the first place. This course covers best practices in suicide prevention, intervention and "postvention" (suicide crisis response) and will explore the particular issues of several vulnerable populations.

CPSY 5687 Contemporary Issues in Geropsychology (2 Credits)
This course addresses issues in aging. Topics include healthy aging, aging issues in diverse populations, contemporary options for care, challenges in service delivery, the interplay of medical and mental health needs, mental health treatment approaches and issues, and end-of-life issues.

CPSY 5690 Introduction to the Rorschac (4 Credits)
Exner's Comprehensive System for administering, scoring and development hypotheses with the Rorschach Test. Prerequisite: CPSY 5130.

CPSY 5692 Advanced Rorschach Analysis (2 Credits)
This course is an exploration of advanced topics in Rorschach interpretation. Topics will include: conceptual understanding of the Comprehensive System; content and sequence analysis; differential diagnosis; integrating alternative systems of interpretation with the Comprehensive System; development and use of special scales; appropriate use of computerized interpretation; and integration of Rorschach analysis with personality theory. Prerequisites include course work in Rorschach administration, scoring and basic interpretation; and in personality theory. Students will be expected to score, analyze, and present Rorschach protocols.
CPSY 5700 Adv Personality Assessment (3 Credits)
Projective techniques including Rorschach, storytelling tasks and projective drawings, with a focus both on test content and the patient-examiner relationship in the context of the diagnostic consultant. Prerequisites: CPSY 5130, CPSY 5680, CPSY 5690.

CPSY 5705 Self Report Assessment (3 Credits)
Construction and application of objective instruments, emphasizing the MMPI and MCMI. Students are required to submit tests reports. Prerequisite: CPSY 5130.

CPSY 5706 Self Report Assessment Lab (1 Credit)
Optional. For students anticipating a need for extra help with report writing.

CPSY 5710 Intro to the Crisi Wartegg System for the WDCT: Administration, Scoring, and Basic Interpretation (2 Credits)
This course introduces the Crisi Wartegg System (CWS), a new methodology for the clinical use of the Wartegg Drawing Completion Test (WDCT). The Wartegg is a projective drawing technique that can be completed in 5-10 minutes and is appropriate for children, adolescents, and adults. It is easy to administer and not overwhelming for clients to complete. The Wartegg is not well known in the United States; however, a recent meta-analysis (Gronnerod & Gronnerod, 2011) attests to its validity in assessing personality and psychopathology. The course will review the history and theory of the Wartegg, teach its administration, introduce the major features of the scoring system, and discuss basic interpretation. Prerequisites: CPSY 5680 Cognitive Assessment, CPSY 5705 Self Report Assessment, and CPSY 5690 Introduction to Rorschach.

CPSY 5711 Introduction to the Crisi Wartegg System for the WDCT: Lab (1 Credit)
This lab accompanies the Crisi Wartegg System course (CWS). It supplements material presented in the class and provides an experiential component to training in the CWS. It will include applied practice of administration, scoring and calculations, as well as basic clinical case interpretation. Concurrent enrollment in the Crisi Wartegg System course is required. Prerequisites: CPSY 5680 Cognitive Assessment, CPSY 5705 Self Report Assessment, and CPSY 5690 Introduction to Rorschach.

CPSY 5740 Integrative Personality Assessment (2 Credits)
This course is the culmination of the assessment sequence, and integrates techniques, approaches and concepts covered in issues in Measurement, Cognitive Assessment, Objective Personality Assessment, and Rorschach. Aspects of the other core courses in the curriculum will also be brought to bear on the question of how to obtain and how to interpret information within various theoretical models for the purposes of answering referral questions and planning interventions. Projective testing will be introduced as a source of behavior samples for which the occasioning environment is known to the psychologist. There will be focus on distinguishing interpretable from irrelevant information, and on integrating interpretable information into meaningful patterns. The goal of using assessment to answer referral question and plan treatments will generate a special focus on report writing.

CPSY 5741 Therapeutic Assessment (2 Credits)
This course explores the advances made in understanding and enhancing the therapeutic impact that assessment can have on clients. We readdress the area: from the genesis of collaborative assessment fueled by Fischer to the empirical foundations and structure of Therapeutic Assessment provided by Finn to novel applications of the approach highlighted by Handler. This important movement in assessment is applicable to personality, cognitive, and neuropsychological assessment as well as any professional endeavor that aims to help clients understand themselves in life-changing ways. The course is designed for those with a solid foundation in assessment who wish to develop greater facility in helping their clients.

CPSY 5745 Human Sexuality (2 Credits)
The psychology of human sexuality is a survey of historical and contemporary psychological views on a wide variety of sexual behaviors; theory and research bearing on the relationship between life span, psychological development, psychological functioning, interpersonal processes, and sexual behaviors; political and social issues involved in current sexual norms and practices. Specific implications for clinical psychology will be discussed.

CPSY 5750 Supervision (2 Credits)
This course is designed to familiarize students with theories of supervision; provide practical, guided experience in peer supervision/consultation; help students understand and critically discuss the supervisory process; aid in gaining awareness of how multicultural issues may affect supervision; and familiarize students with ethical and legal issues in supervision.

CPSY 5755 Supervision Practicum I (1 Credit)
This is a four quarter sequence, 1 quarter credit hour/quarter, in which advanced students will have the opportunity to supervise one beginning student under the overall supervision of a faculty member. Each quarter practicum will include appropriate level readings, group discussions and report writing. Admission to the course with instructor's approval.

CPSY 5756 Supervision Practicum II (1 Credit)
This is a four quarter sequence, 1 quarter credit hour/quarter, in which advanced students will have the opportunity to supervise one beginning student under the overall supervision of a faculty member. Each quarter practicum will include appropriate level readings, group discussions and report writing. Admission to the course with instructor's approval.

CPSY 5757 Supervision Practicum III (1 Credit)
This is a four quarter sequence, 1 quarter credit hour/quarter, in which advanced students will have the opportunity to supervise one beginning student under the overall supervision on a faculty member. Each quarter practicum will include appropriate level readings, group discussions and report writing. Admission to the course with instructor's approval.
CPSY 5758 Supervision Practicum IV (1 Credit)
This is a four quarter sequence, 1 quarter credit hour/quarter, in which advanced students will have the opportunity to supervise one beginning student under the overall supervision of a faculty member. Each quarter practicum will include appropriate level readings, group discussions and report writing. Admission to the course with instructor’s approval.

CPSY 5760 Professional Issues II (2 Credits)
This class provides an organized and comprehensive approach to pre-doctoral psychology internship selection, emphasizing an understanding of "fit." Topics covered include choosing sites; writing cover letters, CVs, and AAPI essays; preparing application materials; interviewing techniques; rank ordering sites; and dealing with emotions related to the process. The course syllabus includes important readings from the current literature. Lectures are balanced with guest appearances by DU Writing Center staff and others. Opportunities are given for role play among the students.

CPSY 5762 Qualitative Data Analysis (3 Credits)
This course, designed for psychology students who are completing their doctoral or masters’ projects, focuses on qualitative data analysis. Throughout the course, we explore different research traditions including phenomenology, grounded theory, ethnography, case study and critical theory. In doing so, we discuss their differing philosophical assumptions, procedures for research, and methods for data collection and analyses. Emphasis is placed on developing skills in qualitative data analysis techniques such as indexing, coding and memo writing. Students also gain experience using qualitative data software (NVIVO 7) and exploring its utility for visual representations and other analytic approaches to understanding their data.

CPSY 5765 Cognitive Behavioral Therapy (2 Credits)
This course focuses on clinical applications of cognitive-behavioral theory. Major theorists in the area are reviewed, including Ellis, Beck, Lazarus, and Meichenbaum. Research utilizing cognitive-behavioral therapy as an evidence-based practice are reviewed. In addition, key cognitive behavioral techniques are demonstrated and practiced.

CPSY 5770 Doctoral Paper Preparation (2 Credits)

CPSY 5775 Clinical Psychology Internsh (8 Credits)

CPSY 5815 Trauma and its Aftermath (2 Credits)
Conceptual model for treating trauma; incidence and specific treatment techniques for various types of trauma (e.g. combat vets, survivors of natural disaster and victims of childhood abuse); professional issues relating to trauma (e.g. secondary PTSD and ethical issues). Students exposed to a variety of reading and expected to integrate current research into clinical application. For advanced students who have both a clinical and conceptual background.

CPSY 5816 Int'l Psychology Externship (5 Credits)
International externship is one component of a yearlong advanced seminar. The five credit course offers students the opportunity to work with victims of disasters in an international setting.

CPSY 5825 Introduction to Latinx Psychology and the Latinx Experience (2 Credits)
This course will highlight the current psycho-social research and literature relevant to the mental health of Latinx populations including influences of culture, acculturation, immigration, and language on utilization of psychological services. The course will explore the variables that can affect how different Latinx groups respond in a unique way to the various services offered in the community. This course will familiarize the student with the personal, social, cultural and institutional forces that affect the psychology of Latinx groups, to include history, religion, gender roles, emotional processing, violence, bilingualism, and stigmatization and oppression.

CPSY 5826 Therapy and Psychological Interventions with Latinx Populations (3 Credits)
As the second course in GSPP’s Latinx Psychology sequence, this course examines the theories and models of research on psychotherapy with Latinx populations to prepare future therapists to engage in culturally responsive services with the growing U.S. Latinx population. This course focuses on clinical interventions that address that particular mental health needs of Latinx populations in the United States. A particular emphasis is placed on the skills that are necessary in order to attain clinical competence treating members of the various Latinx groups, by both Latinx and non-Latinx clinicians. Empirically-based psychological treatments for Latinx patients will be examined. Creative ways will be discussed for adapting these interventions with Latinx groups. Discussion of clinical cases will be integrated into the course. Prerequisite: CPSY 5825.

CPSY 5827 Psychological Assessment with Latinx Populations (3 Credits)
As the third course in GSPP’s Latinx Psychology sequence, the Psychological Assessment with Latinx Populations addresses the cultural considerations needed for interviewing and conducting psychological evaluations of Latinx groups. Clinical interviewing techniques and measures across all psychological assessment domains, including diagnosis, personality, and cognition, as well as more specialty-focused areas such as neuropsychological assessment, forensic assessment, and school-based assessment will be covered. The class will explore the strengths and limitations of each assessment measure with a particular focus on language, research and norming issues, and administration. Prerequisite: CPSY 5825 and CPSY 5826.
CPSY 5828 Latinx Psychology Practicum (2 Credits)
This course is designed to sharpen your clinical skills by examining current cases and analyzing appropriate intervention and assessment techniques as a class. Students will formally present cases from their current caseload, in traditional case presentation format. We will base our following discussions in Latinx psychological theory and orientations, and apply didactic material learned in the previous three courses of the Latinx sequence. Case discussions will be sustained by students and will be positive, constructive, and ethical. It will be important for students to remain open to feedback, new approaches, constructive criticism, and exploring their strengths and weaknesses as early clinicians among their peers and professor. This course is also designed to assist students in the management of their complete caseload and seek advisement from the class on professional issues encountered as a Latinx psychologist, in order to maintain both an ethical and realistic professional perspective.

CPSY 5829 Spanish Clinical Language Lab: Reinforcing the Therapeutic Alliance with Latinx Clients (1 Credit)
This course will be offered as a lab for students in the Latinx Practicum CPSY 5828 class. It is developed to enhance students’ linguistic and cultural clinical competence in Spanish. The lab will focus on learning and using mental health terminology, cultural and linguistic metaphors, practicing clinical interviewing skills in Spanish and how to work with interpreters/translator. The lab will be delivered in Spanish and will be divided into 2 sections of Spanish Proficiency Levels. The lab aims to provide students with hands on clinical skills in Spanish to reinforce the therapeutic alliance with Latinx clients. Students will be required to take a Spanish Language Proficiency Exam.

CPSY 5831 Theory and Foundations of IECMH: Infant and Early Childhood Mental Health (2 Credits)
This course will provide an in-depth historical, theoretical, and empirical foundation for students interested in engaging in ongoing research and practice in Infant Early Childhood Mental Health (IECMH). Formative readings from the IECMH literature, including groundbreaking articles and textbooks will be reviewed and discussed. We will examine methods of applied IECMH work, including promotion of well-being and the spectrum of prevention, early intervention, assessment, and treatment with young children and their caregivers. The multidisciplinary nature of IECMH will be explored, along with a focus on how psychologists and infant mental health specialists fit into these teams in various contexts. We will also examine different “ports of entry” or means into treating caregivers, young children, and their relationships from an IECMH framework. Empirical studies establishing the efficacy, effectiveness, and cultural sensitivity (or lack thereof) of various assessments, therapeutic approaches, and practices in the IECMH field will be examined. We will spend the most time examining critical theories of social development including attachment and temperament and will consider their applicability to IECMH work, cultural responsive across several cultures, strengths, and limitations. Throughout the course, will explore the IECMH Diversity tenets created by leaders in the field and will apply the tenets in discussions and coursework.

CPSY 5832 Caregiver-Child Assessment in IECMH: The Process of Assessment, Diagnosis, Report Writing, & Feedback (2 Credits)
Intensive training will be offered in the process of assessing a caregiver and child relationship in a manner designed to inform dyadic treatment planning. All students will be trained in conducting a multi-modal, relationship-based assessment with a caregiver and child under the age of six. Assessment tools used will include the Infant Toddler Mental Status Exam (ITMSE), the Crowell Procedure and the Working Model of the Child Interview (WMCI). Students will also be introduced to the Interpersonal Inventory and paper and pencil means of assessing the individuals and their relationship. Students will be introduced to diagnosis in IECMH using the Diagnostic & Statistical Manual of Mental Disorders – fifth edition (DSM-V) and the Diagnostic Classification of Mental Health & Developmental Disorders of Infancy and Early Childhood (DC:0-5) classification systems, as well as crossover considerations between the two systems. Students will conduct a thorough and multi-modal assessment of a caregiver-child relationship and will integrate the information learned into a professional report. Students will practice treatment planning as well as providing feedback to the dyad.

CPSY 5833 Advanced Topics in IECMH: Infant and Early Childhood Mental Health (2 Credits)
This advanced topics course will continue fostering the student’s understanding of Infant and Early Childhood Mental Health (IECMH) practice. Throughout the course, in-class discussion centers on developing clinical relationships with families and on how these relationships can support growth and change in both child and caregiver. Of particular importance is the student’s continued exploration of use of self, and integrating IECMH practice principles into their field placement and CUB Clinic work. Topics include infant regulatory concerns, attachment difficulties, caregiver mental illness and impact on the child and relationship, parenting self-efficacy, child maltreatment and trauma, and application of IECMH treatment practices in the community. Prerequisite: CPSY 5831 or equivalent with instructor’s permission.

CPSY 5834 Therapeutic Intensive: Interpersonal Psychotherapy in Infant and Early Childhood Mental Health (2 Credits)
This intensive therapeutic course will continue fostering the student’s understanding of Infant and Early Childhood Mental Health (IECMH) practice via working knowledge of a psychotherapeutic model used during the perinatal through age five (p-5) period. This quarter we will focus on Interpersonal Psychotherapy (IPT), an evidenced based approach, with a focus on its use with clients experiencing depression during the perinatal (pregnancy and postpartum) period. Students will also be introduced to using IPT with adolescents as well as Group-IPT. Students will gain knowledge of IPT assessment and practice via readings, in-class discussions, video, role plays, and case presentations. Of particular emphasis is the student’s continued exploration of use of self and integrating IECMH practice principles when learning about and practicing IPT. Prerequisite: CPSY 5831 or equivalent with instructor’s permission.
CPSY 5840 Psychopharmacology (2 Credits)

CPSY 5846 Military Psychology and the Culture of Warfighting (2 Credits)
This course is intended to provide an introduction to military and veteran culture as well as military psychology and behavioral health. This course is designed as the first of a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with military members, veterans, and the families of servicemembers. The principal focus will be on training students to utilize culturally competent attitudes and knowledge as clinicians when providing services to servicemembers of the military branches, veterans of the military, and the families of servicemembers. American historical context, military history, and military structure will be covered in this course. Additionally, multiple types of behavioral health services within the United States government will be covered including the Department of Defense, the Public Health Service, and the Department of Veterans Affairs. A survey of world affairs as they currently stand, the U.S. national defense strategy, and current military posture will be covered. Salient health care issues within the military and veteran population will be covered. Legal and ethical issues that are pertinent and complex within military psychology and combat will be examined.

CPSY 5847 Psychology and Physiology of Isolated, Confined, and Extreme Environments (2 Credits)
This course is intended to survey and examine human psychological and physiological performance in extreme, austere, and challenging environments and the secondary effects of these environments after deployment. This course is designed as the second in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. This course will examine issues, literature, and critical arguments surrounding team makeup and cohesion in austere environments as well as physiological and cognitive/behavioral effects of operating within these environments. Operational behavioral health will be covered in addition to the physical and psychological after-effects of these deployments. Psychological casualties, forensic issues, and post-deployment transition will also be covered. Prerequisite: CPSY 5846.

CPSY 5848 Evidence-based Practice for Military-related Health Disparities (2 Credits)
This course is intended to survey and examine current evidence-based assessment tools utilized to diagnose certain psychiatric and neurological conditions within military servicemembers and Military Veterans. The course will also focus on the understanding and utility of the best available evidence for the treatment of these psychiatric conditions. Prevalence rates, comorbid conditions, differential diagnosis, and complicating treatment factors within these particular psychiatric conditions will be the primary focus of the course. This course is designed as the third in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity.

CPSY 5849 Behavioral Medicine and Interprofessional Healthcare in Military/Veterans (2 Credits)
This course is intended to build upon academic and clinical knowledge gained throughout the entirety of the Graduate School of Professional Psychology curriculum and integrate this knowledge with the understanding of clinical and operational psychology within Military and Veteran settings gained through courses in the Sturm Specialty in Military Psychology. This course is focused on the acquisition of knowledge of the unique aspects of Military behavioral medicine and its role within the medical center environment. A second focus of the course is on interprofessional work within healthcare settings and how behavioral science professionals play a role on interprofessional teams within family medicine, primary care, and medical/surgical units within the medical center environment. Additionally, special considerations for behavioral medicine and interprofessional work with Military and Veteran populations will be covered. This course is designed as the fourth in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. Enforced Prerequisites: CPSY 5846.

CPSY 5852 Foundations in Substance Use Disorder (2 Credits)
The course examines the major theories addressing substance use disorder and addiction. Students will explore these disorders as understood from a variety of theoretical frameworks (including psychoanalytic, behavioral, humanistic and social learning theory), as well as findings from neuroscience. The course emphasizes a developmental perspective in the understanding of these issues. Further, the course will emphasize current treatment models based on empirically based information and research. Students will gain skills in using their generalist training to conceptualize, diagnose, and treat these difficult disorders.

CPSY 5853 Neuropsychology and Physiology of Substance Use Disorders: Implications for Treatment (2 Credits)
The course will examine research and practice findings from the fields of neuropsychology and biology with regard to substance use disorders. Major findings and theories related to brain and nervous system functioning as they relate to substance use will be discussed, and used to further inform treatment considerations and clinical conceptualization. Additionally, students will be engage in a more in-depth review of treatment modalities available. Students will build on their knowledge of empirically supported treatments in the first course. Students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course.

CPSY 5854 Behavioral Addictions: Assessment and Treatment (2 Credits)
The course will examine research and practice findings regarding behavioral addictions such as sex, pornography, gambling, food, and others. Discussion of brain and nervous system functioning as they relate to behavioral addiction will be discussed, and used to further inform treatment considerations and clinical conceptualization. Prerequisites: students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course, and completion of CPSY 5853 Neuropsychology of Addiction and Advanced Treatment is strongly recommended.
CPSY 5865 Introduction to Psychosocial Oncology (3 Credits)
In this course, students will be introduced to the field of Psychosocial Oncology. This course will include an overview of the physiological processes involved in cancer prevention, etiology, and treatment. Students will develop a better knowledge of the different types of cancer, staging, and treatment options. A brief history of the field of psychosocial oncology will also be presented. The psychological sequelae of cancer diagnosis, treatment, metastases and recurrence, and survivorship will be included in this course. Special topics will also include working with caregivers and family members of cancer patients, sexuality and cancer, and working with patients and families at the end of life. Common psychotherapeutic interventions and assessments for oncology settings will be explored. In addition, the variety of roles of a psychologist in oncology settings will be discussed. Themes that will be included throughout the course are ethical and reflective practice, working with cancer patients from a multicultural perspective, and reducing compassion fatigue.

CPSY 5866 Interprofessional Systems in Healthcare (2 Credits)
This course will provide an overview of working in an interprofessional system as a psychologist. An introduction to systems theory and its application to a healthcare system will be discussed. Collaborating with other professionals, leading a team, and understanding the roles of a psychologist on an interprofessional team will also be covered. This course is best taken as the final course in the oncology psychology specialty, though it is open to other students with special consideration.

CPSY 5880 Business Issues in Professional Psychology (2 Credits)
This course introduces students to business principles as they apply to professional psychology. Students think through various business practice decisions, such as starting, managing, marketing, and diversifying a psychology practice and consider the related legal, ethical, and financial issues.

CPSY 5899 Doctoral Paper Development (1 Credit)
This course is designed to facilitate the development and writing of the doctoral paper. Students are expected to adhere to the GSPP Doctoral Paper Guidelines and the APA style guidelines. A major feature of the class is student-to-student sharing and critiquing of doctoral project ideas and plans. Students are expected to take advantage of this opportunity to hone their writing skills and develop their doctoral paper proposal. Students have complete the proposal phase of their project further develop their research methodology.

CPSY 5991 Independent Study (1-17 Credits)

CPSY 5992 Directed Study (1-10 Credits)

CPSY 5993 Advanced Field Placement Experience (1-8 Credits)
All PsyD students are required to work as a Psychology Trainee in an outside agency each year prior to the internship year. The minimum total is 384 hours per year. Students are expected to arrange with a field placement to receive psychological clinical training, which could include the following types of experiences: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc.

CPSY 5994 PsyD Internship (4,8 Credits)
The Graduate School of Professional Psychology (GSPP) requires that all students attend a yearlong or two half-time years of clinical internship. Internship is the clinical experience after the student has completed all courses, the clinical competency examination, and at least three years of residency at GSPP. Students typically apply through APPIC and are offered formal internships. Occasionally students create internships, but they must be approved formally through GSPP prior to the start of the internship. The basic experiences may include training in: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc. To register, student must have departmental approval. Students can register half-time for 4 credit hours or full-time for 8 credit hours.

CPSY 5995 Independent Research (1-17 Credits)

Communication (COMN)

Courses

COMN 3130 Organizational Communication (4 Credits)
This is an applied course, service learning course, based on a consulting model. While the course will extend and enrich the topical and theoretical knowledge developed in COMN 1550 and COMN 2130, the primary purpose of this course will be to help students explore how they can put such knowledge into practice by collectively working with a local non-profit organization to first diagnose and then propose (and, in some cases implement) solutions to an organizational communication problem faced by that organization.

COMN 3230 Principles of Leadership (4 Credits)
Roles, functions, behaviors that influence and direct; emphasis on interpersonal effectiveness; theories and methods.

COMN 3245 Building Group/Team Effectiveness (4 Credits)
The objectives of this course are to help students acquire a deeper understanding of groups and teams, how they function, and what contributes to their success or failure. It also aims to help students develop the skills and capacities that will allow them to contribute in concrete and significant ways to successful outcomes and satisfying experiences for themselves and others in groups and teams. Cross listed with LDRS 2540.

COMN 3270 Health Communication (4 Credits)
This course examines the role of health communication in our everyday lives. We will focus on communication strategies that inform and influence individuals, families and communities in decisions that enhance health. We will also explore the dynamics and impact of health communication between individuals and the health care system such as doctor-patient communication, dissemination of health related information, and the role of mediated communication in examining health communication.
This course focuses on the interactive relationships between gender and communication in contemporary U.S. society. This implies three priorities for the class. First, the course explores the multiple ways communication creates and perpetuates gender roles in families, media, and society in general. Second, the course considers how we enact socially created gender differences in public and private settings and how this affects success, satisfaction, and self-esteem. Third, the course connects theory and research to our personal lives. Throughout the quarter, the course considers not only what IS in terms of gender roles, but also what might be and how we, as change agents, may act to improve our individual and collective lives. Cross listed with GWST 3680, HCOM 3680.
COMN 3700 Topics in Communication (1-4 Credits)
COMN 3701 Topics in Communication (1-4 Credits)
COMN 3702 Topics in Communication (1-4 Credits)
COMN 3703 Topics in Communication (1-4 Credits)
COMN 3704 Topics in Communication (1-4 Credits)
COMN 3705 Topics in Communication (1-4 Credits)
COMN 3770 Mediated Communication and Relationships (4 Credits)
This course examines how people develop, define, maintain, and manage interpersonal relationships through their use of mediated communication. We will examine communication in relationships that occur through the internet, text-messaging, cell phones, chat rooms, gaming, and virtual communities. This is a seminar type course where students guide and are guided through their own study of mediated relationships.

COMN 3800 Philosophies of Dialogue (4 Credits)
This course explores the philosophies of dialogue of Martin Buber, Mikhail Bakhtin and others in the context of contemporary communication scholarship on ethics, culture, and relationship. Prerequisite: permission of instructor.

COMN 3850 Communication Ethics (4 Credits)
This class is not just about how to be ethical communicators but it is also about how to discover ethics—the good life and care for others, answerability and responsibility—deep within the structures of human communication itself. The course is committed to a mixture of theory and practice but practice is at the heart of the matter. Half of our sessions will be devoted to dialogue or conversation about ethics in life. There we will try to work as close as we can with ethics in our own lived experience. In the other half, we will explore theory: the ethical/philosophical/communicative ground of ethics.

COMN 3991 Independent Study (1-5 Credits)
COMN 3992 Directed Study (1-10 Credits)
COMN 3995 Independent Research (1-10 Credits)
Topics and quarter hours vary. Prerequisite: instructor’s permission.

COMN 4010 Introduction to Graduate Studies (4 Credits)
History of the discipline; noteworthy scholars and publications, current issues in the discipline.

COMN 4020 Communication Studies: Relational (4 Credits)
Recent social science literature in interpersonal communication; emphasis on pragmatics, meta-level perspectives, relational concerns affecting intimacies, friendships, families.

COMN 4030 Communication Studies: Organizational (3-4 Credits)
Ways in which communicative actions create, maintain, transform terms that define and regulate our practical and passionate attachments to each other; specifically how identity, knowledge, value, social organizations are constructed in and through communicative practices.

COMN 4100 Seminar: Speech Communication Theory (4 Credits)
Theoretical foundations of communication and language behavior; syntactics, semantics, pragmatics.

COMN 4110 Theories in Interpersonal Communication (4 Credits)
Selected themes in interpersonal communication, based primarily on theoretical sources, including interaction, relationships, goal achievement, hierarchies, interpersonal change.

COMN 4120 Comparative Theories in Human Communication (4 Credits)
Selected efforts to construct theories of human communication; lectures, discussions, student presentations of analysis of readings.

COMN 4130 Seminar in Communication in Human Organizations (4 Credits)
Current problems and issues in organizational communication.

COMN 4140 Graduate Colloquium (4 Credits)
COMN 4150 Culture, Ethnicity and Communication (4 Credits)
A cross-cultural approach to investigate communication codes, norms, value dimensions, power, privilege, and relationship issues within national, ethnic, and gender groups.

COMN 4160 Performance Ethnography (4 Credits)
This seminar provides a theoretical and methodological framework for understanding performance ethnography. This is not a “how to” class; rather, this is a course that examines the theories and perspectives behind performance ethnography as a method and orientation. Among the subtopics that fall within the purview of performance ethnography we will examine will be performative writing, personal narrative, poetic transcription, autoethnography, narrative ethnography, and ethics. This course provides an introduction and broad overview to performance ethnography.
COMN 4200 Physical Basis of Spoken Language (4 Credits)
The purpose of this course is to provide the student with a comprehensive understanding of the past, current, and evolving legal, policy, and regulatory issues effecting telecommunications, telecommunications-related industries, and the Internet. Laws and policies effecting multichannel television, wireline and wireless telephone companies, and the Internet will be examined in depth. Focus is placed on the role public policy plays in light of a rapidly changing information environment, critical evaluation and understanding of the rationale behind policy and regulatory activity, and the exploration of the various complex problems arising from the evolving information environment and its products.

COMN 4210 Seminar: Interpersonal Communication (4 Credits)
Selected theories applicable to interpersonal communication and their implications.

COMN 4220 Critical Intercultural Communication (4 Credits)
This seminar explores the key figures and foundational essays in the development of Critical Intercultural Communication. This seminar offers a critical perspective on current theory and research in intercultural communication. We emphasize questions and practices of “diversity” (especially involving race, class, gender, and sexuality) as they manifest in local and global contexts in the United States. The principle objective is to develop a politically informed and self-reflexive praxis in the service of reframing the study of intercultural communication.

COMN 4221 Culture, Power and Representation (4 Credits)
Central to the production of cultural knowledge about the ‘other’ is the labor of power implicated in all practices of discursive representation. In this course, we will examine the various theories of representation, the racial and gendered production of difference, the relation between discourse and subjectivity, and more generally, the poetics and politics of representation. These topics will be explored within a rich variety of contexts and institutional sites, e.g., in colonial and anthropological discourse, in popular media narratives and consumer culture, in the global deployment of Western theoretical/knowledge productions, among others.

COMN 4222 Theories of Identity and Subjectivity (4 Credits)
The seminar explores the communicative constitution of cultural, political, and institutional identities. Discussion will range from the historical development of the theoretical discourse on identity and subjectivity to more contemporary theories covering the emergence and transformation of identities in public discursive spaces. Particular attention will be given to theoretical frameworks and methods of inquiry animating research having to do with what is known as the “new cultural politics of difference.” The course ends with a look at the contexts and arenas in which “identity” and “subjectivity” have emerged as critical sites of contestation in the 21st century.

COMN 4223 Culture and Communication: Contexts and Issues (4 Credits)
This is a capstone course in the foundations sequence for the Culture and Communication Area of Concentration in Human Communication Studies. This course will integrate content from the other three area foundations courses and specifically address implications for the study and practice of intercultural communication in such contexts of study as globalization, transnationalism, diaspora, colonization, immigration, adaptation, localization, corporate, institutional, and situated discourse. In addition current theoretical, research, and application issues and problematics such as multivocality, voice and representation, intersections and contradictions of contradictory identifications, representations, micro and macro forces, and paradigmatic separation and integration will be discussed. Prerequisites: COMN 4220, COMN 4221 and COMN 4222.

COMN 4224 Critical Interpersonal & Family Communication (4 Credits)
This course introduces critical interpersonal and family communication studies, an emergent movement within the larger subfields of interpersonal and family communication. At its heart, critical interpersonal and family communication studies centers issues of power in studies of individuals, relationships, and families. Within the context of this course, students explore critically-oriented interpersonal and family communication theories and methods. Students receive the opportunity to work on a research, teaching, or service-learning project that reflect a critical interpersonal/family approach. Students are challenged to consider critical pedagogies in interpersonal and family communication curriculum and instruction.

COMN 4230 Intercultural Training (4 Credits)
Research and theoretical approaches that examine international/intercultural training and instructional practices about topics such as adaptation, adjustment, competence, conflict and cultural diversity.

COMN 4231 Discourse and Race (4 Credits)
This course looks at race as a discursive formation using the literature in Critical Race Theory that has emerged over the past decade. In analyzing this body of work covering a wide range of themes and diverse theoretical perspectives, we hope to uncover the historic, material, as well as symbolic determinations of the discourse on race that have conspired to sustain a highly racialized system in place.

COMN 4232 Critical Sexuality Studies (4 Credits)
This course takes a critical approach to the study of sexualities by challenging our assumptions and everyday knowledges about identities, gender, sexuality, race, and ethnicity. This course is organized around important and recent publications in the fields of Communication Studies and Sexuality Studies. Rather than simply reiterating the canonical voices such as Foucault and Butler, the course focuses on the voices of queer people of color.

COMN 4240 Seminar: Group Communication (4 Credits)
Small group literature; interpersonal and group communication.

COMN 4250 Seminar: Family Communication (4 Credits)
This course is designed to investigate and explore the communication processes associated with families. Areas of exploration include definitions of family communication and interactional patterns, the impact of life stage on family communication processes, marriage and divorce, parent-child communication, sibling interactions, the child-free family, and the later-life family.
COMN 4251 Advanced Seminar in Family Communication (4 Credits)
This advanced seminar is designed to build on the first seminar in family communication. The course will examine how historic research in the study of families have influenced the field of family communication. Emphasis will be placed on how understanding these classics can influence theory and research in the human communication area of family communication.

COMN 4280 Theories-Group Communication (4 Credits)
Examination, from different theoretical perspectives, of group communication as an area of study; research and application in speech communication discipline.

COMN 4300 Seminar in Persuasion (4 Credits)
Theory, research, special problems in persuasion and attitude change.

COMN 4310 Communication and Collaboration (4 Credits)
A survey of contemporary theories and applications.

COMN 4315 Public Deliberation (4 Credits)
An introduction to the theories and problematics of public deliberation. The course pays particular attention to the demands of inclusion, equality, and public reason as requirements of public deliberation.

COMN 4400 Seminar: Rhetoric Conversation Analysis (4 Credits)
Contemporary contributions to development of rhetorical theory ranging from perspectives on rhetoric offered by various rhetorical theorists to methods of rhetorical criticism.

COMN 4420 Rhetorical Theory (4 Credits)
Contemporary rhetorical theories.

COMN 4425 Rhetoric and Governance (4 Credits)
An introduction to the works of Michel Foucault and his influence on contemporary rhetorical theory.

COMN 4435 Rhetoric and Public Life (4 Credits)
An introduction to the conceptual and political history of the public sphere. The course pays particular attention to how the normative assumptions of public communication are affected by the demands of cultural pluralism.

COMN 4510 Seminar: Speech Communication Theory (4 Credits)
Integration of conceptual theory with behavioral practice in formal public speaking situations through lectures, discussions, performances.

COMN 4520 Rhetoric and Social Movement (4 Credits)
This course is designed to survey the range of humanistic/critical scholarship on social movement in Communication Studies. Whether it has approached “social movements” from a rhetorical perspective, or analyzed the rhetoric within and surrounding social change, social movement rhetoric scholarship is characterized by major theoretical debates. These debates will help focus the seminar’s inquiry, and are summarized by the following questions: Are the received tools of rhetorical theory capable of making sense of the (often) non-normative, un-institutionalized expressions of dissent associated with social change? How are scholars to evaluate the ethics and impacts of social movement rhetoric, given its “inherent” nature as challenging to the status quo? What is a social movement, and what is rhetoric’s proper relationship to it? Is the figure of the “social movement” the most insightful means of understanding social change? What is at stake in retaining or abandoning the “social movement” in rhetorical criticism that seeks to understand and evaluate social change?

COMN 4530 Critical Theories of Communication II: Nietzsche’s Influence on Contemporary Rhetoric (4 Credits)
In conversation with Classical Rhetorical Theory and Critical Theories I, this course is designed to explore a major philosopher’s influence on rhetoric and communication studies. Friedrich Nietzsche offers and inspires a second trajectory of thinking that allies with, but ultimately diverges from, the Marxist critical project. Broadly, Nietzschean thought echoes the Marxist concern for structural oppression, alienation, and limited consciousness; but it attempts to undermine structural power as much as possible without the tools of structural power (namely, language, values/truth/knowledge, and the subject). We explore this line of critique much more closely, considering how it has materialized in communication scholarship. This course offers a point of departure for explorations of particular theorists.

COMN 4700 Topics in Communication (1-4 Credits)

COMN 4701 Topics in Communication (1-4 Credits)

COMN 4702 Topics in Communication (1-4 Credits)

COMN 4703 Topics in Communication (1-4 Credits)

COMN 4704 Topics in Communication (1-4 Credits)

COMN 4705 Topics in Communication (1-4 Credits)

COMN 4710 Seminar: Nonverbal Communication (4 Credits)
Theoretical and practical exploration of interpersonal role relationships; emphasis on time, space, kinetic, vocal, tactile cues; methodological concerns.

COMN 4760 Linguistic Aspects of Communication Theory (4 Credits)

COMN 4770 Topics in Communication (1-4 Credits)

COMN 4780 Philosophies of Dialogue (4 Credits)
This course explores the philosophies of dialogue of Martin Buber, Mikhail Bakhtin and others in the context of contemporary communication scholarship on ethics, culture, and relationship.
COMN 4850 Communication Ethics (4 Credits)
This course explores the work of Todorov, Bakhtin, Levinas, and Hyde as foundational to communication ethics.

COMN 4890 Philosophy of Communication (4 Credits)
How speech communication is presupposed and/or demonstrated to be related to social reality, language, intersubjectivity by various methodologies used in conducting communication research; special emphasis on exploring presuppositions of recent methodological developments in contrast to more traditional approaches.

COMN 4900 Quantitative Methods I (4 Credits)
Lectures, readings, written assignments that facilitate growth and development of the research scholar.

COMN 4901 Quantitative Methods II (4 Credits)
This course is a continuation of the HCOM 4900 which explored the process of human inquiry, social science paradigms, the development of sound research questions, and strategies and techniques surrounding sampling, measurement and design. This course will expand on the exploration of research design and statistical methods that can be utilized in answering research questions and hypotheses. In addition, we will be collecting data that will be used to help us understand and analyze various statistical strategies.

COMN 4910 Theory Building in Communication (4 Credits)
Steps involved in constructing theory; application of theory building process to communication phenomena.

COMN 4913 Rhetorical Criticism (4 Credits)
Like other research methods in communication studies, rhetorical criticism is a means: It is a pathway through which you may reach a desired end, as well as a set of tools with which you may shape your final work. However, following Nothstine, Blair, and Copeland (1994), "criticism is a process"—a pathway which "rarely travels a straight line to its end" (p. 343), and a toolkit which arrives with ambiguous instructions (at best) for how to make use of its contents to assemble a research project. In the humanistic tradition, rhetorical criticism is an art inspired by the critic’s vision and guided by her or his deftness, ingenuity, and perseverance. Moreover, rhetorical criticism is a practical endeavor inspired by public events of the day and the critic’s desire to persuade. The significance of rhetorical criticism is born in public dialogue or debate. In the wake of the “critical turn,” rhetorical criticism not only inspires academic colloquia. Through it, critics pursue democracy and social justice. In conversation with performance studies and ethnography, rhetorical critics have started to embrace self-reflexivity, and writing as a method of inquiry (not simply the “reporting on” inquiry once it is “done”). Given its rich scholarly history, and its fluidity as a research method, one could imagine several different ways to approach a seminar in rhetorical criticism. Such a course might use hermeneutics (or the art of interpretation) as its guide, encouraging participants to engage a text and arrive at its deeper meanings. It might take a skills-based approach, cultivating the necessary techniques of the critic, including the abilities to: locate interesting and important rhetorical acts; closely analyze a rhetorical act’s symbolic action and richly describe it to readers; contextualize a rhetorical act to invite a deeper understanding of its significance; and place a rhetorical act in conversation with relevant theory to generate productive insights into the human condition. A seminar in rhetorical criticism might also take a historical approach, attending to the ways rhetorical theory has shaped criticism as a method—such an approach would introduce the range of theoretical “tools” available to critics as they approach different rhetorical acts. At the risk (and with the benefits) of complexity, we will draw upon each of these possibilities, enacting an “inventional” approach to rhetorical criticism.

COMN 4915 Discourse Analysis (4 Credits)
An introduction to common theoretical assumptions and methods shared by scholars who study discourse as social interaction, with emphasis on analyzing key features of discourse that are central to their work.

COMN 4920 Communication Research Practicum (4 Credits)

COMN 4930 Speech and Communication Research - Qualitative Methods (4 Credits)
Grounded theory, phenomenology and other non-numerical approaches to research in human interaction.

COMN 4931 Qualitative Methods II (4 Credits)
This course teaches students qualitative data management skills, introduces them to an array of qualitative methods for analyzing naturalistic data, and guides them through the application of these skills to qualitative research projects. Prerequisite: COMN 4930.

COMN 4932 Critical Methods for Studying Culture (4 Credits)
This seminar provides an overview of a variety of critical methodologies (inclusive of the theory of method) for the study of culture. Potential course foci include textual analysis, critical ethnography, personal narrative, oral history, performance writing, and autoethnography.

COMN 4933 Writing Culture (4 Credits)
This seminar serves as a capstone course in the Culture and Communication seminar sequence. Students explore diverse genres used to write about culture. The course aims to help every student find a writing voice by reading excellent writing in diverse genres. By writing and rewriting all term, this course guides students through the process of writing an article centered around culture and communication, following the practices of the field.

COMN 4990 Graduate Tutorial in Communication Studies (2 Credits)
In this course, students will closely engage in scholarly work with a faculty member, with the intention to foster collaboration on mutually beneficial topics. This close collaboration can take many forms, and much like an independent study, it will be designed by faculty and students together. Such collaboration may include: deeper reading of the literature in a particular communicative context; advancing a research project toward presentation and publication (through data collection, data analysis, or/and manuscript revision); pedagogical development (through the development of syllabi, assignments, teaching materials, and educational philosophy). Students will deepen their knowledge base on a topic of significance in the field, advancing scholarly, pedagogical, and/or creative work.
Communication Management (COMM)

Courses
COMM 4001 Portfolio Foundations (0 Credits)
Master's and certificate-seeking students in Communication Management must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

COMM 4002 Effective Facilitation and Presentation (4 Credits)
The evolution and increasing presence of technology in the workplace has changed the way we conduct meetings, present information, and facilitate in-person and virtual group conversations. In this course, students hone their presentation and facilitation skills by assessing their audience, purpose, and the desired outcomes of the engagement. Students learn to use appropriate and memorable visual aids, maximize audience and/or participant engagement, and employ communication competencies to increase sensitivity to group dynamics and verbal and nonverbal cues. Whether facilitating high-level face-to-face meetings, conducting virtual interactions, or presenting to groups, students will gain the skills and confidence needed for effective communication across varied delivery methods.

COMM 4006 Building High-Performing Teams (4 Credits)
High-performing teams are invaluable to every organization. Ensuring productive and satisfying group and team interactional outcomes in organizational, professional, and personal settings can be difficult. Students focus on theory, application, and the practice of working together to learn the fundamentals of building high-performing teams. Students learn about the development of group dynamics, assessment, and leadership while also gaining knowledge about their strengths and weaknesses in teams, developing new skills, and learning how to enhance productivity while reducing barriers to effective communication.

COMM 4010 Business Fundamentals for Communicators (4 Credits)
Communications leaders must speak the language of business to effectively craft strategies, execute deliverables, and measure outcomes that create tangible value and advance their organizations’ objectives. Whether in an industry, public sector, or non-profit role, these leaders gain an edge through supplementing strong technical literacy with the ability to assess operational priorities and execute deliverables accordingly. In this class, students will sharpen their understanding of balance sheets and budgets; demystify key aspects of Information Technology infrastructure (intranets, cloud and on-premises computing, databases, security, etc.); delve into various organizational and divisional/departmental models, functions, and political positions; address the benefits and challenges of globalization and cross-cultural communication; and touch on an assortment of other relevant topics, including managing upward and workflow prioritization. Along the way, students will hone their strategic planning competencies and perspectives by putting all elements learned in this course together. Materials and assessments are geared toward application in relevant contexts.

COMM 4016 Persuasion and Influence (4 Credits)
The ability to write and speak in a persuasive manner is often the difference between success and failure. In this hands-on course, students learn to 1) recognize persuasive activities; 2) develop skills in persuading others; and 3) develop skills in defending themselves against unwanted persuasive activities. In this course, students will examine a variety of concepts, techniques, and tools designed to improve the persuasiveness of written and spoken interactions. Students will discuss persuasion both in the sense of how people behave and in the sense of how people use language. Students will also discuss how people argue and how persuasive techniques can be used not so much to “win” an argument but to gain agreement with others. Throughout the course, students will learn to use persuasive techniques in an ethical manner.

COMM 4020 Communication in Professions and Organizations (4 Credits)
In this course, students develop and refine interpersonal, intercultural, and organizational communication competencies while applying foundational communication models and concepts to a variety of contexts. The mastery of these communication skills leads to more productive written, virtual, and face-to-face interactions, resulting in personal, professional, and organizational success.
COMM 4030 Managing Learning in Organizations (4 Credits)
In today's highly competitive information society, there is a tremendous need for continuous learning and employee development at all levels of an organization. New knowledge is the foundational resource for the creation and implementation of new visions, structures, and outcomes leading to organizational success. The learning organization, when effectively managed, is engaged in continuous improvement, and grows beyond its current state to widen its creative capacity for the future. In this course, students explore concepts, processes, models, and tools to cultivate a learning organization, and to manage the learning and development function within an organization. The focus of this course is on preparing students to be able to identify major business challenges and the competencies needed to support them from a learning and development perspective.

COMM 4032 Managing Organizational Change (4 Credits)
This course prepares students to create and implement effective communication strategies for change management. The course begins with a discussion of seminal organizational change models, how these models support change management communications, and how change affects employees and individuals. Concepts and practices for facilitating change communications are explored, as well as methods of supporting change leaders. Students develop competencies in change communication through discussion, lecture, video, and change assessment inventories.

COMM 4035 Communicating Across Cultures (4 Credits)
There is a growing need to communicate effectively across cultural differences. Writer James Neuliep defines culture as an accumulated pattern of values, beliefs, and behaviors shared by an identifiable group of people with a common history and verbal and nonverbal code system. Culture pervades every aspect of the communicative process. This course uses a contextual approach to examine the ways culture, communication, context, and power intersect in intercultural communication interactions. Students will identify and analyze obstacles and barriers to effective intercultural communication. Finally, students will examine strategies and skills needed to become a competent and effective intercultural communicator.

COMM 4045 Applied Critical Thinking in Communication (4 Credits)
This course provides an examination of the critical thinking processes and models of decision making and problem solving. The suitability, usage, and effectiveness of critical thinking models in achieving positive organizational outcomes are emphasized. Faculty and student perspectives and experiences, along with case studies, demonstrate applications of the critical thinking and problem solving processes within various communication settings and specialties.

COMM 4050 Communication and Society: Theories and Applications (4 Credits)
This course provides an overview of seminal mass and mediated communication theories and applies them to today's workplace. Additionally, students develop a command of mediated communication frameworks using emerging theoretical approaches to digitization, convergence, and networked culture. Readings and assessments are geared toward active comprehension of communication theories so that students are able to recall and implement theoretical concepts in their professional environments.

COMM 4070 Understanding Human Communication (4 Credits)
This course emphasizes the many communication theories, their origin, and applied use in personal, organizational and smaller professional settings. The course utilizes case studies, surveys, projects, and self-assessment to encourage students to reflect on personal experiences with issues like interpersonal communication and group and team dynamics to facilitate understanding of the importance of applying theory to practice. Key skills and strengths are identified as they relate to students' professional goals and objectives.

COMM 4117 International Technical Comm (3 Credits)
This course focuses on communication and technical writing skills needed to address today's international business environment. Students will develop the foundational skills necessary to write for translation, as well as develop an understanding of, and sensitivity to, the challenges inherent in intercultural technical communication. Additionally, international standards organizations and the role they play in international communication will be discussed.

COMM 4140 Marketing Strategy and Process (4 Credits)
COMM 4140 Marketing Strategy and Process is an application-oriented course to help students examine the fundamentals of marketing, and develop the insights and skills to formulate and implement sound, ethical marketing strategies and processes. The weekly topics covered in this course are divided into three main content areas: 1) foundations, 2) marketing mix elements with an emphasis on communications, and 3) strategy and planning. Each content area helps students apply strategic concepts through discussion and teamwork. Throughout the quarter, students explore marketing decisions by examining how information and research are used to inform marketing management decisions. Because marketing communication plays such a critical role in marketing success, special emphasis is placed on message and media factors. All of the course material culminates in the development of a marketing plan.

COMM 4144 Public Relations Strategies and Process (4 Credits)
In a complex global environment, business, government, nonprofit, and other organizations require professional public relations practitioners who can effectively develop two-way relationships with constituents/publics to enable strategic and effective communication processes. This course explores the essential components of public relations through an examination of the profession, its publics, and effective processes. Areas studied include the nature and history of public relations; applying theories; use of strategy; the value of relationship development; an overview of the range of PR tactics; the evolving role of digital communications and social media to PR; and the importance of ethics and transparency in PR practice.
COMM 4145 Public Relations Writing and Tactics (4 Credits)
Leveraging effective and persuasive writing to develop relationships with media and other target audiences is an integral part of public relations. This course deepens students’ knowledge of the strategic use of public relations tactics, while ensuring they become effective, creative, clear, and concise architects and translators of the written word. To assist in this development, public relations practitioners have a number of communication tools at their disposal. Determining the correct tool to use is based on a strategic approach to all public relations efforts. Professionals must consider their objectives, publics, and key messages in choosing tactics to effectively influence the intended audience. In this course, students examine the purposes, style, format, content, and distribution of tactics used to support public relations programs and the concepts behind generating effective public relations copy. Tactics such as news releases, fact sheets, media alerts/advisories, feature articles, newsletters, emails, pitches, brochures, and social media will enable the creation of a public relations writing portfolio by the end of class.

COMM 4150 Dimensions of Reputation Management (4 Credits)
Reputation management is the process of tracking, maintaining, and defending a consistent message and positive image across all media. It applies to corporations and individuals, to billion-dollar brands and grassroots causes. Today’s reputation management integrates public relations, search engine optimization (SEO), content marketing, and social media management. It requires constant monitoring and participation in the dialogues that comprise modern media as the traditional roles of sender and receiver merge and evolve. Awareness of the ethical and global considerations surrounding the digital landscape is imperative. As digital presence has become the front lines of reputation management, systems use various predefined criteria for processing complex data to report behavior and activity surrounding a reputation, thereby automating the process of determining positive sentiment, influence, and trustworthiness. This course will present the history of managing reputations in the mass media era, from the dawn of the 20th century to present day. Through the study of proactive and reactive programs, students will learn how to apply reputation management principles in times of quiet and crisis, monitoring, positioning, and measuring a brand’s presence online.

COMM 4155 Public Relations Research and Measurement (4 Credits)
Public relations practitioners leverage research at the formative stage of every campaign: during the campaign to measure effectiveness, and at the conclusion of a campaign, to show results. This requires strategic processes to guide organizations toward the best possible actions in creating and sustaining relationships with target publics. This course introduces students to research methods available to public relations professionals, which are dependent on writing measurable objectives to drive accurate evaluation during and following a campaign. Students will explore how to creatively, effectively, efficiently, and ethically adapt research methods to practical application based on available budget, time constraints, and other resources. They then justify these methods to potential clients.

COMM 4200 Instructional Design (4 Credits)
Designing training that maximizes results is a central concern in organizations. Students in this course identify the elements of effective training, they identify and discuss how learning occurs both formally and informally in organizations, and how trainers must plan for learning in order to meet organizational needs and objectives. The stages of systematic instructional design are presented and students are given an opportunity to create an instructional design project that might be applied in their work settings.

COMM 4203 Adult Learning Strategies and Theories (4 Credits)
Adult learning is very different from the learning processes in children. Adults bring a great deal of experience to the learning situation and are intent on the application of their newfound knowledge and skills. The factors that determine how adults learn, as well as appropriate instructional strategies to best reach these learners, are discussed. Students in this course focus on using adult learning principles to strategically design training materials and facilitate adult learning in various workplace settings.

COMM 4206 Evaluating Learning and Development Effectiveness (4 Credits)
Assessment and evaluation enable learning and development professionals to determine if learners acquired the intended content, knowledge, skills and/or attitudes; if the benefits of the training endeavors are worth the costs; whether training has met organizational goals; and if further training is necessary. Through case studies, practice exercises, and the development of an authentic assessment plan, students learn how to design, interpret, and apply different types of learning and development evaluation concepts and methods to their respective or intended work settings.

COMM 4220 Conflict Resolution Strategies and Process (4 Credits)
Conflict is a natural and common part of human interaction. This course prepares students to thoughtfully and creatively manage and resolve conflict in interpersonal and organizational contexts. Students study the sources, causes, and dynamics of conflict in order to explain and predict the patterns of conflict interactions. Students analyze case studies and develop the most appropriate conflict management and resolution strategies based on analysis and evaluation of the personal, interpersonal, historical, and cultural dynamics of a given conflict. By focusing on the application of conflict resolutions strategies and processes, students develop their interpersonal, analytical, and managerial competencies to creatively address conflict in a variety of situations.

COMM 4222 Negotiation Strategies and Process (4 Credits)
Negotiation is at the core of dispute resolution. This course presents the theoretical groundwork for interest-based dispute resolution upon which principled negotiation and other dispute resolution methods are founded. Topics include the definition of the negotiation process, different types of negotiation, and negotiation strategies. Students have an opportunity to practice and compare different negotiation techniques. Teaching methods are experiential in nature and include mini-lectures, discussions, and role-plays. Students also develop strategies for managing challenging negotiations and breakdowns.
COMM 4226 Managing Organizational Conflict (4 Credits)
Conflict is a part of all businesses, government, and nonprofit organizations. It is a product of human existence and diversity in an interrelated society. Though many people fear conflict as a threat to a productive work environment, it is not conflict itself that jeopardizes harmony but unresolved conflict, and the associated costs are well documented. Organizations increasingly recognize that conflict need not carry costly financial and interpersonal burdens and can, in fact, serve as a productive change agent. Students in this course explore the nature and sources of organizational conflict and facilitate development of practical skills to recognize and manage conflict using case studies, exercises, speakers, and field research. Students are introduced to the concept of various conflict resolution methods, including individual initiative, negotiation, mediation, restorative justice, and arbitration. This course is well suited for leaders and aspiring leaders in any profession who want to increase their interpersonal capability and enhance their value in organizations.

COMM 4235 Integrating Learning and Development Technologies (4 Credits)
Organizational learning and talent development are changing rapidly in the face of staggering technological advances. As organizations become increasingly decentralized, teams interact virtually, and collaboration becomes dependent on digital tools. In this context, it is imperative that learning and development professionals harness technology to meet the changing needs of individuals and the places/spaces in which they work. In this course, students explore the latest technological trends in Learning and Development, while also learning how to evaluate technologies for their appropriateness in meeting organizational learning and development goals. In recognition of the rapidly changing nature of this field, students also develop strategies for future learning to keep their work relevant and engaged.

COMM 4270 Forty-Hour Mediation (4 Credits)
This course is designed specifically for individuals interested in becoming mediators or integrating mediation skills into their current positions within (but not limited to) human resources, public service, healthcare, law, non-profit management, etc. The course satisfies the initial training requirements for professional mediators in accordance with the Mediation Association of Colorado (the MAC) and the Association for Conflict Resolution (ACR). The DU mediation training is distinctive for several reasons, including: small class size (limited to 24 people) and the opportunity to network with accomplished mediators and mediation coaches.

COMM 4301 Brand Management Strategies (4 Credits)
Organizations of all types – private, public, and nonprofit – increasingly recognize that a strong brand can ultimately become one of an organization's greatest assets. Executing on a strategy designed to build long-lasting brand recognition, resonance, and loyalty is a critical marketing responsibility. In today's dynamic business landscape, brand management requires complex decisions to create meaning and value for consumers. This course covers the essential components of branding with a focus on how to maintain consistent alignment between brand vision and marketing strategies.

COMM 4318 Mobile Marketing (4 Credits)
Mobile technologies can be found in your pocket, on your coffee table, at your workplace, and even on your wrist. If a business's marketing plan doesn't include mobile, that business plan simply isn't complete. The growing field of mobile marketing has created a new set of communication imperatives and business opportunities. This course is designed to familiarize students to the tools used to implement a robust mobile marketing strategy. Current and future organization and business leaders will learn mobile marketing best practices and gain the knowledge to implement and analyze the results of their mobile marketing efforts.

COMM 4320 Social Media Strategy (4 Credits)
Social media is a critical communication channel that is constantly evolving. Learn to plan, manage, measure, and anticipate social media efforts that add value to your target audiences through organic and paid options. In this course, students will explore motivations that prompt audiences to engage, identify the tools and technology needed to execute social media campaigns or communication interventions, and devise effective strategy and tactics needed to cut through the noise. Create a stronger online presence, show personality, and build your brand by gaining skills needed to successfully communicate on behalf of any organization or individual using social media. Through online research, case studies, and practical exercises, students will gain first-hand knowledge of social media techniques and how to leverage social media as a communications tool.

COMM 4321 Digital Marketing Communication (4 Credits)
At its most basic level, digital marketing leverages digital technologies and media that allow brands to promote their products and services to very targeted audiences in a highly measurable way. Digital marketing as a category has become so integral to overall marketing and communication efforts that the term “digital” as a differentiator may soon become obsolete. Digital marketing continues to grow and evolve, so the focus of this course is to provide an expansive grasp of digital marketing communication tactics, including how to utilize them and how to integrate them into the marketing mix. Through discussion, research, application, and evaluation of case studies and projects, students will learn about the essential tactics utilized by digital marketers.

COMM 4323 Email Marketing (4 Credits)
Today's consumer expectations for relevant, engaging, and timely messages have made email marketing an essential component of the multichannel marketing mix. The creation and delivery of personalized, targeted messages to subscribers can drive both engagement and ROI. This class examines the development and integration of email marketing (including tools, copy, design, service providers, tracking and measurement) to enhance business relationships, encourage customer loyalty and acquire new customers.

COMM 4324 Marketing Analytics (4 Credits)
Marketing analytics leverages business metrics to better understand marketing performance and return on investment (ROI). Through data analysis, attribution modeling, and reporting, marketers are able to measure and optimize their initiatives. The focus of this class is on developing a performance measurement system for marketing channels, incorporating measuring website traffic, conducting market research, estimating usage patterns, and interpreting website visitor behavior. Key performance indicators are tied to marketing goals and tactical campaigns. Students conduct a review of online metrics, compare marketing analytics vendors, and develop ways to communicate performance.
COMM 4325 Search Marketing (4 Credits)
Search marketing is a communicator’s medium and a vital part of any marketing mix. This type of digital marketing specifically focuses on increasing a website’s visibility in the search engine results pages (SERPs) through organic Search Engine Optimization (SEO) and pay-per-click (PPC) while also drawing attention to quality website content or well-crafted paid ad messaging. This class will provide deep insight into the tools and tactics of search marketing. Students will learn what makes search marketing demanding and how to overcome the challenges presented by regular search engine algorithm updates, increasing mobile device usage, and the influence of social media. Two key techniques of SEM will be explored: search engine optimization (SEO) to improve results from the natural or organic listings, and paid search marketing, or pay-per-click (PPC), to deliver results from the sponsored listings within search engines. A variety of search practices, including mobile and local, will be explored.

COMM 4326 Digital Campaign Management (4 Credits)
Any successful marketing or communication campaign — digital or traditional — is dependent on many factors, from its strategic beginnings through its final rollout. However, perhaps the most critical factors driving the success of a digital campaign are rooted within the human, technical, and business processes through which that campaign comes to life. Assuming a foundational understanding of digital marketing techniques (i.e., web, search marketing, social media, etc.), this course will focus on the practical management of digital marketing and communication campaign efforts, including planning, management, and measurement. Pre-requisite: COMM 4321.

COMM 4327 Digital Content Creation (4 Credits)
Content is at the heart of any communication intervention, and creating quality digital content requires an understanding of how digital users experience and consume content. Whether driving consumer behavior or keeping co-workers engaged and effective, quality content will help deliver messages clearly and persuasively. In this course, students explore the relationships between the strategies that drive content creation, the tools used to deliver messages, and the theory behind making content work for the target audience. In addition to hands-on exposure to a variety of content creation tools, students will learn key components of visual communication, the principles of user experience design, and how to match tools to strategies.

COMM 4701 Topics in Communication Management (4 Credits)
The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of communication, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects, such as ethics, human communication theory, or interpersonal communication. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

COMM 4900 Experiential Learning in Communication Management (4 Credits)
This course is designed especially for students transitioning into the professional fields of communication. Through an experiential learning process, students will actively engage in their chosen communication field in order to develop the essential networking, writing, inquiry, and investigation skills required to be successful professional communicators. The course has three central components: first, students will develop professional networks to cultivate mentorship, gain intimate knowledge of the field, and become familiar with the field’s norms and values. Second, students will strengthen their business-writing skills by creating industry-standard documents, communicating clearly and effectively, and activating their voice to convey their points with authenticity. Finally, students will explore their chosen field of communication to determine the current state of the field and its future trajectory, while also exploring how they may adapt and grow to meet the demands of the future.

COMM 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing, critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.

COMM 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.
COMM 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

COMM 4905 Storytelling through Research and Measurement (4 Credits)
Whether conducting a needs assessment, attempting to understand your audience, or developing a new product, communication professionals regularly harness the power of research, measurement, and storytelling. Divided into three parts that culminate in an individualized project, this course explores essential research methods; strategies for measuring the impact of communication interventions; and the fundamentals of telling data-driven stories that persuade stakeholders and demonstrate ROI. On their own, each of these pieces is informative; together they enable confident problem solving, enhance organizational decision making, and influence external stakeholder behavior.

COMM 4920 Portfolio Capstone (4 Credits)
The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the seminar produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field. Students must complete the Portfolio Capstone with a grade of B or better.

COMM 4980 Internship (1-4 Credits)
The Organizational and Professional Communication Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master’s programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all COMM students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

COMM 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. Before registering for the independent study, the student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices. Independent Study is offered only on a for-credit basis.

COMM 4992 Directed Study (1-5 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

Computer Science (COMP)

Courses

COMP 3001 Bridge Course: Theory Basics (1-4 Credits)
Bridge Course I: Computer Science Theory Basics This accelerated course covers the basics of discrete mathematics including functions, relations, counting, logic, proofs etc that is necessary to attend CS graduate school. In addition, it includes an introduction to programming and algorithm analysis. 4.000 Credit hours 4.000 Lecture hours.

COMP 3002 Bridge Course: Theory Advanced (1-4 Credits)
This accelerated course continues to build on the basics of discrete mathematics by covering material including advanced counting, recurrences, graphs, trees, traversals, automata etc. that is necessary to attend Computer Science graduate school. In addition, it includes an introduction to additional algorithms and data structures. Prerequisite: COMP 3001. 4.000 Credit hours 4.000 Lecture hours.

COMP 3003 Bridge Course: Systems Basics (1-4 Credits)
This accelerated course covers the basics of computer systems including assembly language programming, addressing modes, logic design, etc. necessary to attend CS graduate school. In addition, it includes an introduction to C programming language. In particular, standard I/O, data manipulation, pointers, and dynamic memory management. 4.000 Credit hours 4.000 Lecture hours.
**COMP 3004 Bridge Course: Systems Advance (1-4 Credits)**
This accelerated course continues to build on the basics of computer systems by covering material including UNIX tools, version control, process creation, concurrent programming etc that is necessary to attend Computer Science graduate school. In addition, it includes an introduction to a scripting language. Prerequisites: COMP 3003. 4.000 Credit hours 4.000 Lecture hours.

**COMP 3005 Data Science Bridge Course: Computer Science Programming Basics (4 Credits)**
This accelerated course covers the basics of Python programming. By the end of the course students will be able to develop, design and implement Python programs, appreciate the difference between data types, learn to read from and write to files, understand and use data structures, understand and use recursion.

**COMP 3006 Python Software Development (4 Credits)**
This accelerated course covers advanced Python programming for data scientists. Course Objectives: name and demonstrate proficiency using advanced Python programming techniques for data science; analyze a programming task and create a development plan and high-level software design that accomplishes the task; relate common portions of the Python standard library to specific programming tasks; understand and apply aspects of the Python scientific programming ecosystem to achieve a data-science analysis goal; collaborate with another data scientist to develop a software program that completes a given data-science task. Prerequisite: COMP 3005.

**COMP 3007 Data Science Bridge: Data Science Mathematics I (4 Credits)**
This course presents the elements of calculus essential for work in data science. Students will study differentiation and integration in the context of probability density and of optimization.

**COMP 3008 Data Science Bridge: Data Science Mathematics II (4 Credits)**
This course presents the elements of linear algebra and discrete math essential for subsequent coursework in data science.

**COMP 3200 Discrete Structures (4 Credits)**
Discrete mathematical structures and non-numerical algorithms; graph theory, elements of probability, propositional calculus, Boolean algebras; emphasis on applications to computer science. Cross-listed as MATH 3200. Prerequisites: MATH 2200 or COMP 2300 and COMP 1672 or COMP 1771.

**COMP 3341 Multimedia Systems (4 Credits)**
This course covers fundamental issues in design and implementation of multimedia applications. This course also covers technologies in multimedia systems such as multimedia data representation, compression, coding, networking, data management, and I/O technologies. Prerequisite: COMP 3361.

**COMP 3351 Programming Languages (4 Credits)**
Programming language as a component of software development environment; binding, scope, lifetime, value and type of a variable; run-time structure–static, stack-based and dynamic languages; parameter passing–call by reference, value, result, value-result and name; subprogram parameters; role played by side effects, dangling pointers, aliases and garbage; garbage collection; data abstraction - study of object-oriented, functional, and logic languages. Prerequisites: COMP 2370, COMP 2691, and COMP 2355.

**COMP 3352 Elements of Compiler Design (4 Credits)**
Techniques required to design and implement a compiler; topics include lexical analysis, grammars and parsers, type-checking, storage allocation and code generation. Prerequisite: COMP 3351.

**COMP 3353 Compiler Construction (4 Credits)**
Design and implementation of a major piece of software relevant to compilers. Prerequisite: COMP 3352.

**COMP 3361 Operating Systems I (4 Credits)**
Operating systems functions and concepts; processes, process communication, synchronization; processor allocation, memory management in multiprogramming, time sharing systems. Prerequisites: COMP 2355, COMP 2370, and COMP 2691 or for MS Cybersecurity COMP 3001, 3002, 3003, 3004, COMP 4355, and COMP 4370.

**COMP 3371 Advanced Data Structures & Algorithms (4 Credits)**
Design and analysis of algorithms; asymptotic complexity, recurrence equations, lower bounds; algorithm design techniques such as incremental, divide and conquer, dynamic programming, randomization, greedy algorithms, etc. Prerequisites: COMP 2370, MATH 3200.

**COMP 3381 Software Engineering I (4 Credits)**
An introduction to software engineering. Topics include software processes, requirements, design, development, validation and verification and project management. Cross-listed with COMP 4381. Prerequisites: COMP 3351, COMP 3361 or instructor permission.

**COMP 3382 Software Engineering II (4 Credits)**
Continuation of COMP 3381. Topics include component-based software engineering, model-driven architecture, and service-oriented architecture. Prerequisite: COMP 3381.

**COMP 3400 Advanced Unix Tools (4 Credits)**
Design principles for tools used in a UNIX environment. Students gain experience building tools by studying the public domain versions of standard UNIX tools and tool-building facilities. Prerequisites: COMP 2400 and knowledge of C and csh (or another shell), and familiarity with UNIX.

**COMP 3410 World Wide Web Programming (4 Credits)**
Creating WWW pages with HTML, accessing user-written programs via CGI scripts, creating forms, imagemaps and tables, and Java programming principles and techniques. Prerequisite: COMP 2355.
COMP 3421 Database Organization & Management I (4 Credits)
An introductory class in databases explaining what a database is and how to use one. Topics include database design, ER modeling, database normalization, relational algebra, SQL, and B trees. Each student will design, load, query and update a nontrivial database using a relational database management system (RDBMS). An introduction to a NoSQL database will be included. Prerequisite: COMP 3006. Co-requisite: COMP 3007.

COMP 3431 Data Mining (4 Credits)
Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 2370.

COMP 3501 Introduction to Artificial Intelligence (4 Credits)
Programming in LISP and Prolog with applications to artificial intelligence; fundamental concepts of artificial intelligence; emphasis on general problem-solving techniques including state-space representation, production systems, and search techniques. Prerequisites: MATH 2200, COMP 2370.

COMP 3621 Computer Networking (4 Credits)
An introduction to computer networks with an emphasis on Internet protocols. Topics include: network topologies, routing, Ethernet, Internet protocol, sockets, operating system impact and client/server implementations. Prerequisites: COMP 2355 and COMP 2370.

COMP 3681 Networking for Games (4 Credits)
Implementing the networking code for multiplayer games is a complex task that requires an understanding of performance, security, game design, and advanced programming concepts. In this course, students are introduced to the networking stack and how this is connected to the Internet, learn how to write protocols for games, and implement several large games using a game engine that demonstrate the kind of networking and protocols required by different genres of games. In addition, tools are introduced that help understand and debug networking code, simplify the creation of protocols, and make the development of networking code easier.

COMP 3701 Topics in Computer Graphics (4 Credits)
COMP 3702 Topics in Database (4 Credits)
COMP 3703 Topics-Artificial Intelligence (4 Credits)
COMP 3704 Advanced Topics: Systems (4 Credits)
COMP 3705 Topics in Computer Science (1-4 Credits)
COMP 3731 Computer Forensics (4 Credits)
Computer Forensics involves the examination of information contained in digital media with the aim of recovering and analyzing latent evidence. This course will provide students an understanding of the basic concepts in preservation, identification, extraction and validation of forensic evidence in a computer system. The course covers many systems level concepts such as disk partitions, file systems, system artifacts in multiple operating systems, file formats, email transfers, and network layers, among others. Students work extensively on raw images of memory and disks, and in the process, build components commonly seen as features of commercial forensics tools (e.g. file system carver, memory analyzer, file carver, and steganalysis). Prerequisites: COMP 2355 or for MS Cybersecurity COMP 3001, 3002, 3003, and 3004.

COMP 3801 Introduction Computer Graphics (4 Credits)
Fundamentals of graphics hardware, scan conversion algorithms, 2D and 3D viewing transformations, windows, viewpoints, clipping algorithms, mathematics for computer graphics, graphics programming using a standard API. Prerequisites: COMP 2370, MATH 1952 or 1962, and MATH 2060.

COMP 3821 Game Programming I (4 Credits)
An introduction to computer game programming. Use of a game engine to create 3D computer games. Topics include game scripting, simple 3D asset creation, incorporation of assets, keyboard/mouse event handling, animation, game phases and score keeping. Prerequisite: COMP 2370.

COMP 3822 Game Programming II (4 Credits)
An introduction to computer game engine programming. Major class goal is to understand how game engines are created by building subsets of a game engine. Non-exhaustive set of topics include how terrains are generated, how animations are supported, how particle systems are implemented, how physics systems are coded, and how support is provided for higher level scripting languages. All coding will be done in low-level graphics languages. Prerequisites: COMP 3801 and COMP 3821.

COMP 3904 Internship/Co-op in Computing (0-10 Credits)
Practical experience in designing, writing and/or maintaining substantial computer programs under supervision of staff of University Computing and Information Resources Center. Prerequisites: COMP 2370 and approval of internship committee (see department office).

COMP 3991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in the regular course schedule for that particular year.

COMP 3992 Directed Study (1-10 Credits)
COMP 4333 Parallel and Distributed Computing (4 Credits)
Current techniques for effective use of parallel processing and large scale distributed systems. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course qualifies for the Computer Science "Advanced Programming" requirement. Prerequisites: COMP2370 and COMP2355, or equivalent.
COMP 4334 Parallel and Distributed Computing for Data Science (4 Credits)
Current techniques for effective use of parallel processing and large-scale distributed systems for data science. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course is not to be used for the MS Computer Science. Prerequisite: COMP 4581.

COMP 4355 Advanced System Programming (4 Credits)
This course covers programming in a UNIX environment, including use of common command line utilities, scripting, source control via Git, and integration of POSIX system calls into C/C++ code. These features will be leveraged to solve practical problems cleanly and efficiently. More emphasis will be placed on using these features than on how those features work. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4362 Operating Systems II (4 Credits)
Continuation of COMP 3361. Case studies of existing operating systems programming. Prerequisite: COMP 3621.

COMP 4370 Algorithmic Problem Solving (4 Credits)
The course is intended for students who are familiar with programming syntax but have not had much experience writing computer programs to solve a problem stated as a high-level description. The course will run through multiple such problem descriptions, discuss the design of programs to solve those problems using popular data structures, and have students implement those designs using a programming language. This course does not count for MS Computer Science requirements. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4372 Theory of Algorithms (4 Credits)
NP-completeness; lower bound theory; approximation algorithms; amortized complexity and data structures, randomized algorithms. Assorted topics such as string algorithms, graph algorithms, linear programming, computational geometry. Prerequisite: COMP 3371.

COMP 4384 Secure Software Engineering (4 Credits)
This course is concerned with systematic approaches for the design and implementation of secure software. While topics such as cryptography, networking, network protocols and large scale software development are touched upon, this is not a course on those topics. Instead, this course is on identification of potential threats and vulnerabilities early in the design cycle. The emphasis in this course is on methodologies and paradigms for identifying and avoiding security vulnerabilities, formally establishing the absence of vulnerabilities, and ways to avoid security holes in new software.
There are programming assignments designed to make students practice and experience secure software design and development. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4431 Data Mining (4 Credits)
Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 4441 and COMP 4581.

COMP 4432 Machine Learning (4 Credits)
This course will give an overview of machine learning techniques, their strengths and weaknesses, and the problems they are designed to solve. This will include the broad differences between supervised/unsupervised and reinforcement learning as well as associated learning problems such as classification and regression. Techniques covered, at the discretion of the instructor, may include approaches such as linear and logistic regression, neural networks, support vector machines, kNN, decision trees, random forests, Naive Bayes, EM, k-Means, and PCA. After course completion, students will have a working knowledge of these approaches and experience applying them to learning problems. Enforced Prerequisites: COMP 4442 and COMP 4581.

COMP 4433 Data Visualization (4 Credits)
This course explores visualization techniques and theory. The course covers how to use visualization tools to effectively present data as part of quantitative statements within a publication/report and as an interactive system. Both design principles (color, layout, scale, and psychology of vision) as well as technical visualization tools/languages will be covered. Prerequisites: COMP 3006, COMP 4441.

COMP 4441 Introduction to Probability and Statistics for Data Science (4 Credits)
The course introduces fundamentals of probability for data science. Students survey data visualization methods and summary statistics, develop models for data, and apply statistical techniques to assess the validity of the models. The techniques will include parametric and nonparametric methods for parameter estimation and hypothesis testing for a single sample mean and two sample means, for proportions, and for simple linear regression. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Prerequisites: COMP 1671, MATH 1951, MATH 1952; or Data Science Bridge Courses COMP 3005, 3007, and 3008.

COMP 4442 Advanced Probability and Statistics for Data Science (4 Credits)
This course builds on material in Probability and Statistics 1. Students will carry out model fitting and diagnostics for multiple regression, ANOVA, ANCOVA, and generalized linear models. Dimension reductions techniques such as PCA and Lasso are introduced, as are techniques for handling dependent data. The course introduces the principles of resampling and Bayesian Analysis. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Enforced Prerequisites: COMP 4441.

COMP 4447 Data Science Tools 1 (4 Credits)
Organizations are using data science to extract actionable insight from data. To highlight the hidden patterns in the data, this course equips students with essential skills for data collection, cleanup, transformation, feature engineering, summarization, and visualization. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, and various data sets to perform these activities. Enforced Prerequisites: COMP 3006 and COMP 3008. Co-requisite: COMP 4441.
COMP 4448 Data Science Tools 2 (4 Credits)
Building a successful predictive model is a multi-faceted process. This course focuses on hypothesis testing and the development of predictive models. Students will also learn how to perform graph-based modeling and optimization. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, and various data sets to perform these activities. Prerequisite: COMP 4447.

COMP 4449 Data Science Capstone (4 Credits)
Students identify and fill a demand for an innovative data science product, such as a data base tool, analytical software, or domain specific analysis. The product is defined, implemented, documented, tested, and presented by the student or student team with the instructor and other stakeholders acting as a project supervisors to verify that goals are met through the 10-week development process. Prerequisites: COMP 4442, COMP 4448, and COMP 4581.

COMP 4581 Algorithms for Data Science (4 Credits)
This course introduces the design and analysis of algorithms within the context of data science. Topics include asymptotic complexity and algorithm design techniques such as incremental, divide and conquer, dynamic programming, randomization, greedy algorithms, and advanced sorting techniques. Examples to illustrate techniques are drawn from multi-dimensional clustering (k-means and probabilistic), regression, decision trees, order statistics, data mining using apriori algorithms, and algorithms for generating combinatorial objects. Prerequisites: COMP 3006 and 3008.

COMP 4600 Seminar in Computer Science (0-4 Credits)
Preparation and presentation of lectures on some aspect of current research in computer science; topics not generally encountered in formal courses, may include robotics, pattern recognition, parallel processing, computer applications. 10- to 15-page paper with bibliography required.

COMP 4621 Computer Networking (4 Credits)
The Internet is arguably the most transformative invention in recent history and is at its core a massive global computer network (of networks). Students in this course learn how the Internet works, from the highest-level application layer to the lowest-level hardware layer. Topics covered include the OSI and TCP/IP reference models, physical transmission methods, error detection and correction, addressing, routing algorithms, congestion control and more. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4701 Special Topics-Computer Graphics (1-4 Credits)
COMP 4702 Advanced Topics-Database (3 Credits)
COMP 4703 Adv Topics-Artificial Intell (1-4 Credits)
COMP 4704 Advanced Topics-Systems (3-4 Credits)
COMP 4705 Advanced Topics-Programming (1-4 Credits)
COMP 4708 Special Topics-VLSI (3 Credits)
COMP 4709 Special Topics-Computer Security (3 Credits)
COMP 4720 Applied Cryptography (4 Credits)
Block ciphers, one-way hashes, symmetric and asymmetric encryption, public-key infrastructure, digital signatures, security protocols, anonymity, and digital cash.

COMP 4721 Computer Security (4 Credits)
This course gives students an overview of computer and system security along with some cryptography. Some network security concepts are also included. Other concepts include coverage of risks and vulnerabilities, policy formation, controls and protection methods, role-based access controls, database security, authentication technologies, host-based and network-based security issues. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4722 Network Security (4 Credits)
Network Security covers tools and techniques employed to protect data during transmission. It spans a broad range of topics including authentication systems, cryptography, key distribution, firewalls, secure protocols and standards, and overlaps with system security concepts as well. This course will provide an introduction to these topics, and supplement them with hands-on experience. In addition, students will perform an extensive analysis, or development of a security related product independently. Prerequisites: COMP 4721 or COMP 3001, 3002, 3003, and 3004.

COMP 4723 Ethical Hacking (4 Credits)
Ethical hacking is the process of probing computer systems for vulnerabilities and exposing their presence through proof-of-concept attacks. The results of such probes are then utilized in making the system more secure. This course will cover the basics of vulnerability research, foot printing targets, discovering systems and configurations on a network, sniffing protocols, firewall hacking, password attacks, privilege escalation, rootkits, social engineering attacks, web attacks, and wireless attacks, among others. Prerequisites: COMP 3361, or COMP 3001, 3002, 3003, and 3004. Prerequisites: COMP3361 or Permission of Instructor.

COMP 4724 Systems Security Management (4 Credits)
This course covers basic system administration tasks on a Unix environment, with a special focus on command line navigation, file/process access control, setting up network configurations, and managing services related to networks and their security. Prerequisites: COMP 3001, 3002, 3003, and 3004.
COMP 4799 Capstone Project in Cybersecurity (8 Credits)
The purpose of the cybersecurity capstone project is to provide an integrative experience that ties together the learning outcomes from academic coursework undertakings and industry skills necessary to be productive in delivering an end product. Students will engage in one of many options available, such as involvement in a research project, a case study, a product development project, or an extensive survey paper. Capstone projects are presented at the end of the quarter in front of a representative group. Prerequisites: COMP 3001, 3002, 3003, and 3004.

COMP 4991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in regular course schedule for that particular year.

COMP 4992 Directed Study (1-10 Credits)

COMP 4995 Independent Research (1-17 Credits)

COMP 5991 Independent Study (1-17 Credits)

COMP 5995 Independent Research (1-17 Credits)

Conflict Resolution (CRES)

Courses
CRES 3951 Mediation Fundamentals (4 Credits)
This course provides 40-hour mediation training following the model standards for Mediator Certification programs established by the Association for Conflict Resolution. It covers the mediation process and mediator skills including preparation, opening statement, information gathering, movement and solution seeking, negotiation, confidentiality, ethics, power balancing and diversity issues. Students engage in video-recorded role-play scenarios to develop mediation skills.

CRES 4111 Reflective Practice and Evaluation (4 Credits)
Course is designed for practitioners who would like to become more reflective and theory oriented in their practice, and for researchers who wish to work with actual data and questions from practice. The goals are to learn techniques for making theories of practice explicit, to examine ways practice and research may modify theory, and to explore how to introduce and expand reflective practice into conflict resolution.

CRES 4221 Negotiation Theory and Practice (4 Credits)
An overview of negotiation theories, strategy and tactics to understand the role of power perceptions, communications, and ethics affect bargaining processes and outcomes.

CRES 4222 Theories of Conflict Practice and Third Party Roles (4 Credits)
An analysis and critique of the nature and role of third parties in conflict intervention including conciliator, arbitrator, facilitator, monitor, trainer. Theoretical perspectives and case studies are used to understand the situations in which third parties operate, what values and resources they bring to their roles, and how power issues affect mediator functioning. Ethical guidelines are also considered.

CRES 4225 Conciliation and Reconciliation (4 Credits)
Societies are often divided along ethnic, racial, or religious lines. Without work at the grassroots level, international peace agreements regularly fail within five years of ratification. How do we create sustainable post-conflict relationships? How does justice factor into peace, or into the sustainability of peace agreements? This course explores these questions by building on concepts and themes introduced in Mediation Theory (CRES 4222), and analyzing topics such as multilevel interventions and their challenges, second track diplomacy, and citizen dialogue. Reconciliation is a key factor in peace building – Voice, Acknowledgement, and Repair are specifically considered within this realm. Focus is also on the challenges presented by deep-rooted, protracted conflicts, allowing for more complete understanding of the situations in which third parties must operate.

CRES 4333 Resolving Contentious Public Issues (4 Credits)
The course covers collaborative governance work, including identity politics of contentious public issues. Natural resources disputes and the range of processes used to address these conflicts, including theories and concepts useful for understanding environmental and policy disputes, case studies, and world views that premise these disputes, provide insight into constructing interventions best suited to the characteristics and context of each contentious issue.

CRES 4400 Restorative Justice (2 Credits)
This course explores four leading Restorative Justice practices - Victim-Offender Mediation, Conferencing, Talking Circles, and Truth Commissions - to understand how needs of victims are addressed, and embracing notions of forgiveness, reconciliation and social healing within a set of principles based on social justice.

CRES 4410 Intractable Conflict (2 Credits)
This course is focused on factors that lead to intractability, along with strategies for violence prevention and conflict transformation. Conflict mapping and analysis, sources of intractability, and social, psychological, economic and political dimensions of intractable conflicts are examined.

CRES 4420 Negotiate Difficult Situations (2 Credits)
What should a negotiator do when the win-win approach fails and important interests are at stake? This course addresses a variety of tactics and ploys of unethical behavior and dirty tricks used in persuasion and bargaining. Students learn how to recognize and counter such techniques and practice in simulated and real world settings. Prerequisite: CRES 4221.
CRES 4810 Conflict Resolution Topics (2,4 Credits)
Fields of interest to Conflict Resolution Students such as negotiation, international conflict resolution case studies, restorative justice, conflict transformation, methods for conflict resolution research.

CRES 4820 Topics in Conflict Resolution (2,4 Credits)
Fields of interest to Conflict Resolution Students such as negotiation, international conflict resolution case studies, restorative justice, conflict transfos, methods for conflict resolution research.

CRES 4830 Topics in Conflict Resolution (2-4 Credits)
Fields of interest to Conflict Resolution Students such as negotiation, international conflict resolution case studies, restorative justice, conflict transformation, methods for conflict resolution research.

CRES 4840 Managing Organizational Conflict in the Workplace (2,4 Credits)
A broad study of conflict in organizations that may involve gender, race, age, disability and other issues, using lecture, case studies, group dialogue, and team projects to develop systems of management and evaluation.

CRES 4850 Creating Agreement (2 Credits)
Multilateral agreements are as complex as they are difficult to create. What are the key elements in this process? The history of such negotiations is one of both successes and failures. This course examines the development of criteria necessary for creating satisfactory and acceptable agreements involving multiple parties through a series of case studies that link negotiation theory and praxis.

CRES 4860 Public Forum Facilitation (2 Credits)
Diverse democracies require high quality communication and coordination to function well. In the current era, however, polarization, cynicism and apathy have become the norm, they obstructing possibilities for collaborative problem-solving. What are the best processes for making public decisions in a democracy? This course examines the tools of advocacy, debate, dialogue and deliberation through the lens of facilitation in public forums.

CRES 4870 Conflict Vulnerability Assessment (2 Credits)
This course guides students seeking to specialize in early warning and conflict prevention approaches at the community, societal, or country level through the contemporary scholarly literature, policy-related instruments and models that seek to define and measure “conflict vulnerability.

CRES 4880 Grant Writing: The Research Proposal and Conflict Analysis (2 Credits)
This course is designed to cover key elements of social research methods that are important principles of evidence-based policy, known for its rigor and precision in careful data collection - including quantitative and qualitative methodology analysis and expert opinion to build facts and findings from context-free, context rich and colloquial environments into a coherent whole - to support informed decision-making capability.

CRES 4961 Professional Development (0 Credits)
To develop the specialized knowledge, skills, attitudes, values, norms, and interest needed to perform professional roles in the Conflict Resolution practitioner community. It involves informal socialization including lessons learned incidentally through association with mentors, networking with practitioners, and observations of conflict resolution processes in all areas of life. Students gain an awareness of how self-image and activities play an active part in professional socialization.

CRES 4971 Practicum (4 Credits)
Students design, execute, and evaluate conflict resolution interventions. Student involvement in planning, implementation, reflection, and evaluation may look different in different contexts, but all elements are present in some form. Students are supervised by faculty with relevant theoretical expertise and practice experience.

CRES 4981 Internship (0-4 Credits)
CRES 4985 Internship (4-8 Credits)
CRES 4991 Independent Study (1-4 Credits)
CRES 4995 Thesis Research (1-4 Credits)

Construction Management (CMGT)

Courses
CMGT 4110 Preconstruction Integration and Planning (4 Credits)
This course examines the role of preconstruction services, team integration, and joint design planning in various Integrated Project Delivery (IPD) approaches. Various tools and techniques associated with preconstruction services and design planning from the proposal stage through the design stages of a project are considered.

CMGT 4120 Construction Planning and Scheduling (4 Credits)
Understanding and applying scheduling and control to construction projects is essential to successful construction management. Project scheduling emphasizes network-based schedules, such as critical path management (CPM), network calculations, critical paths, resource scheduling, probabilistic scheduling and computer applications. Project control focuses on goals, flow of information, time and cost control, and change management. Prerequisite: CMGT 4420.
CMGT 4155 Sustainable Development/LEED (4 Credits)
The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis is placed on how LEED project certification influences the overall construction project. Topics include LEED certification techniques for sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design. The following topics are covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student studies and analyzes how management and LEED techniques are applied to current construction projects.

CMGT 4170 Construction Accounting and Financial Management (4 Credits)
Construction financing studied from three perspectives: 1) capital requirements for the construction company, 2) cash flow requirements for project administration, and 3) asset acquisition requirements. Cross listed with CMGT 3170.

CMGT 4177 Environmental Systems and MEP Coordination (4 Credits)
A study of electrical and mechanical systems used in the construction of buildings. Course content includes system design, component selection and utilization for energy conservation, cost estimating or systems, coordination and management of installation. Specific systems included are electrical, air conditioning, heating, ventilation and plumbing, fire protection, life safety, communication, power systems and lighting. The course also considers coordination of MEP systems and explores emerging technology and environmental issues related to mechanical and electrical systems in buildings. Cross listed with CMGT 3177 and XRCM 4177.

CMGT 4200 Lean Construction Project Management (4 Credits)
This advanced course focuses on cutting edge lean tools and other productive strategies for the management of people and processes in the construction industry. The tools and strategies presented draw on the very successful Toyota Production System adapted to the construction industry. Lean construction methodologies such as the Last Planner System, the Lean Project Delivery System, and Integrated Project Delivery are discussed. Topics also include sustainability and the emerging interest in “green construction,” as well as the use of Building Information Modeling to enhance the development and management of integrated projects. This course also looks at the human element in relation to motivation, safety, and environmental stresses. A number of case studies are presented to highlight best practices in Lean Construction Project Management. Prerequisite: CMGT 4480.

CMGT 4230 Design Management and Schedule Control (4 Credits)
This course examines the various strategies and techniques associated with managing the design delivery process to align with the construction budget and schedule needs in an integrated fashion. Design planning, scheduling, and resource allocation are considered along with design value determination and management of the design-construct interfaces.

CMGT 4250 Construction Job Site Management (4 Credits)
This course addresses how a successful construction project is managed and administered from design through construction to closeout. Emphasis will focus on how to unite the key stakeholders (contractors, architects, engineers, etc.) to provide them with a workable system for operating as an effective project team. The latest technology, laws and regulations associated with contract administration will be presented. Topics pertinent to each stage of a project are introduced and discussed as they occur throughout the life of the project. Numerous real-world examples will be utilized throughout the course. Various electronic project administration tools and techniques will be demonstrated including Building Information Modeling.

CMGT 4310 Cost Modeling and Trend Management (4 Credits)
This course covers various approaches to construction cost estimating at the conceptual stages of planning and design through detailed construction. Students learn parametric estimating techniques and how they are applied to construct and predict reliable budgets at the earliest stages of design. Students build cost models and refine those models with greater detail as design develops through a project. Building information modeling is introduced and used to create massing models to demonstrate design impacts on project costs. Cost trending techniques are presented to manage, monitor and document project performance relative to cost.

CMGT 4320 Architectural Planning and Design Management (4 Credits)
This course introduces students to the significant value that architecture brings to real estate and the built environment and the various services and professions associated with it. Students will be introduced to principles, protocols and the planning process related to the design function and the link between the architect’s vision and the finished physical structure. Students will be introduced to design, thinking, theory and application. Student will learn to read and interpret the various graphical and written construction documents as well as know how they are developed and what information they contain. Architectural, structural, mechanical, electrical, plumbing and civil drawings and specifications are covered. The business model for design services will be explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction.

CMGT 4401 Residential Practicum I (4 Credits)
A three course sequence designed to emphasize the practical application of the theories and concepts of residential development. The courses provide a capstone experience for seniors. Students are expected to apply their knowledge of general business, real estate and construction management practices by forming a student business entity, acquiring land, building and selling a residential property. Students will apply accounting, finance, marketing, real estate and construction management techniques in the development of a single family residence. Cross listed with CMGT 3401.

CMGT 4410 Construction Building Systems (4 Credits)
A survey of residential and commercial construction materials, means, and methods associated with the various structural and architectural systems used to design and construct buildings. Project plans and specifications are incorporated to teach the basic sequencing and overall construction process. The influence of sustainability in construction is introduced. This class will also have an off campus, experiential learning lab associated with it.
CMGT 4420 Construction Estimating (4 Credits)
This course is designed to provide the student with the theory, principles and techniques of quantity analysis (take-off), labor determinations, overhead and profit analysis. It offers insight into the construction estimating process. The role of the estimator, types of estimating, CSI divisions, bid/contract documents, change order pricing, design/build projects and estimation compilation will be introduced. Discussions regarding the cost/benefit of sustainable materials and typical construction materials will enhance the requisite knowledge of construction estimating. Cross listed with CMGT 3100, XRCM 4420. Prerequisite: CMGT 4320 and CMGT 4410.

CMGT 4438 Legal Issues & Risk Management (4 Credits)
General contract and real estate law, including property rights, title concepts, deeds, purchase contracts, law of agency, environmental issues and disclosures, basics finance concerns, tax law, landlord-tenant law, construction contracts, indemnity agreements, rights and remedies of property owners, contractors and subcontractors issues, and various areas of liability for real estate practitioners and property owners.

CMGT 4480 Const Project Management (4 Credits)
Principles and techniques of construction project management, use of systems analysis, internal and external procedures, planning, programming, budgeting and staffing, controlling major projects, emphasis on construction scheduling techniques with case application. Cross listed with CMGT 3120.

CMGT 4490 Residential Development (4 Credits)
A seminar-style capstone course that integrates various aspects of the construction management curriculum. Emphasis is on topics in the construction and development industries. Cross listed with CMGT 3190.

CMGT 4560 Relational Constructing and Risk Mitigation (4 Credits)
Relational contracting is a construction project delivery framework for multidisciplinary, integrated projects that focuses on aligned goals, high performance, innovation, mutual respect, open communication and a "no blame" culture between Client, Contractor, and Design Team. This approach to contracting, also known as Alliance Contracting, is becoming more prevalent in the United States and is often applied when using integrated project delivery systems. This course compares and contrasts transactional contracting methods with relational contracting methods and the influences on the project team and projects outcomes. Relational contracting is also considered in the context of risk mitigation and project optimization.

CMGT 4580 Strategic Leadership and Integrated Teaming (4 Credits)
This course examines the unique leadership skills and talents associated with leading and facilitating multidisciplinary, integrated design and construction teams. The focus of the course is on applying strategic intelligence and a system of leadership in the development of integrated solutions for the built environment. This leadership model is driven by a compelling purpose and supported by people who share practical values and have excellent processes, to look into the future, create a vision, and bring that vision to reality. Effective strategies for supporting high performance teams are explored.

CMGT 4700 Topics in Construction Mgmt (1-4 Credits)
CMGT 4970 Construction Mgmt Internship (0-10 Credits)
CMGT 4991 Independent Study (1-10 Credits)
CMGT 4992 Directed Study (1-10 Credits)
CMGT 4995 Independent Research (1-10 Credits)

Continuous Enrollment (CENR)

Courses

CENR 4500 Continuous Enrollment-Master P (4 Credits)
CENR 4600 Continuous Enrollment-Master (8 Credits)
Continuous Enrollment 4600 registration permits graduate students to maintain full-time status with the University and to use University resources; including library, e-mail, lab access, student health insurance, and reduced rates at the Coors Fitness Center. It is only for students who have completed all their course work and is allowed only when a student is pursuing full-time academic work/research necessary to complete a degree. Permission to enroll for Continuous Enrollment is granted for up to one academic year beginning in the fall quarter. Students requiring CE must complete and submit the proper permission form prior to registration. CENR 4600 is for master’s level and EdS students, including those with approved time extensions for completion of their degrees and who are eligible for financial aid.

CENR 4700 Continuous Enrollment-MAext (0 Credits)
Continuous Enrollment 4700 registration permits graduate students to maintain active status with the University and to use university resources; including library, e-mail, lab access, student health insurance, and reduced rates at the Coors Fitness Center. It is only for students who have completed all their course work and is allowed only when a student is pursuing academic work/research necessary to complete a degree. Permission to enroll for Continuous Enrollment is granted for up to one academic year beginning in the fall quarter. Students requiring CE must complete and submit the proper permission form prior to registration. CENR 4700 is for master’s level and EdS students who have an approved extension of time for completion of their degree program, but who are no longer eligible for financial aid because they are past the 7-year master’s level (6 years for MSW), or 8-year EdS financial aid eligibility limit. CENR 4700 shows as 0 credit hours and does not confer loan eligibility or loan deferment.
CNP 5600 Continuous Enrollment-PhD (8 Credits)
Continuous Enrollment 5600 registration permits graduate students to maintain full-time status with the University and to use university resources; including library, e-mail, lab access, student health insurance, and reduced rates at the Coors Fitness Center. It is only for students who have completed all their course work and is allowed only when a student is pursuing full-time academic work/research necessary to complete a degree. Permission to enroll for Continuous Enrollment is granted for up to one academic year beginning in the fall quarter. Students requiring CE must complete and submit the proper permission form prior to registration. CENR 5600 is for doctoral level students, including those with approved time extensions for completion of their degrees and who are eligible for financial aid.

CNP 5700 Continuous Enrollment-PhDext (0 Credits)
Continuous Enrollment 5700 registration permits graduate students to maintain active status with the University and to use university resources; including library, e-mail, lab access, student health insurance, and reduced rates at the Coors Fitness Center. It is only for students who have completed all their course work and is allowed only when a student is pursuing academic work/research necessary to complete a degree. Permission to enroll for Continuous Enrollment is granted for up to one academic year beginning in the fall quarter. Students requiring CE must complete and submit the proper permission form prior to registration. CENR 5700 is for doctoral level students who have an approved extension of time for completion of their degree program, but who are no longer eligible for financial aid because they are past the 10-year financial aid eligibility limit. CENR 5700 shows as 0 credit hours and does not confer loan eligibility or loan deferment.

Counseling Psychology (CNP)

Courses

CNP 4303 Risk Resiliency and Prevention (3 Credits)
This course examines the history and theoretical bases of resiliency research and the characteristics of children at significant risk of delays, disorders, and low-incidence disabilities. Participants obtain practical information regarding the assessment, identification, amelioration, facilitative responses, and intervention in school and community settings for these populations. The course moves beyond a pathology approach that focuses on the deficits of children and families to an empowerment perspective that focuses on strengths. The course is grounded in child development research and educational and family systems theory as well as psychopathology and content associated with exceptional children. Prevention principles, curriculum, and policy agendas are discussed that build on a model of collaboration between and among disciplines in community and school settings.

CNP 4312 Counseling Psychology: Learning Application and Analysis (3 Credits)
Learning theories and the principles of behaviorism are active in shaping the individual person, groups of people, and society as a whole. In realizing which actions lead to desirable outcomes and which fail to do so, we alter or change our behaviors accordingly. Through the examination of learning theories and applied behavioral principles, we will explore how behaviors develop, especially those that may be maladaptive or related to psychological disorders, and how clinicians can intervene to enact effective behavior change. Learning will be examined at three levels: the observable or behavioral level, the cognitive process level, and the physiological level.

CNP 4342 Crisis Intervention and Prevention (3 Credits)
This course provides knowledge about crisis prevention and intervention theory and effective strategies for use in direct and indirect services for children and staff in schools and in practice with children. Emphasis is on application to child-centered and school-based crises such as bullying, child abuse, death, loss and grief, trauma, community and school-based violence, threats, and suicide. The course provides students with basic knowledge and skills for crisis intervention in school settings.

CNP 4641 Adolescent Development (3 Credits)
Physical, cognitive, emotional, social, and moral development in adolescents with emphasis on interaction of various aspects of development within an environmental context; focus on normal development with exploration of special problems of adolescents, e.g., substance abuse, teen-age pregnancy, eating disorders and delinquency; critical study, and discussion of literature on adolescence and interviews with adolescents.

CNP 4642 Adult Development (3 Credits)
Literature on normal development of adult thinking and problem-solving processes and the self-esteem. Physiological changes and relationship between cognitive development and developmental tasks of adults included.

CNP 4645 Lifespan Development (5 Credits)
Survey of the principles of development from conception to adulthood, emphasizing biological, environmental, and cultural factors affecting development.

CNP 4700 Counseling Theory (5 Credits)
Basic counseling theories and philosophical principles as a foundation for professional training including history, concepts, techniques and trends.

CNP 4701 Advanced Seminar: Counseling Theory (3 Credits)
Focus on advanced practice issues and (doctoral students only) integration of theory and practice.

CNP 4702 Introduction to Assessment (5 Credits)
This is a biweekly course designed to give students an introduction to the essentials of psychological testing, assessment, and report utilization. This course will provide students with exposure to basic objective tests, projective tests, personality tests and other diagnostic techniques.
CNP 4704 Psychological Assessment (5 Credits)
Administration, scoring and interpretation of objective and projective personality-assessment techniques, the DSM IV, diagnostic categories, report-writing skills, ethical standards for testing. Lab fee required. Prerequisite: counseling or school of psychology Ph.D. student or instructor approval.

CNP 4705 History and Systems of Psychology (3 Credits)
Historical and philosophical basis of modern psychological theories; basic issues as related to major school of psychology.

CNP 4706 Cognitive Assessment (5 Credits)
This course provides students in Counseling Psychology with experience in individual intelligence, learning and memory, and neurocognitive screening test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive measures, with particular emphasis on the Wechsler Scales. Contemporary issues pertinent to the assessment of intelligence are covered. Emphasis is placed on synthesizing and integrating information from cognitive assessment with other sources to produce effective intervention and therapeutic recommendations. Issues regarding the use of such tests are discussed, as well as appropriate use in agencies and clinical practice. Lab fee required.

CNP 4707 Introduction to Integrated Health (3 Credits)
This course is designed to provide students with an introduction to issues in the practice of integrated health psychology, including the topics of interprofessionalism, diagnosis and assessment, treatment, treatment adherence, and consultation. Students will learn about the roles held by behavioral health providers, particularly in the primary care medical setting. Emphasis is placed on evidence-based and culturally competent practice in the integrated health environment.

CNP 4710 Career Counseling (5 Credits)
This course is designed to facilitate student development of knowledge, skills and competencies to engage in counseling clients with career issues; utilize occupational/career resources including technology-based resources and assessments; examine theories of career development and decision-making; develop the ability to evaluate and implement appropriate assessments; collaborate with clients in identifying personal and career goals; and organize and implement program planning and techniques and do so in a diversity of work settings. Lab fee required.

CNP 4711 Advanced Group Counseling (3 Credits)
Advanced group course that concentrates on advanced leadership skills, leadership styles, and leader methods geared toward conducting counseling groups with diverse populations for different problem areas. This class will also focus on the theory and research on group counseling and psychotherapy.

CNP 4712 Grief and Loss (3 Credits)
This course is an opportunity for students to examine their own ideas about grief and loss and come to a clearer understanding of their meaning, with the goal of using this personal growth to facilitate the development of professional and clinical skills. The course will examine current theory, clinical applications, and research implications with an emphasis on personal exploration and cultural considerations.

CNP 4713 Multicultural Issues in Vocational Psychology (3 Credits)
This elective seminar course in Multicultural Vocational Psychology will critically examine existing career theory, research, and interventions from a multicultural perspective. Students will be exposed to cutting-edge literature and explore the future of multicultural vocational psychology. Issues pertaining to: gender, race, ethnicity, sexual orientation, gender identity, social class, aging, ability status, and immigration will be discussed in depth as they relate to career development and the psychology of working.

CNP 4720 Group Counseling Theory (5 Credits)
This course is designed to introduce graduate counseling students to group counseling theory, research, and practice. This course will focus on group theory and research but will also provide instruction and experiences in a variety of group techniques. The course is designed for students in counseling psychology, school psychology, and other related fields who work with persons in a group context. This course focuses on the entire age range from children, adolescents, and adults. This course aims to define therapeutic groups broadly. Students will learn about group theory, research, and techniques through class lectures and discussion, group demonstrations, videotapes on group topics, reading assignments, a group presentation, an experiential task group, a required paper related to the task group presentation, and other required assignments.

CNP 4730 Research Methods and Program Evaluation (5 Credits)
This course is designed to provide an introduction and overview of comprehensive program development and evaluation, and research methods. The course will provide direction on the following topics: causation, research hypotheses, independent and dependent variables, sampling, internal and external validity, experimental, quasi-experimental, single-subject, causal-comparative, and correlational designs, measurement and data collection procedures, types of instrumentation and methods for determining reliability.

CNP 4740 Basic Counseling Techniques (3 Credits)
Basic counseling and interviewing skills; emphasis on building counseling relationships and facilitating client’s self-exploration; skills of empathy, advanced empathy, self-disclosure, confrontation and immediacy.

CNP 4741 Int Counseling Techniques (3 Credits)
Sample of counseling techniques and effectiveness with different types of clients. Prerequisite: CNP 4740.

CNP 4743 Fieldwork in Counseling (1 Credit)
Introduction to the field of counseling with special emphasis on practicum placement. Prerequisite: admission to the MA program in counseling psychology.

CNP 4750 Counseling Psychology Beginning Practicum (1-4 Credits)
Supervised practice in counseling for master’s students. Prerequisite: CNP 4740, and be a counseling psychology student.
CNP 4751 M.A. Internship (1-5 Credits)
Yearlong, 600-hour supervised field practice for second-year master’s students with weekly seminar. Prerequisites: CNP 4750 and be a counseling psychology master’s students.

CNP 4752 Counseling Psychology Advanced Practicum I (3 Credits)
Supervised practice in counseling for doctoral students. Prerequisites: CNP 4750 or prior practicum, and be a counseling psychology student.

CNP 4753 Counseling Psychology Advanced Practicum II (1 Credit)
Group supervised practice in counseling for second-year doctoral students with emphasis on process and countertransference issues. Prerequisite: CNP 4752.

CNP 4754 Couns Psych: PhD Internship (1 Credit)
Meets 12-month internship requirement in counseling psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.

CNP 4755 MA Clinic (2-5 Credits)
MA clinic is a required course for all students in the 90-credit Clinical Mental Health Counseling Concentration.

CNP 4756 PhD Counseling Clinic (1 Credit)
On-campus, advanced-experience counseling of clients from the community with close supervision and observation. Prerequisite: Doctoral student in counseling psychology.

CNP 4758 PhD Field Experience (8 Credits)
Required 12-month, 40-hour-per-week internship for doctoral students in Counseling Psychology. Registration for this course indicates full-time enrollment. This course is not graded. Prerequisites: completion of comprehensive examination and dissertation proposal. Department approval is required for registration. Fall quarter enrollment must be done in conjunction with CNP 4754.

CNP 4760 School Counseling Practicum (1-4 Credits)
A minimum of 100 hours supervised practice in School Counseling for Master’s students in the School Counseling Concentration. Students must be supervised by a licensed school counselor. Enforced Prerequisites: CNP 4740 with a minimum grade of C.

CNP 4761 School Counseling Internship I (1-4 Credits)
100-hour supervised field practice in a school setting for Master’s students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

CNP 4762 School Counseling Internship II (1 Credit)
A minimum of 600-hour supervised field practice in a school setting for master’s students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

CNP 4767 Relationship and Psychotherapy Research (3 Credits)
Students engage in inquiry through a critical analysis of major theoretical approaches to counseling and psychotherapy based on various research methods. Readings and class discussions include an extensive review of research literature associated with couple and individual psychotherapy. The use of actual case studies addresses the relevance and application of each theoretical approach to real world problems presented by clients. Students develop awareness of the importance of an advocacy role through the application of clinical practice to the unique needs of diverse and special populations in particular through the study of multicultural orientation.

CNP 4768 Counseling Psychology: Social Psychology (3 Credits)
Social Psychology is designed to provide students a broad and general understanding of social psychology. The course will cover aspects of self, cultural dynamics, group processes, emotional/cognitive aspects of social behavior.

CNP 4769 Cognitive Behavioral Therapy (4 Credits)
Cognitive Behavior Therapy (CBT) is a treatment approach that incorporates a multitude of evidence-based strategies to construct an individualized and comprehensive treatment plan for a wide variety of mental/behavioral disorders. CBT has been extensively investigated in both research and applied setting. CBT offers foundational knowledge and skills to provide an active, client involved approach to resolving individual and family challenges. CBT is structured, goal-directed, and focuses directly on client problem areas. Students will practice and develop the skills necessary to implement CBT techniques and strategies.

CNP 4770 Counseling Psychology Seminar: Research (3 Credits)
Review of current process and outcome research in counseling and psychotherapy; substantive issues, including client and therapist variables as well as methodological issues and experimental designs. Prerequisite: doctoral student.

CNP 4772 Diversity Seminar: Psycho-Social Issues (1-5 Credits)
Series of courses to analyze social and psychological impacts of oppression related to minority status, socioeconomic status, gender and family configurations; taught using an awareness and knowledge approach; implications for counseling; series includes general seminar and series of 1 credit follow-up seminars on particular topics, e.g., American Indian mental health, African-American mental health and women's mental health. Prerequisites: CNP 4773 and students must take the 3-credit general seminar prior to the individual seminars.
CNP 4773 Diversity: Multicultural Counseling Psychosocial Issues (5 Credits)
The purpose of this course is to provide an overview of multicultural and social justice issues in the United States. While this is not a skills training course, implications for multicultural counseling skills will also be discussed. Issues and concepts related to gender, race, ethnicity, sexual orientation, gender identity, and social class will be examined within a framework of privilege and oppression. This course is designed to present a general introduction to multicultural and social justice issues as well as culturally responsive counseling. Due to the extensive amount of material in this area, only some selected issues and topics will be presented. Students interested in gaining more specific, or in-depth knowledge of topics covered in this class may pursue the one-credit Counseling Psychology diversity seminars offered in the Counseling Psychology program. Significant emphasis will also be placed on experiential learning and the application of students' awareness and knowledge accrued throughout the quarter.

CNP 4774 Counseling Psychology Seminar: LGBT Counseling (2 Credits)
Sexuality and gender are an integral part of human existence and are understood through the lenses of psychology, biology, culture, politics, and religion. As a result of a variety of converging factors including societal oppression, sexual and gender minorities are at greater risk for depression, anxiety, suicidality, substance abuse, and trauma than same-aged peers. Mental health professionals are vital in caring for these diverse populations and are well-positioned to break cycles of oppression both within therapy and through advocacy. The purpose of this class is to increase personal awareness, increase knowledge, and build greater clinical competency in working with sexual and gender minorities.

CNP 4775 Counseling Psychology: Cognitive & Affective Basis of Behavior (3 Credits)
The seminar is intended to enhance students' understanding of the fundamental psychological concepts in cognitive and affective sciences and of the relevance of these theories and concepts to clinical practitioners. This seminar will provide weekly lectures to engage students in core issues surrounding the scientific study of affective and cognitive processes involved in human behavior. Academic inquiry and dialogue will also be fostered through group presentations and discussions of peer-reviewed journal articles and book chapters.

CNP 4776 Family Counseling (3 Credits)
Introduction to family counseling, including survey of major theories and research, and in-class demonstrations of techniques. Prerequisite: advanced master's or doctoral student.

CNP 4778 Health Psychology (3 Credits)
Overview of rapidly expanding field of health psychology; wide variety of topics dealing with role of psychological processes in health and health care; includes impact of stress on physical health, and psychological factors that determine health-related behavior, psychological aspects of delivery of health care, and assessment issues in health psychology.

CNP 4780 Counseling Psychology Seminar: Supervision (3 Credits)
Introduces literature and research on counseling supervision, including awareness of individual differences; provides experience supervising master's level counselors. Prerequisites: doctoral student and CNP 4752.

CNP 4781 Counseling Psychology: Introduction to Psychodynamic Theory (4 Credits)
This class will explore psychodynamic theory, with an emphasis on creating case formulations and practicing an analytic position in the treatment process. We will be focusing primarily on individual treatment with adults in outpatient settings using a developmental lens. You will be encouraged to develop and deepen your capacities for curiosity and self-reflection, in part as they relate to the exploration of countertransference reactions and meaning making. You will be learning both professionally and personally, as they mutually influence one another, what it means to be a psychodynamic clinician.

CNP 4782 Counseling Psychology: Mindfulness, Psychotherapy and Trauma (3 Credits)
The aim of this course is to provide students with the knowledge on major theories and research findings in the field of mindfulness and its relation to modern psychotherapies. The students will learn the foundations of Buddhist psychology and its similarities with and differences from the major Western modalities of psychotherapy, such as psychodynamic, cognitive-behavioral and humanistic.

CNP 4783 Counseling Psychology: Eating Disorders (3 Credits)
This class will offer the opportunity to learn about the diagnosis, assessment, theory, and treatment of eating, weight and shape disorders. While working with clients with eating disorders (EDs) can present unique challenges, we will explore the perception/stigma that these clients are notoriously difficult to treat. We will focus on the importance of integrative treatments, and the role of behavioral, symptom focused techniques in addition to psychodynamic approaches that explore underlying characterological and developmental issues. This class will also consider the impact of culture and media on body image, and the effects of these messages on personal beliefs, attitudes and behaviors.

CNP 4784 Psychopathology (5 Credits)
This course is designed to provide students with a thorough understanding of assessment, diagnosis and classification of psychological abnormalities. Psychopathology is typically characterized by deviance from cultural norms, personal distress, danger to oneself or others, or an inability to function in daily life. We will explore the empirical basis for understanding psychopathology as defined in the DSM 5, as well as, the inherent limitations of the current diagnostic system. Interactions of biological, social, psychological, cultural, political, and environmental factors will be stressed, particularly as they contribute to the development and maintenance of mental disorders. Cultural perspectives on each disorder will be addressed every week to attend to issues of social justice and multiculturalism related to diagnosis.

CNP 4787 Motivational Interviewing (4 Credits)
Motivational Interviewing is a client-centered collaborative style of therapeutic relationship designed to strengthen a person’s motivation for and commitment to change. This class will facilitate skill development in managing client ambivalence, eliciting change-talk and honoring the client’s autonomy regarding taking steps toward a commonly agreed upon goal.
CNP 4788 Physiological Psychology (3 Credits)
Physiological Psychology is designed to expose students to the field of physiology and highlights its reciprocal relationship with behavior. We will cover topics including the structure and function of the nervous system and areas of research relevant to clinical psychology (e.g., substance abuse, mental illness, and biological rhythms). Given the limited time devoted to each area, more in-depth coverage should be pursued by interested persons.

CNP 4789 Pharmacology of Addictive Behavior I and II (4 Credits)
This class provides a solid base of knowledge about the drugs of abuse including what occurs physiologically with drug use and other addictive behaviors. Additionally, this course explores neuroscience and genetic research on addiction to better understand the changes in the brain that underlie drug use and addictive behaviors.

CNP 4790 Counseling Psychology Seminar: Ethics (3 Credits)
Professional ethics in practice and research in counseling psychology, including informed consent, confidentiality, clients’ rights, psychologists’ obligations, etc.; basic APA documents. Prerequisite: doctoral student.

CNP 4791 Counseling Psychology Seminar: Counseling Couples (3 Credits)
Introduction to couples counseling, including survey of major theories and research.

CNP 4792 Pro-Seminar in Counseling Psychology (1 Credit)
Introduction to field of counseling psychology required for all first-quarter doctoral students. Prerequisite: counseling psychology doctoral students.

CNP 4794 Counseling Psychology Seminar: Special Topics (1-15 Credits)
Variety of special topics on research and practice in counseling psychology; readings, lectures and projects to provide an in-depth understanding of topics, which vary from to year and cover areas such as counseling women, counseling in business and industry, advanced group therapy, time-limit counseling, vocational counseling, etc.

CNP 4795 Master of Arts Counseling: Legal and Ethical Issues (5 Credits)
Introduction to ethical and legal issues in school and agency counseling for master’s students. Prerequisite: Master’s student in Counseling Psychology.

CNP 4797 Counseling Addictive Behavior (4 Credits)
Introduction to assessment, treatment and outcome evaluation of chemical and nonchemical addictive behaviors. Requirements include abstinence from a “compulsive” behavior; journaling about one’s cognitive, emotional and behavioral reactions during the abstinence period; attending 12-step meetings; participating in a quasi-12-step in class meeting; critiquing a film depicting dynamics of an alcoholic family.

CNP 4799 Infectious Diseases in Addictive Behaviors (2 Credits)
Drug and alcohol abuse and infectious diseases go hand in hand. This class explores the high risk for contracting and spreading infectious diseases among drug abusers. This class helps prepare students to identify such diseases, determine client risk for infection, and educate students about disease prevention and treatment options.

CNP 4800 Consultation (1 Credit)
This course is designed to teach the basic theories of psychological consultation that can be used to guide practice in a variety of settings. Students learn to differentiate process, collaborative and expert consultation. The class format includes presentations from practitioners working in school, medical, forensic, and business settings. In addition, students also learn about the ethical principles that guide their practice and to also become sensitive to how their work with diverse cultural backgrounds may be perceived. Prerequisite: must be enrolled in the Counseling Psychology doctoral program.

CNP 4991 MA Independent Study (1-10 Credits)
CNP 4992 Directed Study (1-10 Credits)
CNP 4995 Research - M.A. Thesis (1-10 Credits)
CNP 5991 PhD Independent Study (1-10 Credits)
CNP 5992 Directed Study (1-10 Credits)
CNP 5995 Dissertation Research (1-20 Credits)

Curriculum and Instruction (CUI)

Courses

CUI 3055 Human Rights & Education (3 Credits)
Emphasis on human rights, both domestic and international, for the field of education; study of writings and research of leading educators encompassing concepts of human rights; focus on educational issues involving human rights, the Right of the Child, work of UNICEF, and implications of human rights for educational practice. Cross listed with CUI 4055.
CUI 3801 Current Issues in K-12 Education (3 Credits)
This course introduces prospective K-12 educators to the contemporary social, political, pedagogical and curricular context of schooling. Major areas of analysis and discussion will include: gender, social class, cultural competency, linguistically diverse education, funding, sexual orientation, educational policy, and diversity. The course will attempt a critical, reflective, and balanced view of schooling for the purpose of helping students develop the ability to interpret and respond to the challenges associated with teaching in modern schools. Coursework will be paired with a service-learning field experience in an urban educational setting characterized as linguistically and culturally diverse.

CUI 3802 Teacher Identity (3 Credits)
The most effective teachers combine the outer technical aspects of teaching (lesson plans, differentiated instruction, culturally responsive pedagogy, and content knowledge) with the inner non-technical elements (passion, heart, beliefs, and calling). In this course we examine the "inner-life" of the teacher with an emphasis on how understanding the themes of teacher selfhood impact the technical aspects of teaching. Key questions to examine include the following: How do the gifts, talents, and inner capacities of the teacher impact and influence communication and learning in the classroom; why do I teach; what will continue to fuel my passion for teaching; and what vision of the future do I hold for schools? Students should expect to complete 10-20 hours per week of service learning in area education settings.

CUI 3990 Service Learning in Community (1-4 Credits)
This course provides students with the opportunity to serve in the community and to reflect on their service experiences in a classroom setting through structured and meaningful reflection sessions. Students will examine a variety of topics, including the nature and significance of service-learning, motives for service, community action as a means for positive social change, and the relationship between service-learning, social justice, and civic responsibility. Cross-listed with AH 3580, SS 3580.

CUI 3991 Independent Study (1-10 Credits)
CUI 3992 Directed Study (1-10 Credits)

CUI 3995 Urban Education (5 Credits)
Historical, political and sociological influences that shape and socially construct urban schools. Characteristics, opportunities, and needs of students in urban schools and examples of current effective practice.

CUI 3996 Urban Youth Development (5 Credits)
This course examines urban youth development from several perspectives, including the social-psychological, the cognitive/creative, the physical and health-related, and the philosophical. Cross listed with CUI 3996.

CUI 4020 Introduction to Curriculum (3 Credits)
Introduces curriculum theory and curriculum as a field of study; includes study of issues such as standards, cognition, diversity, ecology, and social justice, among others.

CUI 4021 Models of Curriculum (3 Credits)
Reflects on ways various curriculum orientations may resolve modern issues or problems, with students' independent pursuit of one or two orientations in depth; orientations examined include cognitive pluralism, developmentalism, rational humanism and reconceptualism, among others. Recommended prerequisite: CUI 4020.

CUI 4022 Curriculum Theory into Practice (3 Credits)
Helps students move from theoretical concepts and decisions involved in curriculum development to actual construction of curricula; survey of potential components encompassed in a variety of curricula followed by participation in designing a curriculum as a member of a student team; final facet requires students to develop a curriculum. Prerequisites: CUI 4020 and 4021 or instructor's permission.

CUI 4027 Implementing Curriculum: A Practicum (3 Credits)
Opportunity to experience authentic role of curriculum on site; work at the Denver Zoo, the Denver Museum of Nature and Science, other museums and school sites; to develop and implement curriculum.

CUI 4028 Literacy Instruction and Assessment (3 Credits)
Organized around a developmental continuum for literacy acquisition. Addresses best research-based practices that allow teachers to assess students' abilities and to select appropriate instructional strategies leading to communicative competence for all children.

CUI 4029 Issues in Literacy (3 Credits)
Prepares educators to participate thoughtfully and critically in often-contentious discourse about literacy. Examines the research base that supports sound policy and practice regarding literacy instruction for all children.

CUI 4031 Teaching and Learning (3 Credits)
Takes a disciplinary approach (e.g., sociological, historical, philosophical, and anthropological) to the analysis of teaching and learning environments in response to broad questions such as: What are effective teaching and learning environments? For whom and under what circumstances? How can we create such environments?.

CUI 4032 Analysis of Teaching (3 Credits)
Provides a systematic introduction to the research base that characterizes effective practice and to the array of research methods that can be employed to study teaching and teacher development.

CUI 4033 The Practice of Teaching (3 Credits)
Course explores personal, conceptual, and empirical understandings of "teaching practice." Topics addressed have included: metaphors for teaching practice, best practices for equity and social justice, professional development practices.
CUI 4034 Curriculum & Cultural Context (3 Credits)
This course will address the influence of cultural, political, sociological, and economic factors on curriculum at the instructional, situational, societal, and ideological levels. Students should be interested and willing to explore these issues through readings and discussion. We will be exploring various perspectives, including our own, which inform the discussion on this critical area of education.

CUI 4035 e (3 Credits)
In this course, students will examine issues related to democracy, power, and privilege in public education. Specifically, students will learn about how anti-democratic groups are working to undermine public education in the U.S. Students will explore White privilege, racism, classism (and other "isms") and the impact they have had and continue to have in public school settings, particularly at schools that serve historically marginalized and oppressed students. Theoretical frameworks such as Critically Relevant Teaching and Critical Race Theory will be introduced in this class as well.

CUI 4038 Urban Youth Development (3 Credits)
This course examines urban youth development from several perspectives, including the social-psychological, the cognitive/creative, the physical and health-related, and the philosophical. We will explore the emerging field of youth development in an urban context, integrate theory and practice, and analyze youth policies and their implications. Cross listed with CUI 3996.

CUI 4039 Transformational Teaching and Learning (3 Credits)
This course takes an exploratory approach to the analysis of transformation teaching and learning. It asks questions such as "What are effective teaching and learning environments?" "For whom and under what circumstances?" "How can we create such environments?" We will explore how patterns of activities in the classroom can be designed to achieve simultaneously all of the major goals of educational reform. The term classroom is not restricted to the physical classroom space but "classroom" in the sense of the organized instructional activities that can extend outside of the school building into the community.

CUI 4041 School and Curricular Reform (3 Credits)
A look into school reform movements, why most fail and only a few succeed.

CUI 4042 Instructional Design & Web Development for Educators (3 Credits)
Introduces presentation software, basic HTML, and web page development software. Focuses on various Learning, Instructional Design, and Learning Style Theories and how they relate to the development of technology supported pedagogy. Students will create individualized instructional web pages for use in practice.

CUI 4043 Development of Technology Enhanced Educational Environments (3 Credits)
Utilizing emerging Learning Theories and complex Instructional Design Theories, students will move into advanced educational web page development including designing with style sheets and layers. Several customized technology mediated lessons or professional projects will be created for use in practice. Various tools, designed to enhance learning environments, will be explored.

CUI 4045 Technology Practicum (2 Credits)
Under the supervision of the professor, students will generate technological applications relevant to their own work settings using ideas and concepts learned in CUI 4040.

CUI 4046 Technology Leadership (3 Credits)
Explores the role of ethics, values, social, legal, and power issues associated with technology in education. Analyzes how technology is transforming learning, equitable distribution of information, and the implications for providing optimal education to diverse learning populations.

CUI 4050 Curriculum & Instr Rsrch Sem (0-3 Credits)
Students write proposals and learn about current relevant research in curriculum. Students learn about the proposal and dissertation process as well as current research in curriculum.

CUI 4051 Seminar in Dissertation Organization and Design (1-5 Credits)
Individualized assistance in developing the dissertation topic, issue, problem; guidance in preparation for proposal orals and application to the Institution Review Board (IRB), direction for dissertation chapter organization, writing and completion. This seminar is targeted for the student who needs support in completing the dissertation.

CUI 4055 Human Rights & Education (3 Credits)
Emphasis on human rights, both domestic and international, for the field of education; study of writings and research of leading educators encompassing concepts of human rights; focus on educational issues involving human rights, the Rights of the Child, work of UNICEF; and implications of human rights for educational practice. Cross listed with CUI 3055.

CUI 4058 Teacher as Researcher (3 Credits)
Emerging philosophical and methodological issues that arise when school practitioners undertake research within their own sites; range of research traditions including quantitative, statistical research and qualitative methodologies; mastering relevant skills and accessing resources for students to be better prepared to conduct their own inquiries and understand and solve problems.
CUI 4070 Clinical Internship (1-9 Credits)

CUI 4100 Sociocultural Foundation of Education (3 Credits)
Examination of the expanded conceptions of diversity to include difference based on ethnicity, biethnicity, and multietnic identity; social class, differently-abled, age, gender, and sexual orientation; implications of terrorism on America for ethnically diverse populations in our schools and on educational establishments around the world; attention to the interactions of ethnicity with social class and gender identifications in the school setting; implications of the learning of another language as well as the impact of language diversity in our schools; consideration of new conceptual frameworks for multicultural and diversity education for educators for the 21st century.

CUI 4130 Philosophy of Education (3 Credits)
Focuses on 3-4 philosophers and examines the contributions their philosophical ideas have on education. Philosophers studied have included John Dewey, Cornel West, Nel Noddings and Maxine Greene.

CUI 4131 Spirituality in Education (3 Credits)
This course will explore the role of spirituality in education from both the student and educator point of view through an examination of the big questions that are held close to the heart; the ones that guide us toward meaning making in the world. The primary goal of the course is to plumb the depths of spirituality, a deep sense of inner meaning making, that calls us toward a particular profession. The course will focus on the interface between spirituality in education through the lenses of curriculum and instruction.

CUI 4150 Sociology of Education (3 Credits)
Sociology of education emphasizes the importance of the process of socialization on education, the interactions of ethnicity, gender, and social class in education, the formal roles and statuses within the bureaucracy of the school, the informal or "hidden" curriculum, the system of higher education and comparative views of educational systems around the world, and the impact on teaching and schools in an era of terrorism. Objectives of this course: to apply major concepts and theories in sociology to the institution of education; to interpret the applications of sociological theory to the school and the broader educational enterprise; and for personal expansion of philosophy and worldview through humanistic and social science perspectives.

CUI 4153 Practicum: Curriculum and Instruction (1-5 Credits)
Designed to fit the educational needs of the individual student who may choose from a wide variety of practicum (internship) experiences, including teaching, curriculum development, museum internships or research projects in curriculum and instruction.

CUI 4155 Special Topics (1-10 Credits)
Special topics in the field of education.

CUI 4159 Educating Multiethnic Populations (3 Credits)
Emphasizing a worldwide view in considering how education should be delivered to children and youth for life in the 21st century, especially since the World Trade Center Disaster of September, 2001. It is incumbent on those in teaching to find creative policies for working together with those in government and business, strategies that acknowledge our human diversity within and overall context of equality and peacefulness. This begins with raising social justice issues in the classroom in ways that encourage students to openly examine difficult and personally challenging materials, facilitating communication and understanding between members of diverse and unequal social groups.

CUI 4160 Race, Class and Gender in Education (3 Credits)
Ethnicity, Class & Gender in Education applies the concepts and theories of social science disciplines - sociology, social psychology, anthropology, historical perspectives and philosophical orientations - to the inclusive examination of the issues of racism, classism, sexism, and homophobia in education. This course seeks to conceptualize ethnicity, gender and social class as interactive systems, not as separate and independent variables, that impact students, teachers, school systems and the educational enterprise. We examine educational systems and practices that historically have disadvantaged women and peoples of color and discuss strategies and techniques for empowerment of the members of these groups.

CUI 4161 Ethnicity, Gender & Diversity in the Curriculum (3 Credits)
The focus of this course is to examine and explore the complexities of teaching in contemporary educational settings in which the forces of sexism, racism and classism are found. In our society where wide diversity characterizes our student population, it has become an imperative to recognize difference and relate effective teaching to these conditions. Major trends and influences that are impacting the school curriculum are explored.

CUI 4170 Engaging Learners through the Arts (3-5 Credits)
This seven day institute is designed to engage participants in a challenging exploration of the creative process through workshops with professional artists in the disciplines of dance, visual arts, creative writing, music, and theatre, and to provide a greater understanding of the theory and practical applications of school reform.

CUI 4171 The Arts in Education:Stage II (3-5 Credits)

CUI 4172 Aesthetic Foundation in Education (3 Credits)
Educational enterprise from aesthetic viewpoints; examination of a number of aesthetic theories and exploration of implications for curriculum, teaching, and evaluation.

CUI 4180 History of Education in the United States (3 Credits)
Traces historical context and development of K-12 schools in the United States from initial discovery of North and South America by Europeans to the present; understanding through examination of central issues that strongly influenced our current educational systems - evolution of schools, religion, social and political reform, women's issues, nationalism and ethnicity, industrialization of the nation and world.
CUI 4400 Nature and Needs of Gifted Learners (3 Credits)
This course is designed to provide participants with an understanding of 1) conceptual foundations and definitions of giftedness, 2) how intelligence, creativity, and non-intelligence factors are related to giftedness, 3) the nature, development, types, and needs of gifted individuals, 4) principles and issues in the identification of gifted individuals, and 5) the major issues and tensions in the education of gifted and talented individuals. Lectures, discussions, and other class activities and assigned readings and projects will include topics such as the history and nature of the giftedness construct; theories of intelligence and creativity and their relationship to conceptions of giftedness; types of giftedness; the diversity of gifted individuals and their personal and educational needs; the role of identification in the education and development of gifted children and youth; and purposes and perspectives in gifted education.

CUI 4401 Psychological Aspects of Giftedness (3 Credits)
The psychological development of gifted children is examined through a study of current theories, models, research, and case histories. Understanding of psychological development creates a foundation for applications and practices that nurture the psycho-social-emotional development of gifted individuals. Specific topics include the psychological nature and needs of the gifted; perfectionism, stress, and underachievement; special issues for gifted boys and gifted girls; highly gifted; and pertinent theories of psychological development. Emphasis is placed on synthesis of theories and application to specific situations.

CUI 4402 Curriculum for Gifted Learners (3 Credits)
This course is designed to provide participants with an understanding of the conceptual foundations in the design and development of curriculum for gifted and talented students. Includes theories, models and processes for curriculum modification and curriculum design; strategies for adapting educational content, process, product, and learning environment based on the educational characteristics and needs of gifted learners; and curriculum design and development approaches that are effective in the intellectual and personal growth of gifted and talented learners. Content in this course is aligned with appropriate instructional strategies and techniques recommended for use with gifted and talented learners. Lectures, discussions, class activities, assigned reading and projects include topics such as a general overview of curricular principles and perspectives; critical analysis of general curriculum; issues of diversity in curriculum development and modification including cultural congruence; recommended models of curriculum development for gifted and talented learners; and national trends in gifted education.

CUI 4403 Instructional Strategies for Gifted Learners (3 Credits)
This course provides a basic understanding of how to adapt curriculum for gifted learners through various instructional strategies. Strategies studied include: acceleration, enrichment, differentiation, compacting, grouping, independent study, and service learning. By selecting instructional strategies based on assessed learner needs, educators can reach many types of gifted learners in their classrooms including gifted students of poverty and gifted learners of cultural and ethnic diversity. The objectives of this class are that participants: know about and be able to define instructional strategies that meet assessed academic and affective needs of gifted learners and be able to adapt curriculum for gifted learners using learned instructional strategies.

CUI 4404 Twice-Exceptional Students (3 Credits)
The purpose of this course is to acquaint the student with the various areas of exceptionalities typically encountered with gifted students and to provide classroom related techniques to assist the teacher in identifying and working with twice-exceptional children in an effective manner. Environmental, behavioral, motivational, emotional and educational needs are addressed. Legal responsibilities, parent communication and staff development will be emphasized.

CUI 4405 Practicum in Gifted Education (1-3 Credits)
Students wishing to earn credit for the Practicum in Gifted Education must complete an experience in three of the five areas (Teaching, Assessment, Administration, Research, or Policy). Students must submit a Practicum Proposal outlining the intended practicum experiences. This Proposal must be approved by the practicum faculty supervisor when the practicum experiences are begun.

CUI 4407 Current Issues in Gifted Education: Identification (3 Credits)
This course focuses on the screening and selecting of gifted and talented students. It is designed for practicing professionals - teachers, counselors, psychologists, and administrators - who must make decisions about the identification and serving of gifted and talented students. Course uses multiple assessments, both quantitative and qualitative, to identify gifted students within an increasingly diverse population (including culturally- and ethically-diverse, high-potential, linguistically-different students with unique affective needs as well as high-potential economically-disadvantaged students). Students will use data to diagnose educational needs, prescribe appropriate educational strategies and to incorporate appropriate identification strategies for identifying gifted and talented students. Legal responsibilities and parent communication as well as staff development are emphasized. Students are required to develop an identification model based on relevant theory and current practices to be used in their particular setting. Enforced Prerequisites: CUI 4400 with a minimum grade of C- OR CUI 4401 with a minimum grade of C-.

CUI 4408 Creativity: Theory & Practice (3 Credits)
The essence of innovation is creativity, in thought, process and outcome. Classic and current theories provide a foundation for analysis of the concept of creativity. This course is designed to provide participants with an understanding of 1) the conceptual foundations and definitions of creativity; 2) how intelligence, creativity, and non-intellective factors are related to the constructs of giftedness; 3) documented brain research underlying exceptional cognition and/or creativity; 4) principles and issues in the identification and appropriate programming for creative individuals; and 5) the multiple perspectives and manifestations of creativity. Salon discussion groups, lectures, class activities and assigned readings and projects focus on the history and nature of the construct of creativity, theories of creativity, the role of innovation and transformation, assessment and measurement tools, environmental support of the creative process and creativity, and teaching and learning applications.
CUI 4410 Prog Dev/Ldrshp/Comm Gifted Ed (3 Credits)
This course emphasizes the concepts and practices involved in development and management of school- and district-based programs for the special education of gifted and talented children and youth. The course leads to in-depth understanding of program components and systems, program planning and evaluation, program leadership, advocacy in gifted education, and communications. In addition, emphasis is placed on planning and development of staff development in relation to gifted children. This course includes extensive in-class discussion and field applications.

CUI 4411 Wkshp: Gifted & Talented Educ (2-3 Credits)
This course is designed to provide participants with an overview of the education of gifted and talented students. Areas of focus within the course include definitions of gifted and talented students, characteristics, educational and psycho/social needs, common identification methods and concepts and common practices in curriculum and instructional differentiation.

CUI 4417 Independent Study: Gifted Educ (1-3 Credits)
CUI 4450 Education and Psychology of Exceptional Children (3 Credits)
Characteristics of students with moderate needs and state criteria used to determine eligibility for special education population.

CUI 4451 Teaching the Exceptional Child (3 Credits)
This course provides a broad overview of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional education needs. This course also explores the characteristics of students with various disabilities, the history of Special Education, The Individuals with Disabilities Education Act (IDEA) and its current implications, the Response to Intervention Model (RtI) and the Individualized Education Plan (IEP). Prerequisite: CUI 4450.

CUI 4452 Low Incidence Disabilities and Behavior Intervention (3 Credits)
This course reviews a wide range of neurodevelopmental disorders and low-incidence disabilities including fragile X syndrome and Fetal Alcohol Syndrome, along with syndromes associated with chromosomal deletions. Implications for assessment and intervention are outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology are addressed. This class also addresses theories, research, effective practices, and background information needed to implement successful behavior intervention programs for whole classroom management and for students identified with behavioral needs. Prerequisites: TEP 4010 and CUI 4451.

CUI 4453 Curriculum Adaptations and Assessments for Children with Disabilities (3 Credits)
This course applies theories, research, effective practices, and background information for assessment for students with disabilities, monitoring student academic progress, and transition planning for students exiting K-12 schools.

CUI 4455 Assessment of Students with Special Needs (3 Credits)
Theories, research, effective practices and background information needed to develop, implement, analyze, and apply assessment data for mild/mild-needs students.

CUI 4457 Behavior Intervention (3 Credits)
Theories, research, effective practices, and background information needed to implement successful behavior intervention programs for mild/moderate-needs students.

CUI 4459 Curriculum, Collaboration, and Transitions in K-12 Schools (3 Credits)
Knowledge, techniques to develop independent skills for K-12 moderate/mild-needs students and transitions across grade levels.

CUI 4500 Elementary Literacy: Theory and Practice I (1-3 Credits)
This course provides an introduction and overview to the many components that make up a quality balanced literacy program. During the course students will analyze current research and theory in reading and writing instruction. This course will use students' classroom placements to create a foundational understanding on which to build solid literacy philosophy as well as instructional ideas and strategies.

CUI 4501 Elementary Literacy: Theory and Practice II (1-3 Credits)
This course is an extension of Elementary Literacy I and concentrates on the continued development of theories and practical strategies for teaching literacy in diverse classrooms. This course will supply K-6 teachers with the skills to assess student abilities, select appropriate instructional strategies, and design effective instructional programs that lead to increased listening, speaking, reading and writing achievement of all children.

CUI 4502 Elementary Science and Social Studies Methods for Cultural Linguistic Diversity (3-4 Credits)
This course will enable students to develop a deeper understanding of science and social studies content and curriculum in the elementary classroom. Students will explore a range of instructional materials and develop teaching strategies with the guidance of state content standards and research on effective classroom instruction for culturally and linguistically diverse students. This course will revolve around discussion of key questions in the following eight areas: The Role of Social Studies and Science; Instruction; Standards; Content Knowledge; Curriculum Integration; Technology; Culturally Responsive Pedagogy; Sheltered Instruction.

CUI 4503 Elementary Math Methods for Cultural Linguistic Diversity (3,4 Credits)
This course will prepare pre-service elementary teachers to engage students in mathematical learning activities guided by Colorado State Mathematics Content Standards and research. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful activities. In addition, students will develop an understanding of infusing best practice for culturally and linguistically diverse students into the math curriculum in terms of culturally relevant pedagogy and sheltered instruction. This course will revolve around the discussion of key questions in the following seven areas: Content Standards; Instruction; Assessment; Differentiated Instruction; Technology; Culturally Responsive Pedagogy; and Sheltered Instruction.
CUI 4504 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity I (3 Credits)
This course is the first of a two-course study that will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.

CUI 4505 Mathematics across the Content Areas (2,3 Credits)
In this class, prospective secondary and k-12 teachers study fundamental mathematical ideas. Students learn about the five fraction sub-constructs and solve problems in all five areas. In addition, students study ideas that are fundamental to understand algebra. For instance, students learn how to build rules to represent functions. Finally, students learn about inquiry-based approaches to teaching that they can use in their secondary classrooms with their students.

CUI 4506 Mathematics for Elementary School Teachers I (2,3 Credits)
In this class, prospective elementary school teachers experience an in-depth look at the representations of rational numbers, including base-ten and decimal numbers, integers, fractions, and arithmetic operations on these sets. Problem solving is emphasized throughout. Students also learn about inquiry-based approaches to teaching that they can use in their classrooms with their students.

CUI 4507 Mathematics for Elementary School Teachers II (3 Credits)
In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisite: CUI 4506.

CUI 4508 Mathematics for Elementary School Teachers III (3 Credits)
In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisites: CUI 4506.

CUI 4509 Mathematics for Middle School Teachers (3 Credits)

CUI 4510 Adolescent Literacy (3 Credits)
This course provides secondary teacher candidates an understanding of the essential elements of adolescent literacy. Students learn how literacy develops in reading, writing, and oral language and will be able to relate this information to teaching reading and writing in all content areas for both middle school and high school students.

CUI 4511 Secondary Literacy: Reading and Writing Across Content Areas I (3 Credits)
This course is the first of a two-course study that is designed to give secondary Residents an introduction to best practices in content area literacy instruction for in 6-12 classrooms. In support of the instructional shifts presented by the Common Core State Standards, Residents will explore the rationale behind instructional strategies for literacy instruction in the content area classrooms, as well as examine tools and techniques for teaching students to become strategic readers and writers as they model their own thinking and scaffold students’ use of strategies for content area literacy.

CUI 4512 High School Mathematics from an Advanced Perspective (3 Credits)
High School mathematics education. Meets Common Core State Standards.

CUI 4513 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity II (3 Credits)
This course is an extension of the Autumn quarter session and will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards, Next Generation Science Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.

CUI 4514 Secondary Literacy: Reading and Writing Across Content Areas II (3 Credits)
This course is an extension of the Autumn quarter session. In this course, Residents will deepen their knowledge of the English language and linguistics, through an analysis of socio and psycholinguistics, as well as rigorous practice in grammar, syntax and semantics. As Residents gain a more practical understanding of the complexities of the English language, they will be better able to support their English Language Learners. This course addresses the following Common Core State Standards: L1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking L3: Apply knowledge of language to understand how language functions in different context to make effective choices for meaning or style, and to comprehend more fully when reading or listening. W4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CUI 4520 Urban Education I: Diversity and Social Justice (1 Credit)
This class will address questions about multicultural and social diversity in the classrooms, curricular and pedagogical theories and practices, access and equity, and the politics of education.
CUI 4521 Urban Education II: School, Student, Family and Community Influences on Student Learning (2-4 Credits)
This course will consider how teachers are able to foster meaningful connections between the educational goals of the schools and the personal and cultural experiences of young people. Students will study the child in relation to family, school, and community, as well as the relationships between teacher and pupil. We will emphasize the cultural complexity of an urban society and pay special attention to ways that curriculum, language, and literacy affect school success.

CUI 4522 Urban Education III: Sources of Pressures and Possibilities in High Poverty Schools (2,3 Credits)
This course will focus on the sources of problems in high poverty schools and examine educational reform efforts that attempt to transform high poverty schools and classrooms.

CUI 4527 Supporting English Language Learners and Students with Special Needs Across Content Areas (3 Credits)
This course evaluates similarities and differences in theory, methods, approaches, and techniques in meeting the needs of diverse learners including English Language Learners, special needs, and/or gifted. Differentiated instruction, Sheltered instruction, and Response to Intervention (RTI) are key methodologies in meeting needs of diverse learners.

CUI 4529 Foundations of Education for Culturally and Linguistically Diverse Learners (3 Credits)
This course will examine the essential knowledge and orientations educators must possess to effectively meet the needs of culturally and linguistically diverse (CLD) learners through the analysis of historical, political, ethical, and legal foundations of language education in the United States. This course will explore the immigrant experience and the experience of CLD learners in schools in order to understand how the psychosocial aspects of the immigrant experience can impact second language learning.

CUI 4530 Second Language Acquisition (1-3 Credits)

CUI 4531 Language Development and Strategies for Culturally and Linguistically Diverse Learners (3,4 Credits)
This course will evaluate methods, approaches, and techniques in language teaching. This course will also explore classroom strategies and practices for content-area instruction through sheltered instruction, and socio-cultural context of second language acquisition in U. S. public schools including how teachers can support bilingualism, multilingualism, biculturalism, and multiculturalism in the mainstream classroom. Furthermore, this course will explore the needs of special education and gifted culturally and linguistically diverse learners.

CUI 4532 Culturally Responsive Pedagogy (3,4 Credits)
This course examines the intricate web of variables that interact in the effort to create culturally responsive pedagogy. It examines the need and establishes a definition for culturally responsive pedagogy; and includes an examination of one’s conception of self and “others;” conception of social relations; and conception of knowledge teaching and learning in a culturally diverse context. Furthermore, it cultivates the practice of culturally responsive teaching as well as explores the reality of implementing cultural responsive pedagogy in an era of standardization. In sum, this course helps practicing teachers acquire the dispositions, cultural knowledge, and competencies to adapt their curriculum and instructional skills for culturally responsive classroom practice.

CUI 4533 Research Issues in the Education of Culturally and Linguistically Diverse Learners (3,4 Credits)
In this course, students will act as teacher-researchers in order to explore issues that impact the achievement of culturally and linguistically diverse learners. This course will allow students to use functional research tools that can inform practice and lead to better teaching and learning in urban schools, and access resources to enable educators to define and address challenges in their teaching. More importantly, classrooms will become sites for educational reform in that, essentially, educators will act as advocates for change.

CUI 4534 Language Teaching Lab (1 Credit)
This course will critically examine elements of best practice for culturally and linguistically diverse learners through formal observations of three exemplary teachers and evaluate their classroom practices, instructional strategies, assessment practices, and communication strategies. This course will apply our conceptual knowledge of first and second language acquisition and our knowledge of the foundations of the English language to critically analyze each classroom context.

CUI 4535 Language in Society and Schools (3,4 Credits)
This course will introduce students to the discipline of sociolinguistics, including ways language and society impact one another, and how this interaction is reflected in schools. The focus of this course will be on current sociolinguistic theory and research on language variation and its social, political, and cultural significance. Topics include bilingualism and multilingualism in society; formal and informal types of language discourse; language and dialect; cross-cultural communication; and ways language both reflects and creates such constructs as power, culture, gender, ethnicity, and social class. In addition, this course will explore language ideology and language policy and planning.

CUI 4536 Language and Cultural Issues in Assessment and Instruction (3-4 Credits)
This course expands the educators’ knowledge of the connection between data-based instruction and assessment. Educators assess student learning by utilizing strategies that provide continuous feedback on the effectiveness of instruction. Educators learn informal and formal assessment practices that promote student learning and achievement. Educators develop knowledge and understanding of initial assessment of culturally and linguistically diverse learners’ skills and abilities in order to provide appropriate placement and instruction. Educators utilize native language tests to promote adequate placement/transition of students. This course also helps educators develop a framework to analyze and develop culturally responsive assessment practices in order to improve student achievement. Finally, this course integrates Response to Intervention (RTI) strategies to improve student assessment.
CUI 4537 Seminar & Practicum in LDE (1-6 Credits)
This course is to provide students with the opportunity to merge theory and practice in real classroom situations. This course is organized around two main components. The seminar consists primarily of discussions on connections between theory and practice. The practicum centers on educators’ own respective teaching contexts. Students in this course are required to “log” 200 hours of direct teaching with linguistically diverse learners. Under the supervision of a practicum advisor, students will be evaluated for evidence of mastery of LDES standards.

CUI 4538 Literacy and Language Development for Culturally and Linguistically Diverse Learners (3,4 Credits)
Attaining age-appropriate English literacy skills poses many challenges to culturally and linguistically diverse (CLD) learners. Educators must therefore develop proficiency in effective literacy instruction for CLD learners. Effective literacy instruction includes a repertoire of teaching practices designed to scaffold literacy and language across the content areas, and culturally relevant curriculum as an essential component to support the achievement of CLD learners. This course will focus on helping educators gain the necessary skills, orientations, and competencies to advance the literacy of CLD learners through linguistic and cultural knowledge.

CUI 4540 Curriculum, Instruction and Assessment: Theory and Practice I (1-3 Credits)
This is the first quarter of an academic year-long weekly seminar to foster reflective, research-based classroom practice. Teacher candidates will deepen their understanding of teaching and learning in contemporary schools through a guided teaching apprenticeship with a trained mentor teacher, focused observations of a myriad of classrooms, readings, interviews, discussions, critical writing, and presentations.

CUI 4541 Curriculum, Instruction, and Assessment: Theory and Practice II (1-4 Credits)
This is the second quarter of an academic year-long weekly seminar to foster reflective, research-based classroom practice. Teacher candidates will deepen their understanding of teaching and learning in contemporary schools through a guided teaching apprenticeship with a trained mentor teacher, focused observations of a myriad of classrooms, readings, interviews, discussions, critical writing, and presentations.

CUI 4542 Curriculum, Instruction, and Assessment: Theory and Practice III (1-4 Credits)
This is the third and final quarter of an academic year-long weekly seminar to foster reflective, research-based classroom practice. Teacher candidates will deepen their understanding of teaching and learning in contemporary schools through a guided teaching apprenticeship with a trained mentor teacher, focused observations of a myriad of classrooms, readings, interviews, discussions, critical writing, and presentations.

CUI 4543 Educational Psychology: Learning and Development (1-3 Credits)
This course focuses on theories of learning and development, including behaviorism, cognition in context, and sociocultural perspectives, among others, as well as practical application of those theories. Issues of classroom management and student motivation are explored within the context of these theories.

CUI 4544 Ed Psych: Exceptional Child (1-3 Credits)
The focus of this course is on educating children and adolescents with special needs in the general education classroom. The intent is to enable future educators to better serve the needs of these children in their classrooms. Topics such as the special education process, information on specific disabilities, accommodations and modifications, behavior issues, mental health, and communicating with parents will be addressed.

CUI 4545 Perspectives on American Education I (1-3 Credits)
We expect that students will complete this 2-quarter-long class with an appreciation for and commitment to critical reflection, collegiality, ongoing professional growth, and educational reform. Through readings, reflective writing and activities, role-plays, case discussions, community-based field work, visits to a myriad of schools and classrooms, and guest presentations, we expect students to recognize and wrestle with the complexity that characterizes teaching in American society. Four central and recurring themes for this course include: democratic foundations of public schools, apprenticeship of observation, teaching as vocation, and the moral dimensions of teaching.

CUI 4546 Perspectives on American Education II (2 Credits)
We expect the students will complete this 2-quarter-long class with an appreciation for and commitment to critical reflection, collegiality, ongoing professional growth, and educational reform. Through readings, reflective writing and activities, role-plays, case discussions, community-based field work, visits to a myriad of schools and classrooms, and guest presentations, we expect students to recognize and wrestle with the complexity that characterizes teaching in American society. Four central and recurring themes for this course include: democratic foundations of public schools, apprenticeship of observation, teaching as vocation, and the moral dimensions of teaching.

CUI 4560 History and Philosophy in Mathematics Education (3 Credits)
Introduction to the effective integration of history and philosophy of mathematics into mathematics education.

CUI 4610 Learning and Teaching of Mathematics (3 Credits)
Introduction to foundational research literature on learning and teaching in mathematics education.

CUI 4620 Research on Diversity, Equity, and Social Justice in Mathematics Education (3 Credits)
Introduction to research related to issues of diversity, equity, and social justice in P-16 mathematics curriculum, instruction, and assessment.

CUI 4630 Learning Mathematics: Early Childhood (3 Credits)
Development of theories, materials, and methods used to teach mathematics in preschool to grade two and develop abilities in their use.

CUI 4640 Improving Elementary Math Instruction (3 Credits)
Teacher development of elementary mathematical content, pedagogy, curriculum, attitudes and power, and collaboration.
CUI 4690 Field Experience: Curriculum & Instruction (3 Credits)
This course provides students with an authentic field experience for those pursuing a degree in Curriculum & Instruction. Field Experience in Curriculum & Instruction is an off-campus, experience taken throughout the coursework plan. Field Experience is designed to broaden one's professional skills and is considered a critical transition of substantial growth. Field Experience is a hybrid on-line and face-to-face seminar that is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practices. The Field Experience is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students engage in weekly experience seminars (either on-line or face-to-face) facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, and continued professional development and experiences pertinent to successful practice. This course promotes the idea that educators are lifelong learners and regularly reflect on and adjust their practice.

CUI 4700 Foundations of Education: Cognitive Theory I (3 Credits)
Introduction to cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula.

CUI 4710 Foundations of Education: Cognitive Theory II (3 Credits)
Second course in cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula. Prerequisite: CUI 4700.

CUI 4720 Discourse in the Mathematics Classroom (3 Credits)
The study of discourse as it relates to mathematics teaching and student learning.

CUI 4730 Mathematics and Instructional Technology (3 Credits)
Introduction to the principles of effective use of technology in mathematics instruction.

CUI 4740 Policy and Mathematics Education (3 Credits)
Introduction to educational politics and how those policies have influenced and continue to influence mathematics education.

CUI 4790 Seminar on Race in Mathematics Education (3 Credits)
Seminar course for advanced doctoral students on issues of race and mathematics education in the US.

CUI 4870 Education in International Settings (3 Credits)
Objectives of this course include: viewing education in the 21st century as cross-cultural and international; examining the role of schooling in shaping national identity and citizenship in nation-states around the globe; and identifying promising practices and exemplary curriculum material for teaching cross-cultural perspectives and world awareness.

CUI 4991 MA Independent Study (1-10 Credits)
CUI 4992 Directed Study (1-10 Credits)

CUI 4995 Research - M.A. Thesis (1-10 Credits)

CUI 5980 Research as Problem Analysis (3 Credits)
This course is the first of three culminating research courses for students in the Ed.D. in Curriculum and Instruction. This course is designed to guide candidates through the doctoral proposal process and introduce the initial stages of data collection and analysis.

CUI 5981 Research as Intervention (3 Credits)
This course is the second of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates finish collecting their data and analyze their data. This course will also introduce and develop the evaluation or analysis section of the doctoral paper and the beginning steps of the dissemination of the research project.

CUI 5982 Applied Research (3 Credits)
This course is the final of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates disseminate their project, reflect on their project, and defend their project. This course is specifically focused on writing the quasi-practical section of the doctoral paper and the dissemination of the research project to the community partner.

CUI 5983 Defense of Research (1 Credit)
This course will build on the “persistent problems of practice” and research questions identified in CUI: 5980, data collection and analysis in CUI 5981, and applied research skills in CUI 5982. By the end of the course you will be able to schedule and present your doctoral research project for defense. Completion of CUI: 5982 "Research as Applied Research" or permission of the instructor.

CUI 5991 PhD Independent Study (1-10 Credits)
CUI 5992 Directed Study (1-10 Credits)

CUI 5993 Doctoral Research Project (1-4 Credits)
Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in C&I; must have completed C&I doctoral research courses (CUI 5980, CUI 5981, CUI 5982, and CUI 5983).

CUI 5994 Seminar in Dissertation Organization and Research (1-5 Credits)
Individualized assistance in developing the dissertation topic, issue, problem; guidance in preparation for proposal orals and application to the Institution Review Board (IRB), direction for dissertation chapter organization, writing and completion. This seminar is targeted for the student who needs support in completing the dissertation.

CUI 5995 Dissertation Research (1-10 Credits)
Economics (ECON)

Courses

ECON 3040 Marxian Political Economy (4 Credits)
An exposition of Marx’s theory of value through a detailed reading of Capital, vol. I. Excerpts from other readings by Marx, and some of the relevant secondary literature used. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

ECON 3075 Marxism (4 Credits)
This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx’s work, but it is highly recommended. Requires junior standing or above. Cross listed with PHIL 3075.

ECON 3110 European Economic History (4 Credits)
The emergence of capitalism from feudal society; the Industrial Revolution, English capitalism; European industrialization; state and economy in capitalism; 20th-century Europe and the global economy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

ECON 3120 Economic History of the U.S. (4 Credits)
Industrial progress from colonial period to the present time; influence of economic forces in social and political development. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

ECON 3460 Monetary Theory and Policy (4 Credits)
Studies the interaction between money and the economy. Examines the workings of the financial institutions and how they affect the economy. Looks at the questions of what serves as money, what determines interest rates, and how the central bank conducts monetary policy and its effect on the performance of the economy. Restriction: junior standing. Prerequisite: ECON 2030.

ECON 3480 Money & Financial Markets (4 Credits)
Examines workings of the money and financial markets and their relation to the monetary system and to the macroeconomy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

ECON 3500 Economic Development (4 Credits)
Careful re-examination of the works of the prominent development economists of the immediate postwar decades to critically shed light on the treatment of topical development problems by modern economists. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

ECON 3590 Urban Economics (4 Credits)
Covers topics and issues of economic growth and decline in metropolitan areas, emphasizing urban economic issues. A broad range of policy areas is discussed, including labor market policy, welfare reform, housing policy, racial segregation, transportation, and environmental policy, among others. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

ECON 3600 International Monetary Relations (4 Credits)
Theory, policy, and history of international organization of money and finance; open-economy macroeconomics: balance of payments, exchange rate dynamics, monetary policy effectiveness. Cross-listed with INTS 3600. Restriction: junior standing. Prerequisite: ECON 2030.

ECON 3610 International Trade Theory & Policy (4 Credits)
Examines topical trade issues confronting the United States, policies proposed to tackle them, and the theoretical underpinnings of these policies. Studies how those policies could affect the less developed countries as determined by the environment established under the World Trade Organization. Prerequisite: ECON 2020 or 2030. Recommended: ECON 2610.

ECON 3620 Philosophical Perspectives on Economics and Social Sciences (4 Credits)
This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

ECON 3670 Econometrics: Multivariate Regression Analysis for Economists (4 Credits)
This course develops the foundations of ordinary least squares (OLS) regression analysis and teaches students how to specify, estimate, and interpret multivariate regression models. Students have to apply what they have learned using a popular software package used for econometrics and real data. Special topics also covered include regression models that include dummy variables, log-linear models, fixed effects models, a brief discussion of instrumental variables, and an introduction to time-series analysis and forecasting. Prerequisites: ECON 2670 and either ECON 2020 or ECON 2030. Restriction: Junior standing.
ECON 3740 Health Economics (4 Credits)
This course is designed to study the nature of the organization of health care production, delivery and utilization according to economic theory. It introduces the up-to-date problems and issues in the U.S. health care system by studying demand for and supply of health care services, health care production and costs, and market analysis of health care industry. Important parties playing roles in health care industry such as private health insurance firms, physicians, pharmaceutical industry, and hospital services will be studied in detail. In addition, the course deals with the role of government in health care industry and various health care reforms proposed in the U.S. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

ECON 3830 Topics in Macroeconomics (4 Credits)
Coverage varies but may include advanced topics in monetary theory, the study of business cycles, or the works of important monetary and macroeconomic theorists. Restriction: junior standing. Prerequisite: ECON 2030.

ECON 3850 Mathematics for Economists (4 Credits)
Restriction: junior standing. Prerequisite: ECON 2020 and 2670.

ECON 3900 Growth, Technology and Economic Policy (4 Credits)
This course will introduce students to the important issues related to technological change and how it relates to economic growth. The lectures seek to explain how technology and innovation determine growth and development with special emphasis on learning-by-doing, organizational capability, appropriation and spillover effects. The core topics that will be covered include: (1) origins of new technology and its market introduction, (2) the process of technological adoption and advancement, (3) the dissemination of technology and innovations within and cross firms, industries and countries, (4) the impacts of technological change, including benefits and costs, on individual and society at large and (5) policy implications to promote innovation and to reduce its negative effects. The rest of the course will focus on the relationship of technological change to human development, social welfare, as well as prior experiences of industrialized economies and emerging economies. Prerequisites: ECON 2020 and junior standing.

ECON 3970 Environmental Economics (4 Credits)
This course examines economic perspectives of environmental and resource problems, ranging from peak oil, food crisis, and climate change. Topics include the property-rights basis of polluting problems, environmental ethics, benefit-cost analysis, regulatory policy, incentive-based regulation, clean technology, population growth and consumption, and sustainable development. Restriction: junior standing. Prerequisite: ECON 2020.

ECON 3991 Independent Study (1-8 Credits)
Prerequisites: ECON 1030.

ECON 3992 Directed Study (1-10 Credits)

ECON 3995 Independent Research (1-4 Credits)
This research project is based on a topic that the student picks in consultation with the chair of the economics department. During the consultation process a faculty supervisor is assigned to work with the student throughout the research process. The topic is preferably one that requires the student to demonstrate her/his ability to apply what he/she has learned in the intermediate-level required courses for the economics major. Restriction: senior standing.

ECON 3996 Senior Paper Research (2-4 Credits)
This research project is based on a topic that the student picks in consultation with the chair of the economics department. During the consultation process a faculty supervisor will be assigned to work with the student throughout the research process. The topic is preferably one that requires the student to demonstrate her/his ability to apply what she/he has learned in the intermediate-level required courses for the economics major. Restriction: senior standing.

ECON 4020 Adv Macroeconomic Theory (4 Credits)
Determinants of national income and its components and of the level of employment and the general price level; also examines business cycles and alternative macroeconomic theories.

ECON 4030 Adv Microeconomic Theory (4 Credits)
The orthodox microeconomic approach to determining prices and income distribution in competitive general equilibrium based on utility and profit maximization of consumers and firms; alternative theories of value and distribution.

ECON 4050 Origins of Modern Economics (4 Credits)
This course covers the development of economic theory from the decline of the classical school through the emergence of the Keynesian theory and investigates in detail the structure of the neoclassical theory and the degree to which Keynesian economics provides an alternative. We examine why economists thought that certain theoretical frameworks were better than others and what problems skill remain.

ECON 4991 Independent Study (1-10 Credits)

ECON 4992 Directed Study (1-10 Credits)

ECON 4993 Thesis Topic Development and Defense (4 Credits)
This resembles an independent-study where a student will work under the supervision of a professor. The aim is to encourage the student, as s/he completes a certain number of hours of course work, to actively formulate and develop her/his thesis topic, and to formally present and defend it in a thesis workshop scheduled by the Department. A minimum of 20 credit hours of graduate-level course work must be completed. Instructor's permission required.

ECON 4995 Thesis Research (1-10 Credits)
Emergent Digital Practices (EDPX)

Courses

EDPX 4000 Digital Design Concepts (4 Credits)
An introductory course requiring conceptual, perceptual and manual skills to meet rigorous studio research into the history of mark-making, letter forms and layout designs as reflective of cultural, social, political and psychological contexts of interpretation. This class also emphasizes 2-D principles of design, including form, structure, conceptual understanding, visual aesthetics, semiotics, organizational systems, relationships of typography and imagery. Lab fee.

EDPX 4010 Emergent Digital Tools (4 Credits)
This course serves as a primer on the tools essential to expression, sharing, and creation in digital mediums. This includes knowledge of web technologies, creative coding, video, audio, and the basic historical and theoretical contexts of each. Lab fee.

EDPX 4020 Emergent Digital Cultures (4 Credits)
This course familiarizes students with current crucial approaches to understanding digital media and the impacts these media have in personal, community, cultural, social, institutional and international life. The course pays particular attention to cultural constructions of emergent digital media and practices. This course introduces graduate students to a variety of disciplinary lenses and conceptual practices, with readings and research ranging from media theory and studies, philosophy of technology, media archaeology and history, to science fiction studies as approaches to digital media and cultures.

EDPX 4100 Programming for Play (4 Credits)
This course offers an introduction to the creation of games and playful interactive objects. Students explore the space of socially conscious and humane games as well as investigate the creation of compelling interfaces and interactive opportunities. Cross listed with EDPX 3100. Prerequisites: EDPX 4000 and EDPX 4010, or permission of the instructor.

EDPX 4110 Rapid Game Design and Prototypes (4 Credits)
This course is a rigorous investigation into games, rules, systems, interaction, and the iterative design methodology through the rapid creation of paper-based and physical game prototypes. The ambition is for each student to create one new game per week in response to varying material and conceptual constraints. Participants create and constructively critique games created by classmates. Participants are expected to become reflective in their play. Class time is devoted to play-testing and discussion. Lab fee. Cross listed with EDPX 3110.

EDPX 4112 Rapid Physical Game Design & Prototyping (4 Credits)
This course is a rigorous investigation into games, rules, systems, interaction, collaboration, and the iterative design methodology through the rapid creation of large, human scale, "Big Games." The ambition is for students, working in changing collaborative groupings, to rapidly create games in response to varying material and conceptual constraints. Participants will both create and constructively critique games created by classmates. Participants are expected to become reflective in their play. Class time will be devoted to play-testing and discussion. Prerequisite: EDPX 4000. Lab fee.

EDPX 4115 Game Design: Paper to Digital (4 Credits)
This rigorous game design and development course analytically considers formal game design elements through game design and simple 2D game creation exercises, game design text readings, the creation of paper-based game prototypes, digital game-mechanic prototypes, and the followed by the creation of a complete 2D digital game. Class time is devoted to reading discussions, design exercises, play-testing, and some workshop time. Lab fee. Prerequisite: EDPX 4100 or permission of the instructor.

EDPX 4120 Making Critical Games (4 Credits)
This course is a time intensive practicum offered once a year and may be available in Summer terms. Students are challenged to create games (board, physical, video-, and hybrid games) that respond to social conditions in a critical manner while still maintaining an essential ludic quality. Public Good and Civic Engagement projects are welcomed. The course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisites: EDPX 4100 and EDPX 4110 or permission of the instructor. Cross listed with EDPX 3120.

EDPX 4130 Making Educational Games (4 Credits)
This course is a time intensive practicum offered once a year and may be available in summer terms. Students are challenged to create games (board, physical, video-, and hybrid games) that deliver K-12 educational content while still maintaining an essential ludic quality. Course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisites: EDPX 4100 and EDPX 4110 or EDPX 4115, or permission of the instructor.

EDPX 4200 Data Visualization (4 Credits)
This course explores the creation of informational graphics for visual unpacking of relationships within and among data sets. Students learn to visualize large data sets as a means of revealing and exploring patterns of information. Creating interactive visualizations is also covered, allowing for deep and participatory engagement with information. The resulting mediums include print and web. Lab fee. Cross listed with EDPX 3200. Prerequisites: EDPX 4000 and EDPX 4010 or permission of the instructor.

EDPX 4210 Typographic Landscapes (4 Credits)
This class is a rigorous investigation of the expressive potential of typography as a crucial element of visual expression and electronic media. This class presumes no background in typography. Students are guided through project-based explorations that range from hand-rendered inter-letter spatial relationships to the typesetting of modest sets of pages for paper and e-books. Lab fee. Prerequisite: EDPX 4000 or permission of the instructor.
EDPX 4250 Making Networks (4 Credits)
This course provides students with the skills necessary to establish network presence across a range of platforms and technologies. Current web technologies and standards are covered but an emphasis is placed on identifying emerging platforms and developing innovative methodologies for critical engagement with emergent digital practices. Technologies studied may include content management and delivery systems, web APIs, big data, digital mapping platforms, data visualization, augmented reality and locative media. Prerequisite: EDPX 4010 or instructor permission. Lab fee. Crosslisted with EDPX 3250.

EDPX 4270 Making Networked Art (4 Credits)
In this course networked art is understood in the broadest sense from art that natively exists on digital networks to art that critiques and engages with the concept of the network in contemporary society. This course aims to develop a critical understanding of and response to the social, cultural, aesthetic and technical contexts of network culture, building on a deep understanding of contemporary and historical networked art practices. Students will engage with network architectures and platforms developing experimental approaches to user interface and interaction, deploying a range of digital materials from data to rich multimedia content to create work that produces new understandings of the role of the network in a post digital age. Prerequisite: EDPX 4250, or permission of the instructor. Lab fee. Cross listed with EDPX 3270.

EDPX 4310 Tangible Interactivity (4 Credits)
Explores methods and devices for human-computer interaction beyond the mouse and keyboard. Students learn to create and hack electronic input and output devices and explore multi-touch augmented reality, and other forms of sensor-based technologies. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor.

EDPX 4320 Interactive Art (4 Credits)
This course expands the concepts, aesthetics, and techniques critical to the exploration and authoring of interactive art. It explores human computer interactions; user/audience interface design/development; interactive logic, author-audience dialogue; meta-data/multimedia asset acquisition and authoring environments. While utilizing students’ skills in numerous media forms, the class focuses on sensing, interactive scripting techniques, and emerging forms of digital narrative. Emphasis is on the development of interactive media deployment and distributions ranging from screen media to physical environments. Lab fee. Cross listed with EDPX 3320. Prerequisites EDPX 4310 or EDPX 4450.

EDPX 4340 Designing Social Good (4 Credits)
This course focuses on interdisciplinary approaches to artistic, scholarly and cultural methods for creating change in contemporary societal mindsets for a more sustainable and equitable future. Our objectives are to understand how current practices are reinforced and to then make experiences that encourage new ideas in the personal and global sphere. Lab fee. Cross listed with EDPX 3340. Prerequisites: EDPX 4000 and EDPX 4010.

EDPX 4350 Sustainable Design (4 Credits)
This course reviews and implements advanced sustainable design strategies as a praxis intersecting the domains of digital media design, dissemination, community organization and networking. The course builds upon the basic paradigms that have coalesced in the organizational and critical platforms of the sustainable design movement including ecology/environment, economy/employment, equity/equality and education/ pedagogy/dissemination. The class reviews a wide spectrum of sustainable design strategies including: mapping of consumptive origin-thru-fate, green materials usage, creative commons, open source software/hardware movements, collaborative design, predictive complexity modeling, biomimicry, evolutionary design methods, and greening infrastructure, among others. Lab fee. Prerequisite: EDPX 4000 and EDPX 4010 or permission of the instructor.

EDPX 4400 Video Art (4 Credits)
This course continues the investigation of theories and practice of electronic media and expands into an exploration of video art, providing the basic principles of video technology and independent video production through a cooperative, hands-on approach utilizing various video formats. The course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor. Cross listed with EDPX 3400.

EDPX 4410 Advanced Video Art (4 Credits)
This course continues the investigation of theories and practices of electronic media and expands into an individual exploration of video art focusing on "off-screen" time-based media through conceptual and technological experimentation. Projects explore creating digital video for projection into spaces, onto buildings, and in the form of installations, to name a few formats. Projects are used as a platform for creative expression focusing on the critical skills necessary for the conception and completion of ideas. Lab fee. Prerequisite: EDPX 4400 or permission of instructor.

EDPX 4430 2.5D Motion (4 Credits)
This course provides students an opportunity to create multi-dimensionally active poetic orchestrations of text, video and audio using the post-production processing and animation tool, After Effects. Lab fee. Prerequisite: EDPX 4010. Cross listed with EDPX 3430.

EDPX 4440 Site-Specific Installation (4 Credits)
This class produces projects investigating physical space, virtual space and site-specific public installations. Lab fee. Cross listed with EDPX 3440. Prerequisites: EDPX 4000 and EDPX 4010.

EDPX 4450 Visual Programming (4 Credits)
This course introduces intuitive visual "programming" that allows rapid building of personalized tools for data, video, image, and sound manipulation. These tools can be used in real-time editing or performance, complex effects processing, or to bridge between multiple pieces of software. Lab fee. Cross listed with EDPX 3450. Prerequisite: EDPX 4010 or permission of the instructor.
EDPX 4460 Visual Programming II (4 Credits)
This class uses advanced visual programming concepts (as provided by Max/MSP and Jitter) to explore visualization and sonification techniques in an artistic context. Areas of exploration include OpenGL modeling and animation, virtual physics emulation, audio synthesis techniques, and external data manipulation. Students use these concepts to create art installation and performance projects. Lab fee. Cross listed with EDPX 3460. Prerequisite: EDPX 4450.

EDPX 4490 Expanded Cinema (4 Credits)
This course introduces several forms of expanded cinema, such as video remixes and mashups; live cinema and audiovisual performance; VJing; sonic visualization; visual music; and ambient video. The class extends the student's multitrack video and audio mixing skills to an emphasis on both performance and generative approaches to audiovisual media. It introduces software and hardware sets including VJ tools and visual programming for generating as well as manipulating video files and real-time source streams. Lab fee. Cross listed with EDPX 3490. Prerequisite: EDPX 4010 or permission of the instructor.

EDPX 4500 Sonic Arts (4 Credits)
This class introduces the tools and techniques of the sonic arts, including field recording; sampling and synthesis; sound editing and effects processing; and mixing. Students survey a variety of sonic arts, historical and contemporary, to understand techniques and strategies for developing and distributing sonic artifacts. Lab fee. Cross listed with EDPX 3500. Prerequisite: EDPX 4010 or permission of the instructor.

EDPX 4510 Sonic Arts II (4 Credits)
This class extends and applies the techniques and theories of the sonic arts to include loop-based composition, generative creation and modular processing. Students learn to add richness and complexity to audio work based on a combination of modern and classic techniques for audio production and the sonic arts. Class assignments include creation of audio for video and games, live performance and installations. Lab fee. Prerequisite: EDPX 4500 or permission of the instructor.

EDPX 4520 Voice and Sonic Environments (4 Credits)
This course covers environmental sound design with an emphasis on the human voice and acoustic ecologies. Studying and exploring a range of documentary, narrative and experimental approaches to sound design and the spoken word, students write and produce several short audio pieces. The final consists of a podcast, voice-oriented performance and/or sonic installation. Lab fee. Prerequisite: EDPX 4500 or permission of the instructor. Cross listed with EDPX 3520.

EDPX 4600 3D Modeling (4 Credits)
This course serves as an introduction to 3D modeling, texturing, and lighting on the computer. Students complete a series of projects in which the processes of preparing and producing a 3D piece are explored. Various strategies and techniques for creating detailed models to be used in animation and games are examined. Additional attention is spent on virtual camera techniques as well as the use of composting in creating final pieces. Current trends in the field are address through the analysis and discussion of current and historical examples. Lab fee. Cross listed with EDPX 3600, MFJS 3600. Prerequisite: EDPX 4000 or permission of the instructor.

EDPX 4610 3D Animation (4 Credits)
This course examines animation within virtual 3D environments. Starting with basic concepts, the course develops timing and spacing principles in animation to support good mechanics. They also serve as the basis for the more advanced principles in character animation as the class progresses. Lab fee. Cross listed with EDPX 3610. Prerequisite: EDPX 4600.

EDPX 4620 3D Spaces (4 Credits)
An exploration of 3D digital space and the possibilities found in games, narratives and visualizations in these spaces. A real-time engine is used by students to examine the opportunities of virtual 3D worlds. Lab fee. Prerequisites: EDPX 4010 and EDPX 4600, or permission of the instructor.

EDPX 4700 Legacy and Trends of Nonprofit Organizations and Civil Society (4 Credits)
This course provides an in-depth exploration of the emergent digital practices of a particular culture and unique area of advanced study (for example, art and science studies; activism; youth culture; critical game studies; the philosophy of technology; or social networking). Students learn the social/historical context of the particular culture and observe and document the interplay between cultural practices and particular technologies. Prerequisite: varies with topic.

EDPX 4701 Topics in Emergent Digital Practices (1-4 Credits)
Topics in Emergent Digital Practices.

EDPX 4710 Critical Game Studies (4 Credits)
This course is a critical investigation of contemporary ludic cultures. Ludic cultures are environments and practice of play. This course is taught with a hybrid teaching model where games are treated as texts, and outcomes are in the form of discussion and synthetic media responses. We construct and play a hyper-local canon of games, both in and outside of class. We read from the growing body of literature in game studies. We reflect and respond to these texts through shareable media. This course partially satisfies a cultures requirement for emergent digital practices majors and minors. Lab fee.
EDPX 4725 Activist Media (4 Credits)
Today’s alternative cultures use Internet and mobile technologies to access and circulate mainstream information, but also to rapidly exchange information that exists outside mainstream media channels. Activist movements today with access to digital tools and networks are no longer dependent on newspapers and broadcast networks to represent them and to disseminate their messages. We are, however, just beginning to see how the proliferation of alternative networks of communication, and the content, practices, and identities they facilitate, interact with traditional political and business organizations, as well as with traditional media products and practices. This course focuses on media activism over the past half-century tied to various social movements with an emphasis on contemporary protest movements and their use of new and old media tools and strategies. Cross listed with EDPX 3725, MFJS 3150.

EDPX 4730 21st Century Digital Art (4 Credits)
An exploration of Digital Art and surrounding culture from the last 15 years. Topics will include machinima, demoscenes, MMO performances, interactive installations, VR, animation, video shorts, and much more. Students will actively search for, share and critically review much of the creative work for the class.

EDPX 4740 Performance Cultures (4 Credits)
This course explores the history and current state of technology and performance. Topics covered include expanded cinema, live cinema, V.Jing, performance art, and the intersections of audiovisual media and technologies with dance, theater, and more. This course incorporates reading and discussion of critical texts and documentation of theory, process and practices, and the class includes screening and discussion of examples of both historical and emerging forms of media-enhanced performance. Students produce written media on a variety of performance-related issues, artifacts, and practitioners, culminating in a written document or interactive publication. Lab Fee. Prerequisites: EDPX 4010 and EDPX 4020, or permission of the instructor.

EDPX 4750 Sound Cultures (4 Credits)
This course explores the sonic turn of emergence in contemporary digital culture. New sound technologies and practices, along with the development of interdisciplinary sound studies, have made avant-garde composition, sound art, film soundtracks, electronic music, turntablism, jazz, and alternative as well as popular musical forms equally essential zones in which we attune to changing technocultural conditions. To situate the course’s emphasis on contemporary sonic experience and auditory ways of being in the world, an historical portion of the class establishes the ways in which new sound cultures have appeared since WWII to transform how musicians, artists, scholars, and listeners experience and understand sound. The class facilitates experiences ranging from the pole of auditory realism to that of sonic speculation and futurism. Students will develop a sonic literacy that includes: listening as a creative act; understanding how to work with diverse sonic materials; and appreciating the critical voice as a creative and cultural imperative. Prerequisites: EDPX 4010 and 4020.

EDPX 4770 Cybercultures (4 Credits)
This course encompasses a variety of lenses through which to view, evaluate and critique ideas of ‘community’ and communities in cyberspace (cyber culture). The course covers such issues as: identity and race in cyberspace (including ‘identity and racial tourism’); communication technologies and social control; digital censorship; and utopian and dystopian representations of digital technology. The course also engages with social theories involving issues of technological determinism and the popular representation of technology. It explores the views of a diverse set of critics to ask whether digital things are ‘good’ for you and your communities. Cross listed with EDPX 3770. Prerequisite: EDPX 4020.

EDPX 4780 Speculative Cultures (4 Credits)
This course explores the intersections of emergent digital practices and cultures with the extrapolative thought experiments, technical speculations, and social criticisms of science fiction. Students read, discuss, write and otherwise respond to primary texts by the likes of William Gibson, Bruce Sterling, Cory Doctorow, Philip K. Dick, and Hiroshi Yamamoto. Science fiction studies may also include sub-genres (steampunk, hard science fiction, ecological) and regional categories (Japanese sci-fi), as well as consider science fiction in other media formats (sound recordings, film, games). Students produce written materials in a variety of formats, culminating in a formal essay or interactive publication. Cross listed with EDPX 4780. Prerequisite: EDPX 4020 or permission of the instructor.

EDPX 4800 Topics in Digital Making (4 Credits)
This course provides an in-depth explorations of the emergent digital practices of a technology or method for making (for example, wearables; interactive projections; augmented reality; immersive multi-channel soundscapes). Students learn the social/historical context of the particular method and consider the role and function their creations serve when it becomes public. Lab Fee. Prerequisite: varies with topic.

EDPX 4980 Internship (0-8 Credits)
Instructor approval required.

EDPX 4991 Independent Study (1-8 Credits)
Independent Study form required.

EDPX 4992 Directed Study (1-4 Credits)
Independent study form required.

EDPX 4995 Independent Research (1-10 Credits)
Topics vary. Reading and discussion of critical theory. May include project(s) related to the topic. Course may be repeated up to six times.
EDPX 5100 Graduate Critique (4 Credits)
The course focuses on student's creative production. Critiques are moderated by a different faculty member each quarter. Conceptual, methodological and theoretical concerns are stressed. Critiques are designed to assist in the experimentation, preparation and construction of individual art projects. Time is also spent on preparing students for a professional practice in the Arts. Course may be repeated up to six times.

EDPX 5700 Research & Theoretical Methods (4 Credits)
This course provides graduate students with the strategies and techniques of research in the area of digital media studies.

EDPX 5800 M.A. Thesis (4-8 Credits)
Independent work toward completion of the MA Thesis. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

EDPX 5850 M.A. Project (1-4 Credits)
Independent work toward completion of the MA Project. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

EDPX 5900 MFA Exhibition (1-6 Credits)
Independent work toward completion of the MFA Thesis Exhibition. May only be taken with the permission of the Graduate Director. May be taken for up to 12 credit hours.

**Engineering (ENGR)**

**Courses**

**ENGR 3210 Intro Nano-Electro-Mechanics (4 Credits)**
Familiarize science and engineering students with the electromechanical aspects of the emerging field of Nanotechnology (NEMS). NEMS is a relatively new and highly multidisciplinary field of science and technology with applications to state of the art and future sensors, actuators, and electronics. Starting with an overview of nanotechnology and discussion on the shifts in the electromechanical behavior and transduction mechanisms when scaling the physical dimensions from centimeters to micro-meters and then down to nanometers. Several electromechanical transduction mechanisms at the micro and nanoscale are presented and discussed in an application based context. New electromechanical interactions appearing in the nano and molecular scale, such as intra-molecular forces and molecular motors, are discussed. A detailed discussion and overview of nanofabrication technologies and approaches are also provided. Cross listed with ENGR 4210. Prerequisite: must be an engineering or science major of at least junior standing.

**ENGR 3340 Product Development and Market Feasibility (4 Credits)**
In this course, students gain knowledge of designing products for market success by developing a product and optimizing its design for specific mass manufacturing technologies. Students gain experience through the design development process including market feasibility research, human-centered design, brainstorming and ideating new concepts, refinement through design iteration, and constructing alpha and beta prototypes that are designed with mass manufacturing considerations. Projects are based upon real world new product development principles. Students learn and practice the fundamentals of design thinking, design process, and entrepreneurship.

**ENGR 3510 Renewable and Efficient Power and Energy Systems (4 Credits)**
This course introduces the current and future sustainable electrical power systems. Fundamentals of renewable energy sources and storage systems are discussed. Interfaces of the new sources to the utility grid are covered. Prerequisite: ENEE 2021.

**ENGR 3520 Introduction to Power Electronics (4 Credits)**
This covers fundamentals of power electronics. We discuss various switching converters topologies. Basic knowledge of Efficiency and small-signal modeling for the DC-DC switching converters is covered. Furthermore, magnetic and filter design are introduced. Prerequisites: ENEE 2211 and ENGR 3722.

**ENGR 3525 Power Electronics and Renewable Energy Laboratory (1 Credit)**
In this course the fundamentals of switching converters and power electronics in a real laboratory set-up are covered. The course incorporates hardware design, analysis, and simulation of various switching converters as a power processing element for different energy sources. The energy sources are power utility, batteries, and solar panels. Prerequisite: ENGR 3520.

**ENGR 3540 Electric Power Systems (4 Credits)**
This course covers methods of calculation of a comprehensive idea on the various aspects of power system problems and algorithms for solving these problems. Prerequisite: ENGR 3530.

**ENGR 3550 Introduction to Machine Drive Control (4 Credits)**
This course provides the basic theory for the analysis and application of adjustable-speed drive systems employing power electronic converters and ac or dc machines. Prerequisites: ENGR 3520 and ENGR 3530.

**ENGR 3620 Advanced Engineering Mathematics (4 Credits)**
ENGR 3621 Advanced Engineering Mathematics (4 Credits)
Applied mathematics for engineers. Topics include vector spaces, normed vector spaces, inner product spaces, linear transformations, finite-
dimensional linear transformations, linear operators, finite-dimensional linear operators, linear differential systems, linear difference systems,
orthogonal transformations, amplitude estimation, fundamentals of real and functional analysis, and introduction to partial differential equations, and
applications to engineering systems.

ENGR 3630 Finite Element Methods (4 Credits)
Introduction to the use of finite element methods in one or two dimensions with applications to solid and fluid mechanics, heat transfer and
electromagnetic fields; projects in one or more of the above areas. Prerequisites: ENME 2541 AND ENGR 1572.

ENGR 3650 Probability and Statistics for Engineers (4 Credits)
This course covers quantitative analysis of uncertainty and decision analysis in engineering. It covers the fundamentals of sample space, probability,
random variables (discrete and continuous), joint and marginal distributions, random sampling and point estimation of parameters. It also covers
statistical intervals, hypotheses testing and simple linear regression. The course includes applications appropriate to the discipline. Prerequisite:
MATH 1953.

ENGR 3721 Controls (3,4 Credits)
Modeling, analysis and design of linear feedback control systems using Laplace transform methods. Techniques and methods used in linear
mathematical models of mechanical, electrical, thermal and fluid systems are covered. Feedback control system models, design methods and
performance criteria in both time and frequency domains. A linear feedback control system design project is required. Prerequisites: ENEE 2021, ENGR
3610 or permission of instructor.

ENGR 3722 Control Systems Laboratory (1 Credit)
This laboratory course serves as supplement to ENGR 3721. It aims at providing "hands on" experience to students. It includes experiments on
inverted pendulum, gyrosopes, motor control, feedback controller design, time-domain and frequency domain. Corequisite: ENGR 3721.

ENGR 3730 Robotics (3 Credits)
Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support
robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Cross listed with
ENGR 4730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or permission of instructor.

ENGR 3731 Robotics Lab (1 Credit)
Laboratory that complements the analysis, design, modeling and application of robotic manipulators. Implementation of the mathematical structures
required to support robot operation. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning and
kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Corequisite: ENGR 3730 or permission of
instructor.

ENGR 3742 LabVIEW Programming, a primer for certification as an Applications Developer (4 Credits)
The LabVIEW course covers numeric, Boolean, and string controls; programming structures include loops, sequences, formula, and case structures.
VISA (virtual instrumentation and software structure) and SCPI (standard commands for programmable instruments) are used to control test
equipment and acquire data via the GPIB (general purpose interface bus, IEEE488 standard). Vis (virtual instruments) for data acquisition and
analysis are developed utilizing mathematical, signal processing, and statistical LabVIEW programming modules. LabVIEW structures will be used to
mathematically model and solve second order differential equations and Laplace transforms.

ENGR 3800 Topics (ENGR) (1-4 Credits)
Special topics in engineering as announced. May be taken more than once. Prerequisite: varies with offering.

ENGR 3900 Engineering Internship (0-4 Credits)
Students in engineering may receive elective credit for engineering work performed for engineering employers with the approval of the chair or
associate chair of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the
employer before a grade is assigned. Junior, senior, or graduate status in engineering is normally required. May not be used to satisfy technical
requirements. May be taken more than one for a maximum of 6 quarter hours. Prerequisite: permission of instructor.

ENGR 4100 Instrumentation and Data Acquisition (4 Credits)
This course examines different instrumentation techniques and describes how different measurement instruments work. Measurement devices
include length, speed, acceleration, force, torque, pressure, sound, flow, temperature, and advanced systems. This course also examines the
acquisition, processing, transmission and manipulation of data. Final project or paper. Cross listed with ENGR 3100. Prerequisites: PHYS 1213 OR
PHYS 1214.

ENGR 4200 Introduction to Nanotechnology (4 Credits)
The most important recent accomplishments so far in the application of nanotechnology in several disciplines are discussed. Then a brief overview
of the most important instrumentation systems used by nanotechnologists is provided. The nature of nanoparticles, nanoparticle composites,
carbon nanostructures, including carbon nanotubes and their composites is subsequently discussed. The course also deals with nanopolymers,
nanobiological systems, and nanoelectronic materials and devices. The issues of modeling of nanomaterials and nanostructures is also covered.
Multiscale modeling based on finite element simulations, Monte Carlo methods, molecular dynamics and quantum mechanics calculations are briefly
addressed. Most importantly, students should obtain appreciation of developments in nanotechnology outside their present area of expertise. Cross
listed with ENGR 3200.
ENGR 4210 Introduction to Nano-Electro-Mechanical-Systems (4 Credits)
This course familiarizes science and engineering students to the electromechanical aspects of the emerging field of Nanotechnology (NEMS). NEMS is a relatively new and highly multidisciplinary field of science and technology with applications in the state of the art and future sensors, actuators, and electronics. This course starts with an overview of nanotechnology and discussion on the shifts in the electromechanical behavior and transduction mechanisms when scaling the physical dimensions from centimeters to micro-meters and then down to nanometers. Several electromechanical transduction mechanisms at the micro and nanoscale are presented and discussed in an application based context. New electromechanical interactions appearing in the nano and molecular scale, such as intra-molecular forces and molecular motors, are discussed. A detailed discussion and overview of nanofabrication technologies and approaches are also provided. Cross listed with ENGR 3210.

ENGR 4215 Nanoscale Electromechanical Systems and Nanofabrication Laboratory (4 Credits)
This course provides science and engineering students with comprehensive hands-on experience in design, fabrication and characterization of Nanoscale Electromechanical Systems (NEMS). This laboratory-based course starts with a number of sessions including brief lectures reviewing the fundamentals and theories followed by pre-designed lab experiments. The students are then provided with a choice of different comprehensive design and implementation projects to be performed during the quarter. The projects include design, layout, fabrication, and characterization of the devices potentially resulting in novel findings and publications.

ENGR 4220 Introduction to Micro-Electro-Mechanical-Systems (4 Credits)
This course introduces students to the multi-disciplinary field of Micro-Electro-Mechanical-Systems (MEMS) technology. MEMS and Microsystem technology is the integration of micro-scale electro-mechanical elements, sensors, actuators, and electronics on a common substrate or platform through semiconductor microfabrication technologies. The course gives a brief overview of the involved physical phenomena, electromechanical transduction mechanisms, design principles, as well as fabrication and manufacturing technologies. Cross listed with ENGR 3220.

ENGR 4300 Advanced Numerical Methods (4 Credits)
Fundamental and advanced numerical methods to approximate mathematical problems for engineering applications using modern software such as Matlab. Topics include numerical differentiation and integration, solution to linear and non-linear equations, ordinary and partial differential equations, and initial, boundary, and eigen value problems. Recommended prerequisite: MATH 2070.

ENGR 4350 Reliability (4 Credits)
An overview of reliability-based design. Topics include: fundamentals of statistics, probability distributions, determining distribution parameters, design for six sigma, Monte Carlo simulation, first and second order reliability methods (FORM, SORM). Most Probable Point (MPP) reliability methods, sensitivity factors, probabilistic design. Cross listed with ENGR 3350.

ENGR 4530 Intro to Power and Energy (4 Credits)
Basic concepts of AC systems, single-phase and three-phase networks, electromechanical energy conversion, electric power generation, transformers, transmission lines, AC machinery, DC motors, and contemporary topics in power and energy conversion. Cross listed with ENGR 3530.

ENGR 4540 Electric Power Economy (4 Credits)
This course covers economy aspects of electric power industry and the implications for power and energy engineering in the market environment. Cross listed with ENGR 3540.

ENGR 4550 Probabilistic Methods in Electric Power Systems (4 Credits)
The course covers techniques for probabilistic power system analysis and design, power system reliability, probabilistic structural design and analysis of transmission lines, analysis and assessment of transmission line reliability, probability-based power system design criteria, probabilistic load-flow studies and probabilistic power system stability. Prerequisites: ENGR 3540 or equivalent; permission of instructor; knowledge of MATLAB/Simuling is required.

ENGR 4555 Power Generation Operation and Control (4 Credits)
This course covers economic dispatch of thermal units and methods of solution; transmission system effects; generate with limited energy supply; production cost models; control of generation; interchange of power and energy; power system security; state estimation in power systems; optimal power flow. Prerequisite: ENGR 4540.

ENGR 4590 Power System Protection (4 Credits)
This course covers methods of calculation of fault currents under different types of fault; circuit breakers, current transformers, potential transformers; basic principles of various types of relays; applications of relays in the protection of generator, transformer, line, and bus, etc. Prerequisite: ENGR 4540.

ENGR 4620 Optimization (3,4 Credits)
Engineering problems will be formulated as different programming problems to show the wide applicability and generality of optimization methods. The development, application, and computational aspects of various optimization techniques will be discussed with engineering examples. The application of nonlinear programming techniques will be emphasized. A design project will be assigned.

ENGR 4730 Introduction to Robotics (4 Credits)
Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Cross listed with ENGR 3730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or instructor approval.
ENGR 4735 Linear Systems (4 Credits)
This course focuses on linear system theory in time domain. It emphasizes linear and matrix algebra, numerical matrix algebra and computational issues in solving systems of linear algebraic equations, singular value decomposition, eigenvalue-eigenvector and least-squares problems, linear spaces and linear operator theory. It studies modeling and linearization of multi-input/multi-output dynamic physical systems, state-variable and transfer function matrices, analytical and numerical solutions of systems of differential and difference equations, structural properties of linear dynamic physical systems, including controllability, observability and stability. It covers canonical realizations, linear state-variable feedback controller and asymptotic observer design, and the Kalman filter. Cross listed with ENGR 3735. Prerequisites: ENGR 3610, ENGR 3721/3722, or permission of the instructor.

ENGR 4740 Adaptive Control Systems (4 Credits)
Theoretical and application aspects of robust adaptive control design for uncertain dynamical systems. Topics include: parameter estimation, stability, model reference adaptive systems, self-tuning regulators, gain scheduling, design for robustness against unmodeled dynamics and disturbance signals. Examples will be given from aerospace engineering (changes in the dynamics of aircraft), process control, and robotics. Modern alternatives to traditional adaptive control will be discussed (switching multi-model/multi-controller adaptive schemes). Prerequisites: ENEE 3111, ENGR 3610, and ENGR 3721, or permission of instructor. Familiarity with MATLAB/Simulink.

ENGR 4745 Adv Non-Linear Control System (4 Credits)

ENGR 4750 Networked Control Systems (4 Credits)
Fundamental tools and recent advances in networked control. Topics include the control of multi-agent networks found in multi-vehicle coordination, control of sensor networks, unmanned vehicles, and energy systems. Network models, distributed control and estimation, distributed control under limited communications and sensing, formation control, coverage control in mobile sensor networks. Prerequisites: linear algebra, linear control systems, differential equations, familiarity with MATLAB, or permission of instructor.

ENGR 4755 Optimal Control (4 Credits)
Introduction to optimal control theory (control laws that maximize a specified measure of a dynamical system's performance). Topics include: optimality conditions and constraints; calculus of variations; review of mathematical programming (Language multipliers, convexity, Kuhn-Tucker theorem); Pontryagin's maximum principle (constraints, Hamiltonians, bang-bang control); dynamic programming and Linear Quadratic Regulation (Riccati, Hamilton-Jacobi equation). Prerequisites: ENGR 3721 (Controls) and ENGR 3735/4735 (Linear Systems) or equivalent courses.

ENGR 4760 Multivariable Control (4 Credits)
Multivariable aspects of control (systems with multiple actuators and sensors); performance analysis of feedback control systems; sensitivity, robustness and stability margins; disturbance attenuation; design tradeoffs; singular value; characteristic locus. Modern H-infinity control theory and ‘mu’ synthesis-based robust control design techniques. Enforced Prerequisites and Restrictions ENGR 3721 (Controls) and ENGR 4735 (Linear Systems) at a graduate level or equivalents.

ENGR 4810 Advanced Topics (ENGR) (1-5 Credits)

ENGR 4885 Graduate Project for non-Thesis Option Master's Degree (1-4 Credits)
This course is required for all Master of Science graduate students with major in Electrical Engineering, Computer Engineering, and Mechatronic Systems Engineering, who choose the non-thesis option. The student will be supervised by his or her faculty advisor to conduct original and independent research with project topic closely related to the student's depth requirement of the specialization area. The student will deliver a final comprehensive project report and an oral defense for the project. The examination committee for the Master's project shall consist of at least two faculty members.

ENGR 4991 Independent Study (1-5 Credits)
ENGR 4992 Directed Study (1-10 Credits)
ENGR 4995 Independent Research (1-16 Credits)
ENGR 5991 Independent Study (1-10 Credits)
ENGR 5995 Independent Research (1-16 Credits)

Engineering, Bio (ENBI)
Courses
ENBI 4500 Biofluids (4 Credits)
The application of fluid dynamics theory and design to problems within the biomedical community. Specific topics covered include the mechanics of inhaled therapeutic aerosols, basic theory of circulation and blood flow, foundations in biotechnology and bioprocessing, and controlled drug delivery. Cross listed with ENBI 3500.
ENBI 4510 Biomechanics (4 Credits)
An introduction to the mechanical behavior of biological tissues and systems. Specific topics covered include: Analysis of the human musculoskeletal system as sensors, levers, and actuators; Joint articulations and their mechanical equivalents; Kinematic and kinetic analysis of human motion; Introduction to modeling human body segments and active muscle loading for analysis of dynamic activities; Mechanical properties of hard and soft tissues; Mechanical and biological consideration for repair and replacement of soft and hard tissue and joints; Orthopedic implants. Cross listed with ENBI 3510.

ENBI 4520 Introduction to Cardiovascular Engineering (4 Credits)
An introduction to cardiovascular mechanics with a focus on the quantitative understanding of the mechanical phenomena that governs the cardiovascular system. Specific topics covered include: basic principles of circulation including macro and micro circulation, soft tissue mechanics, applications to cardiovascular diseases, modelling techniques, clinical and experimental methods, and design of cardiovascular devices. Recommended prerequisites: ENME 2541 and ENME 2661.

ENBI 4800 Adv Topics (Bioengineering) (1-5 Credits)
Various topics in Bioengineering as announced. May be taken more than once. Prerequisite: varies with offering.

ENBI 4991 Independent Study (1-5 Credits)

ENBI 4992 Directed Study (1-5 Credits)

ENBI 4995 Independent Research (1-18 Credits)

Engineering, Computer (ENCE)

Courses

ENCE 3231 Embedded Systems Programming (4 Credits)
Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems. Prerequisite: ENCE 3210.

ENCE 3250 HDL Modeling & Synthesis (3 Credits)
Introduction to Hardware Design Language (HDL). Language syntax and synthesis. Applications related to digital system implementation are developed. Project. Prerequisite: ENCE 2101 or instructor's permission.

ENCE 3261 Fault Tolerant Computing (3 Credits)

ENCE 3321 Network Design (4 Credits)
Introduction to network components. Layering of network architecture. Analysis of Local Area Network (LAN) concepts and architecture based on IEEE standards. Design principles including switching and multiplexing techniques, physical link, signal propagation, synchronization, framing and error control. Application of probability and statistics in error detecting and control. Ethernet, Token-ring, FDDI (Fiber Distributed Data Interface), ATM (Asynchronous Transfer Mode), ISDN (Integrated Service Data Networks). Prerequisite: ENEE 3111, ENCE 2101 or permission of instructor.

ENCE 3501 VLSI Design (3 Credits)
Design of Very Large Scale Integration systems. Examination of layout and simulation of digital VLSI circuits using a comprehensive set of CAD tools in a laboratory setting. Studies of layouts of CMOS combinational and sequential circuits using automatic layout generators. Fundamental structures of the layout of registers, adders, decoders, ROM, PLA's, counters, RAM and ALU. Application of statistics and probability to chip performance. CAD tools allow logic verification and timing simulation of the circuits designed. Cross listed with ENCE 4501. Prerequisite: ENCE 3231.

ENCE 3620 Computer Vision (4 Credits)
This course is an introduction to the basic concepts in image processing and computer vision. First, an introduction to low-level image analysis methods, including radiometry and geometric image formation, edge detection, feature detection, and image segmentation are presented. Then, geometric-based image transformations (e.g., image warping and morphing) for image synthesis will be presented in the course. Furthermore, methods for reconstructing three-dimensional scenes including camera calibration, Epipolar geometry, and stereo feature matching are introduced. Other important topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 4620. Prerequisite: ENEE 3311.

ENCE 3630 Pattern Recognition (4 Credits)
This class provides an introduction to classical pattern recognition. Pattern recognition is the assignment of a physical object or event to one of several prescribed categories. Applications includes automated object recognition in image and videos, face identification, and optical character recognition. Major topics include Bayesian decision theory, Parametric estimation and supervised learning, Linear discriminant functions, Nonparametric methods, Feature extraction for representation and classification, Support Vector Machines. Cross listed with ENCE 4630.
ENCE 3631 Machine Learning (4 Credits)
This class covers topics in machine learning including but not limited to Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, deep learning, neural networks, linear classification techniques, manifold learning, bag of words, and Support Vector Machines. Cross listed with ENCE-4631.

ENCE 4100 High Speed Digital Design (4 Credits)
Fundamental topics related to the development of high speed digital systems. Topics include signal integrity and reliability related to crosstalk, parasitic, and electromagnetic interference caused by device clocking speed and system complexity. Project. Cross listed with ENCE 3110.

ENCE 4110 Modern Digital Systems Design (4 Credits)
This course focuses on the design of digital systems using combinational, sequential, and programmable logic devices and Hardware Description Languages (HDL). Techniques for logic design including asynchronous logic, physical world interfaces to digital systems, and system performance analysis methods are studied. Students also learn HDL-Verilog to program CPLD devices and FPGA systems. Cross listed with ENCE 3110.

ENCE 4210 Microprocessor Systems I (4 Credits)
Introduction to microprocessors and to the design and operation of computer systems. A study of the microprocessor and its basic support components. Analysis of CPU architectures of modern computers. Assembly language programming. Use of an assembler and other development tools for programming and developing microprocessor-based systems. Cross listed with ENCE 3210.

ENCE 4231 Embedded Systems Programming (4 Credits)
Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems.

ENCE 4250 Advanced Hardware Description Language (HDL) Modeling and Synthesis (4 Credits)
This course covers advanced concepts in Hardware Description Language (HDL) modeling and synthesis. It covers topics including but not limited to digital system design, simulation, and synthesis using Verilog HDL and VHDL. The course also covers RTL design, behavioral description, system Verilog, and timing analysis using CAD tools.

ENCE 4501 Advanced VLSI Design (4 Credits)
Advanced techniques in the fabrication and design of VLSI circuits and systems. Modeling of parasitic components. Floor-planning, clock distribution, routing, and low power design. Cross listed with ENCE 3501. Prerequisite: ENCE 3501 or permission of instructor.

ENCE 4601 Detection and Estimation Theory (4 Credits)
The subject of the detection and estimation theory course is on signal and information processing for the purpose of making desired inferences. The purpose of this course is to provide the fundamentals of theory and principles underlying the techniques for such processing. The following topics are involved in this course: receiver operating characteristics, hypothesis testing, Neyman-Pearson theorem, detection of deterministic signals with known parameters in Guassian noise, matched filters principles, detection of random signals with known characteristics, estimator-correlator, linear models, estimation bias, variance, Cramer-Rao bounds and Fisher matrix, Bayesian estimation, maximum likelihood estimation, minimum mean-squared estimation, detection of deterministic signals with unknown parameters, signal parameter estimation, Bayesian approach and generalized likelihood ratio test, detection of random signals with unknown characteristics, unknown noise parameters; signal processing applications. Prerequisite: basic understanding of probability theory and statistics, or permission of instructor.

ENCE 4620 Advanced Computer Vision (4 Credits)
This course covers advanced concepts in image processing and computer vision including but not limited to image radiometry and geometric formation, edge detection, geometric based transformations (e.g., image warping and morphing), camera calibration, Epipolar geometry, and stereo feature matching. Other advanced topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice advanced topics in image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 3620. Prerequisite: ENEE 3311.

ENCE 4630 Advanced Pattern Recognition (4 Credits)
This class covers advanced topics in pattern recognition including but not limited to Bayesian decision theory, parametric estimation and supervised learning, linear discriminant functions, nonparametric methods, feature extraction for representation and classification, manifold learning, bag of words, and Support Vector Machines. Cross listed with ENEE 4631.

ENCE 4680 Time-Frequency Signal Analysis (4 Credits)
This course focuses on time-frequency signal processing methods. Many TFRs and their usefulness in many applications is covered. Course topics include: signals and signal properties; uncertainty principle. Review of 1-D transforms: Fourier transform (FT), group delay, instantaneous frequency. Desirable properties: linear vs. quadratic TFRs. Linear TFRs: Short-timer Fourier transform (STFT); Wavelet transform; filter banks. Spectrumgram: relation to STFT; tradeoff between TF resolution and cross-term attenuation; application examples. Wignor distribution (WD): definition; properties; signal examples; relation to narrowband ambiguity function; cross-term geometry; applications; Smoothed WDs. Scalogram: relation to wavelet transform; properties; TF resolution' applications. Adaptive TFRs: adaptive spectrogram; positive TFRs; short-time techniques; time-frequency distribution series. Reassignment method; matching pursuit algorithms. TFRs in real-world applications: wireless communications, biomedicine, radar, sonar, detection, estimation, classification, speech processing, image processing, structural health monitoring, and many more. Prerequisites: basic knowledge of signal and systems, and digital signal processing, or permission of instructor.

ENCE 4800 Advanced Topics (CPE) (1-5 Credits)
Various topics in computer engineering as announced. May be taken more than once. Cross-listed with ENCE 3321, ENCE 3620.
ENCE 4900 Machine Learning (4 Credits)
This course provides a broad introduction to machine learning. Topics include: supervised learning (linear regression, logistic regression, parametric/non-parametric, neural networks, support vector machines); unsupervised learning (clustering, dimensionality reduction, kernel methods); anomaly detection and recommender systems. The course also discusses recent applications of machine learning. Recommended prerequisite: basic probability theory and statistics.

ENCE 4991 Independent Study (1-10 Credits)
ENCE 4992 Directed Study (1-10 Credits)
ENCE 4995 Independent Research (1-18 Credits)
ENCE 5995 Independent Research (1-18 Credits)

Engineering, Electrical (ENEE)

Courses

ENEE 3011 Physical Electronics (4 Credits)
The basic physical concepts of electronics, electrons and holes in semiconductors, transport and optical processes. Concentration on device concepts, including material synthesis and device processing, P-N junction diodes, junctions with other materials, bipolar transistors, field effect transistors (JFET, MESFET, MOSFET) and optoelectronic effect transistors (JFET, MESFET, MOSFET) and optoelectronic devices (lasers, detectors). Prerequisites: CHEM 1010, CHEM 1610, PHYS 1213, PHYS 1214 or permission of instructor.

ENEE 3111 Signals & Systems (4 Credits)
Introduces continuous time and discrete time linear system analysis, Fourier series, Fourier transforms and Laplace transforms. Specific engineering tools for discrete time linear system analysis include discrete time convolution, Z-transform techniques, discrete Fourier transform and fast Fourier transform (DFT/FFT), and the design and analysis of analog and digital filters for real-world signal processing applications. Prerequisites: ENEE 2021, MATH 2070.

ENEE 3141 Digital Communications (3 Credits)
Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels. Prerequisite: ENEE 2611.

ENEE 3611 Analysis and Design of Antennas and Antenna Arrays (4 Credits)
Maxwell’s equations applied to antenna analysis and design. Topics include fundamental parameters of antennas, radiation integrals and auxiliary potential functions, analysis and design of linear wire antennas, loop antennas, arrays, broadband antennas, frequency independent antennas, aperture antennas and horns. Integrated lab included. Prerequisite: ENEE 2611.

ENEE 3620 Optical Fiber Communications (4 Credits)
A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users with a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA) and ultra-fast optical time-division multiplexing (OTDM). Laboratory. Cross listed with ENEE 4620. Prerequisite: ENEE 3030 or permission of instructor.

ENEE 3641 Introduction to Electromagnetic Compatibility (4 Credits)
The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Cross listed with ENEE 4640. Prerequisite: ENEE 3111, ENGR 2611 and ENEE 2223.

ENEE 3670 Introduction to Digital Signal Processing (4 Credits)
Introduction to the theory and applications of Digital Signal Processing. Special attention is paid to the fast Fourier transform and convolution and to the design and implementation of both FIR and IIR digital filters. Prerequisite: ENEE 3111.

ENEE 4030 Optoelectronics (4 Credits)
Optical fibers: structures, waveguiding, and fabrication; attenuation and dispersion; optical sources (LED, LASER, Fiber laser); power launching and coupling; photodetectors (APD, PIN, MSM); and practical optical transmitter and receivers. Cross listed with ENEE 3030.

ENEE 4035 Nanophotonics (4 Credits)
Nanophotonics provides high-speed, high-bandwidth, and ultra-small optoelectronic components. This course covers nanoscale processes, devices and their applications for harnessing and manipulating light on the nanoscale.

ENEE 4141 Digital Communications (4 Credits)
Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels.
ENEE 4310 Information Theory and Coding (3 Credits)
Information and entropy; coding theory; error detection, correction codes; channel capacity; application to communications engineering.

ENEE 4416 Advanced Digital Signal Processing Topics (4 Credits)
Study of linear discrete-time systems used to perform operation on random processes for the purposes of signal detection, estimation, spectral estimation, enhancement and parametric modeling of signals and systems, linear difference equations, Z-transforms, random sequences, state variables, matched filtering, Wiener filtering. Prerequisite: ENEE 3670.

ENEE 4460 Real-Time Digital Signal Processing (4 Credits)
Digital signal processing algorithms and processing of discrete data, finite word length effects on filters, fixed point arithmetic and floating-point arithmetic. Overview of different architectures of digital signal processors. Programming of the DSP processor, implementation of DSP algorithms on DSP hardware in labs. Prerequisite: ENEE 3111, ENEE 3670, or ENCE 3210.

ENEE 4620 Adv Optical Fiber Comm (4 Credits)
A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users who have a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA), and ultra-fast optical time division multiplexing (OTDM). Advanced Project. Cross listed with ENEE 3620. Prerequisite: instructor permission.

ENEE 4625 Radio over Fiber Comms. (4 Credits)
This course provides comprehensive and technical foundation in Microwave photonic Applications: Radio over optical fiber communications (RoF) is a novel technology in the field of short-range communication applications. The main goal is to enable range extension of 1 to 3 orders of magnitude over a typical ultra wide wideband radio signal in the range of 3.1-10.6 GHz. This technology allows separation of low cost Base-Station (BS)s from the Central-Station (CS). In the RoF technology is targeting the Personal Area Network (PAN) market that is characterized by very low cost and low power (10 uW) access point. In RoF, the optical fiber is used to carry extremely wide RF signals (several GHz).

ENEE 4630 Optical Networking (4 Credits)
This course provides a technical overview of optical networking. It gives students a solid understanding of optical networking field principles and practice. Underlying principles are reviewed along with common optical solutions and practices. It explains and provides practical tips on how to design and implement Networks. Examples are used to demonstrate key concepts of ATM, SONET/SDH and DWDM implementation. Prerequisite: ENEE 3011 or instructor approval.

ENEE 4635 Optical Wireless Communications (OWC) (4 Credits)
This course addresses important issues in optical wireless theory, including coding and modulation techniques for optical wireless, wireless optical CDMA communication systems, Optical MIMO systems and optical wireless technology such as visible light communications, IR links and sensor networks. Project in OWC. No prerequisite.

ENEE 4640 Electromagnetic Compatibility (4 Credits)
The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include: Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Final Project. Cross listed with ENEE 3641.

ENEE 4650 Radio Frequency Design in the Wireless World (4 Credits)
Topics include the following: basic concepts in Radio Frequency design and communications, transceiver architectures, low-noise amplifiers, mixers, oscillators, phase-locked loops, power amplifiers, and transceiver design examples. Final Project. Prerequisites: ENEE 2611, ENEE 2222, and ENEE 3111 or equivalents.

ENEE 4800 Advanced Topics (EE) (1-5 Credits)
Various advanced topics in electrical engineering as announced. May be taken more than once. Cross-listed with ENEE 3035.

ENEE 4991 Independent Study (1-10 Credits)
ENEE 4992 Directed Study (1-10 Credits)
ENEE 4995 Independent Research (1-16 Credits)
ENEE 6991 Ph.D Independent Study (1-10 Credits)
ENEE 6995 Ph.D Independent Research (1-16 Credits)

Engineering, Mechanical (ENME)
Courses
ENME 3511 Machine Design (3 Credits)
Application of statics, dynamics, mechanics of materials and manufacturing processes to the design of machine elements and systems. Properties of materials and design criteria. Synthesis and analysis of a machine design project. Prerequisites: ENME 2520 and ENME 2541.
ENME 3545 Mechanisms (4 Credits)
Synthesis, analysis and use of mechanisms. Mechanisms studied include cams, gears and planar linkages, with an emphasis on planar linkages. Prerequisites: ENME 2530 and ENGR 1572.

ENME 3651 Computational Fluid Dynamics (4 Credits)
This course introduces principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer or two phase flow. The conservation equations, their discretizations and solutions, are presented. Convergence and validity of solutions along with computational efficiency are explored. Students learn to apply these techniques using the latest software packages. Prerequisite: ENME 2671.

ENME 3661 Mechanical Energy Systems Engineering (4 Credits)
This course covers energy systems engineering analysis from a mechanical and materials engineering perspective. This course covers energy production from traditional energy systems that use fossil fuel combustion such as internal combustion engines, coal-fired plants, and natural gas turbines, to nuclear energy and renewable energy methods such as wind, solar, hydraulic, and geothermal. Lastly, the course will survey emerging technologies for future (21st century) energy systems. Students should have taken a minimum Thermodynamics, Dynamics, and Fluid Dynamics courses. Prerequisites: ENME 2720, ENME 2510, ENME 2651.

ENME 3720 Introduction to Aerospace Engineering (4 Credits)
This course provides an introduction to aerospace engineering analysis and design. In the atmospheric domain, the basics of aerodynamics are covered, followed by flight mechanics. The approach is from a practical perspective in which analysis and design are intertwined. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

ENME 3810 Mechanical Engineering Capstone Laboratory (3 Credits)
This course is the capstone mechanical engineering laboratory course requiring independent experimental design by student teams. Using experimental equipment available in heat transfer, fluid mechanics, solid mechanics, thermodynamics, and measurement and control, the student team is required to design experiments to solve given problems which will be unique to each team. This course encourages students to develop experimental design and research techniques while continuing to improve skills in fundamental lab notebook keeping, uncertainty analysis in measurements, data acquisition, data analysis, report writing, oral presentations, and laboratory safety and procedures. Prerequisite: ENME 2810.

ENME 4020 Adv Finite Element Analysis (4 Credits)
ENME 4310 Computational Methods for Mechanics and Materials (4 Credits)
An introductory course for the general-purpose computational methods in advanced multiscale materials and mechanics. Students learn the fundamentals on the numerical methods used in mechanical and materials engineering. Cross listed with ENME 3310.

ENME 4360 Elasticity (4 Credits)
Students will be able to apply the fundamental principles of elasticity to solve two- and three-dimensional mechanical engineering problems involved in modern applications of elastic structures, composite materials, tribology and contact mechanics. Dependence on previous knowledge of solid mechanics, continuum mechanics or mathematics is minimized. The emphasis is placed on the engineering applications of elasticity. Suggested prerequisite: ENME 2541.

ENME 4400 Fatigue (4 Credits)
A detailed overview of fatigue. Topics include: stress life and strain life approaches, fracture mechanics, constant amplitude and spectrum loading, life prediction, fatigue at notches, microstructural effects, environmentally assisted fatigue, retardation and acceleration, multi-axial fatigue, design against fatigue and reliability. Cross listed with ENME 3400.

ENME 4520 Intermediate Dynamics (4 Credits)
Development and analysis of dynamic systems through classical and modern approaches. Topics include: reference frames, particle kinematics, Newtonian particle mechanics, Phase Portraits, rigid-body kinematics, Euler’s laws, Lagrange’s Equations, Lagrange Multipliers, and Kane’s Equations. Recommended prerequisites: MATH 2070 and MATH 2080.

ENME 4541 Advanced Mechanics of Materials (4 Credits)
This is a second-level course in mechanics of materials with an emphasis on techniques that are useful for mechanical design. Topics may include energy methods, non-symmetrical and nonlinear bending, shear and torsion of closed and open sections, beams in elastic foundations, membrane stress in axisymmetric shells, asymmetric bending of cylindrical shells, thick-walled cylinders and disks, curved beams, and elastic stability. Recommended prerequisite: ENME 2541.

ENME 4630 Viscous Flow (4 Credits)
Course covers the fundamentals of fluid mechanics from an advanced point of view with emphasis on the mathematical treatment of viscous-flow phenomena. Topics cover the Navier-Stokes equations and its exact and similarity solutions, laminar boundary layer theory, free-shear flows, and the phenomena of instability and transition to turbulence. Recommended prerequisite: ENME 2541.

ENME 4650 Adv. Fluid Dynamics (4 Credits)
Physical properties of liquids and gases; turbulence and closure models; surface waves and instabilities; non-Newtonian fluid behavior; conformal mapping and airfoil theory.

ENME 4660 Micro Heat Exchangers (4 Credits)
Explores the advance principles and applications of fluid dynamics and heat transfer through the application to micro fluidic heat exchanger design and optimization. Students utilize Mathcad extensively to seek optimized exchanger performance within a clearly defined design space. Students also build small scale heat exchangers from their optimized designs. Prerequisite: ENME 2671.
ENME 4670 Advanced Computational Fluid Dynamics (4 Credits)
Building on the principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer and two phase flow. Specifically, Monte Carlo and volume of fluid techniques are discussed at length. Additionally, students learn how to set up automated design optimization using the latest software packages. Time permitting, students also are introduced to fluid-solid interaction modeling. Prerequisite: ENME 3651.

ENME 4671 Convective Heat Transfer (4 Credits)
The objective of this course is to examine the physical phenomena associated with heat transfer in the presence of fluid flow. We will develop a mathematical description of the processes (fluid flow and heat transfer) for laminar and turbulent flows for both internal and external situations. Exposure to the fundamentals of fluid mechanics and heat transfer is expected before taking this course.

ENME 4800 Advanced Topics (ME) (0-5 Credits)
Determined by interest and demand. May be taken more than once for credit.

ENME 4900 Grad Professional Development (1 Credit)
This course is required for all MME MS graduate students and all MME PhD graduate students who enter with a BS or enter with an MS but fail their first qualifying exam. One of our objectives is for all graduating students to have good written and verbal communication skills. This course is set up to meet those objectives. During this course, students write a mini-proposal and/or literature review. Students follow guidelines for a funding agency (e.g. NSF or NIH) for the mini-proposal. If students have a research advisor, students can coordinate with their advisor. If students do not have a research advisor, students may pick a topic that most interests them. Both a written proposal and an oral presentation are required of all students. Graduate standing is required.

ENME 4950 Graduate Assessment (0 Credits)
This graduate assessment course is required for all MME graduate students to be taken in their last quarter. All required assessment materials are uploaded to DU Assessment to meet the course requirements. Students will receive emails through the DU Assessment system notifying you of what is required to be uploaded.

ENME 4991 Independent Study (1-10 Credits)

ENME 4992 Directed Study (1-10 Credits)

ENME 4995 Independent Research (1-16 Credits)

Engineering, Mechatronic Syst (ENMT)

Courses

ENMT 3210 Mechatronics I (4 Credits)
This course provides basic concepts from electrical, mechanical, and computer engineering as applied to mechatronic systems and is intended to serve as a foundation course for further exploration in the area of mechatronics. Prerequisite: senior or graduate standing in engineering.

ENMT 3220 Mechatronics II - Real-Time Systems (4 Credits)
Real-time systems require timely response by a computer to external stimuli. This course examines the issues associated with deterministic performance including basic computer architecture, scheduling algorithms, and software design techniques including data flow diagrams, real-time data flow diagrams, stat transition diagrams, and petri nets. In the lab portion of this class, students program a microcontroller to interact with mechatronic devices. Prerequisite: ENMT 3210, ENCE 3210 or COMP 3354.

ENMT 4000 Space Systems Design I (4 Credits)
The application of advanced theory and concepts as they relate to the development of spacecraft and missile subsystems, and how those subsystems are related under the umbrella of systems engineering. The course emphasizes practical aspects of space systems design and integration, and is team-taught by faculty and functional experts in the various fields. Lecture topics include aerospace materials, mechanics, thermal control, embedded systems, distributed sensor networks and aerospace probability and statistics.

ENMT 4010 Space Systems Design II (4 Credits)
The continuation of Space Systems Design I. Lecture topics include payload communications, guidance and control, spacecraft electric power, propulsion systems, radiation and avionics and sensor subsystems. Prerequisite: Space Systems Design I.

ENMT 4100 Systems Engineering (4 Credits)
Provides a framework for understanding and acquiring the knowledge, tools and skills needed by explicitly "systems-trained" engineers, to effectively interact with specialist engineers and project managers in the engineering of complex, large scale systems. Emphasis is on the development of a life-cycle model for systems engineering processes, to reduce the risk inherent in each life-cycle stage.

ENMT 4220 Mechatronics II (4 Credits)
This course combines systems design and integration with a real world project involving the design and fabrication of an integrated system. Prerequisite: Mechatronics I or equivalent.
ENMT 4730 Advanced Ground Robotics (4 Credits)
Introduction to path planning and sensing and estimation for robotic manipulations and mobile robots. Review of the mathematical preliminaries required to support robot theory. Topics include advanced sensors, mobile robot mechanisms, advanced manipulator mechanisms, path planning in 2-D and 3-D, and simultaneous localization and mapping. Applications include task and motion planning for idealized and real robots.

ENMT 4734 Unmanned Aerial Systems (4 Credits)
Unmanned Aerial Vehicles (UAVs), or Unmanned Aircraft Systems (UAS) as is the preferred term by the US DOD, have seen unprecedented levels of growths in military and civilian application domains. Fixed-wing aircraft, heavier or lighter than air, rotary-wing (rotocraft, helicopters), vertical take-off and landing (VTOL) unmanned vehicles are being increasingly used in military and civilian domains for surveillance, reconnaissance, mapping, cartography, border patrol, inspection, homeland security, search and rescue, fire detection, agricultural imaging, traffic monitoring, to name just a few application domains. This course offers a very comprehensive study of UAS that includes: history of unmanned aviation, including evolution of designs and models for application-specific domains; modeling, control and navigation fundamentals for both teleoperation, semi-autonomous and fully autonomous flights; see-and-avoid-systems for different classes of UAS; integration of UAS into the National Airspace System (NAS); applications and case studies. Prerequisite: ENGR 3730.

ENMT 4800 Adv Topics (Mechatronics) (1-5 Credits)
Various topics in Mechatronics System Engineering as announced. May be taken more than once. Prerequisite: varies with offering.

ENMT 4991 Independent Study (1-5 Credits)
ENMT 4995 Independent Research (1-18 Credits)

English (ENGL)

Courses
ENGL 3000 Advanced Creative Writing-Poetry (4 Credits)
Technique, writing practice and criticism.

ENGL 3001 Advanced Creative Writing-Poetry (4 Credits)
Technique, writing practice and criticism.

ENGL 3002 Advanced Creative Writing-Poetry (4 Credits)
Technique, writing practice and criticism.

ENGL 3003 Advanced Creative Writing-Poetry (4 Credits)
Technique, writing practice and criticism.

ENGL 3010 Advanced Creative Writing-Fiction (4 Credits)
Technique, writing practice and criticism.

ENGL 3011 Advanced Creative Writing-Fiction (4 Credits)
Technique, writing practice and criticism.

ENGL 3012 Advanced Creative Writing-Fiction (4 Credits)
Technique, writing practice and criticism.

ENGL 3013 Adv Creative Writing-Fiction (4 Credits)
Technique, writing practice and criticism.

ENGL 3015 Advanced Creative Writing: Non-Fiction (4 Credits)

ENGL 3017 Travel Writing-Fiction & Fact (4 Credits)
A study of European, American and other narratives of travel. This course examines relevant postcolonial and literary theories of travel and nationhood.

ENGL 3040 Introduction to Publishing (4 Credits)
Cross listed with ENGL 2040, MFJS 3140.

ENGL 3101 Non-Chaucerian Middle English Literature (4 Credits)
A study of Chaucer's near-contemporaries, Gower, Langland, and the Pearl poet as well as drama and lyrics.

ENGL 3121 Chaucer: Canterbury Tales (4 Credits)
Life, culture, language and literary trends of Chaucer's age as reflected in "The Canterbury Tales".

ENGL 3320 Oral Literature and Orality in Literature (4 Credits)
The term "oral literature" generally refers to narratives and poems—including songs—performed and disseminated orally from one generation to the other. Oral literature is, in some respects, the foundational 'text' of written literature. Some of the questions that we therefore explore in this course are as follows: How did oral literature develop? What are its types and their characteristics? How has oral literature been shaped by time and place? How is it distinct from as well as related to written literature? To answer these questions, we explore different forms of oral literature—from the traditional (such as folklore) to the contemporary (such as spoken word poetry). We also study the use of orality as a literary device in written literature. Our studies involve the examination of material and texts from different parts of the world.
ENGL 3402 Early Romantics (4 Credits)
ENGL 3404 England and Empire: Ambivalent Imperialism in Victorian and Edwardian Literature (4 Credits)
A course investigating the literary accounts of and responses to British imperialism in Victorian and Edwardian England in which students read works by Conrad, Kipling and Forster as well as several 20th-21st works by post Commonwealth authors in London.

ENGL 3405 Postmodern Visions of Israel (4 Credits)
This course investigates how representation of Israel as a modernist utopia have been replaced in contemporary literature with images of Israel as a dystopia. The class discusses the historical context that gave rise to visions of an idealized Israel, and the role the Hebrew language played in consolidating and connecting narration to nation. Next the class considers how belles-lettres from recent decades have reimagined Israel as a series of multilingual “multiverses.” A selection of fiction translated from Hebrew forms the core of class reading. Theoretical exploration of postmodernism help us conceptualize the poetics of postmodern literature. No knowledge of Israeli history or Jewish culture is necessary to succeed in this course. Cross listed with JUST 3405.

ENGL 3706 Writing the American West (4 Credits)
Explores historical and contemporary writing produced in and about the American West.

ENGL 3711 20th-Century American Fiction (4 Credits)
Fiction, poetry, drama, and non-fiction on selected themes by 20th and 21st century American writers. Topics for study may include issues related to realism, ethnicity and gender, as well as specific social and historical concerns.

ENGL 3731 Topics in English (1-4 Credits)
ENGL 3732 Topics in English (1-4 Credits)
ENGL 3733 Topics in English (1-4 Credits)
Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

ENGL 3742 Jesus in Jewish Literature (4 Credits)
This course surveys literary depictions of Jesus in Jewish literature. Readers are often surprised to learn that throughout the twentieth century and into the twenty-first century, major Jewish writers have incorporated the figure of Jesus of Nazareth into their work. This class explores the historical, aesthetic, and spiritual reasons for the many Jewish literary representations of Jesus and of his literary foil, Judas. A selection of materials including short stories, poems, novels, scholarly essays and polemics in English and in translation from Hebrew and Yiddish demonstrate the depth of Jewish literary culture's engagement with Jesus' life and teachings. Among the many writers we will read are: S.Y. Agnon, Sholem Asch, Uri Zvi Greenberg, Haim Hazaz, Emma Lazarus, Amos Oz, Philip Roth, and L. Shapiro. Ultimately, this class will consider how literary representations of Jesus can destabilize perceived distinctions between Jews and Christians. While helpful, no knowledge of Jewish languages, religious tradition, or cultural practice is necessary to succeed in this course. This course is cross-listed as JUST 3742.

ENGL 3743 Modern Jewish Literature (4 Credits)
Stories, novels and memoirs by 20th-century Jewish writers; consideration of issues of generation, gender and idea of Jewish literature as a genre. Cross listed with JUST 3743.

ENGL 3744 African American Literature (4 Credits)
This course examines fiction, poetry, autobiography, and drama by African American writers, with strong consideration on the socio-historical conditions that gave rise to and continue to inform this literary tradition.

ENGL 3800 Bibliography/Research Method (4 Credits)
ENGL 3803 Modernism/Postmodernism (4 Credits)
ENGL 3813 History and Structure of the English Language (4 Credits)
A composite course studying both the structure of modern English and the history of the English language.

ENGL 3815 Studies in Rhetoric (4 Credits)
This course will examine the history and principles of rhetoric and how they pertain to theory and practice in the field of composition and rhetoric.

ENGL 3817 History of Rhetoric (4 Credits)
ENGL 3818 Composition Theory (4 Credits)
ENGL 3819 Old English (4 Credits)
This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 3200.

ENGL 3821 Literary Criticism: 19th Century-Present (4 Credits)
ENGL 3822 Literary Criticism: 20th Century (4 Credits)
Critical methods and philosophies of 20th-century critics; their relationship to traditions.

ENGL 3823 Interpretation Theory (4 Credits)
ENGL 3825 Cultural Criticism (4 Credits)
Cross listed with ENGL 2835.
ENGL 3852 Topics in Poetics (4 Credits)

ENGL 3982 Writers in the Schools (2,4 Credits)
This course operates mostly "in the field." Following the models of California Poets in the Schools and Teachers & Writers Collaborative, students are in training with a poet-in-residence, observing him as he conducts a residency in a public school. In addition, we have our own meetings to discuss pedagogy, classroom practices and management, teacher-writer relations, and all other necessary logistical planning. Placement in public schools is facilitated by Denver SCORES, an education program dedicated to increasing literacy in Denver's at-risk school population. For those wishing to work with middle or high school students, or in other community settings (e.g., homeless or women's shelters), special arrangements can be made. This course is a collaborative effort between CO Humanities, Denver SCORES, and the University of Denver.

ENGL 3991 Independent Study (1-17 Credits)

ENGL 3992 Directed Study (1-10 Credits)

ENGL 3995 Independent Research (1-10 Credits)

ENGL 4000 Colloquium (2 Credits)

ENGL 4001 Sem Creative Writing-Poetry (4 Credits)

ENGL 4011 Sem Creative Writing-Fiction (4 Credits)

ENGL 4012 History/Theory of Genre-Poetry (4 Credits)

ENGL 4017 Travel Writing (4 Credits)

ENGL 4050 The Critical Imagination (2 Credits)
This graduate level course explores poetry, fiction, and criticism as different facets of the imagination. This is a large and a necessarily vaguely defined topic. But in the world of literary studies, creativity and criticism are clearly symbiotic. Reading and writing are connected activities. The poet or fiction writer is often a critic, and there are numerous treatments of interpretation in the critical canon suggesting that the act of reading and interpreting is itself an imaginative and creative act. The course explores genre signatures and possibilities, as well as provides an introduction to some of the analytics through which texts, literary and otherwise, are interpreted.

ENGL 4100 Graduate Tutorial (2-4 Credits)

ENGL 4120 Beowulf (2 Credits)
Reading and translation of the Old English Beowulf. Prerequisite: ENGL 4125.

ENGL 4125 Old English (4 Credits)
This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 4120.

ENGL 4150 Special Topics in Medieval Lit (4 Credits)

ENGL 4200 Special Topics-Early Mod Lit (4 Credits)

ENGL 4210 Holocaust Literature (4 Credits)
This seminar presents a multidisciplinary and transnational approach to literature of the Holocaust. Students consider memoir, fiction, and poetry drawn from a variety of national literatures and linguistic traditions. Works written by victims, survivors and 'witnesses through the imagination' are all considered. These readings are supplemented by secondary texts, including historical and philosophical materials, as well as relevant works from the social sciences.

ENGL 4213 Advanced Studies in Early Modern Literature (4 Credits)

ENGL 4220 Seminar-Studies in Shakespeare (4 Credits)

ENGL 4300 Advanced Studies in 18th Century Literature (4 Credits)

ENGL 4321 Spc Tpcs: 18th Cent Literature (4 Credits)
Special Topics courses will explore specific topics within historical periods, single authors, or theoretical/critical/ scholarly issues.

ENGL 4424 Topics in English: 19th Century Literature (4 Credits)
Special Topics courses will explore specific topics within historical periods, single authors, or theoretical/critical/ scholarly issues.

ENGL 4510 ISL Dharamsala: Tibet, Global Citizenship, & Community Literacies (4 Credits)
ISL Dharamsala presents DU students with the unique opportunity to study international community literacies as a practical component of global citizenship through service-learning placements and study in Dharamsala, India. Home of the Dalai Lama and the Tibetan government-in-exile, Dharamsala is a multi-generational community located in the northern Indian foothills of the Himalayas. During fall quarter, students will study community literacies in the practice of global citizenship and service while immersed in the geo-political, religious, and other contexts experienced by Tibetans in exile. During their time in Dharamsala, cultural immersion and a service-learning placement will give students insight into the complexities of social justice issues and cultural nuances they have been studying and provide opportunities to contribute to local and global society through informed and reflective practice.

ENGL 4600 Adv Studies -20th Cent Lit (4 Credits)

ENGL 4621 Adv Studies-20th C. Literature (2-4 Credits)
This course will offer (and be required of) graduate students an advanced foundation in 20th century literature; the primary texts and their cultural/ historical/ theoretical contexts.
ENGL 4650 Special Topics: 20th Cent Lit (4 Credits)

ENGL 4660 The Black Imagination (4 Credits)
Focusing mainly on Africa, Asia, Europe, and the Americas (especially the USA and the Caribbean/Latin America), this course explores and connects aspects of the black imagination. These aspects include oral performances, thought systems, literature, art, cinema, and critical discourses in different eras and in various places. Studied together, these existential and intellectual signposts provide an expanded insight into black (African and African diasporic) aesthetics from an intercontinental and an interdisciplinary perspective.

ENGL 4675 Theories of Narrative: Formalism, Narratology, Cybertext (4 Credits)
This class traces developments in narrative theory from Russian Formalism through "classical" narratology and on to examine the border between traditional narrative texts and texts that require a higher degree of interactivity, sometimes called "cyber texts." The goal is to identify significant contributions to narrative theory and to suggest the possibilities for the future of the field. Seminal articles, key works, and critical introductions survey key advances in narrative theory to present an overview of the field from its inception to contemporary trends.

ENGL 4700 Antebellum American Literature (4 Credits)

ENGL 4701 Topics in English (2-5 Credits)
A topics class; topics may change.

ENGL 4702 Topics in English (2-5 Credits)
A topics class; topics may change.

ENGL 4730 American Romanticism (4 Credits)

ENGL 4732 Spc Tpc: Antebellum Amer Lit (4 Credits)

ENGL 4735 Sem: H. James & E. Wharton (4 Credits)

ENGL 4830 Seminar: Teaching and Writing Literature (2-4 Credits)

ENGL 4832 Sem: Teaching Writing & Lit (2 Credits)

ENGL 4840 Topics in Composition Studies (2-4 Credits)
Each offering of this course focuses on specific issues in theory, research, or pedagogy within the broad field of composition studies. Examples of topics include the development of writing abilities; genre theory and composing; multimodal texts and their intersections and disjunctions of rhetoric and composition; the history of composing theories and practices; realms of composing, including the academic, civic, vocational, aesthetic, and interpersonal; institutional formations and settings of composing; discourse theories; stylistics; race, gender, class and composing; and so on.

ENGL 4851 Publishing Institute (6 Credits)

ENGL 4852 Dissertation Colloquium (2 Credits)
This two-credit dissertation colloquium is offered in the winter and spring for third-year PhD students in English who are in the process of researching and writing their dissertations. In addition to having weekly presentations and discussions of work in progress, the group will peruse prefaces and introductions to former English Department dissertations, write and abstract for their own dissertation, and possibly revise and send out a piece from their dissertation. The class is open to both literary studies and creative writing students. Restricted to doctoral students in English.

ENGL 4991 Independent Study (1-17 Credits)

ENGL 4992 Directed Study (1-10 Credits)

ENGL 4995 Independent Research (1-17 Credits)

ENGL 5991 Independent Study (1-17 Credits)

ENGL 5995 Independent Research (1-17 Credits)

English Language Center (ELC)

Courses

ELC 3001 Advanced Graduate Writing for International Students (0 Credits)
The purpose of this course is to introduce international graduate students to the format and expectations of graduate research writing with specific application to the student's major field of study. Students cover topics related to academic writing citation style, finding/using academic sources, and plagiarism. Students learn to improve their academic writing style and grammar in the context of an academic research proposal and paper.

ELC 3002 Advanced Graduate Speaking for International Students (0 Credits)
The primary goal of this course is to help university graduate students communicate more easily, comfortably, and confidently in English. This course focuses on preparing students for communicating in their academic classes with professors, classmates, and possibly future students as teaching assistance. Accordingly, the students build pronunciation, fluency, vocabulary, and interactive skills (negotiating meaning and compensations strategies, for example).
ELC 3003 Integrated Communication Skills for International Graduate Students (0 Credits)
This course assists international students in discovering and mastering the communication norms of graduate programs in U.S. universities. Beginning with a student-led needs analysis of communication expectations in their academic departments, students identify the language skills that will help them succeed in their field of study. The course follows a workshop format and includes a variety of speaking and writing activities, through which students learn to recognize and correct their own language errors, integrate sources appropriately, and develop confidence in interacting with professors and peers. Students are encouraged to bring assignments and projects from their major coursework as examples for class discussion. These discussions provide the foundation for work on oral skills (pronunciation, fluency, and interaction), writing skills (citation style, organization, and voice), and general language development (vocabulary and grammar).

Entrepreneurship & Venture Mgt (EVM)

Courses
EVM 4040 Social Entrp in Global Mrkt (4 Credits)
This is a dynamic hybrid course with online readings, cases, quizzes, and blogs, as well as in-class experiential interactions with social enterprises in the community. The distance component of this course is guest speakers from other countries. Students will have the opportunity to network, interact, and work with local social enterprises. A value added component of this course is the coverage of global and cross-cultural concepts and issues critical for successfully running social enterprises in a global context.

EVM 4350 Big Challenges, Big Solutions: The Emerging Start-Up (4 Credits)
Students in the experiential course will start a firm in which they formulate an idea, gather basic data, formulate hypotheses, and then test these hypotheses with potential market participants. Students are likely to pivot several times in this course as the experimentation process helps them shape the emerging firm.

EVM 4351 Designing the Start-Up (4 Credits)
In this class, students will develop an executive summary that outlines the core business concept and the type of governance that will be needed, how the business will scale both in terms of product/service and customers. This executive summary will be used to fund the business and determine how the business will be funded—friends and family, credit cards, second mortgages, crowdfunding, angel, or VC.

EVM 4355 Entrepreneurship: Ideation to Creation (1-2 Credits)
Entrepreneurship is designed as a general introduction to sustainable entrepreneurship and the application of basic business skills to the creation of innovative enterprises which incorporate renewable, reusable and sustainable approaches to business. Sustainability is unleashing a new wave of innovative and disruptive forces to create new profitable business enterprises. In this course, through a combination of lectures, discussion, outside speakers and practical exercises, we will explore the creation of new enterprises that embrace the triple bottom line of profits, people and planet. It will culminate in a new venture pitch at Denver Startup Week. (BUS 4610 Pre Req).

EVM 4356 Entrepreneurship II: Ideation to Creation (1 Credit)
Entrepreneurship II builds on Entrepreneurship I, requiring students to use their knowledge of sustainable entrepreneurship and the application of basic business skills to create an innovative enterprise which incorporates renewable, reusable and sustainable approaches to business. This is the second of two classes, taken with at least one quarter separating EVM 4355 and EVM 4356.

EVM 4360 Entrepreneurship: Ideation to Creation (2 Credits)
Entrepreneurship is designed as a general introduction to sustainable entrepreneurship and the application of basic business skills to the creation of innovative enterprises which incorporate renewable, reusable and sustainable approaches to business. Sustainability is unleashing a new wave of innovative and disruptive forces to create new profitable business enterprises. In this course, we will explore the creation of new enterprises that embrace the triple-bottom line of profits, people and planet. Students are then required to use their knowledge of sustainable entrepreneurship and the application of basic business skills to create an innovative enterprise which incorporates renewable, reusable and sustainable approaches to business.

EVM 4700 Funding the Business (2,4 Credits)
This course will focus exclusively on financing the business, including crowdfunding, angel investments, and private equity, the documents needed for such funding and the valuation of the firm as a result of funding.

EVM 4704 Topics in EVM (1-8 Credits)
EVM 4710 Innovation/Creativity-Business (4 Credits)
Cross listed with EVM 3710.

EVM 4980 Internship (1-5 Credits)
EVM 4991 Independent Study (1-10 Credits)
EVM 4992 Directed Study (1-4 Credits)

Environmental Policy & Mgmt (EPM)
Courses

EPM 4001 Environmental Foundations and Principles (4 Credits)
Each major federal environmental law has a basis in protecting human health, as well as the environment. Although protection of the environment is claimed to be the purpose of the law, protection of the public’s health ultimately becomes its foremost effort. This course provides an overview of how government institutions address environmental health concerns, develop policy, apply the law, and implement environmental public health protections. In addition, how environmental health law is implemented by agencies; the responsibilities of local, state and federal agencies; the rights of the citizens subject to these rules; and the role of the courts throughout the process are explored.

EPM 4002 Integrated Environmental Systems (4 Credits)
The earth as a whole is comprised of many systems that affect the environment. Some have large wide ranging reach, while others are restricted to a relatively small area. Included is everything in between. Actions in one area or system may have unintended secondary and tertiary consequences in that system or others. This course uses various tools and materials to study a few environmental systems and determine connections, consequences, impacts, barriers, decision making, life cycle costs, etc.

EPM 4003 Environmental Finance and Economics (4 Credits)
This class provides an overview of economics and finance in an environmental context. Topics include an overview of the economic system, efficiency, equity, market failure, environmental regulation, benefit-cost analysis, valuing the environment, pollution control, energy, conservation of natural resources, performance metrics, risk and return, time value of money, cost of capital, returns on investments, and standard financial reports. The class makes use of reading assignments, written assignments, case studies, and class participation. The course emphasizes relationship between business management and environmental quality, and provides students with a financial and economic decision-making framework for understanding and analyzing environmental issues.

EPM 4040 Wetland Ecology and Management (4 Credits)
This course provides a detailed examination of aquatic communities and habitats with an emphasis on freshwater systems. The recognition, identification, classification, and maintenance requirements of various wetland communities are stressed. Students analyze Section 404 of the Clean Water Act and the permitting process. Guidelines for placing dredge and fill materials in wetlands and other construction projects that directly or indirectly affect these areas are reviewed. Students explore concepts related to regulatory enforcement, mitigation, and the need for additional policies and actions to sustain as well as protect these critical communities.

EPM 4108 Impacts of Recreational Use (4 Credits)
The practical and theoretical basis of recreational use of public and private lands is examined in the context of ecosystem management. The statutory and regulatory policies and current issues regarding the management and use of lands in wilderness systems, wild and scenic river corridors, parks, and open spaces are discussed in detail. The impacts of recreational uses on the environment and conflicts with other uses of land and resources are discussed. Land use planning policies and decisions which respond to recreation, wilderness and open space issues are examined. Field trips to Rocky Mountain National Park, Chatfield State Park, or other outdoor recreation sites will be scheduled to supplement classroom meetings.

EPM 4115 Introduction to Ecology (4 Credits)
This course examines the concepts of the ecosystem, populations, communities, the flows of energy, material cycles, and the necessity of diversity. Concepts including the unity of organisms and inseparable interactions with the physical environment are analyzed. Class discussions include topics such as the formation, distribution, and organization of ecological communities; plant succession and nutrient cycling; evolutionary trends of plant and animal populations; and species interactions in subalpine and alpine forests, prairies, and plains.

EPM 4120 Introduction to Natural Resource Management (4 Credits)
This course provides an introduction to natural resource management with an overview of historic and contemporary management systems and principles. Students examine key policies, guidelines, and planning procedures of governmental agencies, resource-based industry and the public. Topics include the simultaneous consideration of biological, physical, social, and economic aspects of lands, waters, and natural resources to achieve sustainable conditions. Other topics are multiple use/sustained yield management; soil and water conservation and protection; use, restoration, and preservation of renewable and non-renewable resources; and the preservation and management of natural resources for recreation, spiritual renewal, and other amenity values.

EPM 4140 NEPA (4 Credits)
Students examine the requirements and implementation strategies of the National Environmental Policy Act. The Council on Environmental Quality, National Environmental Policy Act Regulations and the rules and requirements of various federal agencies which are responsible for National Environmental Policy Act implementation are examined in detail. Specific applications of National Environmental Policy Act to private and public activities which constitute major federal actions significantly affecting the quality of the human environment are discussed. Representative Environmental Impact Statements and Environmental Assessments are presented and critiqued for regulatory compliance and thoroughness in disclosing environmental effects of proposed actions. Prerequisite: EPM 4200 (Environmental Protection Law).

EPM 4150 Global Environmental Law and Policy (4 Credits)
This course explores the legal and philosophical underpinnings of the environmental movement, both in the United States and internationally. Students will analyze global environmental issues including endangered species, overpopulation, resource depletion, biodiversity, ocean dumping, deforestation, desertification, global warming, and ozone depletion. Emphasis is placed on management options and the use of international laws and treaties to mitigate, lessen, or eliminate damage to various aspects of the environment.
EPM 4200 Environmental Protection Law (4 Credits)
This course reviews a wide spectrum of laws which protect our environment and health. Students will discuss the purpose, context and implications of the most important laws, regulations and court cases that affect the quality of our lives. Coverage includes: National Environmental Policy Act (NEPA), Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Emergency Planning and Community Right-to-Know Act (EPCRA), Occupational Safety and Health Act (OSHA), and related toxics laws. It provides an overview of the legal system and the roles of Congress, the President, executive agencies, states, and courts in shaping environmental laws.

EPM 4220 Endangered Species and Wildlife (4 Credits)
This course provides an overview of the basic principles, trends, challenges, and controversies of the administration of maintaining certain wildlife species. Threats from water and air pollution, poaching and other illegal actions, interrelationships of wildlife and their habitats, and biodiversity will be discussed. Students gain an understanding of the roles and responsibilities of various federal, state and local agencies, environmental and wildlife interest groups, and other organizations involved in wildlife management issues.

EPM 4230 Renewable and Alternative Energies (4 Credits)
This course provides a well-rounded primer on energy as a resource and its importance in the economy and the world today. Renewable energy and alternative fuels as well as nuclear and hydrogen-based technologies will be explored. This course also provides an in-depth view of issues surrounding the development, enforcement and application of energy regulatory policy.

EPM 4232 Sustainability Policy and Practice (4 Credits)
In 1987, the Brundtland Commission, formerly the World Commission on Environment and Development, defined sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Sustainability covers many disciplines, and the concept is very broad. Sustainability relates to some of the most challenging questions of our time, and the United Nations has developed sustainability goals to meet these challenges. The UN Sustainable Development Goals range from reducing poverty to building sustainable communities. Not only are countries working on sustainability goals but corporations have joined as well. Shareholders of many corporations have requested their corporations meet sustainability needs. Sustainability reports are now required in the annual reports. This course will look at sustainability goals as it relates to environmental policy and practice. Students will understand the language of sustainability and analyze sustainability reports for greenwashing versus legitimate actions toward sustainable practices. They will also be able to put into practice possible policies to meet sustainability goals.

EPM 4233 Sustainable Transportation (4 Credits)
21st Century transportation planning on the local and global scale involves consideration of environmental policies and sustainable practices. Development of an efficient system for moving goods and people along highways, airways and public transit networks must coordinate with legal requirements governing automobile source emissions, water pollution, mitigation of congestion, and crisis management. Conflicts occur along political fault lines between public interest groups, environmental justice advocates, the business community, government regulators, and the ordinary commuter. Consideration is given to different fuel sources, including carbon-based, hydrogen, electricity, and biofuels. The course also examines fuel efficiency (CAFE) and trends in emission science and regulation.

EPM 4234 Climate Change and Science (4 Credits)
Global Warming is a cause celebre, but how much do we really know about the science involved in studying the earth's climate? Moving beyond the social and political opinions espoused in the current debate on climate change, this course delves into the chemical and physical forces at play in the arena. This course covers scientific processes used in measuring climate dynamics, among them ozone chemistry, carbon and oxygen cycles, and heat and water budgets. It explores scales and methods for detecting climate change, including analyzing ice cores, instrumental records, and time series. Some attention will be devoted to "climate forcing" caused by such things as orbital variations, volcanism, plate tectonics, and solar variability.

EPM 4235 Green Building (4 Credits)
Builders, developers and designers increasingly are promoting the use of green construction practices in the pursuit of healthier, smarter buildings. Students in this course examine sustainable building strategies and tools, including LEED (Leadership in Energy and Environmental Design), the nationally-accepted benchmark for the design, construction and operation of high-performance green buildings. LEED promotes a whole-building approach by recognizing performance in five areas: sustainable site development water savings, energy efficiency, materials selection and indoor air quality. What materials are best in the design and operation of green building? How can a designer or building owner make better use of power and water efficiency programs? What are the recent developments, trends and case studies of green buildings and materials?

EPM 4236 Nuclear and Hydrogen Energy (4 Credits)
Two future- and high-tech oriented energy sources are explored in this course, nuclear power and hydrogen fuel. The course covers principles used in fission energy and in nuclear power engineering, including controlled chain reactions and reactor design criteria. It also attends to issues of radioactive waste treatment and storage and the mitigation of other radiation hazards. Currently, some 20% of the United States electric power comes from nuclear plants that use low-enriched uranium as fuel, burn nothing, and emit virtually no CO2. What is the future for this form of energy? In addition to nuclear power technology, the course focuses on fuel cells and the hydrogen economy, which brings its own questions concerning cost-benefit analysis and risks. Do these new economy, relatively "clean" energies present a way to avoid the downward trend of depleting natural resources, or do they send a siren song with the waste and safety problems they present?
EPM 4238 Water and Food Sustainability (4 Credits)
For such basic human needs, water and food present their own highly-technical challenges inside legal, political and environmental spheres. This course delves into environmental, economic, and social implications in water usage and water resources regulation. This course also takes a broad look at food and farming systems at community, society, and ecosystem levels.

EPM 4280 RCRA Permitting and Compliance (4 Credits)
This course presents Resource Conservation and Recovery Act’s cradle-to-grave regulations governing solid and hazardous waste generation and disposal, the various permitting requirements, and the process by which permits are obtained. Design and performance requirements for treatment, storage, and disposal facilities are examined. Developing trends in waste minimization, solid waste management, and special waste controls are also examined.

EPM 4355 ISO 14001 Standards (4 Credits)
This advanced course introduces the new ISO 14001 standard for environmental management systems. It includes a history and developmental context review of the ISO 14001 standard. This class reviews the specific elements and processes that form certifiable 14001 environmental management systems. Using an example, students develop a complete program that integrates the 14001 requirements with the existing strategic management methods of an organization. This program demonstrates how to use the 14001 framework as a proactive and systematic approach to environmental management. Class discussions include developing an environmental policy, specifying objectives and targets, implementing an environmental management program, monitoring and measuring program results, and reviewing the program to ensure continual improvement.

EPM 4390 Environmental Policy Analysis (4 Credits)
This course provides a basic introduction to the field of public environmental policy analysis. Specifically, it serves as a foundation course that introduces contemporary methods of policy analysis, agenda-setting, models of policy formulation and implementation, and policy evaluation. The focus is principally on concepts, analytical approaches, and research methods.

EPM 4400 Environmental Values and Ethics (4 Credits)
Students examine ethical considerations in environmental management and decision making. Discussions cover personal versus organizational attitudes; cultural, economic, and historic values; science versus politics; and international and intergenerational policies. The course also explores various philosophies of humankind’s relationship with the environment. Students are encouraged to develop and express a personal philosophy relative to their role in the regulatory, technical, scientific, and financial management of the environment.

EPM 4460 Land And Visual Resources (4 Credits)
This course is designed to provide students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems is also be discussed.

EPM 4461 Assessment of Social Impacts (4 Credits)
Students examine how the introduction of nuclear power systems or a nuclear waste treatment facilities affect the demographic and economic characteristics of a specific region. Basic analysis of archaeological resources, historic buildings and structures, and traditional cultural properties are also considered. Pertinent areas of environmental law provides guidelines and regulations with relation to the nuclear industry and current policy issues including the importance of the Energy Policy Act of 2005.

EPM 4462 Ecology, Soil, and Water (4 Credits)
A general overview of the potential effects of nuclear power facilities on ecosystems and ecological resources. These include terrestrial resources, wetlands, floodplains, aquatic resources, protected and sensitive species, geology, soil mechanics and seepage. In site-specific scales, the following items need to be considered, such as physical alteration of the landscape, disruption of natural processes, such as flooding and fires, and pollution.

EPM 4463 Air Quality, Noise and Transportation (4 Credits)
Air quality, noise and transportation issues can potentially be affected in the area surrounding a nuclear power plant in a variety of ways. Students become acquainted with the methodology of the dose rate estimations to the public and workers; the methods that are in place to monitor and reduce the risk to the public and workers from all hazards; and various pathways of exposure from possible nuclear contaminants and related pollution. Perceptions of citizens as stakeholders are considered. Identifying and profiling atmospheric toxic sources, developing and assessing emerging measurement methods, characterizing the degree and extent of local air toxicity problems, and tracking progress of air tox reduction efforts. The impact of transportation on human and environmental risk assessment, including the primary methods and routes used to transport to a specific site, affected employees, commercial shipments, hazardous and radioactive material shipments, transportation packaging, transportation accidents, and onsite and offsite traffic volumes.

EPM 4464 Nuclear Power Plant Systems (4 Credits)
This course presents the basic components of nuclear power plant systems, their functional purpose, and operating conditions, including an overview of the equipments design and components from the safety point of view. An overview of nuclear power plants is presented in context of their impact on the environment and human health, including active and passive safety aspects.
EPM 4465 Environmental Restoration and Waste Management (4 Credits)
Environmental Restoration is the identification and elimination of hazardous materials from a designated site such that the risks to human health and the environment are reduced to an acceptable level for an intended future land use. This course examines successful environmental restoration activities that were used to reduce and mitigate risk associated with past operations of nuclear and nuclear-related facilities and the significant potential to release harmful contaminants. Environmental restoration effects on the ecological and human health risk assessments and analyses related to the transport, treatment, storage, and disposal of waste from the contaminated site are presented. Remediation processes for radioactive materials and other hazardous wastes and the eventual storage, processing, and disposal and the potential effect on humans and the environment is studied. An overview is given on the development of a radiological protection program for an EIS report. External and internal hazards: control measures and monitoring, and other important limits and measurements are explored.

EPM 4500 Leadership for Environmental Managers (4 Credits)
This course is an overview of basic leadership and management skills with an emphasis on topics germane to practicing environmental professionals. It addresses three main subject areas: performance metrics and standard financial reports (i.e., how organizations and businesses keep score); leadership (i.e., changes in behavior and work habits necessary for advancement from staff to management; and achieving clarity in organizational values and mission); and basic elements of internal and external communications. The class will make use of reading assignments, written assignments and class participation.

EPM 4510 Environmental, Health & Safety (4 Credits)
The exponential growth in regulations and the increased demand to streamline resources present a unique opportunity for the environmental professional to integrate safety and health practices both horizontally and vertically within the organization. Students will evaluate the benefits and barriers to integrating environmental, health and safety programs with applicable laws and regulations. Topics addressed in the class will include a brief review of EPA and OSHA standards as well as an introduction to industrial hygiene, workplace safety management, hazard evaluation and control, and the integration of environment, health, and safety. The course also reviews concepts essential for the understanding and implementation of environmental safety and health policies for use in the workplace.

EPM 4520 OSHA Law (4 Credits)
This course provides an in-depth review of the laws and regulations that govern the safety and health of workers. The course is of value to students seeking to expand knowledge of the Occupational Safety and Health Act. Emphasis is on the areas of overlap between safety and environmental laws, OSHA’s inspection and enforcement authority, employee and employer rights, record keeping requirements and an outline of labor’s interest in OSHA cases. Current topics such as OSHA reform legislation and regulatory agenda are discussed.

EPM 4525 Workplace Safety Management (4 Credits)
This course introduces students to core elements in a health and safety management systems approach to identifying and preventing workplace injuries and illnesses. Students examine the five elements of developing an effective occupational health and safety management program. The course also explores the common challenges and obstacles encountered during the development and implementation of these programs. This course includes a general overview of common OSHA regulations, rights, and responsibilities for developing a safety and health program. The format of this class is highly interactive, affording students an opportunity to engage with case studies and their peers, as well as to practice developing health, safety, and environmental programs at their respective establishments.

EPM 4610 Analytics I (4 Credits)
This course explores how companies can and do use data analytics in an era of sustainability and ever-increasing complexity to manage their businesses more effectively. The course has a managerial focus rather than a technical one. Students do not need a statistics or analytics background. It is designed to provide managers with sufficient background on the potential value of data analytics, the business process change associated with data analytics, and the underlying technologies to enable them to interface effectively with analysts and data scientists. A key component of the course is developing a pilot project or business case for an analytics project of your choice.

EPM 4615 Analytics II (4 Credits)
Building on the course content of Environmental Analytics I, this course retains a managerial focus rather than a technical one. Students do not need a statistics or analytics background. It is designed to prepare managers to identify and obtain a publicly available data set (or one from their own organization), suitable to use for carrying out an analytics project, often the pilot project identified in the previous course. In addition, the course goes into the next level of detail on analytical algorithms and cloud technologies to enable students to frame the questions to be answered or insights revealed from running an analytics application. Finally, the course provides an introduction to cognitive computing and its applications, trends, and potential impacts.

EPM 4620 Environmental Reporting Standards and Models (4 Credits)
Students learn the reporting requirements of existing and emerging environmental reporting standards, e.g., SEC requirements, EU standards, NGO standards, Global Reporting Initiative environmental performance indicators, and Sustainability Accounting Standards Board recommendations, and how to craft mandatory and optional reports that conform to these standards and requirements.

EPM 4625 Environmental Analysis and Reporting Project (4 Credits)
This is the concluding class for the Environment Analytics and Reporting concentration and graduate certificate. The class centers on performing sophisticated investigations of sustainability-related datasets utilizing the tools and insights of the data analytics revolution. The focus of the course is on applying advanced data analytics techniques (e.g., data mining, predictive analytics, and prescriptive analytics) to support innovative approaches for organizational sustainability, business performance, stakeholder relations, and/or environmental policy. Students will engage in readings, develop an analysis project using Watson Analytics, and prepare a report covering conclusions and recommendations.
EPM 4701 Topics in EPM (2-5 Credits)
The content of this course will vary each time it is offered. The topics may include time-sensitive issues in the field of environmental policy and management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content will be announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

EPM 4705 Land Use Planning (4 Credits)
This course includes a comprehensive examination of the land use planning efforts of federal, state, and local governments. The legal authorities, responsibilities, and conflicts of these governmental entities are examined in detail. Class discussions include: setting goals and objectives for specific components of ecosystems; design of projects to achieve desired ecologic conditions; the interrelationship between home rule authority, local zoning and planning requirements, and federal/state natural resource plans; use of new technologies in planning; and public participation in land use plans.

EPM 4710 Environmental Project Management (4 Credits)
Students discuss environmental project management from the government, industry, and contractor perspectives. The course looks at successful project management organization, planning, and communication strategies. Using examples, students will also examine complex projects needing management. The types of contractual assistance needed will be reviewed.

EPM 4780 Air, Water and Soil Pollution (4 Credits)
This course addresses sources, reactions, and remediation of pollutants occurring in the atmosphere, waters, and soil. The deposition of pollutants from the atmosphere to soil and surface waters (acid rain) is covered. The migration of pollutants from surface waters through the soil to ground waters are also discussed.

EPM 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.

EPM 4902 Capstone Seminar (4 Credits)
The purpose of this Capstone Seminar is to develop and apply transferable professional skills to persuade decision makers. This is accomplished through the following: investigate questions and issues found within a discipline-specific area of interest. To do this, a clear question/issue will be researched in order to create (a) several different arguments for (b) several different audiences in (c) several different professional contexts. Peer-to-peer conversations will support the development of the questions/issues, and throughout the process, peer-to-peer critiques will take place to foster a developed sense of community where peers rely on one another for what is working, what is not working, and possible ways forward. Part of this process will also include intentional moments spent reflecting upon the process and the knowledge gained by it. Thus, through reflection and meaningful dialogues and conversations, students learn how to be active agents of change where they can successfully contribute to any professional exchange. In sum, the Capstone Seminar focuses on how to investigate problem(s) found within professional settings, how to analyze and critique those problems, and ultimately, how to generate effective arguments for the various stakeholders involved throughout this process. The knowledge gained within this course should transfer forward informing a current or future job.

EPM 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.
EPM 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master’s degree. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

EPM 4980 Internship (1-4 Credits)
The EPM Internship is designed to offer students a purposeful experience in the field of environmental policy and management. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master’s programs.

EPM 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed it with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

EPM 4992 Directed Study (1-10 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

Environmental Science (ENVI)

Courses
ENVI 3000 Environmental Law (4 Credits)
Purpose and applications of federal laws pertaining to environmental protection, including NEPA, RCRA, CERCLA, and Clean Water and Clean Air Acts; addresses role of states in implementation of federal environmental laws.

ENVI 3550 Environmental Issues-Colorado (4 Credits)
This course focuses on the identification, analysis and mitigation of landscape-scale environmental issues or concerns, using watersheds as units of study. Emphasis is on field data collection and analysis to answer specific questions or address particular problems.

ENVI 3991 Independent Study (1-5 Credits)
Study of a topic not covered in existing course offerings. May be used for work completed in off-campus internships that focus primarily on the mastery of existing knowledge.

ENVI 3992 Directed Study (1-10 Credits)

ENVI 3995 Undergraduate Research (1-5 Credits)
Original research in environmental science topic under sponsorship of a faculty member; applicable to studies that focus primarily on discovery of new knowledge through application of scientific method.

ENVI 3999 Environmental Science Internship (1-5 Credits)
Supervised internship in a state, local, or federal office or in the private sector. Prerequisites: 15 quarter hours in the environmental science major and approval of supervising faculty. Maximum of 5 quarter hours total.

Executive MBA (X MBA)

Courses
X MBA 4102 Business & Economic Context (2.5 Credits)
This introductory course is designed to provide a survey of essential economic concepts and frameworks for executives. Economics provides a clear lens to intelligently evaluate and understand the world around us. Disciplines including finance, strategy, international business and marketing all share a foundation in economic principles. Business decisions require knowledge of economic principles in order to effectively evaluate impact. This course provides a survey of these economic principles, with an emphasis on teaching via case studies and examples.
XMBA 4331 Executive Leadership III - Power and Influence (2.5 Credits)
This course focuses on an often-overlooked leadership skill – the ability to use power and influence effectively, and to negotiate the relationships critical to being a successful leader. Class time focuses on not only understanding the basics of this critical leadership skill, but also on honing skills through case studies and exercises. Particular attention is given to ethical issues connected with power and negotiation. This course will challenge you to develop the understanding needed to better engage their own marketing departments as well as navigate the online advertising industry as a whole.

XMBA 4330 Financial Accounting (2.5 Credits)
This is a study of the fundamental concepts of financial accounting and reporting by business entities in accordance with generally accepted accounting principles (GAAP). The course approaches the material from the perspective of the financial statement user rather than the financial statement preparer. Emphasis is placed on the use and interpretation of information contained in business financial statements by managers, investors, and creditors.

XMBA 4331 Foundations of Financial Analysis (2.5 Credits)
This course introduces the tools and techniques for financial analysis and planning. Topics include the tax implications of financial decisions, financial ratio analysis, operating and financial break-even analysis, operating and financial leverage, time value of money, and interest rates in the financial markets.

XMBA 4332 Accounting/Financial Reporting (2.5 Credits)
This is a study of the fundamental concepts of financial accounting and reporting by business entities in accordance with generally accepted accounting principles (GAAP). The course approaches the material from the perspective of the financial statement user rather than the financial statement preparer. Emphasis is placed on the use and interpretation of information contained in business financial statements by managers, investors, and creditors.

XMBA 4333 Entrepreneurial Mindset II (2.5 Credits)
Entrepreneurial Mindset II applies the concepts of entrepreneurship to an established company. By contrast, Intrapreneurship refers to a ‘start up’ style of management (characterized by flexibility, innovation, and risk taking) to fast track product development in order to take advantage of a new opportunity or to assess feasibility of a new process or design. The content of this course is designed to help identify the differences and similarities between entrepreneurship and intrapreneurship by looking at such factors as risk/reward systems; corporate culture; autonomy within the context of a large organization; gaining commitment and funding; as well as resource allocation. Intrapreneurs are not just entrepreneurs who happen to work inside an organization; there are some fundamental differences in their motivations, the skills they possess and the environment they need to thrive. From within a company, successful intrapreneurs understand trends and how to develop industry disruptive strategies. In this respect good intrapreneurs are the most important asset a company has: they do more than just commit their time to a company, they also invest their skills. Intrapreneurs see the ability to grow personally along with the company and in this sense, should be seen as investors in a company, rather than just employees.

XMBA 4334 Accounting III - Strategic Management of Costs (2.5 Credits)
Effective cost management is at the core of nearly every successful enterprise. Through this course, students will better understand why, when, and how cost management effects operations. The course materials (including lectures, cases, problems and simulations) provide real-world applications that include cost behavior, budgeting and variance analysis, costvolume-profit relations, pricing, quality, Activity Based Costing, Target Costing, the Balanced Score Card, ISO 9000, and using relevant costs and revenues in decision making.

XMBA 4336 Finance II - Financial Decision Making (2.5 Credits)
This course applies the tools of financial analysis to financial decisions. Topics include the valuation of financial assets, capital budgeting, cost of capital, Performa financial statements, business valuations and mergers, return on equity analysis, EPS and stock prices, and cash flow statement analysis.

XMBA 4337 Finance III - Strategic Finance (2.5 Credits)
This course applies the tools of financial analysis to financial decisions. Topics include the valuation of financial assets, capital budgeting, cost of capital, Performa financial statements, business valuations and mergers, return on equity analysis, EPS and stock prices, and cash flow statement analysis.

XMBA 4340 Executive Leadership I (2.5 Credits)
For Executive MBA students, ethics is a contact sport. That is, ethics is more about what happens between people than within people. And this contact is where leadership is learned and relationships are nourished. Ethics is all about how a person exercises his/her values in the real world of personal, business, social and political transactions. In the EMBA program, highly experiential methods are employed to actively engage and teach ethical decision-making. This ethical enterprise infuses all parts of the curriculum from beginning to end, and it’s our primary focus in the team-taught Executive Leadership sequence, which marks the start of the 18-month EMBA program.

XMBA 4341 Executive Leadership III - Power and Influence (2.5 Credits)
This class focuses on an often-overlooked leadership skill – the ability to use power and influence effectively, and to negotiate the relationships critical to being a successful leader. Class time focuses on not only understanding the basics of this critical leadership skill, but also on honing skills through case studies and exercises. Particular attention is given to ethical issues connected with power and negotiation. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life.
XMBA 4342 Human Capital Management (2.5 Credits)
The course will focus on the role of Human Capital Management as it relates to a firm's performance. The course follows the cycle of business planning and execution and focuses on the key human capital considerations at each step in the cycle. It addresses Talent Management processes while also exploring current and emerging practices. The course has a global focus and gives significant attention to new trends that relate to human capital.

XMBA 4343 The Discipline of Execution (2.5 Credits)
In the gap between a brilliant idea and the successful organization lies the discipline of execution. Execution is built on three key processes: the people process, the strategy process, and the operations process. In this course, we study the methods of successful leaders and organizations known for execution, self-evaluate execution skills and reinforce learning via case methodology.

XMBA 4350 Executive Leadership II (2.5 Credits)
In today's world, working with teams is a necessity, yet few of us understand how to do this well. In this class, you will address how high performance teams are built, sustained and integrated through practice and competition. The class will participate in a team building weekend in San Diego (sailing) to gain hands-on experience with these skills. Leadership is about effectively achieving results through others. Technical business knowledge, emotional intelligence competencies, and the ability to execute are all required to achieve this objective. This course examines these elements within the context of developing personal and organizational 'leadership intelligence’. Students will explore ethical, legal, social, and public policy challenges frequently encountered by executives and business leaders in the workplace.

XMBA 4351 Marketing II - Product Innovation (2.5 Credits)
The second course in the marketing sequence shifts from left brain activity to whole brain activity. Building on the tools and disciplines learned in Strategic Marketing, Product Innovation shifts to focus on the art of marketing. The course enables students to understand the role of innovation in delivering value to customers and stakeholders, to acquire the executive competence necessary to secure the innovation investment, and to realize how executives propel and assess innovation through all the stages of the innovation life cycle – from idea exploration to bringing a product/service to market successfully.

XMBA 4353 Global Business I (2.5 Credits)
Students will be asked to apply models, disciplines, and systems learned during the first four quarters of their EMBA program to a global environment. The global course includes a two week practicum where students pick two international cities and go deep into their respective business environments. The ten weeks of learning and research done in Denver, along with the on the ground research process completed in-country, build a global perspective and the student’s worldview.

XMBA 4354 Global Business II (2.5 Credits)
Students will be asked to apply models, disciplines, and systems learned during the first four quarters of their EMBA program to a global environment. The global course includes a two week practicum where students pick two international cities and go deep into their respective business environments. The ten weeks of learning and research done in Denver, along with the on the ground research process completed in-country, build a global perspective and the student’s worldview.

XMBA 4355 Executive MBA Summit Series (2.5 Credits)
The last five weeks of the 18-month program consists of a series of class sessions centered on topics of particular relevance in today's business environment. The content in this “multi-part course” is designed to be fluid, reflecting the shared interests of the cohort. For example, topics may include subjects such as Board Membership (how to secure a Board position; roles and responsibilities etc.), Crisis Management/Media Relations, Executive Career Development and/or Leadership in Non-Profit Entities. Final presentations for EMBA co-curricular projects (Social Impact Project, Business Plan/New Venture Project) also occur in these final weeks, representing the “summit” of EMBA learning outcomes.

XMBA 4360 Marketing I - Strategic Marketing (2.5 Credits)
Focused on creating customers, this course will build decision tools, mental models and a holistic framework for finding the right market, the right price, the right communication and the right partners for your product or service. Through market research and competitive intelligence, students will learn to provide customer value, customer information, customer solutions and organizational profitability. Strategic Marketing in a Dynamic Environment explores the science of marketing. Students will acquire a detailed understanding of strategic business- and decision support models that helps executives navigate and lead an enterprise towards sustainable competitive advantage and differentiation. The course allows executives to develop and internalize business acumen as relates to translating the voice of the customer to strategy and orchestrating stakeholders in a way that add value.

XMBA 4361 Go-to-Market Strategy (2.5 Credits)
This course focuses on Go-To-Market strategy as a framework for effectively implementing a business plan. The key areas of Go-To-Market strategies evaluated in this class include approaches to segmentation of key markets, sales organizational and compensation considerations, channel and distribution considerations, and the overall corporate culture to sustain the GTM strategy. The focus is on developing the customer experience while sustaining long-term profitable growth.

XMBA 4362 Strategic Management (2.5 Credits)
This strategy course covers a range of concepts and analytical techniques relating to creating and sustaining competitive advantage as the basis for superior performance. It deals with contemporary issues such as industry analysis, core competence of organizations, value chain analysis, and strategy implementation. The emphasis is on the application of analytical tools and frameworks to understand complex strategic issues. Competitive Strategy integrates concepts from finance, marketing, accounting, general management, information technology, and operations management.
XMBA 4363 Strategic Implementation (2.5 Credits)
Strategic Management and Strategy Implementation are courses that build off several previous courses and each other. Students will examine such issues as the vision/mission/values of the organization, the key industry forces that influence the competitive environment of the organization, ways of maintaining and sustaining a core competency, and critical strategy implementation issues. In doing this, the course integrates concepts from finance, marketing, accounting, general management, information technology, legal studies, and operations management. In addressing these issues, the course involves a mix of strategic tools with real world examples and case studies. The course will be offered in a work-shop atmosphere in which students are expected to apply and discuss the various aspects of strategic management.

XMBA 4364 Business Data & Analytics (2.5 Credits)
This course will familiarize the student with data management and analytic methodologies that are prevalent across most industries today, and will suggest a way-ahead as electrons continue to get cheaper to collect and maintain. A well-designed architecture for collecting, storing, and accessing data is essential for all businesses that want to compete successfully as the pace of the decision-making cycle continues to increase. Traditional statistical techniques are still prevalent (and useful!) with proper mining or sampling of big data, and these remain the workhorses of Business Analytics. Analytic modeling is an integral part of business decision-making, and knowing and identifying the appropriate technique can make the difference between discovering the truth and running into a data wall. With the right toolset, the data analyst can tackle large volumes of data with a “divide and conquer” approach. However, the decisions that lead to parsing the data appropriately require not only an understanding of the data and the available tools, but the question being answered as well.

XMBA 4365 Entrepreneurial Mindset I (2.5 Credits)
This course provides students with the analytical skills needed to identify and evaluate new business opportunities and the skill set to prepare a business plan for an entrepreneurial venture. The curriculum incorporates insights from successful entrepreneurs and covers topics such as crafting a value proposition, market and sales forecasting, exploration of financing options, and building an effective team. The course concludes with the presentation of student business plans.

XMBA 4720 Executive Business Law (2.5 Credits)
This course is designed to provide executives and entrepreneurs with practical, applied legal information that will lead to better decision-making in the business environment. It also highlights the importance of managing legal professionals and creating a sound legal strategy – both key components of business strategy – and crucial for business success. Emphasis is placed on teaching applied knowledge and using this knowledge to make difficult, real-world business decisions. This course provides a safe learning environment in which management decisions can be carefully analyzed and studied without real world consequences.

XMBA 4991 Independent Study (1-10 Credits)
XMBA 4992 Directed Study (1-10 Credits)
XMBA 4995 Independent Research (1-10 Credits)

Executive RCM (XRCM)

Courses

XRCM 4000 Business of the Built Environment (4 Credits)
The emphasis of this course is on the importance of real estate and the built environment and its impacts and influences on how we live, work, and play. The course employs a full life cycle sustainable model that links the various phases, functions, and professions of real estate, project delivery, and asset/facility management to create holistic, value generating solutions for society. Professional practices/skillsets associated with the many career options that engage the built environment are explored.

XRCM 4007 Real Estate Financial Analysis (4 Credits)
Alternative analysis formats that can be applied to a wide array of real estate analysis issues; simulates working/decision-making environment; structured overview of analysis tools focused on specific facets of multidimensional real estate decision-making environment; applications in investment analysis, feasibility analysis, valuation, market analysis, and report writing and presentation. Prerequisite: XRCM 4407.

XRCM 4010 Real Estate Capital Markets (4 Credits)
This course will expose students to the Commercial Real Estate Capital Markets that have evolved from exclusively private in the 1980s to a mix of private and public, including commercial mortgage backed securities (CMBS) and real estate investment trusts (REITs), in the 1990s. Any person involved in real estate today must understand all the alternative capital sources available and their requirements. Students will be exposed to the positives and pitfalls of all the capital market products. This course will provide students with the general concepts and definitions. A combination of lectures, guest lectures from industry experts, text & article readings, class discussions, and case studies using real life examples. Prerequisite: REAL 4007.

XRCM 4110 Preconstruction Integration and Planning (4 Credits)
This course examines the role of preconstruction services, team integration, and joint design planning in various Integrated Project Delivery (IPD) approaches. Various tools and techniques associated with preconstruction services and design planning from the proposal stage through the design stages of a project are considered.
XRCM 4115 Corporate Real Estate and Management (4 Credits)
This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. The course addresses key CRE issues including globalization, technology, sustainability and the enterprise business model. Within the framework of a corporate or agency structure, facility management is addressed as a distinct and critical component of successful performance. Topics include facility planning and forecasting, lease administration, space planning, allocation, and management, workplace planning, budgeting, and economic justification, real estate acquisition and disposal, sustainability management, construction project management, move, add, change (MAC) management, operations, maintenance and repair, technology management, emergency, security and life-safety management, and general administrative services.

XRCM 4120 Construction Planning and Scheduling (4 Credits)
Understanding and applying scheduling and control to construction projects is essential to successful construction management. Project scheduling emphasizes network-based schedules, such as critical path management (CPM), network calculations, critical paths, resource scheduling, probabilistic scheduling and computer applications. Project control focuses on goals, flow of information, time and cost control, and change management. Prerequisite: XRCM 4420.

XRCM 4140 Global Perspectives in Real Estate (4 Credits)
Cross listed with REAL 4140.

XRCM 4155 Sustainable Development/LEED (4 Credits)
The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis is placed on how LEED project certification influences the overall construction project. Topics include LEED certification techniques for sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design. The following topics are covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student studies and analyzes how management and LEED techniques are applied to current construction projects.

XRCM 4177 Environmental Systems and MEP Coordination (4 Credits)
A study of electrical and mechanical systems used in the construction of buildings. Course content includes system design, component selection and utilization for energy conservation, cost estimating or systems, coordination and management of installation. Specific systems included are electrical, air conditioning, heating, ventilation and plumbing, fire protection, life safety, communication, power systems and lighting. The course also considers coordination of MEP systems and explores emerging technology and environmental issues related to mechanical and electrical systems in buildings. Cross listed with CMGT 4177.

XRCM 4180 Construction, Layout and Surveying (4 Credits)
Theory, principles and techniques of constructing layout and surveying; field procedures in fundamental surveying; site, foundation and frame layout.

XRCM 4200 Lean Const Project Mgmt (4 Credits)
This advanced course focuses on cutting edge lean tools and other productive strategies for the management of people and processes in the construction industry. The tools and strategies presented draw on the very successful Toyota Production System adapted to the construction industry. Lean construction methodologies such as the Last Planner System, the Lean Project Delivery System, and Integrated Project Delivery are discussed. Topics also include sustainability and the emerging interest in “green construction,” as well as the use of Building Information Modeling to enhance the development and management of integrated projects. This course also looks at the human element in relation to motivation, safety, and environmental stresses. A number of case studies are presented to highlight best practices in Lean Construction Project Management. Prerequisite: XRCM 4480.

XRCM 4210 Planning, Entitlements, and Public Finance (4 Credits)
Real estate development, place making, and community building require the combined efforts of the public, for-profit, and non-profit sectors. Participants in the real estate development process need to understand and appreciate the sometimes competing and sometimes collaborative interests of governments, agencies, and the private developer. This course is designed to familiarize students with the overall context of urban planning and land use. Students discover the variety of participants in the development process and also become familiar with the project entitlement process, zoning, and land use regulation. Students also examine public/private financing structures such as public-private-partnerships (P3s) and become familiar with detailed calculations relating to Tax Incremental Financing (TIF) and Metropolitan Districts.

XRCM 4230 Design Management and Schedule Control (4 Credits)
This course examines the various strategies and techniques associated with managing the design delivery process to align with the construction budget and schedule needs in an integrated fashion. Design planning, scheduling, and resource allocation are considered along with design value determination and management of the design-construct interfaces. Constructability, value engineering, design performance.

XRCM 4250 Construction Job Site Management (4 Credits)
This course addresses how a successful construction project is managed and administered from design through construction to closeout. Emphasis will focus on how to unite the key stakeholders (contractors, architects, engineers, etc.) to provide them with a workable system for operating as an effective project team. The latest technology, laws and regulations associated with contract administration will be presented. Topics pertinent to each stage of a project are introduced and discussed as they occur throughout the life of the project. Numerous real-world examples will be utilized throughout the course. Various electronic project administration tools and techniques will be demonstrated including Building Information Modeling.

XRCM 4310 Cost Modeling and Trend Management (4 Credits)
This course covers various approaches to construction cost estimating at the conceptual stages of planning and design through detailed construction. Students learn parametric estimating techniques and how they are applied to construct and predict reliable budgets at the earliest stages of design. Students build cost models and refine those models with greater detail as design develops through a project. Building information modeling is introduced and used to create massing models to demonstrate design impacts on project costs. Cost trending techniques are presented to manage, monitor and document project performance relative to cost. Prerequisite: XRCM 4410.
**XRCM 4320 Architectural Planning and Design Management (4 Credits)**
This course introduces students to the significant value that architecture brings to real estate and the built environment and the various services and professions associated with it. Students will be introduced to principles, protocols and the planning process related to the design function and the link between the architect's vision and the finished physical structure. Students will be introduced to design, thinking, theory and application. Student will learn to read and interpret the various graphical and written construction documents as well as know how they are developed and what information they contain. Architectural, structural, mechanical, electrical, plumbing and civil drawings and specifications are covered. The business model for design services will be explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction.

**XRCM 4337 RE Securities/Syn/Entrep (4 Credits)**
Introduction to real estate securities; emphasis on private offerings; determining whether a contemplated transaction involves a security, and what happens if it does; exemptions from registration (Reg D); registration requirements; investor suitability, how to syndicate, acquisition of property, marketing of the property, tax structure and formation of syndication, compensation to syndicators, real estate tax considerations. Cross listed with REAL 4337.

**XRCM 4347 Management - Income Properties (0-4 Credits)**
Complex problems of managing apartments, condominiums, office buildings, industrial property and shopping centers; rental markets, development of rental schedules, leasing techniques and negotiations, repairs and maintenance, tenant relations, merchandising, selection and training of personnel, accounting, owner relations.

**XRCM 4357 Corporate Real Estate and Management (4 Credits)**
This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. Over the ten week period we will address the diverse but critical components that together account for Facility Management. These shall include: Building Life Cycles and sustainability, facility management as part of the enterprise model within a corporate structure, regulatory agencies, professional relationships and the impact of the build environment on the bottom line, contracting and budget management, move-add-change (MAC) / operations, and general administrative services.

**XRCM 4369 Real Estate Taxation (4 Credits)**
Tax factors affecting investments and operations in real estate; special attention is given to legal forms of ownership, depreciation, tax basis, tax impacts of exchanges, syndications, real estate securities, and other federal tax laws affecting real estate.

**XRCM 4407 Income Property Finance (4 Credits)**
Conventional and alternative (creative) financing techniques, mortgage banking, law and markets, loan underwriting analysis, the impact of monetary and fiscal policies on the real estate and mortgage markets, emphasis on case studies and microcomputer applications.

**XRCM 4410 Construction Building Systems (4 Credits)**
A survey of residential and commercial construction materials, means, and methods associated with the various structural and architectural systems used to design and construct buildings. Project plans and specifications are incorporated to teach the basic sequencing and overall construction process. The influence of sustainability in construction is introduced.

**XRCM 4417 Income Property Valuation and Appraisal (4 Credits)**
Residential/Commercial appraising, including market cost and income approaches to value, gross rent multiplier analysis, neighborhood and site analysis, valuation of income properties including market cost and income approaches to value, capitalization theory and techniques, mortgage-equity analysis, and investment value concepts. Prerequisite: XRCM 4407.

**XRCM 4420 Construction Estimating (4 Credits)**
Integrated approach addressing construction accounting, estimating, purchasing, and management reporting systems. Cross listed with CMGT 4420. Prerequisite: XRCM 4320 & 4410.

**XRCM 4438 Legal Issues & Risk Management (4 Credits)**
General contract and real estate law, including property rights, title concepts, deeds, purchase contracts, law of agency, environmental issues and disclosures, basics finance concerns, tax law, landlord-tenant law, construction contracts, indemnity agreements, rights and remedies of property owners, contractors and subcontractors issues, and various areas of liability for real estate practitioners and property owners.

**XRCM 4467 Property Development and Feasibility (4 Credits)**
Commercial real estate development analysis and feasibility includes economic base analysis, tenant demand analysis, development and construction cost analysis, lease-up analysis, financial feasibility, leasing and property management practices. Five major property types (office, industrial, retail, apartment and hotel) are covered. Prerequisite: XRCM 4007.

**XRCM 4477 Income Property Investment (4 Credits)**
Comprehensive analytical framework for real estate investment decision-making, equity investment decisions via discounted cash flow, and risk analysis models and strategic planning concepts, structuring parameters to maximize rates of return while controlling downside risks; emphasis on theory, concept building, and practical application to various types of investment properties. Prerequisite: XRCM 4007.

**XRCM 4480 Construction Project Mgmt (4 Credits)**
This course introduces the student to project management scheduling techniques and methodologies. The student will be exposed to different scheduling techniques, how to develop a project schedule of limited scope, and how to utilize the project schedule for planning and monitoring job progress.
FIN 4110 Ethics in Finance (4 Credits)

This second course in the Compass is specifically designed for the Master of Science Finance (MSF) curriculum and focuses on the ethical, professional, social, and legal responsibilities of finance professionals, organizations and markets. Financial institutions are facing a crisis of confidence. Trust is an essential ingredient to maintaining efficient and effective financial markets. The finance industry has acquired a reputation for unethical and unsavory activity and has lost the trust of much of society. Many financial professionals believe they are encouraged and rewarded for engaging in unethical activity. We discuss the ethical issues facing financial institutions and professionals and explore solutions for resolving these issues and restoring trust.
FIN 4150 Advanced Business Valuation (4 Credits)
The objective of this course is to present advanced valuation techniques to deepen students’ understanding and enhance their knowledge of valuation theory and practical application.

FIN 4160 Treasury Management (4 Credits)
The objective of the course is to provide students with a comprehensive understanding of how various treasury functions are managed in a corporation and build students’ capabilities to assume the role of a proficient treasury manager.

FIN 4180 Global Finance (2 Credits)
This course explores financial management in the international arena. Principal content elements include: The market for foreign exchange, interest rate parity, hedging currency risk, international portfolio management. Upon completion of this course, students should be able to accomplish the following objectives: Explain the determinants of foreign exchange rates; Explain and identify the financial difficulties and opportunities faced by corporations when operating internationally; Apply forwards and options for hedging currency risk; Identify the determinants of the expected returns on international investments; Discuss current issues in international finance. Prerequisites: FIN 4630.

FIN 4200 Financial Investments and Markets (4 Credits)
Introduction to financial markets, securities, instruments, and other factors that determine the financial environment. Prerequisites: STAT 4610 or FIN 4170 or (MBA 4160 and MBA 4360) or (MBA 4280 and MBA 4285). Co-requisites: MBA 4630 and FIN 4630.

FIN 4201 MS Management Managerial Finance (2 Credits)
FIN 4201 introduces concepts and analytical techniques to identify and solve financial management problems. The focus on Performance Metrics (Ratios and Du Pont Analysis), Time Value of Money and Opportunity Costs, and Project Analysis prepares managers to operate in an environment that can at times be driven by the financial performance of the company.

FIN 4320 Equity Analysis (4 Credits)
Examination of statistical and theoretical foundation for determination of market prices and market returns. Includes theoretical implications for investment management of options, futures, stocks and bonds. Prerequisite: FIN 4200.

FIN 4330 Portfolio Management and Risk Analytics (4 Credits)
Case and project approach to foundation of investment portfolio management. Prerequisite: FIN 4200.

FIN 4410 Financial Planning & Analysis (4 Credits)
Advanced course in financial planning and decision-making focusing on capital structure, working capital management, long-range and short-term financial planning, and mergers. Prerequisite: MBA 4112.

FIN 4420 Capital Expenditure Analysis (4 Credits)
Advanced course in capital budgeting examining capital allocation processes and procedures and the theory and applied techniques of capital spending and divestment under conditions of certainty and uncertainty. Related issues of cost of capital and leasing also included. Prerequisite: FIN 4630.

FIN 4500 Financial Modeling (4 Credits)
Use of erect functions and macros to construct financial models from corporate finance, investments and financial markets. Prerequisites: FIN 4170.

FIN 4610 Multinational Financial Management (4 Credits)
Financial analysis of multinational corporation operating in international markets, including exchange rates, international instruments, markets, institutions and futures. Prerequisite: MBA 4112.

FIN 4620 Financial Forecasting (4 Credits)

FIN 4630 Managerial Finance (4 Credits)
Analytical skills and tools of finances; theoretical concepts and practical applications. Topics include ratio analysis, breakeven analysis and leverage, securities valuation, capital budgeting, financial forecasting, and working capital management.

FIN 4700 Topics in Finance (4 Credits)
Topics vary each quarter. Course may be taken more than once if topics are different.

FIN 4701 Topics in Finance (1-10 Credits)
Topics vary. For new/experimental courses taught within the Reiman School of Finance.

FIN 4710 Marsico Investment Fund I (4 Credits)
A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: Permission of instructor. (First part of two-quarter course.).

FIN 4720 Marsico Investment Fund II (4 Credits)
A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: FIN 4710. (Second part of two-quarter course.).
FIN 4730 Marsico Investment Fund III (4 Credits)
This course is an elective course that is the third in the series of classes involving the Graduate investment fund class: Marsico Investment Fund I & II. This course allows students to apply the investment, security analysis, and portfolio management tools and techniques that they have learned in their Finance classes. The students manage an actual portfolio, a portion of the University's endowment originally gifted by Tom and Cydney Marsico. The selection of students for this class is competitive. Students must agree to participate for 2 consecutive quarters, and they must be willing to address portfolio issues during the between-quarter periods if necessary. Because the course involves the application of tools and concepts learned in other classes, the best time to take the course is in the last year of a student's program. Prerequisites: FIN 4710 and FIN 4720.

FIN 4740 Managerial Microeconomics (2 Credits)
This course combines the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics, game theory, and industrial organization that they need to make sound managerial decisions. The course uses case studies to develop practical insights into managing the firm's resources to achieve competitive advantage. The course is divided into two principle modules based on market structure: perfect competition and imperfect competition. Both modules cover optimal behavior and strategies.

FIN 4750 Managerial Macroeconomics (2 Credits)
This course covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the global economy and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rate, business cycles, and monetary and fiscal policies. The course uses case studies to analyze real-life macroeconomic issues, and students are encouraged to investigate the potential and limitations of macroeconomic theory with real-world problems. The course is divided into two principle modules: the economy in the long run, and the economy in the short run. Both modules cover impacts of government policies on the business environment in a closed economy and an open economy.

FIN 4760 Managerial Economics (4 Credits)
The first half of this course meshes the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics, game theory, and industrial organization that they need to make sound managerial decisions. Case studies will be used to develop practical insights into managing the firm's resources to achieve a competitive advantage. The second half of this course covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the domestic and global economies and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rates, business cycles, and monetary and fiscal policies. Case studies will be used to analyze real-life macroeconomic issues, and students are encouraged to investigate the potential and limitations of microeconomic theory with real-world problems.

FIN 4800 An Organized Walk Down Wall Street (4 Credits)
After four class sessions in Denver, participants will spend five days in New York visiting exchanges, brokerage firms, investment bankers, commercial banks, asset managers, and other institutions.

FIN 4830 Econometrics for Finance (4 Credits)
This course focuses on econometric and statistical modeling with an emphasis on finance applications. Prerequisite: STAT 4610 or FIN 4170.

FIN 4860 Derivatives (4 Credits)
This course provides a theoretical foundation for the pricing of contingent claims and for designing risk-management strategies. It discusses more advanced material in financial derivatives and is intended for students who have a quantitative background and are interested in enhancing their knowledge of the way in which derivatives can be analyzed. This course covers option pricing models, hedging techniques, and trading strategies. It also includes portfolio insurance, value-at-risk measure, multistep binomial trees to value American options, interest rate options, and other exotic options. Prerequisite: FIN 4200.

FIN 4870 Strategic Finance (4 Credits)
Addresses theory, concepts, and techniques associated with asset management and creation of value from a strategic orientation. Links financial theory and practice to strategic and operational objectives of the firm, prepares student to incorporate risk and uncertainty into analytical decision-making process and to analyze divestiture, restructuring, and liquidation decisions. Prerequisites: MS/ Finance students only and FIN 4840.

FIN 4885 Investment Banking and External Financing (4 Credits)
Considers the blend of theory and practice with regard to designing the appropriate capital structure of the firm as well as appropriate use of securities and process for raising capital in different financial markets. Prerequisites: MS/Finance students only and FIN 4840.

FIN 4890 Fixed Income Analysis (4 Credits)
Emphasizes valuation and management of fixed income securities in prevailing environment of complex and innovative financial arrangements. Study of the nature of evolving markets, both domestically and internationally. Prerequisite: FIN 4200.

FIN 4980 Finance Internship (0-10 Credits)
Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Permission of instructor required. Hours and times arranged by student.

FIN 4991 Independent Study (1-10 Credits)
Individual study and report. Hours and times arranged by student.
FIN 4992 Directed Study (1-4 Credits)

FIN 6300 Seminar in Finance Research (4 Credits)
Through a survey of research in the discipline of finance, this course illustrates how theory can shape the literature and the formation of research questions. Analysis of key studies will provide business leaders with the tools to analyze how the academic literature can impact and inform the finance profession across such as areas as corporate governance, corporate finance, investments, and financial institutions.

Gender and Women's Studies (GWST)

Courses

GWST 4700 Special Topics in GWST (1-5 Credits)
Current issues or women's faculty research interests relevant to women.

GWST 4701 Special Topics in GWST (1-5 Credits)
Current issues or women's studies faculty research interests relevant to women.

GWST 4702 Special Topics in WSTU (1-5 Credits)
Current issues or women's studies faculty research interests relevant to women.

GWST 4703 Special Topics in WSTU (1-5 Credits)
Current issues or women's studies faculty research interests relevant to women.

GWST 4704 Special Topics in GWST (1-5 Credits)
Current issues or women's studies faculty research interests relevant to women.

GWST 4991 Independent Study (1-10 Credits)

GWST 4992 Directed Study (1-10 Credits)

GWST 4995 Independent Research (1-10 Credits)

Geographic Information Systems (GIS)

Courses

GIS 4007 Creative Problem Solving and Programming (4 Credits)
In this course students will develop, or improve upon, their problem-solving skills and how to use those skills to analyze problems and determine how to create solutions. Students will document their solutions (e.g., in pseudocode or UML diagrams) and, by the end of the course, translate their solutions into running programs written in at least two languages (e.g., Python and C#). Students will learn programming concepts including the use of variables, program input and output, flow control (if-then-else, looping, etc.), and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as Visual Studio Code on their personal computers in which they will write programs.

GIS 4070 ArcObjects (4 Credits)
This class is an introduction to the development of custom applications and tools in GIS. It combines ESRI's ArcObjects with C#.NET programming language to introduce students to desktop GIS development. Students learn about the C# language, Object Oriented Programming, ESRI's Object Model Diagrams, conversion of VBA code to C# code, the creation of custom GIS based forms, buttons, and tools, and the automation of the GIS workflow. Students leave this class with the ability to create embedded tools as well as distributable C#.NET GIS applications based on ArcGIS 10.

GIS 4080 Python Programming in GIS (4 Credits)
This course introduces Python concepts and the Python scripting environment in a GIS environment. Python is a free, open-source scripting language that has been integrated with ArcGIS. Python is a dynamic, interpreted language that can be used to automate redundant tasks and workflows in GIS. Students learn tools and techniques and proper Python syntax, script flow, and error handling. Students learn to write scripts that allow them to automate redundant tasks and workflows in GIS. Students learn to write scripts that allow them to automate geoprocessing processes and GIS work more efficiently. This course teaches fundamental concepts needed to create Python scripts in ArcGIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4101 Introduction to Geographic Information Systems (4 Credits)
This is the initial course in Geographic Information Systems (GIS). General introduction including background, development, trends, prospects in this rapidly evolving technology; basic components, functions of GIS, fundamental spatial, geographic concepts explored through use of GIS software.

GIS 4110 Geographic Statistics (4 Credits)
This course introduces the basic concepts of probability and statistics with an emphasis on applications and an ongoing focus regarding the nature and problems associated with spatial or geographic data. Prerequisite: GIS 4101 or similar GIS course and/or work experience.
GIS 4200 Geospatial Intelligence (4 Credits)
The term geospatial intelligence (GEOINT) means the exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the earth. GEOINT consists of imagery, imagery intelligence and geospatial information. This course serves as an introduction to the fundamentals of the geospatial intelligence community, core GEOINT technologies and operations, and the role of GEOINT in national, regional and local security affairs supporting decision makers and operations. The course is built on a framework of data, technology and analysis in support of the GEOINT community which may include natural disasters, first responders, military problems, homeland defense, and law enforcement. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4504 Cartography and Geovisualization (4 Credits)
The theory and art of map making developed over several thousand years and has recently been revolutionized by computer technology. This course is designed to expose students to the use of computer techniques in assessing technical design issues in the compilation of accurate and meaningful automated geographic mapping products. ArcView is used in a series of hands-on lab exercises to produce typical GIS mapping products. Each class includes lecture and discussion of cartographic design concepts. Emphasis is placed on reader perception of map design elements, and also includes an introduction to appropriate software tools and application of concepts through lab exercises. In-class time is provided for work on lab exercises. It is likely that additional lab time outside of class will be necessary and/or valuable for students, particularly in completion of the final project. Prerequisite: GIS 4101.

GIS 4510 GIS in Business (4 Credits)
Businesses continue to embrace GIS as an effective alternative to traditional manual mapping analysis methods. GIS has emerged as an affordable solution for performing essential revenue producing and expense reducing functions. Many years ago, successful GIS implementation required huge capital investment and a large staff of GIS experts; however, with the introduction of more powerful inexpensive computers and easier to use software, companies of all sizes are unleashing the business potential of GIS on the marketplace. This course exposes students to various business applications and uses of GIS as well as the underlying theories and technology behind the applications. This course emphasizes various business disciplines including Marketing, Real Estate, Transportation, and Oil & Gas using ArcView GIS in practical, hands-on exercises that demonstrate the theories and concepts discussed in the lectures. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4520 GIS in Telecommunications (4 Credits)
Telecommunications is a thriving technology and business, accounting for a significant percentage of technical advances and revenue around the globe. GIS has emerged as a crucial tool in the telecommunications field for maintaining existing entities, planning for additional ones, and for gaining an advantage in this very competitive marketplace. The use of GIS in the telecom industry continues to grow because GIS technology accommodates the many CAD programs and drawings representing plant and transmission towers/coverage as well as the geographic representations of those items. Only a few years ago, introducing GIS into a telecom business required significant cash outlay, but through less expensive hardware and more user-friendly software, now even a modest CLEC can implement an effective GIS. This course exposes students to the various applications and uses for GIS in the telecom arena by breaking down the miscellaneous telecom requirements into GIS components and technological solutions. This course emphasizes specific telecom technology application requirements and allows students, through hands-on-lab work, to discover the power of GIS in delivering superior telecom solutions. This course also focuses on OSP/ISP applications and solutions, network connectivity issues as well as the exploding future of wireless technology. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4530 Crime Mapping and Analysis (4 Credits)
Municipal police departments, county sheriff departments, and other state and federal law enforcement agencies use GIS technology as a tool to analyze crime statistics and patterns. This course explores how GIS technology is used in law enforcement to provide strategic, tactical, and administrative crime analysis. Prerequisite: GIS 4504 or similar GIS course and/or work experience.

GIS 4540 Conservation GIS (4 Credits)
This course is designed to provide students with an introduction to the use of geographic information systems (GIS) in conservation. Students receive an introduction to the use of GIS in various types of conservation studies and preservation. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support planning and management of land, species, and habitats. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4570 Geographic Information Systems in Public Health (4 Credits)
GIS offers many applications and functionality that are tremendously beneficial to the Public Health industry. The ability to visualize cases in space (geographically) and time is invaluable in analyzing spatial clusters of health related events. Further the ability to model the spread of a potential epidemic can literally be a life saver. GIS is a natural choice for solving many Public Health issues including: analyzing the location of diseases; the spread of contagious diseases (both vector borne as well as the spread through human contact); the cause and effect of environmental factors; as well as the availability of Health facilities. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4620 Geodatabase Application (4 Credits)
This course in Geodatabase Application is logically broken into two separate component parts; the first section deals with Geodatabase concepts and provides a general overview of the Geodatabase structure and implementation including: background, object classes, feature classes, relationship classes, domains, validation rules, and Geodatabase topology. The second portion of the course focuses on Geodatabase Application introducing advanced features of Geodatabase, providing a solid foundation for the application of the Geodatabase to model and address complex real world issues. Geodatabase Linear Referencing, Geodatabase Surface Modeling, and Geocoding Services in the Geodatabase, are explored. This course incorporates a hands-on lab component. Computer lab exercises are designed to introduce the student to concepts and Geodatabase application. Strong emphasis is placed on Geodatabase design. Design objectives, design guidelines and functional requirements of the resulting Geodatabase model are addressed. Prerequisite: GIS 4101 or similar GIS course and/or work experience.
GIS 4630 Public Domain Data for GIS (4 Credits)
Geospatial data are the foundation upon which GIS and spatial analysis rests. As GIS has matured, the challenge has evolved from generating data to managing the enormous volume of data from government agencies, nonprofit organizations, and industry, and increasingly, from ordinary citizens through citizen science and volunteered geographic information efforts. Key to working with this volume of data are essential issues such as privacy, copyright, public domain, cost recovery, metadata standards, and data quality that GIS professionals must grapple with to be effective in the 21st Century. This class discusses and applies these issues and works with a rich array of data sources to enable effective decision-making in a Geographic Information System. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4650 Demographic Analysis Using GIS (4 Credits)
This course offers an overview of US Decennial Census data, covering a brief historical overview of why census information is collected, collection procedures, geographic coverage, and subject matter contained in census reports. Using a popular PC-based desktop mapping software program, students learn how to navigate through census files and create a variety of thematic maps. Several application areas, such as marketing, demographic analysis and facility planning, are used in sample exercises. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4660 GIS in Municipal Government (4 Credits)
There are many areas of government where desktop mapping can be extremely helpful in solving problems that are spatial in nature. This course explores the many types of data collected by city and county government agencies from crime and election data to building, assessment, and zoning data and how it can be displayed in map form. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4670 GIS and the Law (4 Credits)
This course explores the legal and technical ramifications created by Geographic Information Systems (GIS), Mobility and the Law, including the legal and policy issues related to the science of GIS, the sharing of geographic information, the data generated by mobile devices, the intellectual property issues, security and privacy issues, business and contractual issues related to GIS, and the standards of care and liability related to GIS. This course also examines the types of issues and concerns that exist in the U.S. and the world created by geographic information science and the mobile device. The evolution of GIS and the mobile device directly impacts governments, companies, and individuals on a daily basis. In today's world, more than three billion people have smart phones in their hands constantly. This creates issues about how to handle data, security and privacy, civil and criminal laws, rules and regulations, contractual agreements, and service-level agreements between parties on many levels from service providers in different states, countries and parts of the world. All of these issues need to be balanced by the differing cultural standards and mores from all over the world and legal (and sometimes not so legal) methods of protecting governments and companies in this ever-changing "always-connected" world created by GIS and the mobile device. Prerequisite: GIS 4101 - Intro to GIS, and GIS 4700 - Remote Sensing I and/or similar GIS course and/or work experience.

GIS 4680 Environmental Applications (4 Credits)
This class provides students with an introduction to practical applications of computerized Geographic Information Systems (GIS) in environmental assessment and natural resource management. Emphasis is placed on automated analytical techniques and data presentation methods that support facility site selection, environmental impact analyses, resource management, and characterization of environmental hazards. This course is designed to provide students who participate in environmental assessment projects with introductory preparation for practice as GIS professionals in public agencies or in the private sector. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4683 GIS for Disaster Management (4 Credits)
This course serves as an introduction to Geographic Information Systems and their application in Emergency Operations. The basic concepts of geography, cartography and Global Positioning Systems will be covered, along with the basic components and capabilities of a geographic information system. Students will learn about the fundamental types of GIS analysis and applications, focusing on those used in Emergency Operations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4685 GIS and Natural Hazards (4 Credits)
This course is designed to provide students with an introduction to the use of GIS in natural hazard assessment. Students receive an introduction to the use of geographical information systems (GIS) in various types of natural disasters and response management. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support hazard risk and assessment, mitigation, and emergency response planning. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4687 Hydrologic Modeling in GIS (4 Credits)
Hydrology is concerned with movement of the earth's waters through the hydrologic cycle, and the transport of constituents carried in its flow. In GIS, the landscape is represented by means of geographically referenced data describing the character and shape of relief features. A spatial hydrology model simulates the water flow and transport in a specific locale using GIS data structures. Hydrologic modeling in GIS allows us to automatically delineate a drainage system and quantify the characteristics of the system. It focuses on the movement of water across a land surface. This course looks at the basic inputs to hydrological modeling in GIS, walks students through established modeling procedures, and has students work on projects that are real and relevant as model applications. Instruction is largely hands-on, project-oriented. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4690 GPS for GIS (4 Credits)
This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Control and Quality Assurance issues for data collection programs. Lab exercises include planning a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, and data integration into a GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.
GIS 4700 Remote Sensing I (4 Credits)
This course provides a survey of remote sensing technologies, applications, and the industry. This course is designed for GIS, Geography and Geoscience students who seek to broaden their understanding of remote sensing in support of Geographic Information Systems. Introductions to the electromagnetic spectrum, energy sources, radiation principles, aerial cameras, and electronic imaging provide the student with the initial building blocks to a thorough understanding of remote sensing. This course provides an overview of the various high altitude and space-based collection systems and their characteristics, with a view toward future systems and capabilities. In addition, this course exposes students to the techniques of extracting relevant information from both hard copy and digital imagery. Pre-requisite: This course is a pre-requisite for GIS 4740 – Remote Sensing II.

GIS 4701 Topics in Geographic Information Systems (2-5 Credits)
The content of this course varies each time it is offered, depending on the interests and needs of the students. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

GIS 4740 Remote Sensing II (4 Credits)
This course is the second in the two-course Remote Sensing emphasis of University College's GIS Certificate Program. The curriculum is a rigorous presentation of digital imaging processing theory with emphasis on its application to airborne and space borne imagery. The course includes computer laboratory exercises and workshops, where the students apply theory to satellite and air photo data. Interpretation of the digitally processed data is also included in the class exercises. Examples of vector and raster data integration are shown as well. Prerequisite: GIS 4700.

GIS 4750 UAVs and GIS (4 Credits)
The purpose of this course is to introduce GIS students to the emerging world of using Unmanned Aerial Vehicles (UAV) in the GIS workplace for data collection, reconnaissance, and research. UAVs are in the news every day, highlighting their use in a military context. Soon the Federal Aviation Administration (FAA) will release new rules and regulations governing the use of UAVs in the civilian sector. This course will prepare students to be conversant in the world of UAVs, basic aviation, safety, flying, mission planning, and general data gathering techniques for use in GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4760 UAS Photogrammetry (4 Credits)
Surveying, photogrammetric mapping, GPS, and remote sensing are critical components to working in the UAV and GIS domain. The second course in this two-course sequence will expand on the data collection process highlighted in the first class and deliver the foundations required by GIS professionals workings with UAVs. Prerequisite: GIS 4101 or similar GIS course and/or work experience and GIS 4750-UAVS and GIS.

GIS 4770 UAV Ground School Practical (4 Credits)
Course Description: The purpose of this course is to provide skills and abilities to become a remote pilot in command (RPIC) within the United States. The class content will focus on 14 CFR 107, the rules and regulations that allow RPICs to operate unmanned aircraft vehicles (UAVs) safely and legally. In addition, students will be given hands-on training in the best practices for flying UAVs. Course Overview/Purpose: The release of 14 CFR 107 by the FAA has set a legal framework for commercial UAVs operations in the United States. The purpose of this course is to help students become well versed in 107 and gain hands-on experience operating UAVs. Students will become proficient with UAV aeronautical operation standards, discover the rules and regulations of airspace that all RPICs must comply with, and evaluate the effects that weather has on UAVs as well as sources of weather information. Students will also assess the performance abilities and limitations of UAVs and explore standard UAV operations as outlined in the 107 regulations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

GIS 4860 Internet Mapping (4 Credits)
Creating web-based maps allows city and local governments, businesses, and other organizations to publish, discover, and share geospatial information. This course introduces the fundamentals of various web-based mapping systems and software applications. Students complete comprehensive projects, each resulting in the creation of a working web site using different technologies. Students make use of WMS (Web Map Services) and WFS (Web Feature Services), integrating them into their web sites and creating their own web map service. Prerequisite: GIS 4101 and GIS 4504 or similar GIS course and/or work experience.

GIS 4980 Internship (1-4 Credits)
GIS students may fulfill up to four quarter hours of electives by enrolling in a GIS internship with a GIS company or an agency actively engaged in GIS activities. Students incorporating professional work experience must work with an approved mentor, who evaluates the student's performance and learning. The internship is designed to provide practical experience to students without prior professional experience in the field. Students who are employed on a full-time basis in the GIS industry may not use paid work experience as part of the academic program.

GIS 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

GIS 4992 Directed Study (1-8 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the directed study. Directed Study is offered only on a for-credit basis.
Courses

**GEOG 3000 Advanced Geographic Statistics (4 Credits)**
The second in a sequence of two courses that address general statistical applications particular to geography, environmental science and other disciplines dealing with a spatial dimension in the data they work with. The focus of this second course is on the more advanced multivariate statistical techniques. The course has a strong applied orientation as particular attention is given to which technique is the most appropriate to use for a given type of problem and how to interpret and apply the resulting statistics. Extensive use is made of computer statistics packages. Homework exercises involving such statistical techniques as multiple correlation and regression analysis, principal components analysis, discriminate analysis and canonical correlation. Prerequisite: GEOG 2000.

**GEOG 3010 Geographic Information Analysis (4 Credits)**
Reviews many basic statistical methods and applies them to various spatial datasets. In addition, several spatial statistical methods are applied to spatial datasets. This course is an in-depth study of the interface between GIS, spatial data, and statistical analysis. Preferred prerequisite: GEOG 2000. Prerequisite: GEOG 2100.

**GEOG 3030 Advanced Field Methods (4 Credits)**
Various field methods used by researchers in physical geography; techniques include field mapping, laboratory analyses, geologic field methods. Prerequisite: GEOG 1201 or equivalent.

**GEOG 3040 GPS for Resource Mapping (4 Credits)**
This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Assurance issues for data collection programs. Hands-on lab exercises include navigation, mission planning for a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, differential correction, and data integration into a GIS and map production.

**GEOG 3100 Geospatial Data (4 Credits)**
This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed. Cross listed with GEOG 2100.

**GEOG 3110 GIS Modeling (4 Credits)**
This course focuses on the concepts and procedures used in discovering and applying relationships within and among maps. It extends the mapping and geo-query capabilities of GIS to map analysis and construction of spatial models. The course establishes a comprehensive framework that addresses a wide range of applications from natural resources to retail marketing. Topics include the nature of spatial data introduction to spatial statistics and surface modeling in the first five weeks followed by spatial analysis operations and modeling techniques in the second five weeks. The lectures, discussions and independent exercises provide a foundation for creative application of GIS technology in spatial reasoning and decision making.

**GEOG 3130 Advanced Geographic Information Systems (4 Credits)**
This advanced course explores the more technical aspects of GIS functions and data structures. Students have hands-on access to both raster (grid-cell) and vector-based software packages in the form of lab exercises that culminate in a small student-designed GIS project. Prerequisite: GEOG 2100.

**GEOG 3140 GIS Database Design (4 Credits)**
Designing databases to provide a foundation for GIS functions and applications, including investigating techniques used for designing databases in non-spatial environments and learning the applicability to GIS problems. Building on concepts and techniques introduced in the first half to extend traditional techniques and methodologies to model the requirements of spatial problems. Students learn to translate the conceptual spatial model into a physical implementation specific to GIS products. Prerequisite: GEOG 2100 or GEOG 3100.

**GEOG 3150 GIS Project Management (4 Credits)**
This course provides graduate students seeking a career in GIS, or anyone managing a GIS project, with the knowledge, skill and abilities to take a GIS project or program past the design and implementation phase and into day-to-day operation. Students evaluate and analyze the role of GIS in an organization’s overall information system strategy and communicate the importance of geography in an information system. Data sharing in the organization is examined to determine the benefits and costs of distributing data creation and maintenance activities throughout an organization. Finally, the role of GIS professionals and the skill sets required to manage GIS effectively are examined. Students review case studies of successful and not-so-successful GIS projects in North America. GIS management issues are addressed by a series of case studies focusing on various management aspects. Students are also expected to visit operational GIS programs in the metropolitan area and interview GIS managers. Students prepare case studies evaluations for the classroom. Required for all MSGIS students because of the critical importance of GIS project management.
GEOG 3160 Web GIS (4 Credits)
With the development of internet technologies, the architecture of Geographic Information System (GIS) has evolved from the centralized desktop architecture to the distributed web architecture. Numerous web GIS applications are available (e.g., Google Map, Earth Explorer, and National Map). A web GIS application allows GIS analysts to access, manipulate, and visualize geospatial data from the web without the installation of GIS software. To facilitate the development of web GIS applications, geospatial technology vendors have provided application programming interfaces (APIs) through which GIS professionals can build customized web applications. This course focuses on the concepts and the development of web based GIS applications using industry-relevant geospatial APIs and core web technologies of HTML, CSS, and JavaScript. This is an upper-level undergraduate, to graduate-level course in GIS that introduces fundamental Web GIS concepts, applications and development kits. Concepts and techniques to be covered in this course include: *

GEOG 3200 Remote Sensing (4 Credits)
This course acquaints students with the basic techniques of the collection, processing and interpretation of information about the character of the earth's surface from remote locations. Students become familiar with the use of the visible, infrared, thermal and microwave portions of the electromagnetic spectrum as a means of determining land cover and/or land use. Both manual and computer-assisted techniques are discussed and include hands-on applications.

GEOG 3230 Advanced Remote Sensing (4 Credits)
This course will build on the basic remote sensing concepts presented in GEOG 3200. Students will explore more in-depth concepts relevant to satellite and airborne remote sensing, including radiative transfer and information extraction. In addition, students will be introduced to two cutting-edge sources of data about the Earth's surface: hyperspectral and lidar (Light Detection and Ranging) sensors. Students will study specific applications of advanced digital image processing techniques for environmental monitoring, natural resource management, and land-use planning. Finally, students will integrate remote sensing and other spatial datasets in the context of Geographic Information System (GIS) analysis. Prerequisite: GEOG 3200.

GEOG 3300 Cultural Geography (4 Credits)
Themes and methods of cultural geography including cultural area, landscape, history and ecology.

GEOG 3310 Culture/Nature/Economics-Human Ecology (4 Credits)
Cultural adaptation, livelihood strategies and environmental modification among subsistence and peasant societies: responses of such groups to technological change and economic integration.

GEOG 3330 Political Geography (4 Credits)

GEOG 3340 Geographies of Migration (4 Credits)
This course explores contemporary movement of people across international borders and the social, cultural, political, economic, and environmental repercussions of such movements. The class looks at the global flow of people across national boundaries and the ways in which these dispersed peoples build and maintain social networks across national borders. While doing so, we address the role of globalization in international migration processes. What motivates people to move long distances, often across several international borders and at considerable financial and psychological cost? How do migrants change—and how in turn do they bring change, social as well as economic, to new destinations as well as places left behind? This course examines politics and patterns of migration, transnational migration, and immigration to the United States.

GEOG 3350 Qualitative Methods in Geography (4 Credits)
This course focuses upon qualitative methods in the production of geographic knowledge. Qualitative methods are widely employed by geographers to understand patterns and underlying processes of human and human-environment issues in society. The course is designed to expose participants to the theories, purpose, scope, and procedures of qualitative research. Specific topics include: epistemological theories (ways of knowing); ethics and power in research; research design; data collection techniques in interviewing, participant observation and landscape interpretation, discourse and archive analysis, and case studies; data analysis; and writing and disseminating qualitative findings.

GEOG 3400 Urban Landscapes (4 Credits)
Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

GEOG 3410 Urban Applications in GIS (4 Credits)
This course uses the tools of geographic information systems (GIS) to explore concepts of traditional urban geography, including defining cities/metropolis, internal urban structures, urban systems, industrial location, social and residential patterns, urban form, environmental problems, and urban planning. The course allows students to practice fundamental skills in GIS (e.g., working with attribute tables, spatial analysis, spatial queries) and cartography (map design, color theory, display of information). Depending on the quarter, students pursue individual projects of interest or client-based projects. Prerequisite: GEOG 2100 or GEOG 3100 or equivalent.

GEOG 3420 Urban and Regional Planning (4 Credits)
Historical evolution of planning theory and practices; comprehensive planning process; legal, political, economic, social, environmental aspects of urban planning; urban design; urban renewal and community development; transportation planning; economic development planning; growth management; environmental and energy planning; planning for metropolitan regions; national planning.
GEOG 3425 Urban Sustainability (4 Credits)
The 21st century is being called the 'century of the city.' Now more than ever, humans across the globe call the city their home. Many of the world's most pressing crises are manifest in cities, including: greenhouse gas emissions, land degradation, high mass production and consumption, widespread poverty and hunger, and expanding socio-economic disparities. As 'sustainability' becomes part of mainstream discourse, this course explores what sustainability means for urban contexts around the globe. Arguably, the city has the potential to be the most efficient, equitable, and environmental form of modern human settlement. Covering all dimensions of sustainability from a social science perspective, this course focuses on theoretical groundings, practices of urban sustainability, and new research agendas. Major topics include cities and nature; planning and land use; urban form; community and neighborhoods; transportation systems and accessibility; livelihood and urban economies; and social justice and the city.

GEOG 3440 Urban Transportation Planning (4 Credits)
A specialized course in the urban planning sequence focusing on issues, practices and policies of urban transportation planning. Recommended for anyone interested in timely transportation topics, such as the feasibility and impacts of light rail transit, the planning and implementation of highway projects, and the role of freight and passenger transportation companies in transportation planning.

GEOG 3445 Sustainability and Transportation (4 Credits)
Sustainable transportation aims at promoting better and healthier ways of meeting individual and community needs while reducing the social and environmental impacts of current mobility practices. Given the importance of transport for economic growth, the uncertainties surrounding the availability and price of future sources of energy for transport use, as well as the social and environmental externalities of currently-utilized transport modes, it is imperative that more sustainable ways of providing transportation be developed and utilized.

GEOG 3450 Transportation and Mobilities (4 Credits)
The geographical study of transport has grown considerably and become more diverse, encompassing new areas of inquiry generated from economic, urban, environmental, political, social, and cultural geography, as well as from transport geography itself. The most notable expansion has been in the area of 'mobilities' research, which is focused on the social aspects of mobility, including both the large-scale movements of people, objects, capital, and information across the world, as well as the more local processes of daily transportation, movement through public space and the travel of material things within everyday life.

GEOG 3460 Air Transportation & Tourism (4 Credits)
This course delves into the world of commercial air passenger transportation, studying the foundations of the industry, its role in the travel and tourism, and strategies for the future. Foundational topics include the history and geography of air transportation, air travel and tourism, the geography of tourism, airline corporate cultures, the role of government, aviation law, regulation, deregulation, and globalization. Study of the principal elements of airline economics, finance, planning, management, operations, pricing, promotion, cost containment, marketing, and policy provide the opportunity for consideration of strategic options within the contemporary airline industry. Further discussion focuses on the planning and management of airport and airway system infrastructure, the issue of sustainable air transportation, and the role of the airline industry within the context of intermodalism.

GEOG 3470 GIS & Environmental Health Geography (4 Credits)
This course is designed to acquaint students with the spatial distributions of populations and their relationships to environmental pollution sources and health outcomes. It utilizes real-life scenarios using population data from the U.S. census, EPA pollution data and various types of vital statistics data. The goal is to implement novel geographic techniques such as spatial analytical techniques and atmospheric modeling of pollutants to assess possible health risks and outcomes. This class requires basic GIS knowledge.

GEOG 3500 Reconstructing Quaternary Environments (4 Credits)
Nature, magnitude, sequence and causes of Pleistocene and Holocene climatic changes; effects of climatic change on plant/animal distributions and human populations; paleoclimatic research methods. Laboratory and field trips. Prerequisites: GEOG core, ENVI 3000.

GEOG 3510 Biogeography (4 Credits)
Biogeography focuses on present and past distributions of plants and animals. In this course we consider a number of themes central to biogeography, including plate tectonics and biogeography, the effects of climate change of plant and animal distributions, biogeographic realms, island biogeography, biodiversity, human impacts on plants and animals, and the origins of agriculture.

GEOG 3520 Geography of Soils (4 Credits)
Spatial variation in soil characteristics; soil processes, soil morphology, their application in soil studies. Prerequisite: GEOG 1201-1203 Environmental Systems or instructor's permission.

GEOG 3550 Topics in Physical Geography (1-5 Credits)
Investigations into various aspects of physical environment.

GEOG 3560 Fluvial Geomorphology (4 Credits)
Examines how water and sediment interact at Earth's surface to create a variety of landforms ranging from small rills to continental-scale river systems. Introduces fundamental fluvial processes or channel hydraulics and sediment transport. Examines common fluvial landforms including alluvial streams, bedrock streams, floodplains and alluvial fans. Combines traditional lectures and in-class discussions with numerous field excursions to rivers in the Rocky Mountains and Great Plains. Prerequisite: GEOG 1203, GEOG 1218, or GEOG 1266.

GEOG 3600 Meteorology (4 Credits)
The basic theory and skills of weather forecasting. Topics include thorough coverage of atmosphere dynamics and thermodynamics, the evolution of various weather types, the mechanics of storm systems (cyclones, severe storms, hurricanes), creation and interpretation of weather maps, and forecasting techniques.
GEOG 3610 Climatology (4 Credits)
Climatology is the study of the processes that result in spatial and temporal variation of weather. This course introduces the student to the processes responsible for the transfer of matter and energy between the Earth's surface and the atmosphere and the average weather conditions that result. In addition, topics of global concern, such as greenhouse effect, El Nino, urban heat islands and acid rain, are discussed. Laboratory exercises provide an opportunity to investigate climate variation and climatic change through the use of a variety of computer simulations.

GEOG 3620 Applied Climatology (4 Credits)
Climatic impact on environmental systems and human behavior; techniques to investigate climatic characteristics of environmental extremes (floods, blizzards), urban climatology and socioeconomic impacts of climate. Prerequisite: GEOG 1201. Recommended Prerequisite: GEOG 3600 or GEOG 3610.

GEOG 3630 Dendroclimatology (2-4 Credits)
Systematic variations in tree ring width and/or density can be used to reconstruct changes in precipitation or temperature well before humans were around to record the variability. This class utilizes hands on methods to introduce the fundamental principles of dendroclimatology. Through readings and lectures, students will learn how tree ring growth can be correlated to climate change. Students will then undertake several research projects to reconstruct past climate variability in the Denver metro area using tree rings. Prerequisite: permission of instructor.

GEOG 3640 Climate Change and Society (4 Credits)
The science of anthropogenic climate change will be presented with an emphasis on critical evaluation of the evidence of climate change and future scenarios and migration strategies. Students will be introduced to the latest climate change research, including the Intergovernmental Panel on Climate Change report, and the most recent literature from the field. The societal and cultural implications of climate change will also be discussed. Prerequisites: GEOG 1201, GEOG 1216, or GEOG 1264.

GEOG 3700 Environment & Development (4 Credits)
Course examines interrelated nature of environmental and development issues in the Third World; addresses the place of environment in development theory and practice and the political ecology of Third World environmental problems and sustainable development approaches.

GEOG 3701 Topics in Geographic Information Science (1-4 Credits)
Topics vary by instructor.

GEOG 3710 Environmental Change in the Eastern Mediterranean (2 Credits)
We tend to associate environmental problems with modern societies and high technology. However, humans have had impacts on the environment, and have had to cope with challenges brought by the environment, throughout their history. Western cultures are intimately linked to the eastern Mediterranean, where some of the earliest centralized governments arose, agriculture developed, and humans first began living in permanent settlements, so the region has a long history of human-environment interaction. This class focuses on historical, archaeological, and paleoenvironmental records from the region to investigate the impacts of human activities, including deforestation, intensive agriculture, and urban development, on the environment, and the ways in which societies in the region responded to natural environmental perturbations, including drought, earthquakes, and volcanic eruptions.

GEOG 3720 Mountain Environments and Sustainability (4 Credits)
Mountain Environments and Sustainability explores the unique physical and cultural aspects of high relief and/or high altitude environments. Covering one quarter of the Earth's land surface, mountains directly or indirectly impact the lives of millions of people. We examine the significance of mountains to climate, water resources, and human activities, and discuss the sustainability of these environments and communities in light of rapid changes in many mountain regions resulting from anthropogenic factors and global change. GEOG 1201, 1202, and 1203 or instructor approval.

GEOG 3730 International Environmental Policy (4 Credits)
This course acquaints students with the global perspective on current problems of environmental protection and resource use. Population growth, food production, industrialization, technology and cultural change are considered, with heavy emphasis on the social dynamics of environmental problems. A variety of political views are studied, and an attempt is made to develop a perspective useful to students in personal and political decisions.

GEOG 3740 Environmental Justice in the City (4 Credits)
This course is designed to acquaint students with environmental justice in the urban environment. This class focuses on the City of Denver as a laboratory to explore the disproportionate impacts of social justice issues, particularly urban pollution, healthy food sources, gentrification, light rail, and employment opportunities, on neighborhoods and communities. A variety of views are studied, and an attempt is made to develop a perspective useful to students to explain urban social justice conditions.

GEOG 3750 Topics in Human-Environment Interactions (1-4 Credits)
This course investigates various aspects of the relationships between human societies and the natural environment.

GEOG 3755 Geography of Health (4 Credits)
The geography of health is a thriving area of study that considers the impact of natural, built, and social environments on human health. This course introduces students to three geographical contributions to health studies. First, it emphasizes the importance of ecological approaches to health, which consider interactions between humans and their environments, including topics such as how climate change might influence disease distributions, and how the built environment can influence patterns of physical activity. A second focus is social theory, exploring how aspects such as race, socioeconomic status, and identity play a critical role in influencing human health. A third section of the course considers how spatial methods (cartography, GIS, and spatial statistics) can help answer health-related questions.
GEOG 3760 Health & Environment, England (4 Credits)
This field course meets in England, visiting several sites in the Midlands. It focuses on ecological approaches to health, which emphasize the relationship between humans and their environment as a critical influence on the health status of populations. This environmental influence may come from the natural, built, or social environment. The course will use a case study approach to emphasize i) the importance of the natural, built, and social environment to human health, and ii) how the relationship between humans and their environments and its sustainability has changed over time. We will explore eight different time periods, asking in each case how people's relationships with their natural, built, and social environments have influenced health at the population scale, and how these influences can inform sustainable health and environment in the future.

GEOG 3800 Geography of Colorado (4 Credits)
This course focuses on the physical and human geography of Colorado, a state that includes the western Great Plains, the southern Rocky Mountains, and the eastern Colorado Plateau. Colorado's varied natural landscapes provide equally varied settings for human settlement and resource use. Recommended Prerequisites: GEOG 1201, GEOG 1202, and GEOG 1203.

GEOG 3830 Natural Resource Analysis & Planning (4 Credits)
Natural resources provide the basis for all human agricultural and industrial activities. This course discusses our resource distribution, conservation, management and sustainable use.

GEOG 3840 Water Resource Analysis (4 Credits)
The focus of this course is on complex policy, economic and local, national and international, and political issues surrounding resource use in the western U.S. Issues include exploitation of nonrenewable and renewable energy and mineral resources; and flexible responses to changing public policy.

GEOG 3860 GIS Applications and Natural Resources (4 Credits)
In this course we will use a case study approach to examine domestic and international natural resources such as oil, coal, timber, minerals, and recycled materials. We will use a case study approach to look at resource distribution, and the environmental impacts of extraction, production, and disposal, as well as the legal and economic context. We will use GIS data and analysis to enhance our understanding of these case studies, and students will do a project and paper using GIS data and image analysis at a local, regional or global scale. Prerequisite: Introduction to GIS or Introduction to GIS Modeling.

GEOG 3870 Water Resources & Sustainability (4 Credits)
In this course, we look at water as both a local and global resource and examine what sustainability means for human and ecological realms. After an overview of the physical processes that drive the hydrologic cycle, surface and groundwater hydrology, we examine how we humans have harnessed water for our use and how we both alter and treat its quality. We examine the legal aspects of water allocation in the U.S. and the groups and agencies that are most involved in managing and overseeing water issues. Finally, we examine the most pressing water "issues" related to wildlife, development, scarcity and conflict. We look forward to imagining the power of both the individual and the collective in meeting our future, global water needs.

GEOG 3880 Cleantech and Sustainability (4 Credits)
Cleantech has only recently become part of our vernacular and it refers to the technology that enables us to produce energy in a manner that has little or no environmental impact (solar, geothermal, wind, responsible biofuels). Clean technology will not only offer us a chance to rehabilitate the climate, but should make us more aware of how fundamental our approach to everyday life needs a more sustainable consciousness. As part of the debate, we will examine some of the problems facing civilization, why we are not sustainable, who the major players are, and how a more sustainable existence is not just our moral obligation, but it is also good economics and sound foreign policy that will accelerate poverty alleviation.

GEOG 3890 Ecological Economics (4 Credits)
Ecological Economics is an emerging transdisciplinary endeavor that reintegrates the natural and social sciences toward the goal of developing a united understanding of natural and human-dominated ecosystems and designing a sustainable and desirable future for humans on a materially finite planet. In this course we start with a basic overview and summary of the neo-classical economic perspective with a particular focus on the recognized market failures of public goods, common property, and externalities. We begin with a reconceptualization of economic theory by imposing scientific constraints (e.g. conservation of mass and energy, the laws of thermodynamics, evolutionary theory, etc.). Using the ideas developed in this reconceptualization of economic theory we explore the implications for international trade and myriad public policies associated with the ethical, environmental, and economic aspects of sustainability.

GEOG 3910 Geomorphology (4 Credits)
An advanced course that examines how Earth's landforms are created by a range of physical processes. Most landforms can be viewed as a result of some combination of erosion, transport and deposition of rock, soil and sediment. The most common agents causing these geomorphic processes are water, wind, ice and waves. This course examines the processes responsible for eroding, transporting and depositing earth materials and compares these processes with the resulting landforms. Prerequisites: GEOG 1202 or GEOG 1217 or instructor's permission.

GEOG 3920 Remote Sensing Seminar (4 Credits)
Special topics in advanced remote sensing.

GEOG 3930 Cultural Geography Seminar (4 Credits)
Topics, methods and current research in cultural geography.

GEOG 3940 Urban Geography Seminar (4 Credits)
International comparison of economic and social, positive and negative aspects of urban systems.
GEOG 3950 Physical Geography Seminar (2-4 Credits)

GEOG 3955 Pollen Analysis Seminar (3 Credits)
Pollen grains preserved in sediment provide long-term records of vegetation conditions. Changing proportions of pollen types may reflect climatic fluctuation or human impacts. We review important recent research in pollen analysis (palynology), pollen sampling, laboratory techniques and pollen identification. Students are responsible for counting a number of samples and contributing data for a pollen diagram.

GEOG 3990 Undergraduate Research Seminar (1 Credit)
This course is designed to prepare students who will participate in faculty-supervised summer research projects. Students are introduced to research design, use of the scientific method, research expectations and reporting of results. Preparation of formal research proposal with adviser.

GEOG 3991 Independent Study (1-5 Credits)

GEOG 3992 Directed Study (1-10 Credits)

GEOG 3995 Independent Research (1-5 Credits)

GEOG 4000 Fundamental Geographic Perspectives (4 Credits)
A foundation course for persons in the community, without a degree in geography, who want to pursue an education in or make use of computer-based geographic technology but who need a foundation in geographic concepts and perspectives.

GEOG 4020 Geographic Research Methodology (4 Credits)
This class prepares students to undertake creative geographic research leading to the generation of new knowledge. Students produce a NSF proposal by the end of the class. In class, students focus on methods rather than philosophy. This does not mean students go through a laundry list of the many methods employed by geographers (they can do this on their own). Students, however, focus on the methods that are appropriate for their research questions and, at the same time, maintain a healthy awareness and respect for methods employed by geographers in other fields. The class does not focus on the philosophy of the discipline or a particular field. However, these concerns should be apparent in your proposals. Indeed, various philosophical frameworks guide research questions and how students choose to answer those questions.

GEOG 4030 Advanced Field Research (1-5 Credits)

GEOG 4040 Research Topic Identification (0-5 Credits)

GEOG 4100 ApplicationDesign/ProductionI (4 Credits)
First of a two quarter sequence designed to be a culminating educational experience. Primarily lab-based with some lecture material, the various application requirements and guidance on how to go about accomplishing Application Design and Production tasks is provided. Prerequisites: GEOG 2000, GEOG 2100, GEOG 3100 or equivalent.

GEOG 4105 ApplicationDesign/ProductionII (4 Credits)
This course places emphasis on programming and producing technical reports and/or papers that will be published in the Geography Department's online applications library. Prerequisite: GEOG 4100.

GEOG 4110 Geospatial Data (4 Credits)
This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed.

GEOG 4400 Urban Landscapes (4 Credits)
Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

GEOG 4410 Economic Geography (4 Credits)
The study of the location and spatial organization of economic activities at the local, national, and global scales. Concerned with the spatial configuration of firms, networks, industries, and regions within the emerging global economy. Cross listed with INTS 4410.

GEOG 4460 Air Transportation & Tourism (4 Credits)
This course will be cross listed with GEOG 3460 Air Transportation & Tourism.

GEOG 4584 Geographic Information Systems for Humanitarian Assistance (4 Credits)
This class prepares students for future employment and enables them to bring more wisdom and expertise to the practice of their professions. Geographic Information Systems (GIS) technology is critical to support decision making throughout the process of response, assistance, and development -- key stages in any humanitarian action. Much of the information practitioner's encounter is spatial in nature and GIS provides a toolbox from which to better understand and utilize this type of information. This class introduces students to GIS technology functionality and information management, and examines GIS' usefulness in humanitarian response. Today, GIS is an essential technology for emergent managers which support decision making on various levels during preparedness, mitigation, response and recovery. One of the main reasons for that is that much of the information is spatial by nature. Additionally, geospatial and geospatial-temporal analysis of data allows us to quickly access and display relevant information through the creation of maps and reports. This course introduces students to the theoretical principles of geographic information systems and examines its potential for humanitarian assistance through case studies and hands-on training with GIS software. Prerequisite: INTS 4056.
GEOG 4701 Topics in Geography (4 Credits)
Topics vary by instructor.

GEOG 4810 Geography of Latin America (4 Credits)
In this course, we examine how past and present cultural preferences and political economies effect changes in Latin American landscapes. Cross listed with GEOG 2810.

GEOG 4825 Geographies of International Development in Africa (4 Credits)
What are the historical roots of (under)development in sub-Saharan Africa? How is sub-Saharan Africa typically depicted in the media? How can we explain the fact that the Niger Delta provides the bulk of Nigeria’s revenue, and yet, it remains the poorest part of the country? Is climate change the major cause of persistent food insecurity in the drylands of Ethiopia and Burkina Faso? How can we make sense of the uneven geography of poverty in Ghana? What explains urban food insecurity in Cape Town, or land struggles in rural South Africa? What are the social processes underlying the spatial disparity in health status in Malawi, or gender differences in HIV rates in Nyanza province, Kenya? And why do land users often resist state conservation efforts in Tanzania? These are some of the critical questions explored in this course. The primary aim is to provide a critical introduction to the geography of sub-Saharan Africa. We will begin by exploring how “the Africa story” is told by the media, scholars and policymakers. Attention will then shift to understanding the key historical processes that shape (under)development in the region. We will cover a broad range of topics, including governance, colonial history, debt and structural adjustment, foreign aid, food and agriculture, gender, climate change, land grabbing, health, population growth, migration, remittances, and resource extraction. We cannot possibly cover all these topics in greater detail; indeed, some are too vast and complex. We will however use specific case studies to illustrate and discuss each of the topics.

GEOG 4880 Geographies of South Africa (4 Credits)
This travel course is designed to give students a first-hand look at the physical and cultural landscapes of South Africa. We will study the varied natural landscapes that produce the commodities (e.g., gold, diamonds, wine, and agriculture) that have attracted the interest of outsiders for centuries and that have influenced the cultural landscapes particular to South Africa. A systematic presentation of the geology of South Africa, and its human history, will unfold throughout our travels.

GEOG 4900 Graduate Colloquium in Geog (0 Credits)
Solid foundation in history and philosophy of the discipline of geography; basis for further exploration of major research specialization.

GEOG 4930 Nicaragua: Development Dilemmas (4 Credits)
This class takes students to post-revolutionary Nicaragua to examine the consequences of recent land grabs by foreigners and transnational companies. Students learn to operate in a country with minimal "western" infrastructure. They learn to examine developing landscapes (that is, resorts and tourism infrastructure) with new eyes and from the perspective of locals who have been left out of the development loop. By the end of the class, students begin to understand the "development game", begin to question the role of tourism in developing economies, begin to know how to interact with other cultures, and finally learn to question the landscapes we "see" and begin to peel back the layers to understand the social and physical evolution of the landscape before their eyes. This class takes an experiential approach and requires students to participate in a service learning experience. Service learning is defined as a course-based, credit bearing educational experience in which faculty, students, and community members participate in an organized service activity that addresses a self-identified community need. We work with several community-based and non-governmental organizations to ensure a good fit between community needs and student expertise.

GEOG 4950 Advanced Field Research (1-17 Credits)

GEOG 4991 Independent Study (1-5 Credits)

GEOG 4992 Directed Study (1-10 Credits)

GEOG 4993 Capstone or Project (1-4 Credits)
Includes technical design and development for MA geotechnical track project and MS-GIS capstone project.

GEOG 4994 Report (1-5 Credits)

GEOG 4995 Independent Research (1-5 Credits)
Includes field research for doctoral dissertation.

GEOG 4999 Geographic Internship (0-5 Credits)
Supervised internship in a government office at local, state or federal level or within private sector. Prerequisite: Permission of instructor.

GEOG 5991 Independent Study (1-5 Credits)

GEOG 5992 Directed Study (1-5 Credits)

GEOG 5995 Independent Research (1-10 Credits)

Geology (GEOL)

Courses

GEOL 3010 Process Geomorphology (4 Credits)
The land surface of Earth is continuously altered by geomorphic processes. This class focuses upon the nature of these processes, the work that they perform and the resulting landforms. In addition, the student becomes familiar with various methods of geomorphic analysis through the laboratory component of the class. Cross listed with GEOG 3910. Prerequisite: GEOL 1010, GEOG 1202 or permission of instructor.
GEOL 3100 Environmental Geology (4 Credits)
Environmental geology examines geologic hazards, both natural and those attributable to human impacts on the environment from urban and regional development. Specific topics may include disposal of municipal solid waste and radioactive waste; flood, earthquake, volcanic hazards; groundwater pollution and withdrawal; mass-wasting phenomena; and energy-related issues. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission.

GEOL 3200 Sedimentology/Stratigraphy (4 Credits)
This course reviews the origin, geologic history, and depositional environments of sediments and sedimentary rocks. Course work concentrates on the identification of sedimentary rocks and depositional environments by first-hand observations of rocks in the Denver area. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission.

GEOL 3300 Petroleum Geology (4 Credits)
This class examines the geological occurrences of petroleum including the origin, migration, and accumulation of oil and natural gas. This class differs from traditional petroleum geology classes by offering an examination of the economics and politics underlying the oil and gas industry, and by considering alternatives to traditional hydrocarbon resources. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission.

GEOL 3520 Erosion Process & Measurement (4 Credits)
Soil erosion is arguably the most serious environmental problem worldwide. This course focuses upon the significance of this problem, the factors affecting erosion rates, the nature of the processes themselves, methods of measurement, estimation of erosion rates and erosion control practices. Prerequisites: GEOG 1203, GEOG 1218, or GEOG 1266.

GEOL 3540 Hydrology (4 Credits)
This course provides an overview of the hydrologic cycle with emphasis placed on the study of applied hydrology. Discussions include the fundamental characteristics of precipitation, runoff processes, calculation of flood hazards, aquifers (porosity and permeability), the geologic settings of groundwater, the basic physics of groundwater flow, and water supply and use. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission. Recommended prerequisite: one introductory statistics course.

GEOL 3900 Geomorphology Seminar (1-5 Credits)
Hill slopes comprise the vast majority of the Earth’s land surface. It is upon these surfaces that nearly all of the human population must exist and, hopefully, flourish. Hill slopes assume various forms, and their shape influences their utility for various human endeavors. Numerous geomorphic processes operate upon hill slopes to determine their form, and human activities strongly influence the frequency and magnitude of these geomorphic processes. Consequently, hill slopes are an interface between the Earth and the human population. Prerequisite: GEOL 3010 or permission of instructor.

GEOL 3991 Independent Study (1-5 Credits)

Global Studies (GS)

Courses

GS 4010 Global Society: Structures and Stakeholders (4 Credits)
This course provides students with an introduction to the major actors, structures, and issues in contemporary global society. Moving beyond a state-centric view of the global landscape, the course considers the values, interests, and ideas of a variety of stakeholders—including businesses, corporations, institutions, governmental and non-governmental organizations, and grass-roots initiatives—in order to assess some of the ways in which these actors both compete and cooperate for opportunities and resources. Students will apply relevant concepts to their own personal and professional experiences so as to gain a better understanding of how global issues and actors at a variety of levels impact their work and how their work constitutes an important part of global society.

GS 4020 Culture, Identity, Power (4 Credits)
In a rapidly globalizing world, culture and identity are increasingly recognized as having profound implications for professional success across a range of industries and practices. From health care to education, law enforcement to social work, an understanding and appreciation of difference are central to effective professional interactions and institutional progress. This course introduces the concepts of culture and cultural competency, presenting approaches for thinking about culture, identity, and power in professional environments, and for mitigating cultural and identity-based conflict in the workplace and beyond.

GS 4030 Working Internationally (4 Credits)
This course addresses some of the logistical and conceptual challenges of working internationally and provides students with knowledge and skills necessary to succeed in the global workplace. Legal, corporate, and cultural issues are addressed, as well as different approaches to conducting business across national, cultural, and linguistic borders.

GS 4040 Managing Across Cultures (4 Credits)
This course addresses the impact of cultural difference on management and provides students with approaches to managing effectively in cross-cultural and multicultural contexts. Additionally, the course enables students to analyze the impact of global issues and events on the management process in different times and places and to evaluate managerial practices in different cultures and institutional environments. The impact of culture and cultural competence on managerial performance is also addressed.
GS 4050 Diversity and Organizational Structure (4 Credits)
Organizational diversity is often conceptualized in terms of legally protected categories and related anti-discrimination and accommodation policies. Yet diversity presents opportunities and challenges that go far beyond legal considerations. The ability to appreciate and accommodate differences in experience, knowledge, and perspective is crucial for maximizing institutional effectiveness. This course focuses on the ways in which organizations at various levels benefit from diversity and struggle to manage it effectively. Students will develop a comprehensive understanding of the many forms diversity takes and will explore various strategies for maximizing effective professional interactions and institutional success.

GS 4060 Communication and Cultural Memory (4 Credits)
The ability to communicate effectively with employees, stakeholders, and clients from diverse cultural backgrounds requires an understanding of the cultural memories, experiences, and values of everyone involved. The culturally-inflected meanings attached to historical events such as 9/11, the Civil Rights Movement, the Holocaust, and colonialism profoundly influence how people imagine the world and their role in it. This course focuses on the impact of cultural memory on identity, looking in particular at the implications for effective professional communication across an array of organizational contexts. Students will gain an understanding of how history comes to be contested and changed, creating diversity in cultural memories that must be taken into account in professional communication.

GS 4130 Gender and Social Justice: Sex and Power in Global Perspective (4 Credits)
This course provides students with a critical understanding of gender and sexuality in relation to social and institutional processes, particularly as they impact professional interactions and conduct. Issues such as inequalities in the labor force, low wage work and poverty, work/family conflict, and domestic work will be addressed. The course will take an intersectional approach to analyzing gender and sexuality in the workplace and beyond.

GS 4140 Contemporary Racial and Ethnic Relations (4 Credits)
This course provides students with ways of assessing the effects of race and ethnicity in professional settings. Topics addressed will include forms of prejudice and discrimination, manifestations of privilege and inequality, and the intersection of race and ethnicity with other markers of identity. Students will analyze social and institutional practices that foster inclusivity and the implications of such practices on workplace equity and social justice.

GS 4150 Global Trade: The Intersection of Main Street and the World (4 Credits)
Trade is often characterized in terms of economic flows—the exchange of goods and services across borders and the electronic transfer of funds worldwide, as well as associated taxes, tariffs, labor, and production costs in different parts of the world. Yet trade also involves the exchange of ideas, cultures, languages, and people, all of which have profound implications for doing business worldwide. This course addresses trade in its different manifestations and explores the impact of trade on work in a variety of contexts. Students will approach trade from a holistic perspective to analyze its connections to globalization and their own work environments.

GS 4200 Globalization and Global Citizenship (4 Credits)
Over the past century the world has witnessed unprecedented developments in communication, technology, and mobility. These have enabled the rapid exchange of money, people, ideas, and cultures across national borders. With these changes have come questions about the roles and responsibilities of individuals, companies, and organizations within this increasingly complex and interconnected global society. Globalization is often used as a buzzword for this ever-evolving context, although its meaning is sometimes unclear. This course clarifies the nature of globalization by introducing students to fundamental concepts of global citizenship, focusing in particular on relationships between the local and the global, and on the necessity of developing a cosmopolitan perspective in order to be more successful in an increasingly globalizing workplace.

GS 4210 The Force of Faith: Religion in the Global Workplace (4 Credits)
This course examines the role of religion in the global workplace, addressing issues involved in working with clients, stakeholders, and employees from diverse religious backgrounds with the aim of increasing students’ awareness of their own attitudes toward religious beliefs and professional responsibilities. Students will develop an understanding of the ways in which different religious beliefs impact conceptions of professional communication and conduct, in addition to exploring relationships between religious faiths and business ethics.

GS 4300 Foundations of Translation: The Role of the Professional Translator (4 Credits)
This course examines fundamental translation ideas and theories through assigned readings, lectures, and class discussions. It explores the links between linguistic and cultural factors and their relevance to translation. The course covers the different aspects of translation, surveys translation tools and reference materials, discusses professional roles of translators, analyzes the public perception of the profession, and examines standard business practices and professional codes of ethics. It also introduces the actual practice of translation through realistic exercises.

GS 4301 Written & Sight Translation for Translators & Interpreters (4 Credits)
This is an introductory course for translators and interpreters covering a variety of registers: commercial, journalistic, legal, literary, medical, and technical. Students learn to apply text analysis, text typology, and contrastive analysis of their working languages to identify, analyze, and resolve translation/interpretation problems while independently developing an efficient and rational approach to the process of translation or interpretation. In addition, course assignments include practice and graded exercises in translation and sight translation, utilizing authentic texts drawn from an extensive variety of text categories that include, but are not limited to, current events, general political economy, general legal documents, and scientific and technical topics for general audiences. Language-specific.

GS 4302 Computer Aided Translation (CAT): An Introduction to Software for Translators (4 Credits)
In this course, students examine the various technologies and software used by professional translators. Students will explore the differences between Computer Assisted Translation (CAT) and Machine Translation (MT) and become familiar with the concept of Translation Memory (TM), especially how TM differs from term bases and glossaries. Students will also learn the main features of a professional translation tool and use them in conjunction with QA functionalities, as well as practicing how to revise translation drafts in a consistent work-flow.
GS 4303 Language Services Practicum for Translators or Interpreters (4 Credits)
The Practicum helps students develop and establish an identity as professionals because it builds a practical knowledge of translation or interpretation as a profession. Its goal is to empower students to identify and pursue professional development opportunities and specializations. Students are expected to apply the knowledge, skills, and attitudes attained in the translation and interpretation curriculum by apprenticing under qualified translators or interpreters, language agencies, law firms, government agencies (e.g., school districts, the IRS, police departments, social services agencies), and/or healthcare and community-based organizations in a variety of general work situations. Interns shadow their mentors and then move into actual translation or interpretation assignments in monitored situations. Initiation into the language industry through interaction with members of the profession, professional organizations, and institutions is encouraged. Students must prepare a final project based on their practicum experience, following the University College Internship Handbook. The practicum should be taken as one of the last two Translation Studies classes.

GS 4304 Introduction to Legal Translation (4 Credits)
Because a legal document bears legal liabilities, the translation of a legal document has the same legal effect as the original. As a result, the requirements for accuracy in legal translation (meaning, tone, and style) are quite high. This course provides an overview of the nature of legal translation and an introduction to the principles of comparative law, such as how to research legal issues in the countries of the language pair. The concepts of equivalence and zero equivalence are analyzed. Participants translate different types of agreements; certificates; and affidavits, as well as a wide array of documents focusing on probate, family, poverty, and criminal law. Students are given assignments on the research approach, steps, and skills needed to tackle a legal translation project from start to finish. Fundamental legal translation theory is emphasized at the beginning of the course and conveyed in the form of assigned readings, lectures, class discussions, and independent research. Language specific. Prerequisites: GS 4301 and admission to the Master of Liberal Studies in Global Affairs with a Translation Studies specialty of the Certificate of Advanced Study in Translation Studies.

GS 4305 Localization and Translation of Software and Web Pages (4 Credits)
This course provides students with a general overview of the field of web page translation and an introduction to software localization. Class topics range from technical discussions on computer architecture to tips for managing localization projects. Students gain a thorough understanding of the basic components of a localization project (web, software, online help, and documentation) and insight into the larger context of software/web localization and internationalization processes. Using real-life examples and hands-on exercises, students explore the cultural, technical, and organizational challenges in the adaptation of culturally sensitive elements. Language generic. Prerequisites: GS 4301 and admission to the Master of Liberal Studies in Global Affairs with a Translation Studies specialty of the Certificate of Advanced Study in Translation Studies.

GS 4306 Translation of Medical Texts for the Health Care Industry (4 Credits)
This course covers medical terminology involving patient education, medical research, drug development, the human body and systems, major diseases, as well as the most common injuries. Students translate documents used in general medical practice and are introduced to the common roots, prefixes and suffixes in medical terminology. Translation skills are reinforced by analyzing different levels of difficulty in medical texts, by translating, and by addressing requests for editing and rewriting translated materials for patient populations and audiences of different education levels. Students practice translating medical office correspondence, informational brochures, patient letters, discharge information, hospital intake questionnaires, living wills, patient outreach/educational materials, instructions for taking medications, laboratory tests, and medical disability reports, among others. Language-specific. Prerequisites: GS 4301.

GS 4307 Translation Project Management (4 Credits)
This course gives students the opportunity to address both translation and non-translation related issues associated with planning, executing, controlling, and delivering a final translation for a client (either direct or as an agency). Particular focus is given to hands-on practice of the various communications between the parties. The course outlines an effective project management methodology that can be applied to large or small translation/localization projects. Language generic. Prerequisites: GS 4301 and admission to the Master of Liberal Studies in Global Affairs with a Translation Studies specialty of the Certificate of Advanced Study in Translation Studies.

GS 4308 Introduction to Terminology for Translators and Interpreters (4 Credits)
Terminology is a fundamental part of both translation and interpretation, and knowing how to create and use terminology is a skill necessary both to translators and interpreters. This course will introduce what terminology is, how a termbase differs from a simple glossary or from a dictionary, and how terminology differs from allied fields such as lexicography. It will further introduce some tools used by translators, interpreters and terminologists in their work. Language generic.

GS 4310 Foundations of Interpretation: The Role of the Professional Interpreter (4 Credits)
This course examines the profession of interpreting, including employment opportunities, the role of the interpreter, administrative matters, and ethical considerations. In addition, an overview will be given of the three modes of interpretation (sight, consecutive, and simultaneous), as well as the different areas of interpretation, such as legal, medical, business, community, and conference interpretation.

GS 4311 The Language Services Business for Translators & Interpreters (4 Credits)
Translation and interpretation are professions that typically require their practitioners to set up businesses on their own. This course addresses the key issues involved in being an independent contractor in the language industry, including how to acquire clients, how to price professional language services, how to estimate different types of service, and how to manage different client relationships, from government entities to private individuals. The course also analyzes the differences between working directly for clients and working with translation agencies or as a staff translator or interpreter, where it is crucial to know how to work on a team with other language professionals and content experts. The course also covers basic standard business practices in the language industry and business codes of ethics.
GS 4312 Research for Translation & Interpretation (4 Credits)
Not so long ago, the only way for translators to conduct research for their assignments was to consult the reference works they happened to own, or (if they lived near a good library), go to the library and hope what they needed was available there. The Internet changed all that, revolutionizing the translation and interpretation professions. Now translators and interpreters have at their disposal a seemingly bottomless well of information. At the same time, the research skills needed for translation and interpretation also have changed. This course teaches students how to conduct research using a variety of online tools, how to distinguish between reliable and unreliable sources of information, how to take advantage of the research tools made available by libraries, and in particular how to leverage the various types of resources offered by different types of libraries. Language-generic.

GS 4313 Translation for the Publishing Industry (4 Credits)
Most professional translators work outside the publishing industry; they work as freelancers or staff translators in business, technical, medical, legal translation—or in some other translation specialization. But when people outside our industry think of translators, it is likely they think of book translators, i.e., translators who work for the publishing industry. Working as a translator for the publishing industry may be rewarding, but in many respects it is different from the kind of work most translators are accustomed to. This course will explore such themes as the difference between working on book-length projects and shorter projects, and the difference between translations performed as "work done for hire" and copyrighted translations. It will look at publishing contracts, and at the difference between translating non-fiction and fiction works. It will also survey the most prominent theories of translation, past and present, to see how they apply to the translation of literature. Language-specific.

GS 4314 Translation & Interpretation for Law Enforcement (4 Credits)
This course explores the scope and nature of translating and interpreting in a law enforcement context, including the kinds of documents a translator is likely to encounter and how an interpreter interacts with both law enforcement professionals and members of the public who lack fluency in English. Language-specific.

GS 4315 Interpreting for Health Care (4 Credits)
In this course, students analyze and learn to apply the correct interpreting mode for different healthcare situations. They develop personalized introductions for use in interpreted sessions to provide a framework for interpretation that is clear to both providers and patients. Students learn to apply the medical code of ethics to different interpreting situations. Selecting from a list of various medical specialties, students create interpreting role plays with classmates that include appropriate introductions, interpreting modes, and terminology in both Spanish and English to simulate real-life interpretation situations. This course cultivates many of the skills needed to pass medical interpreter examinations and helps to prepare students for work as professional healthcare interpreters.

GS 4316 Interpreting in the U.S. Court System (4 Credits)
This course explores the general body of knowledge that serves as the context for the U.S. court interpreting profession and covers the special skills and abilities court interpreters must demonstrate. It addresses the court interpreter code of ethics, essential legal concepts and terminology, and the different modes of interpreting used in courtroom settings. The course also covers the practical aspects of legal interpreting and will be a skills-based course.

GS 4701 Topics in Global Affairs (4 Credits)
The content of this course varies each time it is offered. Specific course content is detailed on quarterly schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

GS 4800 The Puerto Rican Paradox: Challenges and Opportunities in Uncertain Times (4 Credits)
The Commonwealth of Puerto Rico is a tropical paradise boasting vibrant communities, rich cultures, and abundant natural resources. Once coined a "natural jewelry box" by the BBC, Puerto Rico offers sparkling turquoise waters, bioluminescent bays, lush mountainous terrain, and colorful colonial architecture. It is also plagued by a debilitating debt crisis, political corruption, and a crumbling infrastructure, which, particularly in the aftermath of hurricanes Irma and Maria, have caused many residents to flee the island in search of better opportunities and more stable living conditions. In this course, students will examine the paradox that is Puerto Rico. Drawing from literature on culture, history, power, and politics, students will research a topic of their choosing, with the professor's approval. They will then work with local communities in Puerto Rico on a project of mutual interest and importance, culminating in an approach or proposal for addressing the issue(s) at hand. Students will be required to spend 5 days on-site in Puerto Rico, plus any necessary travel time. This course will give students broad exposure to the history and culture of Puerto Rico, in addition to a nuanced understanding of a specific industry, issue, or problem. It will additionally highlight the power, privilege, and oppression that exists in our own backyards on this U.S. Commonwealth island.

GS 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.
GS 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

GS 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

GS 4905 Graduate Social Research Methods (4 Credits)
Graduate Social Research Methods is an exploration of the methods and purposes of social science research from the perspective of the researcher as well as that of the informed professional and consumer of information. Students will learn about the process of research, including the development of research questions, the purpose of various social science research methods, the role of professional ethics, and general approaches to the analysis and interpretation of data. Students will develop the ability to read and critique basic social science research articles and to implement simple research designs. Students will develop and write a research proposal around a specific research question informed by a review of the literature. Technical requirements include the ability to read and modify Microsoft Excel documents. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

GS 4980 Internship (1-4 Credits)
The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

GS 4991 Independent Study (1-5 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

GS 4992 Directed Study (1-5 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

Healthcare Leadership (HC)

Courses
HC 4000 Healthcare Systems and Regulatory Environments (4 Credits)
This course opens with a comprehensive overview of the functions of various types of healthcare organizations: providers, insurance companies, government agencies, and professional associations. Alternative payment and provider models are reviewed, regulatory bodies and issues are explored, and healthcare reform efforts and proposals are discussed. Supply and demand projections for personnel are examined. The work of key federal agencies (NIH, National Center for Disease Control, and Food and Drug Administration) is reviewed as well as the activity of national and international non-governmental organizations. Major national and global public health challenges are introduced.
HC 4005 Healthcare Macroeconomics (4 Credits)
This course focuses on macro analysis of the current financial state of healthcare in the United States. The relationships of value, quality, and price are analyzed. Transparency related to price and quality is considered. Fundamental items such as balance sheets/income statements, accounting vs. financial reporting, equity, cash flows, and debt financing are covered in detail. Payment and incentive models are considered in connection with employer-furnished benefits, private health insurance plans, Medicare and Medicaid. Current issues, such as pay for performance, shared savings, cost shifting, and healthcare for the aging, under and uninsured are discussed. Students will discuss variations in health policy related to payment and coverage systems.

HC 4010 Healthcare Communication and Leadership (4 Credits)
This course focuses on the welfare of patient, family, and community in the context of medical team communication and leadership. Models for communicating highly technical medical information with patients and others involved in their care are examined. Students weigh and assess differences in personal and organizational cultures to optimize patient-centered outcomes. Students acquire a sound body of knowledge and terminology to facilitate communication and leadership across a multitude of disciplines essential in the delivery of healthcare. NOTE: This course is strongly recommended within the first 3 terms of study.

HC 4015 Healthcare Finance (4 Credits)
This course presents an overview of financial management in healthcare organizations operating in the United States. Students will gain a broad overview of the business of healthcare in the United States, including interpretation of financial statements, budgeting, variance analysis, operational analysis, capital investment analysis, expense management issues, revenues, and payment systems used in the current United States healthcare system. The course will use a case-based approach where students will demonstrate mastery of financial management skills through application of knowledge to real-life scenarios from the industry.

HC 4100 Management Principles in Healthcare Systems (4 Credits)
Healthcare systems are complex, dynamic, multilayered and unpredictable. They require constant situational awareness to maintain safety, efficiency, compliance, relevance and fiscal responsibility. Management and leadership need to have the vision to respond to changes and unexpected events. In this course, students encounter and explore the management functions required to lead and administer various types of healthcare systems. Students will engage in activities such as analyzing a healthcare system or organization’s current level of performance or culture to inform ways to lead that organization toward excellence.

HC 4110 Healthcare: Innovative Strategies and Change Management (4 Credits)
Effective healthcare takes continual innovation to meet the ever-changing needs of the population. Through an examination of disruptions that create a catalyst for change, this course focuses on teaching students how innovative strategies can enable quality care and sustainability both within the healthcare delivery system and the health industry. Further, the drivers of innovation are explored from their use in grassroots efforts through regulatory reform through the lens of supply and demand. Finally, strategic planning for maximum use of financial resources to meet stakeholder expectations is ventured into in this course.

HC 4130 Organizational Behavior in Healthcare (4 Credits)
Customer and employee satisfaction elements of healthcare management are often a result of how well the entire healthcare system functions. Students examine successful and less successful examples of cooperation, compatibility, and dedication within the workplace and explore what contributes to a harmonious and effective healthcare environment. Interpersonal skills are discussed, as are ethical guidelines and laws that define acceptable workplace behavior.

HC 4200 Comparative Healthcare Systems (4 Credits)
This course describes variations in healthcare delivery systems locally, nationally, and globally as they relate to policy, structure, and finance. Comparisons of systems are made relative to expenditure of resources and outcomes. Students learn about healthcare coverage, access to care, healthcare rationing, provider manpower distribution, and seeking healthcare in foreign countries (medical tourism). The discrepancy between the desirable and the practical is explored, and students are asked to outline and defend a system that they believe is both desirable and practical.

HC 4210 Quality Improvement for HC Leaders (4 Credits)
This course is designed to review the body of knowledge and core competencies needed to function at the level of Certified Professional in Healthcare Quality (CPHQ) in a healthcare organization. Skills gained are applicable to managers and administrators of hospitals, practices, and clinics. Course content is beneficial to clinicians and others interested in quality and patient safety. This course facilitates the successful pursuit of the CPHQ certification exam. Core competencies, aligned with the CPHQ certification exam, to be explored in detail include: Leadership and Management; Quality and Performance Improvement; Healthcare Safety; Information Management and Regulation, Accreditation and Continuous Readiness. Students are strongly encouraged to complete HC4000 and HC4220 prior to registering for the course.

HC 4220 Ethical Considerations in Healthcare (4 Credits)
This course explores ethical considerations encountered throughout the United States’ healthcare industry as well as within the broader global environment. Both clinical and non-clinical scenarios will be examined. Students will learn to apply ethical principles, theories, and concepts to analyze and draw conclusions for a broad range of ethical dilemmas. Through readings, class discussions, and assignments, students will recognize how ethical considerations vary depending on the perspective of the stakeholder or assessor, a critical step in making ethical decisions with no single right answer.
HC 4225 Healthcare Public Policy and the Legislative Process (4 Credits)
This class provides students with an understanding of the political and legislative procedures that lead to healthcare policy change and reform. Students examine the influences and functions of government agencies, legislative processes and procedures and executive branch rule-making. Students objectively evaluate how policy changes occur at the federal and state levels and subsequently affect the functioning as a citizen and a professional. Class lecture focuses on the legislative path of federal law and then follows it through to the outcomes at the state level. Students explore the importance of developing relationships, communication and advocacy strategies with elected officials and various stakeholder groups that interact with the federal and state legislative processes.

HC 4230 Implementation and Evaluation of Healthcare Public Policy (4 Credits)
This course examines strategies for implementation and evaluation of healthcare public policy. Students develop skills in analyzing issues, considering and weighing pros and cons of proposed policy, and defending strategies for bringing about change. Beginning with the passage of a new law, policy, or regulation, students track the process to implement and evaluate new policy. Topics related to implementation of a new policy include funding the implementation, effect on constituents and the overall national economy, sustainability, and short- and long-term evaluation of the policy. At the conclusion of this course, students will prepare an implementation plan for selected recently passed state legislation. Students are strongly encouraged to complete HC 4000 prior to registering for this course.

HC 4301 Fundamentals of Healthcare Information Systems (4 Credits)
Health information technology (HIT) can improve cost and efficiency when systems are properly evaluated, implemented, and optimized. Effective IT systems are also increasingly being associated with better patient outcomes and reduced costs. However, healthcare has lagged behind other industries in the adoption of IT systems. A major challenge to healthcare professionals is to articulate the major underlying technical concepts involved in the jargon-filled world of health information technology. This foundational course provides a working knowledge of key HIT definitions and concepts. It is not designed to turn students into network administrators or software developers; rather it is to equip students to become an active and valuable participant – or even a team leader – in the evaluation, selection, implementation and ongoing operation of health information systems. NOTE: This course is a prerequisite for HC 4325 unless approved by the academic director.

HC 4310 Electronic Health Records Systems and Health Information Exchanges (4 Credits)
Electronic health records systems (electronic medical records (EMRs), electronic health records (EHRs), personal health records (PHRs), and health information exchanges (HIEs)) are all the buzz these days, yet for the past 30 years the healthcare sector has clung to paper records, file folders, and clipboards. This course will explore the technical and controversial aspects of healthcare information technology in general, and the specific factors involving evaluation and adoption of EMR systems. The course also covers the fundamental components of modern electronic records systems and reviews their impact on both business and clinical functions. Key areas of interoperability, interfaces, and standards will be introduced. The course will be practical and thought-provoking as it emphasizes critical thinking and the synthesis of ideas from multiple sources and perspectives. Participants will be challenged to develop their own viewpoints and opinions, substantiated by the published work of those who are thought leaders in the field of HIT, as well as the participants' own experiences.

HC 4315 Telehealth, Digital, and Virtual Health (4 Credits)
The lack of access to proper medical facilities presents a gap in quality healthcare, particularly populations, geographies, and specialties. Other populations simply prefer receiving some healthcare services in locations and/or during times that are more patient-centric. This course will present the advantages and challenges of telehealth services to close these gaps, and to develop more efficiencies in providing healthcare services across populations. This course will also cover a broad variety of healthcare services and specialties but will focus on services and specialties that primarily utilize synchronous technologies. After a broad review of the telehealth field, this course will focus on how to set up, sustain, and lead a telehealth, digital, or virtual program. This will include regulatory issues such as state-based licensure, state-based licensing boards, emergency management procedures, reimbursement, and credentialing and privileging. In addition to these regulatory issues, the course will focus on current and emerging technologies, how to conduct a needs assessment, define staff training needs, overcome resistance, market services, implement different business models, and evaluate best practices for leading virtual teams. The course will also cover how some innovative and emerging technologies such as mobile apps and virtual reality are being used in healthcare.

HC 4325 Healthcare Information Technology Applications (4 Credits)
This course covers the major healthcare information technologies and topics other than electronic health records systems. Electronic health records systems represent a large focus in healthcare technology; however, many other important systems form the complete framework of modern connected healthcare. These include electronic practice management (EPM/PMS) systems, scheduling, billing, diagnostics/labs, reporting, payment interfaces, and business intelligence in healthcare. This course focuses on the fundamentals of how to be an analyst of health IT technology. Prerequisite: HC 4301 or approval by the academic director.

HC 4335 Information Systems Security in Healthcare (4 Credits)
This course will introduce students to information security risks facing the healthcare industry. Students will learn how to protect healthcare organizations and their patients’ data better. Students will learn about recent security breaches, the impact of those breaches on healthcare organizations, and all of the key players involved. This course also covers the evolution of healthcare IT and the continuously evolving risk and regulatory landscape. Students will explore regulations of HIPAA, NIST/ONC, HITECH, and Meaningful Use and how they relate to day-to-day operations in healthcare organizations. Additionally, this course will prepare students to support information security initiatives in order to protect the organization while furthering the advancement of healthcare IT capabilities. This is not a technical course; however, the course covers how security is impacted by technology and what one must do across technology to secure healthcare systems, organizations and patients.
HC 4400 Legal Issues: Healthcare Providers and Facilities (4 Credits)
This course is a primer on the legal and compliance considerations associated with organization, payment, and administration of facilities and provider groups. Topics will include the corporate and contract law, Stark and anti-kickback law, licensure and credentialing, professional liability, professional review and patient safety, HIPAA and patient privacy, and other laws affecting healthcare providers and organizations.

HC 4410 Legal Issues: Research, Reform, and Government (4 Credits)
This course reviews the recent history of healthcare reform in the United States beginning with the 2010 Affordable Care Act (ACA) and moving to health reform since the ACA. Students examine the influences and functions of Medicare and Medicaid as well as the Department of Health and Human Services’ (HHS) role in shaping benefit coverage throughout the healthcare industry. Students will explore the importance of, and examine legal issues related to, public health and healthcare provided by entities within the Federal Government such as the Department of Veterans Affairs (VA), Department of Defense (DoD), and Indian Health Service (IHS). Students will objectively evaluate the legalities and ethical issues associated with clinical research as well as the Food and Drug Administration (FDA)'s involvement in the development of pharmaceutical agents and medical devices. The course concludes with students analyzing the future landscape of health reform and public sector influence in healthcare.

HC 4420 Legal Issues: Healthcare Delivery and Payment Systems (4 Credits)
This course provides an understanding of the legal complexities of creating and managing delivery and payment models for healthcare services. Course content revolves around the current challenges of evolving from volume-based to value-based payment principles. Topics will include fraud and abuse and compliance, legal foundations of private and public payment systems, fee for service, managed care, value-based systems, and a review of current healthcare payment reform efforts. The course wraps up with the role of clinical health information and related data systems in healthcare delivery and payment.

HC 4430 Significant Healthcare Law (4 Credits)
As a foundation, students begin with an overview of healthcare law and an analysis of the sources of law to include the Constitution, statutes, regulations, and case law. Throughout the course, students will objectively analyze constitutional issues and major federal healthcare laws and will further delve into regulations implementing statutes as well as cases interpreting them. Students will examine the intersection of traditional areas of law and healthcare to include torts, antitrust, contracts, and intellectual property. They will explore the contemporary and emerging areas of information and innovation in healthcare law as well as the Affordable Care Act, to include the Supreme Court's landmark decision. The course concludes with a consideration of the pervasive problem of fraud, waste, and abuse. This course is delivered in a seminar style with significant independent work/research on the part of students and should be taken after introductory and concentration courses.

HC 4500 Operational Challenges in Global Health Management (4 Credits)
This course presents challenges in operations that are unique to healthcare services and products being delivered in the international market. Topics include international marketing of services and healthcare products, negotiation styles, ethical considerations, organizational structure, transporting of medical goods and personnel, individual travel health and medical tourism as a business model. Cultural and religious considerations in healthcare delivery are discussed. Grants and research management for global health are compared with domestic procedures.

HC 4510 Legal and Employment Issues in Global Health Management (4 Credits)
This course presents legal considerations involved in conducting global programs and business related to healthcare services and products. Employment and labor law are discussed in relationship to employment across international lines and within foreign countries. Intellectual property, patent and copyright of healthcare products, curriculum, and programs are examined. Customs laws, foreign trade, and other regulations such as healthcare licensing and credentialing of personnel are developed. Human resource challenges such as remote team management are discussed.

HC 4520 Global Health NGO Management (4 Credits)
Students will examine factors that impact organizational performance in the global nonprofit health sector. Students explore current challenges associated with Non-Government Organizations (NGOs) that operate in low-income and middle-income countries. Examples include Doctors Without Borders, Shoulder to Shoulder, and others. Students are empowered to research and compare different NGOs and analyze factors that impact organizational effectiveness. Key challenges facing NGO leaders are analyzed and students provide recommendations to improve organizational performance. Course topics include assessment of NGO strategies, organizational resources and financing, and stakeholder relations. Other topics include analysis of countries' demographics, culture, healthcare delivery, policies, and external environment. It is recommended that students in the Global Health Program Management concentration or certificate complete HC4500 and HC4510 prior to registering for this course. Students in other concentrations or programs may take this course at any time as an elective.

HC 4530 Regulatory Affairs in Global Health Management (4 Credits)
This course discusses the various regulatory requirements of conducting healthcare related business from the perspective of research, development, and marketing of medical devices and pharmaceuticals. Both domestic and international requirements will be examined. Students will develop a template of skills for investigating healthcare related compliance issues that can be adapted to specific markets as needed.

HC 4600 Healthcare Data and Delivery by Perspective (4 Credits)
This course evaluates the environment of the U.S. healthcare delivery system and introduces the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, towards the payer, and evolving into population health. Students will learn about the associated data that is generated from the patient as a consumer, from the provider through clinical operations, from the payer perspective, and finally how all of these contribute toward population health data. This course will cover the basics of U.S. healthcare research and clinical intervention, and students will have the ability to model the conceptual as well as practical application of health informatics.
HC 4610 Healthcare Ethics and Biostatistics (4 Credits)
This course discusses research investigator training and outlines the progression of the Institutional Review Board (IRB) process. In addition, this IRB process will be compared with the business process improvement cycle. Health Insurance Portability and Accountability Act (HIPAA) as well as data governance issues are surveyed from the patient, provider, payer, and population perspectives. The connections between these topics and ethics are explored, and the principles of biostatistics are discussed. Common statistical packages used within healthcare research and business applications are covered, and this course concludes with an analysis of resulting ethical implications of short- and long-term healthcare data. Prerequisite: HC 4600.

HC 4620 Healthcare Methods and Programming (4 Credits)
This course presents the basic study designs of epidemiology and illustrates the field's benefit to the healthcare industry. Randomized control trials (RCT) through correlation studies are explained through case studies as well as practical application. Informatics tools such as machine learning, clinical decision support, and natural language processing (NLP) are categorized with respect to their relative positions in the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. This course concludes with the many benefits of auditing as a check and balance for healthcare methods and programming. Prerequisite: HC 4600.

HC 4630 Healthcare Data Mining, Integration, and Interpretation (4 Credits)
This course explores available public healthcare data sets and the data mining process. In addition, this course articulates the value of mapping relationships between data points and workflows. This process determines the level of integration of disparate data sources and is explored through the 4P (patient, provider, payer, population) perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. Once the data sources are integrated, the focus becomes how to turn this data into information, knowledge, and insight. This course wraps up by exploring both business and research options for interpreting data through visualizations and predictive analytics. Prerequisite: HC 4600.

HC 4640 Healthcare Database Applications (4 Credits)
This course covers the growing functions of security in healthcare data and specifically elaborates on the vulnerabilities and emerging solutions for dealing with data once it is stored. Database architecture is surveyed, which transitions into an exploration of terminologies and standards and how these impact interoperability of data in warehouses. A significant portion of this course focuses on the specifics of medical coding and how coding is affected by the 4P perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. The course wraps up with a compilation of Structured Query Language (SQL) capabilities and a study of their influence of their practical application.

HC 4650 Healthcare Project Management and Professionalism (4 Credits)
This course applies skillsets acquired during the course of the program. It is important to learn how to utilize these skillsets, as well as to understand how cultural issues influence processes within the healthcare delivery system. In addition, this course compares research collaborations and business mergers and acquisitions. Finally, the course includes exercises to build professionalism in reporting to convey actionable items. The combination of all of these skillsets informs students' strategies for addressing change management, program implementation, and evaluation. At the culmination of this course, students will have a baseline proficiency in the cultural aspects that are required to succeed as a healthcare informatics and analytics professional. Prerequisites: HC 4600, HC 4610, HC 4620, HC 4630, and HC 4640.

HC 4701 Topics in Healthcare Management (1-10 Credits)
This is an advanced special topics seminar course. The focus is on specialized areas of interest. Topics courses may be used as electives within the Healthcare Leadership degree and certificates, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate programs.

HC 4900 Experiential Learning in Healthcare (4 Credits)
This course is for students who want to do independent research by completing an industry project and serves as a connector between research methods and a student's Capstone Project. The course will connect an academic research question with an experiential learning opportunity in healthcare for students as they prepare for their Capstone Project experience. Students will choose a Capstone Advisor, choose a topic, develop a thesis statement, explore project methodologies, write a proposal, and complete the necessary Institutional Review Board (IRB) requirements. Students will also agree to the structure and deliverables of their projects. There is an expectation for face to face (virtual is acceptable) meetings between students and their prospective Capstone Advisor during this course. This course is a prerequisite for any students planning to complete the Capstone Project (HC 4901) as it is the beginning of the Capstone Project process. Prerequisites: approval by Academic Director, acceptance as a degree candidate, and completion of between 30-40 quarter-hours. This course meets an elective option.

HC 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.
HC 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentations. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

HC 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

HC 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master’s degree. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

HC 4980 Internship (1-10 Credits)
The Healthcare Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master’s programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all Healthcare students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences.

HC 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

HC 4992 Directed Study (1-8 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Directed Study form and filed the form with all appropriate offices before registering for the directed study. Directed Study is offered only on a for-credit basis.

Higher Education (HED)

Courses

HED 3263 Sports and Higher Education (4 Credits)
This course provides an overview of the general history of college and university sports, athletics, intramurals, intramurals, and wellness programs as a broad introduction to this area; additional emphases center on issues related to intercollegiate sports e.g., athletic department positions, student-athlete support systems, ethical considerations, legal issues, politics and policies pertaining to institutional and NCAA norms/ regulations, and current and future issues in collegiate athletics. Prerequisite: must be junior- or senior-level student.

HED 3264 Psychosocial Dimensions of Sports and Wellness (4 Credits)
Cross listed with HED 4264.
HED 3991 Independent Study (1-10 Credits)

HED 3992 Directed Study (1-10 Credits)

HED 4201 Assessment in Higher Education (4 Credits)
This course is designed to give students a broad understanding of assessment in higher education. This course will improve students' familiarity with existing assessment instruments for students, services, programs, and facilities as well as provide an understanding of the importance of maintaining high standards of ethics and integrity in assessment of higher education and student affairs.

HED 4202 Program Evaluation in Higher Education (4 Credits)
This course is an overview of the craft of program evaluation, "...the systematic assessment of the operation and/or the outcomes of a program or policy, compared to a set of explicit or implicit standards, as a means of contributing to the improvement of the program or policy" (Weiss, 1998, p. 4). Program evaluation, simply put, is the craft of applying research methods in a thoughtful way to the task of finding out what and/or how interventions work in the context of the programs or policies in which they operate. This is accomplished by systematically investigating the effectiveness of program processes and outcomes within their political and organizational context. The goal is to inform social action and, by extension, improve conditions for program recipients and participants. Students in this course will explore program evaluation within the context of higher education. The purpose of this course is threefold: (1) Develop an understanding of existing evaluation theory and practice; (2) Apply evaluation theory and approaches to the context education evaluation; and (3) Develop an experiential base upon which to engage in evaluation in educational practice, and for many as a component of doctoral research projects.

HED 4210 Critical Higher Education (4 Credits)
This course examines the social and political context of U.S. education and provides an analysis of schooling, cultural politics, and global influences that inform current practices and structures of the higher education system. Central to this course is the development of a critical understanding of topics related to meritocracy, stratification, diversity, and decentralization in higher education. Prerequisite: Ph.D. student in higher education or permission of instructor.

HED 4211 Current Issues in Higher Ed (4 Credits)
A study of contemporary higher education as a specialized field of inquiry and as a professional area in which to work. Explores institutional missions as well as entities such as administration, faculty, curriculum, and student, in relationship to current issues.

HED 4212 Introduction to Public Policy and Higher Education (4 Credits)
This is an introductory course that gives students an overview of federal and state public policy, current issues, research methods, and practical skills required for the policy formation process. This is the introductory seminar to the Public Policy, Leadership and Organizational Change emphasis area for the master's program.

HED 4213 Leadership and Supervision (4 Credits)
General leadership theory and its implications for higher education; specific focus on leadership skills, such as conflict resolution, problem solving, use of teams and change advocacy.

HED 4214 History American Higher Ed (4 Credits)
Development of North American higher education from colonial times to the present, focusing on important educators and institutions.

HED 4215 Curriculum Development and Teaching Strategies in Higher Education (4 Credits)
The goal of this course is to prepare those who will serve in higher education with the knowledge, skills, and dispositions necessary to design curriculum and pedagogical strategies that produce effective and equitable learning outcomes for all students and adults in postsecondary settings. This course pushes students to think about curriculum and instruction as a decision-making process that requires articulated goals, strategic alignment, and thoughtful planning in order to realize a more effective and inclusive pedagogy. Throughout the course students will come to understand the complexities of curriculum and teaching design, but also have the process clarified with a framework for choosing among different ways of teaching that result in significant and transformative learning experiences for their future students.

HED 4216 HED Research Processes (1-5 Credits)
Enables students to explore current research and theories associated with their scholarly interests and resources for doing research, and to address problems in conducting original inquiry and investigations in postsecondary education. Attention is directed to the investigation of a research problem of each student's interest. Prerequisite: Successful completion of 10 credit hours of research courses or permission of instructor.

HED 4217 Student Affairs Administration (4 Credits)
A review of student services, emphasis on programmatic content and relationship to student development; organization of student service programs and national trends. To further describe the historical development of student affairs work including significant persons and activities and to begin the development of students' own professional identities as a reflective practitioner and to understand the responsibilities for integrating assistantships/internships/work experiences to theory and new knowledge.

HED 4219 Introduction to Higher Education (4 Credits)
This course is designed to provide students an overview of higher education as a field of study and practice. The topics covered attempt to equip students with working knowledge of the structures, functions, challenges, concerns, and opportunities within higher education as a social institution. Grounded in values and principles of inclusive excellence, the course take equity and diversity as departure points from which any and all productive understandings of higher education must engage.

HED 4220 Org & Governance of Higher Ed (4 Credits)
Study of theoretical perspectives and empirical research drawn from the social sciences related to higher education organizations and governance with an emphasis on application of theory and practice.
HED 4221 Financing Higher Education (4 Credits)
Financing public and private institutions of higher learning; sources of income, budgeting procedures, funding and control, use of simulated exercises to illustrate principles. Recommended prerequisites: HED 4210, HED 4211 and HED 4214.

HED 4222 Legal Issues in Higher Education (4 Credits)
Review of a broad range of administrative problems with legal dimensions; process for analyzing case law on issues of access, student rights, employment, collective bargaining, church-state relations, private sector and liability. Students gain practical experience (praxis) in analyzing and applying legal concepts to higher education subjects.

HED 4223 Inst Research & Enroll Mgmt (3 Credits)
Explores the important area of institutional research (IR) in a postsecondary setting. Issues relating to how an IR office functions and typical responsibilities of the professionals who staff these offices will be explored. Enrollment management concepts and themes will be highlighted along with data collection and reporting aspects of the college admissions and retention processes. Recommended prerequisites: HED 4213, HED 4217 and HED 4260 for master’s students; HED 4213, HED 4220 for doctoral students.

HED 4226 The Community College (4 Credits)
General issues related to community college, such as history, mission, characteristics, students, curricula, teaching and student services.

HED 4229 Student Support in College (4 Credits)
This class will introduce students to basic interpersonal helping skills required in Higher Education settings, including relationship building, listening, giving feedback, problem-solving, and resolving conflicts. Students will become familiar with crisis intervention models and techniques; signs and symptoms of distress and mental illness; strategies for making appropriate referrals to mental health providers; and considerations about self and other when engaged in helping relationships, particularly those with cultural differences. Central to the course will be discussion of the appropriate role Higher Education professionals have in helping students while recognizing their limitations.

HED 4230 Inclusive Excellence in Capstone (1-6 Credits)
The purpose of this course is to promote the integration of the core curriculum with practitioner related experiences in the masters program. Advanced students have an opportunity to use concepts and theories learned in previously complete coursework to understand and analyze current issues facing student affairs. The course is also designed to assist students by facilitating the transition into to professional positions in higher education.

HED 4232 Research Methods in Higher Education I (1-3 Credits)
Introductory research methods course for higher education professionals.

HED 4233 Research Methods in Higher Education II (1-4 Credits)
Introductory research methods course for higher education professionals, part II.

HED 4235 Organizational Change (4 Credits)
This course will focus on designing, implementing, and evaluating effective change in higher education through an equity-minded lens. The course is intended to assist students in developing a set of understandings in how to plan and implement change in higher education organizations, institutions, and as an industry. The course will introduce “equity-minded change” in higher education and will focus on how institutions can change to achieve equity, while addressing the importance of managing organizational development on a macro and micro level in higher education institutions and organizations. Students will acquire tools to manage and understand change through structural, political, human resource, and symbolic perspectives to understand the systemic interrelationships among these factors to effectively meet the changing socio-economic/Political environments within higher education as they impact student success.

HED 4242 Educational Policy Analysis (4 Credits)
Students in this experiential course will develop critical policy analysis and Praxis skills that have relevance for the implementation of public policy and finance strategies for higher education. Students will employ critical thinking skills to analyze, evaluate and interpret public policy and finance with the goal of advancing the field of higher education's understanding of effective public policy and finance, as well as the unintended consequences that may arise with various policy solutions and funding strategies. Specifically, students will learn how to evaluate whether public policy and finance hinders or assists post-secondary institutions and their leaders in dismantling systemic oppression while promoting educational equity and opportunity and strengthening the public purposes of higher education. Students will interact directly with public policymakers, post-secondary administrators, policy researchers and policy analysts while assisting with a quarter-long experiential policy analysis project with an intermediary public policy organization. Students will also develop a policy analysis paper.

HED 4246 Issues of Access & Opportunity (4 Credits)
This course addresses theories and research on a variety of issues related to college preparation, school structures, and inequalities in college access. The course will cover different levels of analyses: theoretical, individual levels (i.e., race, ethnicity, and social class), organizational levels (family, geography, high school context, and outreach), and field levels (i.e., policy, testing, rankings, media, and policy). Special attention will be paid to the sociocultural context influencing issues of college access and opportunity for students.

HED 4247 Retention, Persistence, and Student Success in Postsecondary Settings (4 Credits)
This course introduces students to relevant research, theory, and practice related to college student retention and persistence. Students explore cultural, institutional, and individual factors that may impact college student persistence and critically examine theories attempting to explain why students leave college. In addition, students also closely explore the dynamics of oppression at the individual, institutional, and socio-cultural levels and the resulting impact on student retention. Effective retention practices, programs, and assessment procedures are also identified and examined.
HED 4260 Students and College Environments (4 Credits)
This course will serve as an introduction to college environments and the complexity of campus and culture. The purpose of this course is to familiarize you with today's higher education settings and provide you with strategies to maximize learning and development, for all students. In line with inclusive excellence, attention will be paid to the impact of campus environments on diverse student populations. Theoretical concepts will help explain, describe, and examine the college environments as a system and its impact on students, faculty, and staff.

HED 4261 College Student Development Theory (4 Credits)
An overview of human development theories relevant to college students, of traditional and non-traditional ages. This application will enhance the ability of student affairs professionals as they work to maximize the affective and cognitive development of students within the college setting.

HED 4264 Psychosocial Dimens of Sport (3 Credits)
Psychology and sociology of sports as related to college and university athletics and wellness. Cross listed with HED 3264.

HED 4270 Student Affairs Internship (1-6 Credits)

HED 4281 Inclusive Excellence Programming and Development (4 Credits)
IE in Programming and Development will provide an overview related to the development and implementation of cultural programming and cultural centers over time. This course will pay specific attention to the role of student activism in creating change on college campuses in the form of cultural programming, centers, diversity curriculum, and inclusive excellence initiatives. The course will also address the challenges and competencies associated with inclusive excellent programming and development.

HED 4282 Characteristics of College Students (3 Credits)
Characteristics to consider in working with adult learners, including aptitude, motivation, cognitive development, psycho-social development, intelligence, learning styles, gender, ethnicity and social class; practice in analyzing learning characteristics of a specific individual.

HED 4284 Inclusive Excellence in Organizations (4 Credits)
In recent years, major demographic and economic changes in this country and worldwide have contributed to the diversification of the workplace. As a result, the need for understanding how to enhance cultural diversity in organizations has taken on a greater importance. Accordingly, framed through the concept of Inclusive Excellence, this course focuses on the changing demographics of our society, especially related to race and culture, gender, age, physical ability, sexual orientation, and socio-economic status, emphasizing the implications these factors have for leadership and management in a variety of organizational settings.

HED 4287 Critical Race Theory and Education (4 Credits)
The purpose of this course is to provide students with an in-depth exposure to Critical Race Theory (CRT) as it pertains to education. Critical Race Theory is an analytical framework that provides race-based epistemological, methodological, and pedagogical approaches to the study of everyday inequalities in P-20 education.

HED 4288 Gender & Sexuality in Higher Education (4 Credits)
This course examines how the related constructs of gender and sexuality are understood within the context of higher education institutions, practices, policies and research. We'll begin this discussion by examining the evolution of thinking around gender and sexuality. Historically, these constructs have been portrayed primarily as a matter of "natural fact" (Halperin, 1989). In other words, gender and sexuality should be viewed as functions of the body and therefore objectively biological. There is, of course, a resounding counter-argument to this claim, lead by the likes of Michel Foucault, Judith Butler, David Halperin, Eve Sedgwick and others, who suggest that gender and sexuality are socially constructed ideas, fundamentally performative and enforced through existing configurations of power that regulate our bodies vis a vis pervasive social norms and taken-for-granted patterns of socialization.

HED 4289 Race and Racism in Higher Education (4 Credits)
This course explores connections between race, racialization, and racism in American higher education. It draws on historical, political, economic, and cultural explanations of racial inequity in educational outcomes and processes. The course uses institutional and systemic levels of analysis to examine racial equity in higher education.

HED 4290 Inclusive Excellence in Praxis (1-6 Credits)
This course assesses and helps students develop critical self-reflection, leadership, and communication skills. Career plans are developed based on personal, academic, and professional goals. An emphasis is placed on applying theories discussed within the classroom to their respective professional roles on campus. Introductory course for all first-year master's students. This course combines the professional development seminar and practicum.

HED 4291 Doctoral Professional Development Seminar (1-3 Credits)
This course is designed to introduce the first year doctoral students to the field and discipline of Higher Education and to prepare doctoral students for their academic study.

HED 4294 Seminar in Higher Education (1-4 Credits)
Advanced seminar to examine timely topics, issues, and problems. The course description is developed each time the course is offered to describe the topics to be investigated.

HED 4295 Internship in College and University Administration (1-6 Credits)
Supervised experience in administration at college or university level.
HED 4296 Internship in Public Policy (1-6 Credits)
Supervised experience in postsecondary public policy analysis or research, usually at a state or national compact or agency in the Denver-Boulder area. Recommended prerequisites: HED 4210, HED 4211, HED 4212, HED 4221, HED 4242, HED 4243.

HED 4297 Internship in College Teaching (1-6 Credits)
Supervised experience in teaching at college level.

HED 4991 MA Independent Study (1-10 Credits)
HED 4992 Directed Study (1-10 Credits)
HED 4995 Research - M.A. Thesis (1-10 Credits)
HED 5991 PhD Independent Study (1-10 Credits)
HED 5992 Directed Study (1-10 Credits)
HED 5993 Doctoral Research - EdD (1-20 Credits)
Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in HED; must have completed at least 80% of coursework; cannot complete more than five credit hours of HED 5993 prior to passing the comprehensive exam.

HED 5995 Dissertation Research (1-20 Credits)

History (HIST)

Courses
HIST 3350 Social History-Modern Britain (4 Credits)
This course investigates the intersections of class, gender, and race in nineteenth-century British society. During this period, Britain became the preeminent world power thanks to its spectacular industrialization and its even more impressive empire. Such success often fostered smugness and complacency; yet British society was also riddled with dissension as people struggled to cope with the enormous changes they were witnessing. Discussions focus on the ways in which Victorian people themselves understood their society and its problems, and how they attempted to construct solutions to those problems. Who was implicitly or explicitly excluded from British society? As we consider these topics, we use a variety of secondary and primary sources, including fiction; one goal of the course is for us to think about how to integrate different kinds of sources as we analyze historical problems and create our own interpretations. Cross listed with MUAC 3350.

HIST 4991 Independent Study (1-10 Credits)
HIST 4995 Independent Research (1-10 Credits)
HIST 5991 Independent Study (1-10 Credits)
HIST 5995 Dissertation Research (1-10 Credits)

Human Resource Administration (HRA)

Courses
HRA 4130 Finance for HR Professionals (4 Credits)
HR professionals may work in a number of organizational settings and sectors during their careers. This course provides an opportunity to explore how organizations may differ in legal structures, HR models, governmental oversight, records access, type and size, compensation processes, and benefits. The course will use a variety of financial reports, financial ratios, analysis and measurement tools, and ethical situations as a means to increase the student's business acumen.

HRA 4140 Principles and Practice of Human Resources (4 Credits)
This course offers an introduction to HR as a professional field of study, and discusses how HR fits into the workplace. The course presents theories and issues in the HR field, and it defines the HR practitioner as a change agent. The course places HR management in the context of organizational strategy and policy. And it defines the core competencies of HR professionals including recruitment, selection, and placement; job classifications and wage and benefits; employee relations, supervision, counseling, discipline, and employment law.

HRA 4150 Human Resources Across Organizations (4 Credits)
HR professionals may work in a number of organizational settings and sectors during their careers. This course provides an opportunity to explore how organizations may differ in legal structures, HR models, governmental oversight, records access, type and size, compensation processes, and benefits.

HRA 4160 Human Resources in a Global Economy (4 Credits)
In this course, students will explore the proprietorships, partnerships, corporations, nonprofits, multinational corporations, strategic alliances, regulatory agencies, and public organizations that cross sector and national boundaries from an HR impact perspective.

HRA 4170 The Inclusive Organization (4 Credits)
Employees are coming to organizations with differences in race, ethnicity, gender, age, religion, sexual orientation, disability, and other aspects of diversity. How can organizations create a culture of respect, involvement, and positive outcomes for employers, employees, and other stakeholders with individual differences and group affiliations? This course examines these questions.
HRA 4180 Organizational Politics and the HR Professional (4 Credits)
Many programs developed by HR professionals may be impacted by politics, where decisions are made to further individual interests over the interests of other people. Despite the inclusion of best practices in the recommendations, decisions may be made for political reasons, agendas, or actions, and not always for the benefits of the employees. This course explores why and how politics may enter HR decision making, and identifies links between motivation and leadership.

HRA 4230 Consulting and Human Resource Applications (4 Credits)
HR professionals often serve in a consulting role, both as internal and external consultants. This course includes models, tools, and concepts to build effective relationships with key stakeholders; identify, analyze, and diagnose organizational issues; develop and implement value-added solutions; effectively manage the change process; and measure/monitor outcomes. Students utilize a consulting model approach to turn strategy into action.

HRA 4240 Human Resources Technology Solutions (4 Credits)
Technological advances have had a major impact on the use of information for managing human resource functions within both large and small organizations. The quantity of data being collected, stored, and manipulated on computers is growing at a rapid rate. The students in this course strengthen basic technology skills by examining how information is utilized in the functional areas of HR.

HRA 4250 HR Competencies and Talent Management (4 Credits)
Organizational value depends on developing, utilizing, and retaining human resources. This course examines the importance of demonstrating that value along with what is needed to acquire, hire, and retain talented human resources. This includes staffing and forecasting, recruitment, career development, succession planning, and developing competency models. Students will examine how political, economic and social systems can lead to new policies and practices that affect talent management strategies, along with ethical considerations and inclusivity.

HRA 4260 HR Analytics and Research (4 Credits)
This course covers a review of HR metrics, quantitative techniques, and analysis. Students will examine HR research and consider a process to develop practical questions for HR use. Quantitative skills for modeling, spreadsheet analysis, process mapping, and workforce management reporting are developed. Human resource information systems (HRIS) and their role in supporting strategic decision making are examined and evaluated.

HRA 4270 Value and Impact of HR Interventions (4 Credits)
In this course, students will determine the long-term and short-term impact of interventions, especially looking at a cost-benefit analysis. The object is to have a practical strategy to provide decision makers the data for human capital investments support.

HRA 4500 Organizational Leadership, Team Effectiveness, and Communications (4 Credits)
HR professionals are organizational leaders, build teams, and build strong internal communications. The course explores how to lead organizational change, manage organizational crisis, build effective teams, and develop strategic communications.

HRA 4510 Organizational Lifecycles and HR Implications (4 Credits)
This course examines the role of mission, vision, and values. Moving from start-up to mature organizations, the course asks what are HR responses to compensation, benefits, and HR structure. Matching HR structure and policies to organizational strategy is considered.

HRA 4520 HR Change Management (4 Credits)
Human Resources play an essential role in planning, implementing, and sustaining organizational change. This course examines the role of HR professionals in leading and advising on organizational change, including how to apply HR management practices to change management plans, and aligning total compensation and performance management practices to support the goals of change initiatives.

HRA 4600 Human Relations in Organizations (4 Credits)
The purpose of this course is to tie together Human Relations concepts and theories with practical ideas and solutions such that HR professionals can positively impact the employee experience, and, ultimately, drive positive business results. The role of HR professionals in designing and managing organizational programs and systems that are grounded in human relations best practices will be explored, recognizing that positive relationships between the employee, the organization, and its constituents act as drivers of satisfaction and retention.

HRA 4610 Employee Compensation (4 Credits)
This course examines the development and management of employee compensation systems, including motivational, productivity, job classification, and strategic considerations. It explores the history and purpose of a compensation system, today's issues, and key elements of compensation design.

HRA 4620 Employment Total Benefits (4 Credits)
This course develops historical context for employee benefits and the motivational implications. It reviews the wide range of potential benefits and discusses "total rewards" options. The course examines pension plans, social security, ERISA, major benefits legislation, health insurance, flex spending, and budget implications.

HRA 4630 Employment Law (4 Credits)
This course explores current legal issues that affect the HR function in organizations. These include EEO, sexual harassment, managing risk, discrimination, wage and hour, at-will employment, and current Supreme Court decisions. These legal issues will be examined from both the employee and the employer viewpoints.

HRA 4701 Topics in Human Resources (4 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues in the field of strategic human resource management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.
HRA 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.

HRA 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

HRA 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

HRA 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master’s degree. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

HRA 4980 Internship (1-4 Credits)
The Strategic Human Resource Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master’s programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all SHRM students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences.

HRA 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only may be used by degree candidates. Prerequisite: Admitted degree candidate.

HRA 4992 Directed Study (1-8 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.
Info & Communications Technol (ICT)

Courses

ICT 20095 ICT Transfer (1-12 Credits)

ICT 4000 ICT Business Foundations (4 Credits)
This course provides an overview of the relationships between business needs and Information & Communications Technology solutions. The course focuses on fundamental attributes of business research and analysis in the ICT field. Applying appropriate research methods is a critical course requirement. Students demonstrate the critical skills required to define a problem, establish a business and technical context, perform appropriate research, propose and analyze alternative solutions, identify decision criteria, and make recommendations based on such considerations as benefits, technical feasibility, costs, risks, and resources. Students assess the relevance of research findings, considering the credibility of the source, relevance to the research question, and validity of the underlying data. Taking into account current industry trends and customer/user needs, students apply the product development process to create a product or service proposal, including business requirements and a detailed business case. The course establishes the professional and academic framework for the ICT master's degree program, setting a relevant industry context for all ICT concentrations.

ICT 4005 ICT Technical Foundations (4 Credits)
This course provides a substantive review of the technology at the core of the ICT industry. Coverage includes hardware, networking technology, databases, information services, applications, and content in enterprise contexts. The application development process is briefly reviewed. A framework is developed around data at rest, data in transit, and data being processed. This framework is used to detail the roles of a variety of hardware and software artifacts, and their use in the production, processing, protection, and use of organizational information. The role of the ICT user interface and web systems in providing user access to content anytime anywhere is reviewed. The security requirements associated with a variety of information types are introduced, along with the current best practices used in information security.

ICT 4007 Creative Problem Solving and Programming Concepts (4 Credits)
In this course students will develop, or improve upon, their problem-solving skills. Students will learn to use those problem-solving skills to analyze problems and determine how to create solutions. Students will document their solutions (e.g., in pseudocode or UML diagrams) and, by the end of the course, translate their solutions into running programs written in at least two languages (e.g., Python and C#). Students will learn programming concepts including the use of variables, program input and output, flow control (if-then-else, looping, etc.), and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as X-code and MS Visual Studio on their personal computers in which they will write programs.

ICT 4010 Enterprise Architecture (4 Credits)
In this course, students learn how to effectively and efficiently integrate information and communications technologies to support business goals. The course provides an overview of the global, enterprise-wide architectural framework that drives business decisions regarding selection and implementation of ICT systems and solutions. Topics include supporting and transforming Global Value Chains, e-business designs; creating enterprise architecture; and the various methodologies, tools and techniques used in the design and implementation of the enterprise architecture. The course encompasses all aspects of information and communications technology, including data networks, applications, operating systems, database systems, telecommunications systems, and hardware components in the context of a total enterprise-wide framework.

ICT 4015 Managing Technology for Strategic Value (4 Credits)
In this course, students acquire an in-depth understanding of the key management skills necessary to manage technology for strategic value. It concentrates on providing in-depth knowledge of strategic planning, the role of technology in business, and business process automation. It also provides students with the management skills and tools to prioritize technology investments, and manage technology products and projects. Topics include strategic planning and business alignment, managing business applications, business process automation, the role of web 2.0 in business processes, technology management, budgeting and capital investment prioritization, and build/buy decision-making in regards to custom-built and off-the-shelf solutions.

ICT 4020 Business Forecasting and Planning (4 Credits)
Business forecasting and planning brings together a wide diversity of skills: economic, financial, marketing, and technical analysis. This course brings together these concepts and extends prior coursework with coverage of budgeting, finance, costing, business planning, revenue forecasting, profit and loss statements, and balance sheet analysis as applied to information systems and services. Coverage includes the economics of software and other intellectual property, network effects, usage and sharing effects, sunk costs and monopoly effects, capacity and resource planning issues, and an introduction to the related regulatory issues. Students develop budgets or business plans for several increasingly difficult scenarios addressing a range of technology applications and services.

ICT 4025 Technology and Innovation Management (4 Credits)
Leaders of innovative firms build commitment to new directions, re-design structures to support new missions, and transform cultures. This course concentrates on the implementation of business strategy through effective structures and systems. Students learn why only 7% of companies are able to revitalize their organization once growth has stalled; students also learn what to do about it. Students analyze key aspects of strategic deployment, including organizational structure, cross-functional teams, product development, business model design, and change management. The course concludes with students developing a strategy for implementing an innovation. In this course students integrate the areas of knowledge covered in the ICT Foundations courses and the Technology Management concentration. It should be taken as the last of the four required courses in the Technology Management concentration. Prerequisites: ICT 4010, ICT 4015, ICT 4020, ICT 4100.
ICT 4030 Enterprise Architecture Frameworks (4 Credits)
This course covers the application of Enterprise Architecture (EA) frameworks as systems of methods, tools, and standards for transforming the operations of business, non-profit, and government organizations. The course concentrates on TOGAF, The Open Group Architecture Framework, as the primary instructional vehicle, but also outlines other EA frameworks and illustrates their individual purposes. The course demonstrates how EA frameworks can be combined and customized to meet specific objectives. The class starts with a high-level overview of EA, TOGAF, and other EA frameworks, then moves toward covering each component of the TOGAF framework. As the course moves through each component of TOGAF, key concepts such as governance, building blocks, views, viewpoints, and stakeholders are presented in context. Students will choose and apply EA frameworks with transition planning to current industry case studies and scenarios.

ICT 4035 Applied Enterprise Architecture Solutions (4 Credits)
This course addresses how Enterprise Architecture (EA) frameworks and associated methodologies can be combined and customized for targeted organizations for their specific, overarching EA program/capability. It then lays out how to construct a strategic architecture initiative using the customized EA capability, which will include the use of full life cycle transformation activities, leading EA graphical languages and a variety of EA planning and modeling tools. The first half of the course will provide students with the information necessary for them to develop their customized EA capability. The second half will focus on applying the capability for a robust business transformation initiative in their respective final projects. Prerequisite: ICT 4030.

ICT 4045 Information Technology Service Assurance (4 Credits)
In today’s technology-centric work environment, simply delivering IT services is no longer sufficient. Organizations must provide “assurance” that IT services and the underlying data assets are reliable, highly available and secure. IT Service Assurance or IT Quality Assurance includes many functions including IT service delivery, service level management, quality assurance testing and monitoring, change and release management, project management, security, and compliance, all within a risk management framework. This course evaluates these functions as integrated components of a service assurance program and their impact on the organization. It also investigates how service assurance is intertwined with the strategic and tactical initiatives of the organization. The use of case studies and actual IT related challenges and opportunities are utilized to anchor the course concepts. The combined in-class meetings and online course structure lend itself to ongoing interaction, collaboration, and sharing of ideas.

ICT 4100 Principles of Project Management (4 Credits)
This course is designed to provide students with practical skills in project management and the students who are continuing in the Project Management course sequence with a framework for the concepts and tools covered in the remainder of the program. The various elements of the project management processes, tools and techniques are explored, applying the software used in managing projects. Topics include a review of processes to initiate, plan, execute, monitor and control, and close a project. Project integration, scope (including requirements), time, cost management, and planning human resources are emphasized. Students learn project management skills through hands-on exercises using project management tools and techniques and project management software to emphasize the real world of managing a project.

ICT 4105 Project Contracts and Procurement (4 Credits)
This course is designed to provide students with practical skills in project contracts and procurement. This course introduces the various elements of the contract and procurement process, including exposure to procurement plans, Request for Information (RFI), Request for Quote (RFQ) and Request for Proposal (RFP), as well as the various types of contracts and change order procedures. The course builds upon the framework from the remainder of the program. Topics include how to develop a procurement plan, what type of RFs to use and why, selection criteria for vendors, and contract selection. Students learn project management skills through hands-on exercises developing procurement plans, RFx’s and contracts. No prerequisites.

ICT 4110 Project Risk and Quality Management (4 Credits)
This course introduces students to project risk and quality management and develops advanced skills in applying the project management tools and techniques learned in ICT 4100 (prerequisite course). A focused examination of scheduling, cost, quality, and risk management processes using advanced tools and techniques is included. Emphasis is placed on the project planning, execution, and monitoring and controlling processes. This course is on the Project Management Institute’s (PMI) certification track. Prerequisite: ICT 4100 or equivalent knowledge.

ICT 4115 Project Management Dynamics (4 Credits)
This is an advanced course that applies the knowledge and skills learned in the prerequisite courses to a complex program. The planning, monitoring and controlling, and project close process groups are explored using case analyses of program and project plans. Learning is based on reading case material and the practical application of project management tools and techniques. Students receive hands on simulation experiences in planning and running subprojects, and work in Project Management Office (PMO) roles. Students develop a workable change management system, exercise project integration and communication skills, and demonstrate the ability to keep an overall program on track. They also demonstrate decision making skills, with emphasis on making tradeoffs based on solid business rationale. This course is on the Project Management Institute’s (PMI) certification track. Prerequisites: ICT 4100 and ICT 4110.

ICT 4120 Lean Six Sigma—Getting Started (4 Credits)
Students use Lean tools and techniques to define and scope a problem, determine project objectives and benefits, and create a project charter. The students also learn to define the ‘as is’ process, validate the measurement system and measure outputs, and quantify process performance.

ICT 4125 Lean Six Sigma—Analyze (4 Credits)
Students apply Lean tools and techniques to identify potential causes (x’s), investigate the significance of x’s, identify significant causes, and provide a preliminary definition of process outcomes as a function of causes (y=f(x)).

ICT 4130 Lean Six Sigma: Improve and Control (4 Credits)
Students apply Lean tools and techniques to generate potential solutions, select and test a solution, develop an implementation plan, and create a control and monitoring plan. The students also learn the methods and techniques for implementing a full scale solution and finalizing transition.
ICT 4155 Strategic Alliances in the Technology Sector (4 Credits)
Strategic alliances are one of the key drivers in today's global economy and have gradually replaced vertical integration as the chief method of corporate expansion. Business-to-business alliances provide organizations with a variety of benefits, including enhancing the capability of organizations and helping to extract maximum value from available resources. While applicable to any industry, strategic alliances are particularly important in the technology sector. This course defines and discusses the roles of various types of strategic alliances in the technology sector, including informal alliances, partnerships, joint ventures, and outsourcing arrangements. It also explores strategies for managing profitably and exploiting these external business relationships. Case studies will be an integral part of the learning experience. Successful and unsuccessful alliances will be analyzed from the perspective of each alliance participant, 3rd-party vendors, customers, and a variety of other stakeholders.

ICT 4160 Advanced Methods for Complex Projects (4 Credits)
This course explores the planning and execution challenges that often cause complex projects to fail. The course provides a historical perspective regarding project management practices, and reviews evidence regarding trends in project outcomes. For example, despite the use of commonly accepted methods for project management and systems engineering, the success rate of NASA and DoD programs, as measured by schedule, budget, and requirements performance, is trending downward. The evidence shows similar trends in commercial industries (e.g., the Airbus A380 and Boeing 787 aircraft programs). The course addresses why the methods embodied in the Project Management Institute's (PMI) A Guide to the Project Management Body of Knowledge (PMBOK Guide) are sometimes insufficient to assure project success. The course then explores remedies drawn from recent research and cases in complex systems development and global teaming case studies. The instructor will host online reviews of readings and discussion. Students will learn and leverage visual modeling and simulation tools for the design of complex projects. Participation is voluntary, but recommended. Methods to handle complex, concurrent, and mutual dependencies across organizations and cultures will be applied. Based on case studies, the instructor will introduce Project Design methods, including student access to TeamPort project modeling and simulation software. The course culminates with teams in an online role play exercise to demonstrate collaborative planning and decision-making using these advanced methods. This exercise will require dedicated, synchronous interaction with other team members. Prerequisite: ICT 4100 or equivalent experience.

ICT 4165 Project Collaboration with SharePoint (4 Credits)
This course focuses on the role of collaboration as a critical success factor in project planning and execution. Complex projects typically entail cross-functional teams that are often geographically distributed, culturally diverse, and require collaboration across both organizational and corporate boundaries. This course covers best collaboration practices and the use of collaborative websites to facilitate communication, create shared understanding of processes and deliverable, and apply tools to achieve successful project completion. Hands-on assignments are used to illustrate how collaborative sites allow a project team to post, edit and jointly work on documents of all types, such as project charters, project plans, WBS, requirements, budgets, schedules, procurement activities and closeout activities. Students collaborate within the course to learn how collaborative sites can be used to control project documentation and enforce the security levels associated with those documents. Students also learn how these sites can be used for such activities as assigning tasks, building a project calendar, setting up logs for gathering information, and performing other typical project management duties. The lab portion of the courses uses SharePoint as a template and shows how to set up a site to create folders, lists, tasks lists, calendars, and set the associated security levels. A SharePoint site is created for each student and students have access to both the class site and their individual sites.

ICT 4170 Agile Techniques and Practices in Project Management (4 Credits)
Is the Agile vs. traditional project management debate over? At least in the world of software development, the debate is largely over, as evidenced by the widespread adoption of Agile methods. For example, according to Gartner, in 2012 Agile development methodologies will be used in 80 percent of all software development projects. As the term implies, however, the techniques and best practices for the successful application of Agile project management processes are not static, they will continue to evolve. And, Agile principles and practices are used across many project domains, each with their own unique characteristics and challenges. So, best Agile project management practices will continue to be dynamic. The Agile debate is now turning from the tactical to the strategic. Realizing the full benefits of Agile (e.g., faster time to market, improved responsiveness to customers, higher quality, and greater efficiency), means more than improving project execution. It requires transforming the business into an Agile enterprise. This course examines both the Agile processes and practices for delivering projects, and the cultural and programmatic challenges encountered in transforming the business into an Agile enterprise. The course content, in addition to reading assignments, uses practical assignments such as case studies, projects, and simulations to provide applied experience with Agile practices.

ICT 4300 Web Enabled Information Systems (4 Credits)
This course is an introduction to the design of web enabled information systems. The course reviews modern design and programming principles, introduces database design and object oriented principles, and introduces security issues and best practices related to web application development. The course introduces object-oriented modeling methods, including use cases, class, and activity diagrams that describe the informational and behavioral content of a system’s objects. Basic OOM design tools are introduced. The class addresses organizational concerns around web applications, exploitation of technology in today's market, and retention of data integrity. This should be the first course taken in each of the following specialities: Software Design and Programming, Database Design and Administration, Web Design and Development, and Information Systems Security.

ICT 4305 Object-Oriented Methods (4 Credits)
This course introduces the object-oriented view of software analysis, modeling, and design. It defines all of the relevant concepts needed to understand the paradigm. A complete graphical notational scheme is taught for the purpose of diagramming objects and object interactions. The course covers the design, evolution, modification, and test/verifications phases of object-oriented development in some depth. Since project management plays a key role in the success of object-oriented development, its relation to the development process is discussed. The course also surveys the various object-oriented languages and tools available.
ICT 4310 Distributed Computing (4 Credits)
This course provides a practical introduction to client-server applications and programming. The course examines key aspects of client-server computing such as systems requirements for operating systems, middleware, networks, servers and clients. The course develops students’ understanding of alternative client-server architectures to meet business requirements, the selection of application development tools, and the use of object-oriented analysis and design practices to implement client-server applications. Students also develop client applications using a variety of techniques. Prerequisite: ICT 4300.

ICT 4315 Object-Oriented Programming (4 Credits)
This course covers modern programming techniques using object-oriented methods. The course familiarizes the student with development tools and the syntax of a programming language by developing simple programs that use control flow techniques and basic input/output techniques. Basic methods to harden code against malicious attack are introduced, and basic verification techniques presented. Prerequisites: ICT 4300 and ICT 4305.

ICT 4351 .NET Programming with C# (4 Credits)
Students identify and describe the fundamentals of the .NET architecture, explain various .NET components, their respective responsibilities and functions, identify and explain .NET design issues and development solutions; identify and describe the fundamental .NET components; explain CLR execution, and have some familiarity with predominant .NET languages.

ICT 4361 Java Programming (4 Credits)
This course enhances the student’s experience in object-oriented design and software development by performing and discussing object-oriented design for re-use of general purpose applications and small Java applications, including using the Java Collection API and Swing user interface classes. Topics include the use of Java as an object-oriented programming language, including encapsulation, simple inheritance, and polymorphism; design of Java classes using Java interfaces and packages; implementation of design patterns in working Java code; and use of Java Base Classes. The course also addresses the use of JAVA IDEs such as Eclipse and NetBeans. Note: This course does not address JavaScript. Prerequisites: ICT 4300, ICT 4305, ICT 4315.

ICT 4370 Python Programming (4 Credits)
This course starts with an introduction to Python programming covering basic programming concepts and Python syntax. It then continues to deepen students’ knowledge of Python by teaching how to access data (text files, databases and other data storage technologies), and process and manipulate that data. Basics of creating front-end interfaces with Python are covered in order to allow students to produce more intuitive interaction with application users. Beyond core Python libraries, other commonly used Python libraries will also be utilized in the course. The course will focus on good programming practices and solving problems effectively. At the successful completion of the class, students will be able to create a number of different types of projects and execute them in Python, as well as continue learning and applying Python skills to data analytics, GIS and other areas of focus. Prerequisite: ICT 4300.

ICT 4400 Database Administration (4 Credits)
This course introduces the roles and responsibilities, as well as the critical knowledge and skills needed to function as a database administrator. The course focuses on Oracle and Microsoft SQL Server, the two dominant global database platforms. Core components include installation and configuration of both database products and implementation of appropriate account privileges. Lab environments are used for hands-on lab assignments in the course, as well as in subsequent courses in the ICT Database Design and Administration concentration. Primary job responsibilities of database administrators are examined, including monitoring, maintaining, and administering database platforms and schemas, while applying best practices in database security. Broader topics, such as metadata, business intelligence, and data warehousing are examined from an organizational perspective. Prerequisite: ICT 4300.

ICT 4405 Database Design and Implementation (4 Credits)
This course concentrates on the relational database model and the conceptual, logical, and physical phases of database design and development. Entity-relationship modeling, data normalization, and Structured Query Language programming are core components of the class. The role and responsibilities of a database administrator are explored; and the concepts of database integrity and transaction management, concurrency protocols, and security schemes are examined. In addition, emerging data warehouse technologies are introduced. The course culminates in a project that allows students to demonstrate an understanding of all phases of the database life cycle (DBLC). Prerequisites: ICT 4300, ICT 4400.

ICT 4410 Data Warehousing Design (4 Credits)
Organizations with vision and courage are gaining competitive advantage by implementing data warehouses. Under the guidance of an executive sponsor, a team of data administrators, database specialists, and organizational analysts creates these contemporary decision support environments. Building a data warehouse is fundamentally different than building a subject area database for an operational system. In this course students use such data warehouse (DW) concepts as partitioning, granularity, record of source, and metadata as they learn how to build a viable decision support environment. Students further their understanding of such topics as architect development, data migration and integration, use of operational data stores, and transactional systems. Prerequisite: ICT 4405.

ICT 4415 Database Backup and Recovery with Lab (4 Credits)
This course explores basic database backup and recovery strategies and tactics using an Oracle database system. Topics include preparing backup, recovery and disaster plans, and performing complete and incomplete database recoveries using the Oracle Export/Import utility. Using hands-on activities and labs, students also gain experience with Oracle troubleshooting utilities, RMAN architecture and setting up Oracle standby databases. Prerequisites: ICT 4300, ICT 4400, ICT 4405.
ICT 4430 Database Security (4 Credits)
Information Technology has become increasingly data-driven, requiring I.T. professionals to dramatically rethink how we protect corporate assets. This course strives to provide a perspective that intersects several technology disciplines: database administration, web-based application development, and technology management. Taking a defense-in-layers perspective, Database Security will provide students with an opportunity to gain an understanding of how data is protected from the perimeter to the data. Students will understand the nature of the types of threats and vulnerabilities to the web-based applications and underlying databases, and how to develop strategies to most effectively protect an enterprise’s data.

ICT 4451 Database Programming: Oracle PL/SQL (4 Credits)
This course builds on ICT 4405 Database Design and Programming, allowing students to transform a database schema design into a database application prototype using Oracle’s PL/SQL. Topics include advanced SQL DDL, DML, and scripting, PL/SQL constructs, stored procedures, modular design and development, software development processes, views, sequences, cursors, dynamic SQL, error handling, locking, as well as performance and tuning, and database security. Using virtual E-Labs, students design and develop a database and related PL/SQL applications.

ICT 4461 SQL Server with Lab (4 Credits)
This course is an introduction to Microsoft SQL Server for both the DBA and Developer. The key new features of SQL Server are introduced and explored, and the various editions of SQL Server are contrasted. In-depth coverage is provided on how to use the new Microsoft SQL Server Management Studio for both administrative and development tasks. Special emphasis is given to query optimization techniques. An introduction to SQL Integration Services, SQL Analysis Services and SQL Reporting Services is also presented. Prerequisites: ICT 4300 and ICT 4405.

ICT 4462 Transact - SQL Programming (4 Credits)
Transact-SQL is the primary programming interface between applications and the Microsoft SQL Server database. Transact-SQL can be sent from programs or applications to the SQL Server database or can be built into reusable database stored procedures. This course focuses on Transact-SQL in a stored procedure context. Topics include: basic and advanced SQL, SQL functions, stored procedure declaration and execution, cursors, temp tables, error handling, transaction management, security, and performance issues. The course uses a combination of lecture, textbook reading assignments, and hands-on lab assignments to meet its objectives.

ICT 4485 NoSQL Databases (4 Credits)
Relational database systems have been dominant in the market for over forty years, and remain so today. However, the emergence of distributed and cloud computing, as well as the increasing need for storage of large datasets, have created the need for alternate data storage solutions. A number of different models / database management systems have been developed, that as a group are being referred to as NoSQL databases. A number of large, well-known companies use such databases. Some of the companies use more than one variety of NoSQL databases. This course will examine different non-relational (NoSQL) data models, those being Key-Value, Document, Column, Graph and the Object-Oriented database models. Students will learn about advantages and disadvantages of the different approaches. The class will include hands-on experience with a representative sample of NoSQL databases. Computing developments that spurred the existence of NoSQL databases, such as big data, distributed and cloud computing, will also be discussed. Prerequisites: ICT 4300 and ICT 4405.

ICT 4450 Website Design and Management (4 Credits)
This course extends student web design and development skills, and includes advanced HTML techniques and enhanced page design capabilities using CSS. The key to great web design is rooted in a solid foundation, which requires a plan or a "blueprint". We explore best-practices in information architecture (IA) and how to incorporate user-centered design (UCD) techniques as a standard practice in web design. Students also develop an understanding and working knowledge of Cascading Style Sheets (CSS). Through the use of readings, examples, hands-on projects, and discussions the class builds an understanding of the foundations and applications of user-centered design to plan, build and manage a website. Through participation in a project and regular discussions, class members experience working as active and contributing members of the class and knowledge-building community. Prerequisite: ICT 3500, ICT 4300 or equivalent experience.

ICT 4510 Advanced Website Design and Management (4 Credits)
This course explores advanced techniques for web programming using current client-side web technologies. Use of JavaScript, jQuery and Ajax are covered. HTML5 technologies such as Forms, Local Storage and Web workers are introduced. Students create an interactive website. This is a hands-on course where students apply what they learn as they learn it. Students demonstrate mastery of the materials by applying the principles introduced in class to laboratory exercise, class discussions, and projects. Prerequisite: ICT 4505.

ICT 4515 Usability Design for Websites (4 Credits)
This course expands the student's basic knowledge of Web page and website development (ICT 4505) by providing in-depth understanding of how to design Web applications with the user in mind. Students gain knowledge about how the fields of human factors engineering and psychology (e.g., visual perception, cognition, learning, and memory) relate to usability design as well as how usability assessments are conducted. Usability guidelines, design problems and design strengths, and best practices for common functions such as Web navigation, menus, scrolling, graphics and icons are explored. The class is a combination of lectures and lab experiences, culminating in the student's developing a website, conducting a usability evaluation, and reporting on the results and recommendations from the evaluation.

ICT 4520 User Experience: A Human-Centered Approach to Product Design (4 Credits)
This course is an introduction to User Experience (UX) design. The course will take theoretical and practical approaches to guiding students through the principles, practices, process, and tools to design usable, useful, and desirable experiences. Students will explore the methods for conducting UX research to determine needs, processes for designing products that meet those needs, and effective techniques for presenting designs to stakeholders. Throughout the process, students will consider the "why" behind each phase of the approach. The course will culminate in the application of UX best practices to build a functional prototype. Prerequisites: ICT 4505 Website Design & Development.
 ICT 4540 XML and Data in Application Development (4 Credits)
XML is an open, text-based markup language that provides structural and semantic information to data. This "data about data," or metadata, provides meaning and context to the application using it, and supports manipulation and display. The course focuses on techniques to make this data useful for business applications, as well as for browser display. Hands-on experience with the XML formats and manipulation, which includes programming techniques, forms the weekly assignments, culminating in a summary project. Other standards, such as JSON, are discussed, as well as use of CSS for display of XML data. Some JavaScript is introduced to illustrate the document model and techniques for integration of data. Prerequisites: Students should have familiarity with constructing HTML web pages and data concepts. Familiarity with a data manipulation or programming language will be helpful.

 ICT 4555 Introduction to Animate CC (4 Credits)
This course introduces students to rich media design, animation, and interactive development for the web, desktop, mobile, and more using Adobe Animate CC. Students learn the fundamentals of working in the Adobe Animate CC authoring environment to produce web assets, small animations, and basic interactive modules for multiple target platforms.

 ICT 4560 Web Graphics Production (4 Credits)
This course introduces the fundamental concepts and techniques of digital graphics creation and image processing for both online publication and website interface design. Students learn the basics of correcting and modifying images, bitmap painting tools, vector drawing tools, typography, masking, web production techniques, and advanced image compositing. Integration of images and generated code into a website layout employing CSS is also covered.

 ICT 4561 Web Development with PHP (4 Credits)
This course introduces students to programming Web applications using PHP and MySQL. Topics include processing form data, file uploads, object-oriented programming and database access. Students leverage a PHP framework and learn to install and configure a local development environment to test and develop their Web applications. Prerequisite: ICT 4510 or previous programming experience.

 ICT 4570 Web Scripting with JavaScript (4 Credits)
This course presents students with the principles necessary to design and develop client-side scripts used to build dynamic websites and applications. JavaScript concepts such as data types, control structures, functions and objects are discussed. Students learn how to write beginner and intermediate scripts. In addition, students are introduced to advanced JavaScript topics, including module development, distributed computing and security. Students are presented with real world examples of JavaScript and build an interactive and dynamic client-side application. Technologies covered in the course include JavaScript/ECMAScript, JQuery (a JavaScript library), JSON (a JavaScript-friendly data format), JavaScript as the J in AJAX, and JavaScript in HTML5 form interaction and validation. Prerequisite: Knowledge of HTML, ICT 4505, or previous programming experience.

 ICT 4576 Native Application Development on Mobile Devices (4 Credits)
During this course students learn how to use a set of languages and tools to build business and media-centric applications that run on mobile devices such as laptops, tablets, smartphones, and eReaders running on Windows, MAC OS, iOS, and Android. This course illustrates best practices for reusing code, structuring projects, and submitting applications to app stores. Throughout the course students utilize an IDE such as FDT or IntelliJ, MXML, and ActionScript to build cross-device native applications. Students also learn how to add functionality to their Adobe AIR native applications by leveraging third-party Native Extensions to access native features. Prerequisite: ICT 4300 or previous programming experience.

 ICT 4580 Mobile Application Development with Web Standards (4 Credits)
This course enables students to take advantage of web standards (HTML5, CSS3, JavaScript) along with various popular frameworks and tools in the generation of both mobile web applications for the browser and packaged mobile applications for devices. We examine the fundamentals behind good user and interaction design when targeting mobile devices and see what is appropriate for implementation on these platforms. We also employ a popular cross-compilation tool to perform distribution onto multiple platforms. Prerequisite: previous programming experience.

 ICT 4585 Web Development with Ruby on Rails (4 Credits)
Ruby is a dynamic, general-purpose, object-oriented programming language that has an associated web application framework, Rails. The Ruby on Rails (RoR) web application paradigm is powerful and flexible, and has been widely adopted by other frameworks. It allows for the rapid and agile creation of dynamic web applications with little of the overhead associated with other approaches. The student learns how to quickly develop, test, and deploy dynamic web applications using RoR. The student also learns how to manage both the user experience and a backend database from within the RoR framework. Prerequisite: ICT 4510 or previous programming experience.

 ICT 4605 Principles of Information Security (4 Credits)
This is a comprehensive Information Systems Security management course covering the eight basic principles of Information Assurance and Information Systems Security. The course follows the Common Body of Knowledge (CBK) convention established by the International Information System Security Certification Consortium, Inc. (ISC)². This course serves as an introduction to the eight domains of information systems security with the emphasis on management issues. It provides the foundation of information systems security and the methodologies that organizations apply to analyze and achieve their security goals. Students learn about significant computer security laws and regulations, system security engineering, the development of effective security policies, system access controls, network security, encryption and security models. The course also covers specific security measures to include, but not limited to, physical security controls, network security, cloud security, telecommunications, and cryptography. Information covered includes contemporary issues of cybercrime, and business continuity and disaster recovery planning. The course applies a systems approach to security issues to analyze and develop security solutions. All topics are discussed in the context of a total enterprise-wide framework. Prerequisite: ICT 4300.
ICT 4610 TCP/IP Networks (4 Credits)
This course explores the operation of the TCP/IP protocol stack including its history, development, current applications, and future implications. The full range of TCP/IP protocols from IP and TCP to basic RPC issues and application protocols such as DNS, SMTP, FTP, SNMP and HTTP are studied. Students also study TCP/IP capabilities, alternatives, and performance issues. Security-specific protocols including SSL and IPSec are examined along with the security aspects of all other protocols. Mechanisms for Internet connectivity for homes and businesses are also covered. The course concludes with a survey of modern topics including Real-Time Communications and IPv6.

ICT 4615 Computer and Physical Security (4 Credits)
Controlling access to computers and controlling access to a building can no longer be viewed as two separate worlds. Today, IT access control and physical security need to be integrated if organizations are to be fully protected from threats. This course concentrates on seeing IT access control as integrated with physical security within an organization. Students investigate how various technologies and methodologies can work together to manage access to computer systems; how to manage elements of physical security; and the issues involved in creating a unified and complete enterprise security system. Security technologies to physically protect an organization’s people, facility and resources, access control techniques and administration, identification and authentication techniques and methods of attack are emphasized. Prerequisites: ICT 4300 and ICT 4605.

ICT 4670 Disaster Recovery and Operations Security (4 Credits)
This course focuses on the planning and operations security required to effectively recover from natural disasters and security attacks and to ensure the operations and integrity of computer systems and staff. Topics include defining continuity requirements, choosing appropriate recovery strategies and understanding the key elements of a continuity plan. Students create a Business Continuity Plan including business impact analysis, recovery strategies, and recovery plan implementation. The course also provides an understanding of controls over resources, facilities, hardware, systems, and the people who create, modify, and use them. Control mechanisms and operations security "best practices" are identified.

ICT 4675 Information Systems Security in Healthcare (4 Credits)
This course will introduce students to information security risks facing the healthcare industry. Students will learn how to better protect healthcare organizations and their patients’ data. Students will learn about recent security breaches, the impact of those breaches on healthcare organizations, and all of the key players involved. This course also covers the evolution of healthcare IT and the continuously evolving risk and regulatory landscape. Students will explore the regulations of HIPAA and how they relate to day-to-day operations in healthcare organizations. Additionally, this course will prepare students to support information security initiatives in order to protect the organization while furthering the advancement of healthcare IT capabilities. This is not a technical course, however we will be learning about how security is impacted by technology and what we must do across technology in order to secure our healthcare systems, our organizations, and our patients.

ICT 4680 Principles of Cryptography (4 Credits)
E-commerce has made cryptography a cornerstone of modern information systems security. Cryptology is one of the 10 domains required for the CISSP, and is a core component of all other recognized information security certifications. Surprisingly, it is the least understood of the information security disciplines. This course focuses on the terminology and concepts needed to understand how cryptographic techniques are used to protect sensitive information. Topics include: Advanced Encryption Standard (AES), the Secure Hash Algorithm (SHA), Digital Signatures and Message Authentication Codes, Diffie-Hellman Key Exchange, public key infrastructure (PKI), secure sockets layer (SSL), and IPsec among others. Lecture and reading materials are reinforced by hands-on experimentation with cryptographic software tools. Internet resources are used to tie the course material to current technology trends. No programming experience or advanced mathematical skills are required for this course. Prerequisite: ICT 4605.

ICT 4685 Cloud and Internet Law (4 Credits)
The legal ramifications of Cloud Computing, Cyber and Internet Law are effecting dynamic change in our country and all throughout the world. This course explores the laws of the new paradigm of Cloud Computing, Cyber and Internet Law and describes the types of issues and concerns that exist. Such issues include the civil and criminal laws, rules and regulation, privacy issues, contractual agreements between parties (on many levels from providers in numerous different states and countries), the impact of differing cultural standards and mores from all over the world, and legal methods of protecting companies from these issues and worries in the world of Cloud Computing, the Internet and Cyber Law.

ICT 4690 Computer Forensics with Lab (4 Credits)
This course is concerned with providing an overview of the methods and tools utilized for collecting and preserving electronic digital evidence for the computer forensic process; the forensic examination, analysis, and report writing; and preparing for courtroom testimony about the forensic results. The course is supplemented by hands-on-exercises, case studies, and a moot court exercise in which each student will testify.

ICT 4695 Application Security (4 Credits)
In this course, students explore the security principles and practices that apply to application software development throughout the entire software development lifecycle (SDLC). Topics include characteristics of secure and resilient applications, proven best practices for secure software, and designing for security and resilience. The course also provides an overview of programming best practices. Other topics include testing custom application, testing off-the-shelf commercial applications, implementing development security methodologies, and evaluating the models used to measure the maturity of software development organizations. Prerequisites: ICT 4300 and ICT 4605.

ICT 4701 Topics in Information and Communication Technology (4 Credits)
From time to time a special topics course may be offered that addresses a new issue, a developing concept, industry trends, or new technology.
ICT 4800 Network Communications and the Internet (4 Credits)
This course focuses on the fundamental concepts and technologies of communications networks and the Internet, including the information theory that is the foundation of modern communication systems. It emphasizes application of these concepts to the analysis and design of network solutions to meet various service provider and IT business requirements. Topics include network media, communications protocols and standards, LAN and WAN network architectures, the Public Switched Telephone Network, and current trends in networking via the Internet. Network components, such as modems, routers, switches, and voice communications systems are analyzed. The various transport media of copper, fiber, and wireless infrastructures are compared. Critical thinking is emphasized via discussions of current and future trends in network technology, global regulatory and political issues in voice/data/video communications, and Internet governance.

ICT 4815 Managing Global Telecommunications Projects (4 Credits)
Set in the context of today's convergence from the traditional telco/telephony world to next generation all-IP networks brought about by the Internet revolution, this course addresses managing across borders, cultures, time zones, and continents. In addition, the course explores managing conflicts of interest between carriers and over-the-top (OTT) players such as Apple, Google/Android and Skype. Related topics include the challenges and opportunities in vendor management between the old telco vendors of the West and their new competitors from the East. Finally, the course analyzes stakeholder management at the C- and SVP-level of the organization. A variety of assignments create opportunities for students to work in teams, and at other times to work individually on a set of real-world case studies derived from typical projects at leading global network operators and telecom vendors. This course applies project management best practices to the typical challenges faced by project managers in today's fast-paced, complex and highly competitive global telecom industry. Case studies are used to exemplify core project management challenges at an advanced level. Prerequisites: two courses in any of the following areas: Project Management, Technology Management, Telecommunications Technology.

ICT 4830 Broadband Wireless Networks (4 Credits)
This course examines the key broadband radio technologies at the center of today's rapid innovation in wireless networks. Wireless telecommunications networks are studied with an emphasis on the challenges and the approaches to deal with the immense wireless data traffic explosion from devices such as the iPhone, iPad, Android smartphones and connected laptops, as well as broadband services like VOIP and mobile video. The dominant wireless telecom technologies and protocols are presented, including 4G LTE, 5G, OFDM, MIMO, mobile IP, WIMAX, Wi-Fi and WPANs. The "triple play" convergence of voice, video, and data over wireless networks is analyzed. The wireless telecom industry is studied from standards, carrier, and technology perspectives, with an emphasis on radio networks as well as key application use cases.

ICT 4835 Advanced Network Technologies (4 Credits)
Technological advancements in networking within the last few years are revolutionizing concepts of networking for both Enterprises and Service Providers. This course demystifies these latest advancements in network technologies. Topics include in-depth coverage of modern networking elements, network requirements, Network Virtualization technologies, Software Defined Network (SDN), and Network Function Virtualization (NFV). Coverage of latest technology requirements includes elastic traffic, big data, mobility, QoS, QoE, and more. The course discusses SDN and NFV components, architecture, protocols, and use cases. Virtualization technologies include VLANs, OpenFlow, VPNs – IPSec and MPLS-based. The course emphasizes deep understanding, analyses, and evaluation of modern network architectures. Prerequisites: ICT 4800 (required), ICT 4830 (strongly recommended).

ICT 4840 Next Generation Wireless Networks and Services (4 Credits)
The rapid innovation in wireless networks that is at the center of today's ICT industry takes place in the four areas of broadband radio, core & edge networks, wireless networks, as well as devices and smart objects. This course focuses on the key next generation technologies at the core network, service and object layers. First, the role of the Internet Protocol Multimedia Subsystem (IMS) in the core network is examined, which is at the heart of many next generation deployments. At the service layer, this course explores wireless service architecture, including popular applications such as mobile real-time messaging, TV/video and mobile web services. The Internet of Things (IoT) plays an increasingly prominent role at the object layer of modern wireless network designs. A case study approach is taken to highlight core use cases from key industries including Smart Cities, the Smart Grid and Industry 4.0. Finally, wireless product development, deployment and operations are examined in the critical context of the conflict between over-the-top (OTT) and network operator based ecosystems. Prerequisite: ICT 4800 or departmental permission.

ICT 4845 Network Security with Lab (4 Credits)
This course examines the key broadband radio technologies at the center of today's rapid innovation in wireless networks. Wireless telecommunications networks are studied with an emphasis on the challenges and the approaches to deal with the immense wireless data traffic explosion from devices such as the iPhone, iPad, Android smartphones and connected laptops, as well as broadband services like VOIP and mobile video. The dominant wireless telecom technologies and protocols are presented, including OFDM, MIMO, mobile IP, WIMAX, LTE, and WPANs. The "triple play" convergence of voice, video, and data over wireless networks is analyzed. The wireless telecom industry is studied from standards, carrier, and technology perspectives. Important radio network concepts are addressed, including network design, cell selections and traffic concepts, mobility handoff signaling, radio resources management, location updates, roaming, as well as authentication and encryption. Prerequisite: ICT 4800 or departmental permission.
ICT 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and who can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of a B- or better is required to pass.

ICT 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students’ research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

ICT 4903 Applied Capstone Seminar (4 Credits)
In the Applied Capstone Seminar, students propose, develop and deliver a cloud-based application that demonstrates the ability to apply the technical knowledge developed throughout their program of studies. In addition to demonstrating competence in applying what they have learned to date, students are challenged to expand their skills by virtue of the development environments, tools, and technologies they use to develop and deliver their projects. The primary deliverables are functional software, accompanied by representative design documents. As such, the project represents in microcosm the development processes, practices and deliverables that are typically entailed in producing robust, cloud-based software solutions. Although each student develops an individual project, the seminar also requires student collaboration via such activities as design reviews, quality reviews and peer exchanges on such topics as suggestions for solving problems and improving code. Prerequisite: To register for this course, a student must be accepted as a degree candidate, have completed at least 40 quarter-hours (including all core courses), and have a cumulative GPA of 3.0 or better. In addition, the student must be approved for registration by the course professor and the ICT Director. This seminar is limited to students in the Software Design & Programming, Web Design & Development, Mobile Application Development, and Database Design & Programming concentrations, and who are judged to have the requisite level of technical skills to be successful in this demanding seminar. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Applied Capstone Seminar in one quarter; no incomplete grades are permitted.

ICT 4980 Internship (1-4 Credits)
The ICT internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the ICT master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all ICT students if they hear of internship opportunities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the ICT degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

ICT 4991 Independent Study (1-4 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

ICT 4992 Directed Study (1-4 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Directed Study form and filed the form with all appropriate offices before registering for the directed study. Directed Study is offered only on a for-credit basis.

Info Tech & E-Commerce (ITEC)

Courses
ITEC 4270 Emerging Technologies (4 Credits)
Emerging Technologies and Strategies investigates new information technologies. Having a broad view of emerging technologies as they relate to business can provide an organization with a valuable strategic advantage. Those organizations that can most effectively grasp the deep currents of technological evolution can use their knowledge to protect themselves against sudden and fatal technological obsolescence.
ITEC 4280 Intro Software Engineering II (4 Credits)
A continuation of ITEC 4270, this course covers systems development in a client-server Internet/Intranet environment using the Java programming language. Principles of event-driven systems, remote database access, and building GUI (Graphical User Interface) prototypes for interfacing with desktop systems are included. Prerequisite: ITEC 4270 or instructor’s permission.

ITEC 4310 Electronic Commerce (4 Credits)
This course is an overview of electronic commerce (EC) trends and techniques including the underlying technical infrastructure, traditional EDI techniques such as electronic data interchange (EDI) and commerce at light speed (CALS), Internet use for EC, business models for business-to-consumer EC, marketing on the Internet, payment and fulfillment mechanisms, security and regulatory issues, and global implications. Uses lectures, cases, outside speakers from industry and field trips.

ITEC 4320 Networks & Telecommunication (4 Credits)
This course examines network-enabling technologies and concepts, including LANs and WANs. Network design, management, and trouble-shooting issues will be covered. Network design in the age of the Internet will be emphasized, including intranets, extranets, design issues, security and firewalls. Pros and cons of private networks, including virtual private networks, will be discussed. Alternative technologies such as wire line, wireless, satellite and cable will be covered. Cross listed with ITEC 3810. Prerequisite: ITEC 4475.

ITEC 4350 Practicum (1-4 Credits)
This course will consist of an information systems project performed by small teams of students and tailored to individual students’ needs. It will be undertaken for a “client” in the business community. Supervised by a faculty member, each project will permit students to apply what they have learned in a live setting and focus on project management planning, reporting, and problem discovery and resolution. Prerequisite: ITEC 4300 or ITEC 4330.

ITEC 4476 Business Process Analysis and Design (4 Credits)
This course starts with the traditional information technology systems analysis and design and broadens this approach to include analysis and design of better business processes - innovative processes which deliver greater value to customers and enterprises alike through creative uses of information technology. We will analyze past and current examples and look for ways to build on and extend these successful exploitations of information technology to other companies and industries. In short, this course is about exploring innovative ways to create greater business value by analyzing and designing not only the systems, but also the business processes these systems are created to support.

ITEC 4477 Database-Driven Websites (4 Credits)
Using state of the art technologies, this course focuses on the development of dynamic web pages. Technologies include PEARL, ASP, ColdFusion, SQL, Access, and Oracle. Cross listed with ITEC 3477. Prerequisite: ITEC 4475 or current enrollment.

ITEC 4478 XML (4 Credits)
This programming course is the second of a five series Web Services course track designed to prepare the student for the certification exam offered by Microsoft in the development of .NET applications. The second module of the series, XML, provides a thorough understanding of the main techniques surrounding the development of XML applications. Up until now, it has been very difficult to communicate and transfer data between different platforms. The surge of XML as a universal text-based standard readable and interpreted by any other system available, has opened the channel to enhance the development of cross-functional applications. Students will learn to write the codes describing the data, processes it and prepare it for presentation, as well as modeling and designing functional components that will later be used to drive the applications. Topics include: creating well-formed and valid XML documents, parsing the documents and creating the format to display it through the client’s browser, design functional components and the interconnections among them. Some of the tools that the student will learn to use in this course are XML Syntax, DTD, Schema, CSS, XSL, XSLT, DOM, SAX, SOAP, WSDL, and UDDI. Prerequisite: ITEC 4477 or concurrent enrollment.

ITEC 4480 ASP.NET (4 Credits)
The goal of this course is to provide students with the knowledge and skills that are required to develop XML Web services-based solutions to solve common problems in the distributed application domain. The course focuses on using Microsoft Visual Studio .NET, Microsoft ASP.NET, and Universal Description, Discovery, and Integration (UDDI) to enable students to build, deploy, locate and consume Extensible Markup Language (XML) Web services.

ITEC 4481 C#.NET (4 Credits)
The goal of this course is to provide students with the knowledge and skills needed to develop C# applications for the Microsoft .NET Platform. The course focuses on C# program structure, language syntax, and implementation details. C# was created to be the programming language best suited for writing .NET enterprise applications. C# combines the high productivity of Microsoft Visual Basic with the raw power of C++. It is a simple, object-oriented, and type-safe programming language that is based on the C and C++ family of languages.

ITEC 4486 Information Technology Management (4 Credits)
This course focuses on issues central to the effective management of the IT function including, but not limited to: managing the IT organization, IT’s changing role in the enterprise, and managing internal and external relationships.

ITEC 4500 Strategic Info Technologies (4 Credits)
How organizations are using information technologies for competitive advantage.

ITEC 4610 IT Strategy (4 Credits)
Businesses run on information, organized data about customers, markets, competition, and environments. Information systems (interconnected computers, data, people, and processes) are critical to capture, organize, and disseminate that information in ways that provide stakeholder value. This course is designed to help managers, technical and non-technical alike, to explore how to derive greater value and satisfaction, both personally and professionally, from information systems.
ITEC 4700 Topics in Inform. Technology (1-10 Credits)
New topic area discussion in information technology.

ITEC 4980 Internship (0-10 Credits)
Daniels College of Business’s graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Permission of instructor required. Hours and times arranged by student.

ITEC 4991 Independent Study (1-8 Credits)
Individual study and report. Hours and times arranged by student.

ITEC 4992 Directed Study (1-4 Credits)

ITEC 4995 Independent Research (1-8 Credits)

**Intermodal Transportation (TRAN)**

**Courses**

**TRAN 4010 Introduction to Freight and Passenger Transportation (2 Credits)**
This course will provide an overview of the freight and passenger transportation sector of the North American economy, focusing on all of the modes. It will include a discussion of the vision of a transportation system for the future: one that moves people and goods efficiently, economically, safely and securely, and in an environmentally benign manner on an integrated, seamless, ethical transportation system that uses the strengths of all modes and minimizes their weaknesses. The course will discuss how such multi-modal systems for freight and intermodal systems for passengers operate in an impact the development and growth of the US and global economies.

**TRAN 4020 Applied Micro Economics for Transportation (4 Credits)**
This course will discuss basic microeconomic concepts used in the analysis of transportation with a focus on pricing for the firm relative to costs, market framework, and competitive issues both within the mode and between modes. In addition, the course will involve fieldwork observing and discussing the physical elements underlying the economics of the firm and its pricing.

**TRAN 4030 Quantitative Tools for Transportation Management (4 Credits)**
This course will introduce the quantitative transportation tools of GIS and statistics; GIS to help solve data management, modeling, and visualization challenges, and statistics for analysis of transportation data to support decisions. GIS addresses (1) the challenge of “big data” which is a current discussion topic in business, (2) modeling (including linear programming) of networks, routing/scheduling, and location analysis, and (3) the visualization output and how it is used for decision making. The statistics component would focus on the framing, tools, and appropriate applications of the statistical processes and how statistics can be correctly used in different data analysis situations in transportation.

**TRAN 4050 International Transportation Survey and Analysis (4 Credits)**
This course will survey and analyze at a macro level the international freight and passenger operations, policies, and other concepts covered in fundamental courses, as applied to the locations and facilities included in the planned International Transportation Seminar. In addition, this course will explore the specific passenger and freight transportation structure and systems operation for transportation in these international locations and facilities.

**TRAN 4060 Transportation Marketing and Sales Tools (4 Credits)**
The marketing mix is presented as it relates to both freight and passenger transportation services. Demand forecasting and market analysis for transportation markets. Understanding capacity, marginal costs of capacity market segmentation, pricing capacity and revenue maximization within available capacity constraints will be addressed. Customer service is discussed fully in terms of understanding both the freight- and passenger-customer perspectives and relating this information to marketing and management decision making, especially with regard to the intermodal industry.

**TRAN 4070 US and International Law (4 Credits)**
This course will survey the main issues facing transportation professionals in managing and operating a safe and secure intermodal transportation system. Particular attention will be given to labor and management practices that have proven effective in addressing these issues and to their potential for intermodal transportation. Topical content will include the history of labor relations, fatigue in transportation, personnel safety, ergonomics, negotiation strategies, ethical issues, security issues, and others.

**TRAN 4080 Transportation Law, Policy, and Regulation (4 Credits)**
This course addresses the history of transportation and its regulation, constitutional law, regulatory agencies and administrative procedures, railroad regulation, motor carrier regulation, taxicab regulation, air carrier regulation, pipeline regulation, carrier liability (passengers and cargo), labor law, safety regulation, environmental law, antitrust law, and disabilities law as well as issues of intermodalism.
TRAN 4100 Fundamentals of Supply Chain Management (4 Credits)
This course will provide a broad overview of the discipline of supply chain management, providing to students an understanding of “people, processes, and technologies” related to the field. Supply Chain Management is the discipline that brings together B2B and B2C markets, and the University of Denver's model defines this as an end to end system within six pillars that has a goal of a “cradle to cradle” system. Participants will learn of the key operating, financial, and technical measures and tools of supply chain management, which is necessary to be a successful professional in the field. Specific current and future trends will be covered, including the implications across local, national and global systems. The focus will be on learning and applying how supply chain will continue to transform in the future, but from an understanding of the end to end system and its principles as the foundation.

TRAN 4110 Fundamentals of Supply Chain Planning (4 Credits)
This course focuses on the first three pillars of the supply chain management system, design, source, and schedule, the steps that are taken before a product is made. Supply Chain Planning is focused on how agents in the front end of the supply chain system are centered on how to create, procure, and plan/forecast within the overall process within and across companies. Students are exposed to concepts and practical examples of how back-end activities are achieved within the overall supply chain model. The course introduces concepts and tactics in materials resource planning (MRP), manufacturing, transportation, warehousing, distribution, retailing and sustainability. Upon completion of this course, the student will understand how these three pillars are critical to an overall successful supply chain strategy. The student will be introduced on how to apply these concepts and practical applications within a real world market environment. Prerequisite: TRAN 4100.

TRAN 4120 Fundamentals of Supply Chain Execution (4 Credits)
This course focuses on the final three pillars of the supply chain management system, make, deliver, and sustain, the steps that are taken as and after the product is made. Supply Chain Execution is focused on how agents in the back end of the supply chain system are centered on how to make, deliver and reuse within the overall process within and across companies. Students are exposed to concepts and practical examples of how back-end activities are achieved within the overall supply chain model. The course introduces concepts and tactics in materials resource planning (MRP), manufacturing, transportation, warehousing, distribution, retailing and sustainability. Upon completion of this course, the student will understand how these three pillars are critical to an overall successful supply chain strategy. The student will be introduced to how to apply these concepts and practical applications within a real-world market environment. Prerequisite: TRAN 4100.

TRAN 4130 Supply Chain Management Practicum (4 Credits)
This course provides opportunities for students to apply concepts covered in the first three courses of the program to an individual project through the completion of a structured problem-solving exercise in an area of study related to the student's specific area of interest. Potential topics will either relate to one of the six pillars in the SCM model, or a specific area of interest as a special topic, such as sustainable supply chains, supply chain structure, supply chain risk management, etc. Upon completion of this course, the student will possess a deeper understanding in an area of focus related to application of the student's future interests. The student will be introduced to how this topic area can be applied in a company in a real market setting. Prerequisites: TRAN 4100, TRAN 4110, TRAN 4120.

TRAN 4140 Supply Chain Technology and Systems (4 Credits)
The key to an effective supply chain are its people and processes, but technology and systems are often the glue that keeps everything together. Even since its inception, technology and systems have been critical to supply chain strategy; given the complexity and fast paced nature, it can be a key determinant of a company's success or failure. Because technology is so rapidly changing, it is critical to understand how to develop a successful plan to enhance the overall supply chain strategy. In this course, we will not focus on a specific technology or system, but rather the fundamental concepts and how it intersects to people and processes. Specific technologies will be addressed, such as ERP, WMS, and TMS systems. As well, the course will focus on how a company's strategy and business requirements should be developed into process flows, and a technology/system strategy. The course will also address how companies make technology and system solutions, as well as special topics related to supply chain strategy. Note that this course is only for a six class SCM certificate; it will need to be determined whether this course occurs before or after the SCM Practicum. TRAN 4100, 4110, 4120, 4130.

TRAN 4150 Supply Chain Finance (4 Credits)
A successful supply chain strategy must be effective not just in its material flow within the six pillars and the information flow from its systems, but its financial flow as well. Companies and their corresponding supply chains can achieve improved cost management that leads to greater top line revenue growth through improvements in financial flows achieved waste reduction, inventory carrying cost, capital investment and management and terms with suppliers and customers, to name a few. How the financial flow of the company and its supply chain is dependent on the entity's material and information flows, and vice versa. This course will provide an understanding of how these flows work in conjunction with one another, and how supply chain professionals must understand the role of financial management fundamentals in the process. Note that this course is only for a six class SCM certificate; it will need to be determined whether this course occurs before or after the SCM Practicum. Prerequisites: TRAN 4100, 4110, 4120, 4130.

TRAN 4310 Freight Transportation Executives Seminar (4 Credits)
Through the use of transportation executives in the classroom, this course will explore in depth some of the key concepts covered during the course of the program to include topics such as applied transportation finance, shipper transportation metrics/requirements, global freight flows to/from North America, government/military transportation, etc. In addition, in a case study, students will propose options for a real-world challenge using knowledge and data from current-event case material and guest executive presentations.
TRAN 4320 Transportation Management, Leadership and Values (4 Credits)
This course will address personal behavior; understanding yourself as a leader and organizational behavior issues such as organizational structures, motivation, power and politics, culture and change management. The course will focus on ways of dealing more effectively with the organizational upheaval that comes with change, including planning and information-sharing techniques to help keep your team focused on solutions. Developing leaders- creating a vision, gathering resources, motivating others, handling conflict- together with advice about how to create a climate that encourages others to take initiative and develop their own potential will be a vital part of the course. Strategies in human resource with a system level macro focus will be discussed.

TRAN 4330 Principles of Supply Chain: Management and Technologies (4 Credits)
This course will assist students in gaining awareness, knowledge, and understanding of the distribution patterns and relationships that play a key role in determining company success. We will view perspectives within the context of the global marketplace and across both freight and passenger transportation. We will address external value chains and internal value chains; stakeholder relationship management; the supply chain and the demand chain complexities; strategies of E-business; the strategic use of IT; strategic planning to gain a competitive advantage; end-to-end supply chain visibility and the strategis use of technologies in the enterprise-wide system.

TRAN 4340 Freight Transportation in Supply Chains (4 Credits)
As freight can be two-thirds of logistics costs, this course expands on a traditional Supply Chain course, providing detailed concepts and application for freight transportation in supply chains. This will include modal comparisons and contrasts of operational, financial, marketing, and information technology tools/software in the freight industry. Collaboration and competition between and among the modes will be explored to understand specific tactics to improve modal and supply-chain efficiencies in both the global and domestic arenas. Additionally, current trends in freight transportation and supply chain management across the globe will be studied and discussed for strategies and tactics to shape, manage, and respond to those trends.

TRAN 4400 Excellence in Leadership for Transportation (2 Credits)
This course will provide an integrated exploration of current topics most important for leadership success within the transportation industry. Current best leadership practices will be reviewed, and common leadership challenges within transportation will be analyzed for successful resolution.

TRAN 4410 Executive Management Practices in Organizations (1 Credit)
This course will provide a comprehensive view of best practices for executive management in transportation workplaces. Organizational situations will be assessed from a variety of viewpoints and policies analyzed for optimal execution of strategy.

TRAN 4420 Leading with Integrity (1 Credit)
This course will explore ethical decision making and values-based leadership. Values, ethics and organizational philosophies will be assessed for best application in various corporate settings within the transportation industry.

TRAN 4430 Applied Micro Economics & Pricing (4 Credits)
The course will involve fieldwork and U.S. site visits observing and discussing the physical elements underlying the long-term and marginal economics of the firm and its pricing strategies and policies. In addition, the course will discuss basic microeconomic concepts used in the analysis of business services, including the concepts of market size; marginal, average, short-run, and long-run costs; and production levels as they relate to revenue and contribution with a focus on pricing for the firm relative to its fixed and variable costs, market share framework, and competitive issues both within the mode and between modes.

TRAN 4440 Marketing & Sales Management Strategies (4 Credits)
This course will examine the foundations of marketing as well as the process of developing, assessing and implementing marketing strategies in the transportation and supply chain industries. The foundations are grounded in an understanding of customers’ wants and needs and a commitment to satisfying those needs within the resources of the organization, the long-term benefits of society and the economy, and the highest ethical and moral standards in this global economy. Based on this foundation, students will learn the process of formulating marketing strategies, such as segmentation, targeting, positioning and the four P’s of marketing: product, price, place and promotion.

TRAN 4450 Legal Studies: Contracts & Regulation (2 Credits)
This course will focus on the fundamentals of creating and implementing effective contracts, whether with customers, suppliers, or labor. The contract discussion will be framed by regulatory and policy realities both in domestic and international contexts, including an understanding of federal and international laws, liability, regulations, policies, programs, and agencies impacting contracts.

TRAN 4460 Financial & Managerial Accounting (2 Credits)
This course will cover the basic theory, principles and practice of financial accounting and examine accounting statements including income and cash flow statements and balance sheets. Discussions include managerial use of accounting data useful in making investment and cost decisions, assessing cash flows, and the use of the organization resources to produce profit. Additional topics will include reading and understanding the 10-K, basic accounting standards and practices, and assessing the quality of financial information found in the accounting reports.

TRAN 4470 Financial Analysis & Capital Structures (2 Credits)
Complementing 4460, this course will use ratio analysis to determine relative performance of companies and the industry to enable management to assess operating efficiency, profitability and effective use of capital. Capital structure concepts, fixed and variable cost considerations, the use of operating and financial leverage and the concepts of business and financial risk will be discussed. The course also includes a basic review of the principle of time value of money.
TRAN 4480 Capital Decision Making and Capital Markets (2 Credits)
This course will examine the management decision process for making capital expenditures that enhance the value of the firm, cash flow estimation for capital budgeting purposes, decision models for capital budgeting, weighted average cost of capital, decisions in capital constrained situations, sensitivity analysis, and a review of the capital markets.

TRAN 4490 Global Trade & Economics (4 Credits)
This course will examine the World Trade Organization and the regional trade agreements, such as NAFTA, EU, and ASEAN, with regard to their impact on North American transportation, trade, and economy overall including their relationship to account deficits and their N20; and their impact on disputes and how trade disputes are settled. In addition, the course will address the global economy and economics and its drivers, comparing and contrasting North America, China/Asia, the European Union and selected emerging economies to include impacts on global trade, such as trading patterns, outsourcing, and changing production areas.

TRAN 4610 Multimodal Passenger-Freight Transportation Systems (4 Credits)
The purpose of this course is to explore the multimodal characteristics of transportation systems with emphasis on the interactions between freight and passenger flows. The students will learn about how passenger transportation systems are planned and operated, and the potential impacts on freight movements. At the end of the course, students will have a better understanding of how both public and private sector transportation decisions affect on another.

TRAN 4700 Transportation Roles in Global Trade (4 Credits)
This course will examine the World Trade Organization and the regional trade agreements, such as NAFTA, EU, and ASEAN, with regard to their impact on North American transportation, trade, and economy overall including their relationship to account deficits and their significance; and their impact on disputes and how trade disputes are settled. In addition, the course will address the global economy and economics and its drivers, comparing and contrasting North America, China/Asia, the European Union, and selected emerging economies to include impacts on global trade, such as trading patterns, outsourcing, and changing production areas.

TRAN 4710 Transportation Finance (4 Credits)
This finance course focuses on the transportation managers ability to understand and analyze financial statements. Topics covered will be the basics of major accounting statements, income and balance sheets, use of operating leverage, ratio analysis to determine relative performance of companies and the industry individual modes and across modes. An emphasis will be placed on time value of money and capital expenditure analysis and decision models for capital budgeting. Exploring markets and the sources of financial capital, securities, public and private financing will be discussed.

TRAN 4800 Analysis of Passenger & Freight Transportation Business Segments (2 Credits)
This course will provide an overview of the freight and passenger transportation sectors of the North American economy, focusing on various modes and their financial profiles, including aggregate revenue, income, market share and investment. The course will include a discussion of the vision of a transportation system for the future—one that moves people and goods efficiently, economically, safely and securely, and in an environmentally benign manner on integrated, seamless, ethical transportation processes using the strengths of all modes and minimizing their weaknesses. The course will discuss how such multi-modal systems for freight and intermodal systems for passenger operate in and impact the development and growth of the U.S. and global economies.

TRAN 4810 Big Data & Analytics (4 Credits)
This course will cover the principles of big data and analytics with a focus on applying quantitative methods within the transportation and logistics sector, including a review of technology-based tools that support problem solving with data management, modeling, and visualization. This course will address (1) the challenge of real-world application of “big data” with a focus on ROI and outcomes, (2) modeling (including linear programming) of networks, routing/scheduling, and location analysis, and (3) visualization output and how it is used for decision making. The course covers statistical analysis including framing, tools, and appropriate application of statistics within the transportation sector.

TRAN 4820 Principles of Supply Chain Management (4 Credits)
This course will provide an overview of the basic principles of supply chain management, giving students an understanding of supply chain processes from sourcing to finished goods and customers to suppliers, identifying the five core supply chain processes and examining the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management that impact the users and providers of services. Additionally, current trends in the technology of supply chain management, including applicable global trends, will be covered.

TRAN 4830 Advanced Transportation & Supply Chain Management (4 Credits)
Transportation costs and inventory considerations are significant drivers of total logistics and supply chain management costs. This course expands on the earlier Principles of Supply Chain Management course, providing detailed concepts and applications for freight transportation and inventory considerations in supply chains. This will include modal comparisons and contrasts of operational, financial, marketing, and information technology tools/software available in the freight and supply chain industries. Collaboration and competition between and among the modes will be explored to understand specific tactics to improve modal and supply chain efficiencies and competitive alternatives in both the global and domestic markets. Additionally, current trends in freight transportation and supply chain management across the globe will be studied and discussed to consider strategies and tactics to shape, manage, and respond to those trends.

TRAN 4840 Passenger-Freight Multimodal Transportation Systems (4 Credits)
The purpose of this course is to explore the multimodal characteristics of transportation systems with emphasis on shared assets and the interactions between freight and passenger flows. Students will learn how passenger transit and vehicular transportation systems are planned and operated, the concept of external benefits, and the potential impacts on freight movements. By the end of the course, students will have a better understanding of how public and private sector transportation management and investment decisions affect one another.
TRAN 4850 International Transportation & Supply Chain Management Analysis (4 Credits)
This course will survey and analyze at a macro level the international freight and passenger operations, policies, and other concepts covered in fundamental and advanced courses, as applied to the locations and facilities included in the planned International Transportation Travel Seminar. In addition, this course will explore specific passenger and freight transportation management structures and operations for transportation systems in important international locations and facilities.

TRAN 4860 Senior Management: Executives & Issues Seminar (4 Credits)
Through the use of transportation executives in the classroom, this course will explore in-depth some of the key concepts covered during the course of the degree program, to include topics such as applied transportation finance, merger and acquisition issues, shipper transportation metrics/requirements, global freight flows to/from North America, and government/military transportation. In addition, in case studies, students will propose options for real-world challenges using knowledge and data from current events, degree program courses, case material, and guest executive presentations.

TRAN 4870 Individual Leadership Development Project (4 Credits)
This course will guide students through the process of developing and executing individualized leadership development projects to enhance specific leadership skills and goals within their current management structure or an assigned organization. Through work over the six quarters of the program, the leadership projects will provide a unique opportunity for each student to hone critical aspects of her/his leadership, which, in turn, benefits the students, their organizations, and the larger transportation, logistics, and supply chain community.

TRAN 4880 Business Planning Thesis Project (4 Credits)
This course will guide students through the creation of a comprehensive business development and/or productivity improvement-oriented business plan, with a preferred focus on the transportation industry, to develop a new revenue growth or new service opportunity for their organization or an assigned organization. Through work over the six quarters of the program, this project provides each student with important business planning and development skills to create an implementable business plan, which may provide tangible benefits to their sponsoring organization as well.

TRAN 4890 International Study Seminar (2 Credits)
The Seminar will provide an onsite experience for students as they visit and study freight and passenger-related facilities and governmental agencies in major international locations. This international travel seminar will allow students to see new and emerging technologies in action that may provide significant productivity improvements. Students will also have the opportunity to examine the management and operation of transportation and supply chain operations in other countries. Students will meet with executives, government leaders and local managers of these systems to learn directly about the challenges of serving the global economy.

TRAN 4910 International Transportation Travel Seminar (2 Credits)
This course will provide exposure to real-world issues and problems in the intermodal transportation industry through an intensive four-to-seven-day onsite visit to a major transportation facility in North America. The course will include research and data gathering prior to the actual visit and will result in team projects with the final presentations being made during the final Quarter.

TRAN 4920 Leadership Development in Transportation Project (4 Credits)
This course will guide participants through the process of developing and executing an individualized leadership development plan to enhance specific leadership skills in the transportation or transportation-related industry. With work over the six quarters of the program, the leadership plan will provide a unique opportunity for each participant to hone critical aspects of his/her leadership, which, in turn, benefits the participant, the organization, and the larger transportation and supply chain community.

TRAN 4950 Transportation Business Planning Project (1-8 Credits)
This course will guide participants through the creation of a comprehensive transportation oriented business plan to develop a new or enhanced product or service for a transportation related organization. With work over the six quarters of the program, this project provides the participant with important business planning and development skills and an implementable transportation related business plan, which may provide a tangible benefit to the organization as well.

TRAN 4991 Independent Study (1-10 Credits)

International MBA (IMBA)

Courses
IMBA 4141 Managing Exports (4 Credits)
IMBA 4142 Global Management (4 Credits)
IMBA 4500 Global Theory in Practice (2,4 Credits)
IMBA 4700 Topics in International Business Administration (1-5 Credits)
Topics change each term.

International Studies (INTS)
Courses

INTS 4010 Epistemology (4 Credits)
An introductory course covering philosophy and history of science, epistemology, causality, and the logic of inquiry as related to international studies. The relation between theory and practical politics is explored, and differences between empirical and normative theory are examined in the context of foundational principles of politics and social science.

INTS 4011 Comparative Genocide (4 Credits)
This course examines the historical origins, patterns, and legacies of contemporary genocides around the world. We begin with the UN Convention on the Prevention and Punishment of the Crime of Genocide in 1948, which legally codified the definition of genocide and compelled ratifying parties to prevent its reoccurrence. Yet as we'll see, genocide has instead reoccurred with alarming frequency. We will discuss the definitional and analytical challenges facing this subject, as well as academic and policy debates regarding how to define and prevent genocide. We will also explore different approaches to seeking justice and reconciliation in the aftermath. To do so, this class will ground theoretical debates in empirical case studies.

INTS 4029 International Business: Strategy and Practice (4 Credits)
This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture, and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc.

INTS 4031 Conflict and Security in Cyberspace (4 Credits)
This course is for Korbel in DC program participants only. Cyber conflict is a new and complicated strategic problem that will engage the international community at many different levels. The cyber environment challenges traditional strategic thinking, and work on an adequate policy framework to assess and manage cyber conflict is at an early stage. Many traditional security concepts will need to be adjusted for the cyber environment through review and discussion. This class will look at both the national and international dimensions of cyber conflict in the larger international security context.

INTS 4033 Natural Resources and Armed Conflicts Under International Law (4 Credits)
The course will offer a description and an assessment of how international law regulates the relationship between natural resources and armed conflicts. Attention will be given to principles and rules regulating access to natural resources in the pre-conflict phase; protecting the resources pending the conflict; regulating the exploitation of the resources during and after occupations and international administrations. The role of transnational corporations in fueling conflicts will be considered with reference to recent developments such as certification schemes, the emerging legal framework on transparency in business, and the debate on corporate responsibility for international crimes. The concept of “illegal exploitation of natural resources” will be analyzed in light of the relevant resolutions of the United Nations Security Council. Finally, possible solutions to the issue of armed conflict resources (i.e. resources fueling the initiation of conflicts) will be considered from a legal perspective.

INTS 4036 Mobilities: Critical Perspectives on Forced and Voluntary Migration (4 Credits)
The mobility of people across international borders, be they labeled as refugees or economic migrants, is becoming a crucial debate both within academia and in the public sphere. Migrants are presented as potential promoters of peace and actors of development in their country of origin, but also as a threat to the national cohesion in their country of destination. This course deals with key issues related to the field of migration studies. Building on an anthropological perspective on the predicaments and strategies of people, it will offers a critical scrutiny of existing categories such as the distinctions between forced and voluntary migration, between situations of conflict and development. At the conceptual level, the course questions the narrow framework of the nation-state to relocate migration processes in all their complexity and proposes new approaches that take into account ongoing circulation and the existence of transnational ties. At the practical level, it stresses the normality and potential of human mobility throughout history to renew the policy debates of states and international organizations.

INTS 4039 Violence, History and Memory in Twentieth Century Africa Law (4 Credits)
This course offers historical, theoretical and empirical perspectives on the impact of conflict in the modern history of Africa. Opening with a guided discussion of broad debates over models of warfare and violence that apply social, cultural, materialist and instrumental theories of causation, the course then proceeds through a series of case studies in seminars. These include colonial wars of decolonization in Algeria and Kenya, the Biafran War of secession and its repercussions in Nigeria, contrasting genocides in Burundi and Rwanda, the Red Terror in revolutionary Ethiopia, liberation struggles in Southern Africa, the ‘African World War’ in Congo, interlinked conflicts in Sierra Leone and Liberia, and other cases of contemporary significance. In each case, students will be encouraged to consider the means of violence employed, the causes and motivations of conflict, issues of gender, youth, religion, politics and ethnicity, the personal and communal impacts of experiencing and witnessing various forms of violence, and the transnational dynamics of conflict. Throughout, questions of culpability, ethics and moralities will be tackled in relation to the various approaches to transitional or retributive justice, the problem of ‘living together again’ dominated by the pressures of memory, silence, memorialization and mythicohistory.

INTS 4040 Technology and War (4 Credits)
This course introduces graduate students to past, present, and future trends in warfare, focusing especially on the how technological advances affect the ways in which states engage in international conflict. The course will begin by introducing students to a number of theories that help shed light on why technological developments occur and how they affect the conduct of war. Subsequent classes will then examine important technological developments and assess how each has impacted the use of force over time. Topics range from the invention of gunpowder and the use of machine guns, to the development of nuclear weapons, the use of unmanned technologies on the battlefield, and the growing importance of the cyber domain to future inter-state conflict.
INTS 4046 Global Economic Inequality and Human Rights (4 Credits)
The main purpose of this course is to understand the conceptual and empirical issues underlying the political economy of global inequality and its relation to Human Rights. What is inequality? What are the global dimensions of inequality and what are the connections between global inequalities and human rights? What are the proximate and deeper causes of global inequality? How does the analysis of deeper causes of global inequality and poverty relate to the underlying political economy of global capitalism? In order to do this, we will look at the relationship between the world economic system, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus on the more recently developed social capabilities approach developed by Amartya Sen and others. In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy. A special feature of the course will be an analysis and assessment of the millennium development goals and the prospects for progressive policies in the post-MDG period, e.g., the SDGs. We will also examine the problems of the advanced countries in a rigorous holistic framework that will go beyond the important work of Pickett and his collaborators on inequality.

INTS 4047 Global Sustainable Development and Human Rights (4 Credits)
The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between sustainable development and human rights globally. For this purpose we will need to understand both the current global political economy(GPE) and Geopolitics. The key questions are: What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between sustainable development and human rights globally and within particular nation states? How does the discourse of the linkages between sustainable development and human rights relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between sustainable development and human rights relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among sustainable development, human rights, energy, technology, geopolitics, geo-economics, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus critically on the more recently developed social capabilities approach developed by Amartya Sen and others within the context of domestic and global political economy. In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy and within the nation states. For this purpose we will try to find the approximate but deep causal structure of GPE and the place of sustainability and human rights within this GPE. A special feature of the course will be an analysis and assessment of the climate change issues and renewable energy and critiques of technological fix.

INTS 4048 International Politics of Nuclear Weapons (4 Credits)
This MA-level course analyzes subjects central to the understanding of the role of nuclear weapons in international politics. The course addresses the origins of the atomic bomb project, early efforts to control nuclear materials, deterrence theory, nuclear strategy and force posture, and considers contemporary challenges to the global nuclear order including nuclear latency and nuclear terrorism. The goal of the course is to introduce students to the evolution of scholarship on the role of nuclear weapons in international politics, and to evaluate contemporary nuclear security issues in light of this broader context. Each class will focus on a different substantive topic, interweaving theory with history to better understand each issue area. The course will start with the initial development and use of nuclear weapons, followed by an in-depth look at the early thinking on nuclear strategy and escalation during the Cold War. These classes will cover the Manhattan Project, the bombings of Hiroshima and Nagasaki, the basics of deterrence theory, the arms race between the United States and Soviet Union, and historical cases of nuclear crises and brinkmanship (the Cuban Missile Crisis being the most well-known example). During weeks 5-7 students will explore the politics of nuclear acquisition, evaluating different explanations for why states build nuclear weapons. This section of the course will also explore the variety of ways that the international community has sought to prevent the spread of nuclear weapons, including the important role of international institutions, norms, and the nuclear disarmament movement. The final three classes are devoted to contemporary issues in nuclear politics, including the threat of nuclear terrorism, nuclear energy and dual-use issues, regional instability in Northeast and South Asia, the Iran nuclear deal, and the implication of new technologies (e.g. autonomous systems, 3D printing, precision weapons) for nuclear issues. The final class will provide the students with the opportunity to take stock of what we have learnt over the course of the quarter and to reevaluate early thinking on nuclear weapons in light of what we know now.

INTS 4049 Addressing Complex Interagency Problems (4 Credits)
This class will ask students develop the skills and addresses the challenges associated with the process by which policy recommendations are developed within the United States Government, particularly as they relate to complex multi-dimensional security problems. Students will learn about the roles played by various departments and agencies that are engaged in the policy making process, as well as how external actors impact the development of national security policy. This class will also give students the opportunity to learn about the policy making process in the United States inter-agency environment through a series of presentations from practitioners as well as hands-on experience via role-playing and the development of briefing memos, presentations and other materials. Students will learn about the history, structure and function of the interagency process, including past and current reform processes such as the Clinton Administration's Presidential Decision Directive on Managing Complex Contingency Operations (PDD-56) as well as the more recent Project on National Security Reform. Students will also hear several real-life examples of interagency policy-making from former government officials and various subject-matter experts. Students will be expected to role-play members of a mock National Security Council (NSC) team or as representatives of various US Government Departments and Agencies involved in the interagency decision-making process. Students will identify an actual national security problem and be responsible for debating and agreeing to a set of policy recommendations within the format and structure of the mock NSC. Select students may have the opportunity to present their recommendation to a current member of the National Security Council via video-teleconference. At the end of course, students should have a fundamental understanding of the strengths and weaknesses of the current system; what constitutes good NSC products and how to produce them; and how concession and compromise, trade-offs, external public pressure, intelligence issues and budget realities all can play a role in how national security decisions are made.
INTS 4050 Statistical Methods I (4 Credits)
An introductory course featuring statistical reasoning, probability, sampling, statistical inference, nominal and ordinal measures of association, and correlation. Open only to students with no prior background in statistics.

INTS 4051 Statistical Methods II (4 Credits)
This course is a continuation of Statistical Methods I, covering the fundamentals and primary methods of statistical inference. Topics include two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, correlation, simple regression and multiple regression. Emphasis will be on problem solving, computer applications (using Stata) and interpretation of results. This course is offered in the Winter quarter only. Prerequisites: INTS 4050.

INTS 4052 Statistical Methods III (4 Credits)
This course will serve as continuation of Statistical Methods II. This will be an applied, non-calculus based course on statistical techniques used in nonparametric and multivariate analysis. Emphasis will be on applications and data analysis using the statistical software package SAS. Prerequisite: INTS 4051 or INTS 4057.

INTS 4056 Information Management in Humanitarian Crises (4 Credits)
Accurate, reliable and timely data collection, processing, analysis and dissemination (four steps in information management) are critical for the effective implementation of both development and humanitarian programs. In humanitarian responses, there are numerous challenges to managing information in what may be a rapidly evolving situation. This course introduces students to the theory of information management and its application in the humanitarian context.

INTS 4057 Statistics for International Affairs (4 Credits)
This is a fast-paced course which serves as an introduction to basic and intermediate concepts in statistics and probability, as well as the primary methods of statistical inference. Topics include data collection, presenting data in tables and charts, summarizing and describing numerical data, basic probability, discrete probability distributions, normal distribution, sampling distributions, confidence interval estimation, single-sample and two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, simple regression and multiple regression. Emphasis will be on statistical reasoning, problem solving, computer applications (using Stata), and interpretation of results. This course is offered in the Fall quarter only. Prerequisite: Strong quantitative background and a minimum quantitative GRE score of 148 or permission of the instructor.

INTS 4058 Applied Time-Series Analysis (4 Credits)
This course serves as an introduction to time-series analysis and panel data analysis techniques. Topics include moving averages, exponential smoothing, time-series decomposition, model identification and estimation, Box-Jenkins method, ARMA and ARIMA models and VAR analysis. Panel data analysis includes fixed effects and random effects models. Emphasis will be on computer applications (using Stata) and interpretation of results. This course is offered in the Winter quarter only (and occasionally in the Spring quarter instead of Winter). Prerequisites: INTS 4050 or INTS 4057.

INTS 4110 Food and Nutrition Security for Sustainable Development (4 Credits)
This new graduate course provides an in-depth look at often ignored areas of history. Learning about the rise and fall of the Roman Empire, British Empire, Russian Empire, Soviet Empire and Chinese Empire provides an excellent backdrop to understanding important historical lessons that are often downplayed in the early 21st century. The course provides a series of good works that can help students better understand the present and future developments of our century.
INTS 4134 Forever Emerging? The Developmental Trajectory of Modern Brazil (4 Credits)
Brazil has the largest population, economy, and industrial basis in Latin America. It is the seventh largest economy in the world, fifth largest country in land area, outranking the continental United States. Like the US, Brazilians are a mix of indigenous, European, and African peoples, along with subsequent inflows of Asian and Middle Eastern immigration, though race, ethnicity, and class have been interpreted with distinct cleavages and hierarchies. We approach our understanding of Brazil through the country's former capital, Rio de Janeiro, a city of numerous complexities, wonders, contradictions, challenges, and potential. By looking at the historical evolution of this fascinating city, the course will offer students an opportunity to study the evolution of Brazil, from the colonial period to the present day, when the country has increasingly been seen as a regional economic and diplomatic powerhouse, as well as a globally emergent player. By focusing on the historical trajectory of Rio de Janeiro, in an in-depth reflection structured along textual, visual, and in-sight materials and experiences, students are invited to reflect about matters of change and continuity as well as how national socio-political trends are reflected in local contexts, thus also learning to reflect about the interpretive relationship between the micro-macro levels of analysis. Historical political and economic narratives, contemporary analysis of the country’s place in the world, films, music, architecture, guided visits to neighborhoods and local cultural institutions will be our experiential prisms into the Carioca (Rio-based) spirit and cultural memories as expressions of national trends and trajectories. Through lectures, seminar discussions, and field studies, we explore Rio’s renown and sometimes notorious informalism, from informal housing (favelas) to language, social organization and economic activities. We also explore themes such as tourism, the history of housing policies, and the transformation of local culture into ‘national’ and ‘export’ cultures. Moreover, by looking at the urban transformations over the last 200 years, we explore Brazil’s drive to become an industrial power, as well as the new social conflicts produced by these efforts. Finally, we investigate Brazil’s contemporary culture, politics, sports, achievements, promises and continued challenges as it proceeds as a so-called emergent nation into the 21st century, while still struggling with its colonial past.

INTS 4141 Domestic/Int'l Conseq:Drug War (4 Credits)
Domestic and international policy and the impact of the drug war on both.

INTS 4142 After the Fall: Russia & China (4 Credits)
Provides analysis of the historical rise of Russia and China, and their complex inter-relationship and interaction with the United States and the world.

INTS 4147 American Govt & Pol. Making (4 Credits)
Examines governmental fragmentation affects and policies and examines how policy issues engage different segments of the government.

INTS 4151 History, Culture and Conflict (4 Credits)
An introductory course examining how and why historians develop diverse interpretations of events and periods. Methods of analyzing evidence, selecting research material, and supporting arguments are discussed and evaluated in assessments of selected historical cases. Methodological ties between the historiographic approach and social sciences including anthropology and psychology, as well as the study of gender are also drawn.

INTS 4200 Water and Sanitation in the Global South (4 Credits)
The current water governance systems are intertwined with politics and power and prioritize some groups and water uses over others. Worldwide, there are 750 million people who lack basic water access and 2.5 billion who lack sanitation access. Water is life. It sustains ecosystems, it fuels energy and industry, it enables livelihoods, it is essential for food security, health and nutrition, and it is central to many social and spiritual practices. Inadequate access to safe drinking water, sanitation facilities and hygiene practices deepens income poverty, weakens health, undermines education and exacerbates gender inequality. This interdisciplinary course will explore water and sanitation issues in the Global South. Political ecology and the hydo-social cycle will be introduced as concepts for moving beyond technical water and sanitation planning to consider how water is related to broader issues of power, politics, culture, and society. We will learn about practical and applied approaches for planning water, sanitation and hygiene (WASH) programs, discuss interactions between society and water, and critically examine constructions of water scarcity. In this process we will move between scales at the community, river basin, regional and global level. Several special topics will be explored including gender and water, multiple use water services, water privatization, water and culture, WASH technologies, sustainability, health and behavior change. This course will focus on the water needs of communities in the Global South from a perspective of social justice.

INTS 4210 Multinational Corporations (4 Credits)
The emergence of sweeping new legal rights for MNCs in relation to their foreign direct investment and cross-border trading activities under the avalanche of bilateral investment treaties negotiated in the last few decades and under multilateral conventions such as NAFTA represent what many have termed "revolutionary" changes in the nature of state sovereignty as it relates to state-investor relations. That expansion of investor/MNC rights in relation to state sovereignty has thus seemingly reached a point calling for re-examination of the nature and appropriate scope of MNC rights, as well as the nature of MNE accountability and responsibilities which are the flip side of such rights.

INTS 4215 Gender and Humanitarian Assistance (4 Credits)
In recent decades, the humanitarian system has grappled with the concept of gender and how to operationalize it in the context of humanitarian preparedness and response. Through readings, class discussions, guest speakers and assignments, students will have the opportunity to gain a better understanding of how the humanitarian system's approach is evolving in theory and practice.

INTS 4220 Political Economy of Energy & Sustainable Development (4 Credits)
The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between energy and sustainable development within the current global political economy(GPE) and Geopolitics. What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between energy and sustainable development? How does the discourse of the linkages between energy and sustainable development relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between energy and sustainable development relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among energy, geopolitics, geoconomics, economic growth, poverty and inequalities in several different dimensions.
INTS 4221 India in the Global Economy (4 Credits)
The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between Indian economic development and the world economy within the current global political economy(GPE). What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between Indian strategy for development and sustainable development? Is the Indian strategy for development sustainable? How does the mainstream Indian development discourse relate to the underlying political economy of global capitalism? What are the deep underlying causes of inequality and poverty in India? In order to do this, we will look at the relationship between India's development strategy, energy, economic growth, poverty and inequalities in several different dimensions.

INTS 4222 Slavery and Genocide: A Comparative Analysis (4 Credits)
This course attempts to examine the similarities and differences between slavery and genocide by using comparative techniques. Since both slavery and genocide studies have definitions problems we will work toward clarity since politics has played a major role in naming events. Beyond definitions, we need to take a close look at the political economy of both slavery and genocide.

INTS 4223 Global Dynamics and Local Threats in Agricultural Development (4 Credits)
Many low- and middle-income countries in which agriculture plays a key role for development are characterized by high levels of socio-economic inequality, a mixed human rights record and a dominance of transnational corporate power in domestic agricultural export markets. At the same time, these countries face processes of environmental degradation through anthropogenic and natural drivers of change that affect the availability of ecosystem services and thus shape agricultural development and human wellbeing. This course offers an in-depth study of the political, socio-economic and social-ecological conditions for sustainable agricultural development in low- and middle-income countries. We explore the political economy of agricultural production and trade in countries that depend to a significant extent on the export of agricultural commodities as a source of foreign revenue. We examine the design and implementation of global policy frameworks, international agreements, and national strategies for agricultural production and trade, with a particular focus for the governance of natural resource use. Our goal is to assess the relevance and effectiveness of current governance structures for agriculture to respond to local-, regional- and global-scale environmental changes and socio-economic challenges in ways that address current and future human needs. Through case studies from selected agricultural sub-sectors and diverse countries from across Asia, Africa and Latin America, we investigate local strategies for natural resource use in the context of poverty, inequality, and environmental change. The course provides a comprehensive coverage of the political economy of agricultural development and an introduction to social-ecological systems analysis as a theoretical framework for interdisciplinary research in the field of sustainable development.

INTS 4224 Trade Unions in the Global Economy (4 Credits)
Trade unions are major influences in the political economy of most nations, even as they face apathetic or hostile governments and increasingly powerful multinational corporations. As globalization has created common employers across national boundaries, trade unions have struggled to establish institutions and mechanisms to defend workers and build global power. The course will familiarize students with the underappreciated role of trade unions in the global economy. Having a grasp of the subject matter is essential to anyone working in the international arena for governments, corporations, non-governmental organizations and trade unions.

INTS 4225 Civic Strategies for Fighting Extremism (4 Credits)
This course will teach students hands-on community organizing, technology and intervention strategies for action to help combat extremism. The students will spend time working directly with community and government agencies on security strategies, identifying online risks, and learning about social media strategies for intervention. Some of the skills covered include network analysis, resource management, cognitive behavior change and political psychology, public narrative, power mapping, asset-based community development, and group facilitation.

INTS 4226 Social Entrepreneurship & Global Poverty (4 Credits)
This course provides an overview of the role of social entrepreneurs, innovative small firms, and entrepreneurial NGOs in sustainable development and poverty alleviation. Market-driven strategies are increasingly important for all organizations, in government, public, or private sectors, to encourage local solutions that are sustainable and do not require ongoing subsidy. Entrepreneurial NGOs and small firms are a great source of local innovation and adaptation, identifying potential strategies that can be scaled up through partnerships with governments, social purpose organizations, or private capital. These market-driven strategies are based on a good understanding of customers, the value provided, and how to best deliver products and services to vulnerable populations in a responsible way. Further, a strong customer and market focus ensures that all social purpose organizations (both for-profit businesses and NGOs) meet customer needs effectively and develop new products and services efficiently.

INTS 4233 Realism and International Security (4 Credits)
We focus in this course on realist understandings that relate to national security—a focus on the power wielded by states and the balance of power among them. Under anarchy (the absence of central authority), wars and “rumors” of wars are the continual expectation, whether dealing with city-states in ancient Greece, Renaissance Italy, American or European states in the 18th and 19th centuries, or interstate conflicts across the globe in the 20th and 21st centuries. It is a world aptly described by Thucydides and Sun Tzu, Machiavelli and Hobbes—not to mention, among others (and with variations in their approach), Cate, Niebuhr, Morgenthau, Waltz, Hoffmann, Gilpin, Schelling and, in our time (in no particular order), Mearsheimer, Walt, Betts, Layne, Posen, Schwerler, Greico, Van Evera, Snyder, Jervis, and Nye. We also take account of critics of realism (for example, Haas, Ruggie, and Ashley)—as well as those who have made their peace with it (for example, Keohane and Wendt). The central question is what does realism offer to both theorists and policy practitioners?.
INTS 4234 International Security, Diplomacy and Force (4 Credits)
The course examines the ways and means of war and peace with a focus on both multilateral and bilateral forms of diplomacy. We begin with the use of force and the modalities of peacemaking in the Greco-Roman, Indian and Chinese ancient worlds. Ending wars in the “modern” period has often resulted in new constructs to maintain peace. Thus, the Peace of Augsburg (1555) and the Peace of Westphalia (1648) that ended warfare among German states established a foundation for sovereignty as cornerstone of a new state system. When post-1789 France became a “revolutionary” power, she dramatically upset the status quo. After the defeat of Napoleon in 1815, conservative powers gathered in the Congress of Vienna to restore a balance of power. The arrangements they established (dubbed the “Concert of Europe”) successfully avoided general war for 99 years. World War I (1914-18) was followed by multilateral diplomacy at Versailles and formation of the League of Nations and agreement to maintain international security through application of international law. Failure of this design in the interwar period led to another attempt after World War II (1939-45) at Yalta, Potsdam, Dumbarton Oaks, and San Francisco to establish and maintain peace not just by international law (collective security), but also through alliances (collective defense)—both under United Nations auspices. In the seven decades since, both bilateral and multilateral diplomacy have been used to restore or maintain international peace and security, also engaging in peacekeeping and arms control efforts in relation to weapons of mass destruction, confidence- and security-building measures (CSBMs), space and other security-related matters on present-day national and international security agendas.

INTS 4235 Realism and National Security (4 Credits)
We focus in this course on realist understandings that relate to national security—a focus on the power wielded by states and the balance of power among them. Under anarchy (the absence of central authority), wars and “rumors” of wars are the continual expectation, whether dealing with city-states in ancient Greece, Renaissance Italy, American or European states in the 18th and 19th centuries, or interstate conflicts across the globe in the 20th and 21st centuries. It is a world aptly described by Thucydides and Sun Tzu, Machiavelli and Hobbes—not to mention, among others (and with variations in their approach), Carr, Niebuhr, Morgenthau, Waltz, Hoffmann, Gilpin, Schelling and, in our time (in no particular order), Mearsheimer, Walt, Betts, Layne, Posen, Schwebler, Grieco, VanEvera, Snyder, Jervis, and Nye. We also take account of critics of realism (for example, Haas, Ruggie, and Ashley)—as well as those who have made their peace with it (for example, Keohane and Wendt). The central question is what does realism offer to both theorists and policy practitioners?

INTS 4260 Global Dynamics & Local Threats in Agricultural Development (4 Credits)
Many low–# and middle–# income countries in which agriculture plays a key role for development are characterized by high levels of socio–#economic inequality, a mixed human rights record and a dominance of transnational corporate power in domestic agricultural export markets. At the same time, these countries face processes of environmental degradation through anthropogenic and natural drivers of change that affect the availability of ecosystem services and thus shape agricultural development and human wellbeing. This course offers an in–#depth study of the political, socio–#economic and social–# ecological conditions for sustainable agricultural development in low–# and middle–# income countries. We explore the political economy of agricultural production and trade in countries that depend on a significant extent on the export of agricultural commodities as a source of foreign revenue. We examine the design and implementation of global policy frameworks, international agreements, and national strategies for agricultural production and trade, with a particular focus for the governance of natural resource use. Our goal is to assess the relevance and effectiveness of current governance structures for agriculture to respond to local–#, regional–# and global–# scale environmental changes and socio–# economic challenges in ways that address current and future human needs. Through case studies from selected agricultural sub–# sectors and diverse countries from across Asia, Africa and Latin America, we investigate local strategies for natural resource use in the context of poverty, inequality, and environmental change. The course provides a comprehensive coverage of the political economy of agricultural development and an introduction to social–# ecological systems analysis as a theoretical framework for interdisciplinary research in the field of sustainable development.

INTS 4270 Gender, Security, and Human Rights (4 Credits)
This course examines the gendered dimensions of security and human rights, with a particular focus on periods of violence and insecurity. Gender equality has been at the heart of human rights and development efforts over the past half-century. Governments and multinational organizations have created legal and normative instruments to address the ongoing marginalization of women and girls around the world, such as the 1979 Convention on the Elimination of Discrimination Against Women (CEDAW) and the 1995 Beijing Platform of Action. More recently, these same actors have turned their attention towards the importance of “gendering” discussions of international security. For instance, UNSCR 1325, passed in 2000, is a landmark legal framework that aims to secure women’s inclusion in post-war peace processes. Despite these formal achievements, gender-based violations and insecurity continue persist around the globe. Moreover, there remain profound gaps between legal provisions aiming to promote women’s equality and the lived experience of women on the ground. Drawing from critical feminist analyses, this class will introduce you to the concepts of gendered rights and security, challenge you to think about intersectionality as a lens through which to understand “rights,” and increase your understanding of the contemporary human rights and security crises unfolding around the world today.
INTS 4280 Contemporary Peace Operations: Disarmament, Demobilization, & Reintegration (4 Credits)
Disarming, demobilizing and reintegration (DDR) of former fighters in the aftermath of conflict is as old as war itself. Tens of thousands of soldiers were voluntarily DDR(ed) during the Roman-Etruscan wars in the 3rd century BC and virtually every conflict since. In fact, no fewer than 60 DDR initiatives have taken place globally since the UN and major bi-lateral engagement the late 1980s. While most were launched in the wake of international or civil wars as part of an internationally mandated peace support operation, shifting conflict dynamics and emergent caseloads over the last decade continue to alter the landscape in which DDR operations are implemented. Whether occurring in a humanitarian crisis, as an outcome of a peace accord or during active conflict, DDR represents a voluntary civilian led non-violent policy option for peacebuilding and human security for the international community. Often applied in a post conflict environment, the global caseload in 2014 was estimated at approximately 250,000 DDR candidates spread across more than 20 planned or ongoing DDR operations. Presently, DDR targets persons in combatant and non-combatant roles from statutory armies and non-state armed groups. It is not uncommon for DDR to serve as tool for security sector reform and transformation efforts aimed at downsizing and legitimizing armed forces under civilian control. In doing so DDR is a unique policy tool that enhances the resilience of local, national and regional actors, by addressing various peace consolidation issues spanning the civilian and security sectors. The course will utilize illustrative global case studies to examine 3 distinct ‘generations’ of DDR since the 1980s. Tracking the evolution of DDR in contemporary peace operations, the course will demonstrate the critical role DDR continues to play in peacebuilding and recovery in settings as diverse as the Balkans and Philippines where DDR is used to facilitate the ‘normalization of relations’, to the Sahel, the Horn of Africa, South America and the Middle East where DDR addresses mercenaries and terrorism. DDR’s current role in stabilization efforts in the Ukraine, Afghanistan and The Sudan will be juxtaposed with political stability and development issues in Central America and Southern Africa where gang violence and veteran’s concerns are related to DDR outcomes. The first generation of DDR occurred in the wake of the Cold War. Typified by verifiable caseloads under unified command and control, these occurred regionally in Latin America and Southern Africa. In the mid-2000s, 2nd Generation policy approach emerged in response to the perception by the international community that DDR, and reintegration specifically, was not achieving intended development aims. This led to a broad range of initiatives targeting communities as a means to facilitate enabling conditions for DDR. Presently, DDR is undergoing a 3rd shift. The monetization of DDR is creating a cottage industry for former fighters traveling across international borders rejoining armed groups as mercenaries. At the same time peace operations are receiving DDR mandates in areas where conflict is ongoing and insurgent groups slated for DDR are associated with ‘terrorist’ organizations complicating the legal and political environment.

INTS 4290 Gender, Environment, and Development (4 Credits)
This course is concerned with how and why gender matters in producing environmental, economic, and social outcomes of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of environmental and related economic planning. Beyond these practical implications of gendered environments, the course will engage theoretical and ideological underpinnings for the gendered structures of environmental control and management encountered in a wide range of physical environments.

INTS 4301 Introduction to Political Theory (4 Credits)
Political theory analyzes and interprets the foundations of political life and evaluates its principles, concepts and institutions. It is fundamentally concerned with the normative political relationships among human beings that revolve around the organization and basis of government. This course provides an introduction to Western political theory through key texts and thinkers that are essential reference points in the social science literature. The focus will be on the Enlightenment tradition and the approach will be geared toward understanding how the seminal texts and thinkers of this period have shape--and continue to shape--our understanding of political ideas and norms. This course will also have a pragmatic component, where the books and ideas under consideration will be applied to contemporary international debates and issues. Please note that this course is geared toward students without a strong background in political theory. No previous knowledge is required or assumed. All that is needed is an open mind and willingness to work hard.

INTS 4303 Econometrics for Decision Making I (4 Credits)
The first course in a two course sequence in Applied Econometrics. Introduces basic probabilistic techniques for the quantitative analysis of economic and social data and their application to international public policy decision making. Prepares students to: compile and analyze data sets; build and test regression models; interpret and critically evaluate applied econometric studies; and conduct their own applied econometric research using computerized statistical packages. Prerequisite: INTS 4051 or INTS 4057.

INTS 4310 International Trade (4 Credits)
An intermediate course analyzing causes and consequences of international trade. Classical, neo-classical, and product- cycle models included. Topics include international specification, terms of trade of developed and less- developed countries, distribution of gains from trade, instruments and uses of commercial policy, nominal and effective protection, and theory of customs unions and economic integration. Prerequisite: grade of B- or better in undergraduate course in Introductory Microeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for INTS 4310 should first complete INTS 4536.

INTS 4318 Applied Research in International Economics (4 Credits)
The purpose of this course is to critically review the literature in political economy and introduce students to some recent empirical work to analyze data and test relevant theories and hypotheses in political economy, IPE and related social science disciplines. The course provides students with the tools necessary to conduct and critically evaluate empirical analysis in these fields. Two data sets are handed out during the course and students analyze them. The final paper deals with a substantive empirical issue.
INTS 4319 Governing the Global Economy: The Effectiveness of Multilateral Economic Institutions (4 Credits)
Multilateral Economic Institutions are the primary mechanisms by which the global economy is governed when it is governed at all. This course examines the institutions and theoretical foundations that are at the center of this system of global governance by studying their history, sources of authority, and ideological underpinnings. Simultaneously, each multilateral economic institution/ regime is examined from an empirical perspective in order to determine the impact of these institutions and whether or not they are accomplishing their respective tasks in the governance of the global economy. The course is both theoretical and empirical and there is a bias to the course – it is that the MEIs are among the most written about and least understood institutions in the global economy. In addition, the course also examines the practical reality of multilateral economic negotiations through an examination of recent attempts to govern segments of the global economy; including international trade, finance, and climate.

INTS 4320 Int’l Monetary Relations (4 Credits)
An intermediate course examining history of the monetary system, foreign exchange rates, balance of payments analysis, and adjustment processes under different exchange systems, current status problems, and prospects for reform. Prerequisite: grade of B- or better in undergraduate course in Introductory Macroeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for 4320 should first complete INTS 4536.

INTS 4324 International Political Economy (4 Credits)
The course examines 3 contrasting visions of international political economy: economic security, trade and finance.

INTS 4327 Advanced Issues in International Studies (4 Credits)
The purpose of this course is to train students in advanced research in the fields of International Relations and Comparative Politics. The course achieves these ends through an investigation into a particular empirical theme (of the professor’s choosing in any given year). While due emphasis is placed on the major findings of the specified literature, as much or more attention is given to the research design, methods and evidence of the selected literature. Students will learn what constitutes a falsifiable hypothesis and what the alternatives to falsifiability are, examine various scholars’ methods of operationalization and measurement, consider the merits of treating rival explanations to one’s own, and judge the veracity of findings by these and other criteria. In addition, students will apply such knowledge gained by writing their own original research paper during the quarter. The course aims to assist primarily PhD candidates in their abilities to carry out research, to assess the quality of other scholars’ research, to teach in the fields of International Relations and Comparative Politics, and to excel in their comprehensive exams. Please note that this course is offered only once every other year. Thus PhD candidates must enroll in the first year it is available in their course program.

INTS 4330 International Business Transactions (4 Credits)
INTS 4332 Data Analysis and Development (4 Credits)
INTS 4333 International Project Design and Monitoring (4 Credits)
It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Design and Monitoring course (formerly International Project Analysis) is to provide students with an appreciation for the myriad of considerations in designing and monitoring an international development intervention and exposure to conventional and unconventional methods and means for doing so. The international project cycle begins with identifying an intervention to address a development impediment or opportunity faced by a target group. A development intervention typically falls into a sector or thematic area, such as education and health care, and it is generally directed towards physical, human, institutional/legal capacity building, or a combination of them. Projects can be singular in scope, such as building a new primary school, or broadly scoped to mitigate causes of poverty, such as the Millennium Development Villages project, but they all should be a unique endeavor with a beginning and an end. Much of the physical development today is supported by the private sector or state sponsored organizations, with less support through traditional foreign aid unless it is a major reconstruction effort like in Afghanistan. In this course, students will learn that a project proposal should be designed in concert with the beneficiaries to be relevant, feasible, and supported by their needs, but also recognizing their absorption capacities. Such a project proposal should ideally have gone through a systematic analysis of factors that will affect its design and management of risk, including economic, financial, environmental, technical, and social factors, as well as special safeguard areas. Students will also learn about the continued need for project proposals to define the underlying theory of change, assumptions, and logical framework for linking inputs, activities, outputs, outcomes and ultimately desired impacts. Establishing a performance management plan for the project that defines, among other things, the metrics and milestones for monitoring the process is an essential component of most project proposals. However, students will learn that adherence to plans is challenging under complex development conditions.
INTS 4339 Microfinance, Financial Inclusion and Inclusive Markets (4 Credits)
This course provides an overview of why microfinance and financial inclusion are key strategies and platforms to build sustainable development and inclusive markets. It covers the financial inclusion ecosystem supports development outcomes through direct impact of microfinance institutions (MFIs) and systems change. Microfinance and financial inclusion are important ways to improve economic choices and household resilience among the poor, providing access to credit, safe savings options, payment systems, and even micro-insurance to help the poor manage risk and financial uncertainty. They are also important tools to create local, inclusive markets and economic opportunity by facilitating micro and small business development and access to development assets like clean energy, clean water, agricultural inputs, education, and healthcare. We will focus on lessons and insights from microfinance’s evolution into financial inclusion, how digital finance and other technology innovations are creating new opportunities and risks in development, and the shared characteristics of highly effective microfinance institutions and NGOs that integrate microfinance into their development strategies.

INTS 4341 Illicit Markets in the Americas (4 Credits)
This course applies the understandings of International Political Economy (IPE) to the study of illicit market activity in the western hemisphere. While sociologists, criminologists, legal scholars and law enforcement agencies have all contributed substantially to this area of study, IPE has only recently been applied. So what can this approach contribute? Through IPE, we can place illicit market activity within the larger structure of trade and monetary relations, the rise of the informal sector and the existence of economic and other inequalities in particular regions. We can consider the nature and impact of North-South relations and the process of structural adjustments as advised by international financial institutions. Further, we can evaluate the overall function and effectiveness of law enforcement, governing institutions and international organizations in controlling illicit market activity. Finally, through IPE, we can consider the ideological context of participation in illicit market activity.

INTS 4342 Project Management (4 Credits)
It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional service organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the Project Management course is to expose students to right- and left-brain approaches to managing the knowledge areas of project management, such as time and cost management, as well as approaches used by project managers and their teams. This course concentrates on the implementation and completion/transition phases of the international project cycle. The implementation phase commences after stakeholders approve a project proposal—translated into a project charter—from which a detailed project management plan is developed to execute the project. Project managers rely, to a large extent, on internationally recognized management approaches to move workflow smoothly among project phases, allocate project tasks effectively, efficiency track project milestones, and make adjustment for inevitable and often uncontrollable project delays and cost overruns. The completion/transition phase ends the project and transfers control from the project team to the operational team, preferably through a defined exit strategy. The course covers the knowledge and skills needed to meet the educational requirements for certification by the Project Management Institute (PMI). PMI serves practitioners and organizations by providing standards that describe leading practices, globally recognized credentials that certify project management expertise, and resources for professional development, networking and community. PMI credentials certify your knowledge and experience in project management so you can be more confident at work and more competitive in the job market. Several other organizations will be mentioned that also provide certification, but all share in common required education hours, years of experience, and passing a professional examination. Students in the course will exhibit their new knowledge and skills by joining small teams to prepare a professional project management plan for the selected development project charter and through individual examination.

INTS 4344 The Art of Forecasting (4 Credits)
Course defines forecasting techniques and expert systems. Will cover Delphi techniques, expert systems, modeling and economic forecasting.

INTS 4344 Comparative Public Policy and Finance (4 Credits)
Course aims to provide in-depth treatment of the question "why do size, form, financing, and distributive outcomes of government differ so greatly across nations?.

INTS 4350 Economic Development (4 Credits)
This course combines an introduction to the theories and key issues in economic development with a rigorous analysis of empirical evidence from low- and middle-income countries in Asia, Africa, and Latin America. The course enables participants to develop an in-depth understanding of diverse local, national, and regional patterns of economic development, and to critically assess the design and potential social and economic consequences of global policy frameworks and national economic development strategies. The course starts with providing an outline of global trends in poverty, inequality and growth, including a discussion of key concepts and ways of measuring economic development. Part I focuses on classical, neoclassical, and institutional theories of economic development. Linkages between the intellectual basis of different theories and major political currents and ideologies, and the associated policy design, are assessed. In part II, core themes in economic development are explored, including agriculture, trade, industrialization, labor, and the environment. The analysis of diverse country studies illuminates how historically specific social, political, and institutional conditions shape development outcomes. In part III, we examine the design and implementation of economic development policy through an analysis of international aid agendas and institutional modalities of ODA, with a particular focus on emerging donors. We investigate the strength and weaknesses of national economic development policies through an in-depth study of selected country case studies. Please note that a mastering of quantitative economics is not a requirement for this course.
INTS 4355 Finance and Development (4 Credits)
An advanced course which examines the relationship between financial system organization and economic performance. The political economy of financial innovation, liberalization and globalization, state-finance-industry relations, micro-lending, stock markets and regional financing are discussed with reference to Latin America, Asia and African countries.

INTS 4362 Gender and Health (4 Credits)
INTS 4363 Discrimination, Minorities, and Rights of Indigenous People (4 Credits)
INTS 4364 Global Poverty and Human Rights (4 Credits)
This course explores the many dimensions of global poverty and human rights and well-being of people around the world. Three particular areas are emphasized and explored in detail. The first is the exact dimensions and extent of globalization. The second is the exact nature of another complex thought called poverty. The third area explores the connections between globalization, poverty, and human rights. After rigorous discussion of the conceptual foundations, we focus on the U.N. millennium development goals for poverty reduction in particular. At the end we will be able to explore the analytical foundation of alternative policies, strategies and evaluate these for formulating alternative strategies addressing human rights issues and global poverty reduction.

INTS 4367 Global Health Affairs (4 Credits)
Introductory survey class for all students interested in intersection of international affairs and global health and security, development and economics.

INTS 4368 HIV & AIDS in International Affairs (4 Credits)
Upon completion of the course, students will understand (a) the concept of global health security; (b) HIV/AIDS as an epidemiological phenomenon; (c) the political, economic and social contexts of HIV/AIDS in specific regions of the world; (d) HIV/AIDS as a threat to security and gender; (e) security considerations of HIV/AIDS impacts in development and as a human right.

INTS 4369 Political Economy of Global Poverty & Inequality (4 Credits)
The main purpose of this course is to understand the underlying causes of inequality and poverty in the world. In order to do this, we look at the relationship between economic growth, poverty, and inequalities in several different dimensions. First, the process of sustainable grown itself is analyzed. Second, the implications of different types of growth for income distribution and poverty are studied. Finally, the implications of such inequalities for human welfare in developing economies in particular are studied. After an initial exploration of the income-based measures of poverty and inequalities we focus on the more recently developed social capabilities approach developed by Amartya Sen and others.

INTS 4370 Political Economy of Globalization (4 Credits)
An introductory course on the nature of global economic integration in the postwar period, including contending theoretic perspectives, and several applied issues and policy dilemmas such as the evolving nature of firms (e.g. globalization of production), the "new international of labor," the status of national sovereignty/policy autonomy in an integrated world economy, politics and markets, and currents themes in political economy.

INTS 4372 Great Books in Political Economy (4 Credits)
This course investigates several contemporary approaches to Political Economy, ranging from institutionalist to Marxist, anti-essentialist, and (postmodernist) feminist thought. Rather than attempt to survey quickly a lot of literature, we carefully read a limited number of influential (and provocative) texts that present a range of perspectives with which most students are largely unfamiliar. These are very challenging texts, and students must be prepared to spend a good bit of time on the assigned readings weekly.

INTS 4374 The Ethical Foundations of Global Economic Policy (4 Credits)
This seminar explores the contending ethical theories that underlay contemporary debates over global economic policymaking. We explore the ethical foundations of neoclassical, Austrian, institutionalist and Marxist and economic theory (including utilitarianism, welfarism, libertarianism and egalitarianism) in order to better understand why and how these diverse economic theories generate distinct policy prescriptions. For example, we examine the controversy over "free trade" versus "fair" trade that is now at the center of policy debate in the U.S. and across the globe, and explore the contending ethical theories that inform this debate. This is a reading intensive seminar. We examine central works of Amartya Sen, Milton Friedman, Robert Nozick, Michael Walzer, and other leading economists and political theorists.

INTS 4376 Terrorism, Transportation, and Homeland Security (4 Credits)
This course is designed to introduce students to the critical role that transportation plays in homeland security. Transportation is one of the most important critical infrastructures because society and economy are totally dependent upon the efficient movement of freight and people. Not surprisingly, terrorists, on numerous occasions and in many countries, have launched attacks against aircraft, ships, railway stations, airports and other transportation facilities. In the U.S. the devastating 9/11 attack proved to be a turning point and led to fundamental changes in the struggle against terrorism, including the largest governmental reorganization in many decades, the creation of the Department of Homeland Security and its Transportation Safety Administration. In this course, students analyze the degree to which a safe and secure transportation system for goods and people has emerged. Accordingly the course deals with such topics as the contemporary structure and role of transportation, the nature of the terrorist threat, including the potential of the weapons that are or might become available (ranging from WMD's to suicide bombers to cyber-attacks), the difficulties inherent in safeguarding such facilities as airports, rapid transit, railroads, and seaports, the efficacy of the policies that have been implemented and the kinds of changes that might further enhance transportation and homeland security.
INTS 4379 Gender and Development (4 Credits)
This course is concerned with how and why gender matters in outcomes and impacts of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of development planning. Beyond these practical implications, the course engages theoretical and ideological underpinnings for the gendered structures of economic, political, and social power encountered in a wide range of economic and social development contexts. Throughout the quarter, the class examines interactions among structural and cultural (including ideational) factors that together comprise and construct gendered environments. Structural and cultural factors are, at the least, mutually reinforcing, and may be mutually constitutive. The class interrogates the ways in which each set of economic and social transformations broadly encompassed within a human-rights or human-development approach to international development. The class also engages interacting dimensions of change, including economic, social, political, physical environmental, and human biological dimensions. The class explicitly examines all interactions across scales from global to local. If we were looking for a label for this approach, it could be called "gendered political ecology." We could also use a term coined by Dianne Rocheleau and others, "feminist political ecology," which suggests the need to examine the responsibilities, freedoms, and control of resources, together with the varying forms of agency, strategy, and tactic deployed by women (often in partnership with men) to redress these inequalities. The class considers numerous cases from the Global South, and some from the Global North. These case studies immerse us in the diversity and complexity of gender and development interactions and in the "grounded agency" (Radcliffe 2006) through which women and men attempt to secure livelihoods – that is, "making a living and making living meaningful" (Bebbington 2000) – to enjoy long and healthy lives, and to participate in full citizenship. These cases also illustrate myriad patterns of gender construction across ethnicity, class, age, marital status, and other differences among women and men. This is a policy-oriented course. The class explores the ways in which the gendered division of labor and resources, and the socio-cultural construction of masculinities and femininities, influence perceptions, formulation, and implementation of development policies and practices. The class traces the differential impacts of development policies and initiatives on women, men, and gender relations in the developing world as well as efforts to target women through more gender-sensitive development initiatives. Ultimately, this course considers how ideologies and institutions of global development might yet enable women's empowerment and facilitate equity in a deeply unequal and interconnected world.

INTS 4384 Middle East and U.S. Security (4 Credits)
The course will examine current US strategies toward the Middle East, terrorism, and how Homeland Security in US will respond.

INTS 4386 Transnational Migration in the Americas (4 Credits)
The course examines movement of various nationalities from other nations into North, South and Central America.

INTS 4391 Financial Management and Fundraising of Non-Profits (4 Credits)
This course will introduce students to the legal, governance and financial structures that enable non-profit organizations to function effectively. It will also provide a practical orientation to financial management issues, such as budgeting, financial reporting, and independent audits. Finally, a comprehensive presentation will be given of the fundraising methods needed to sustain the viability of non-profit organizations. These methods include: annual campaigns, direct mail, special events, major gifts, corporate fundraising, foundation grants, and planned giving. The course combines exploration of the general conceptual issues with an emphasis on practical "how-to's" and skill building.

INTS 4394 Non-Profit Management Issues & Techniques (4 Credits)
Nonprofit management issues and techniques looks at current NGOs and issues in working with corporations.

INTS 4396 Education and Development (4 Credits)
Education is a major component of the human capital. It is both an indicator and a driver of an improved quality of life. Developed economies have already achieved high in terms of the average education of their populations. Most of the middle income and some low-income countries have also succeeded in enrolling a high percentage of their children in elementary schools, thanks to the internationally coordinated emphasis in this sector in the sixties and seventies of the last century. On the flip side, some of the developing regions are still struggling to provide basic education to a large share of their school age population. Research on economic growth and development has established a close connection between the economic performance of a country and the level of education of its population. These results have prompted a resurgence of focus on education in the global development agenda. From the Jomtien conference on Education for All (EFA) in 1990 to the Millennium Declaration, the world community has set targets on universal primary and gender balances at the higher levels of education. Despite the thrust on national commitment on education, supported by international efforts like the EFA/Fast Track Initiative, there still remains some inertia and uncertainties on issues like equity of access along different dimensions of deprivation - gender being an important one, balancing the demand and supply of education, the relative importance of basic education for capability creation and social cohesion versus mid-level education for knowledge diffusion or higher education for knowledge generation. Discussion of these issues in a regional comparative context is important in understanding and suggesting education policies for developing countries. This course is primarily intended for students who have a broader interest on human capital development, and specific interest on educational policies and their outcomes. Students with a general interest on development policies and developing economies would also find the course beneficial. It is expected that, after actively participating in the course, the students gather or enhance their understanding of the major education policy issues and debates in the context of developing countries. Students will also identify the best practices by analyzing the national education policies of some of the high performing countries and regions in the developing world. Students use this knowledge to examine the national and international education policy initiatives and develop their own recommendations as necessary.
INTS 4397 The Environment, The Economy, and Human Well-Being (4 Credits)
In this course we will explore the role of the environment plays in society and the determination of human well-being, and how this can be addressed from an economic perspective. A core premise of the course is that the human economy is embedded within the broader context of human society, which in turn is embedded within a natural environment. The natural environment provides a variety of goods and services, which, through interactions between the environment, individuals, and society, contribute to human well-being. Some of these services are directly used by people. Others contribute indirectly by allowing for the continued provision of other services. As such, any discussion of human well-being and development that ignores the natural environment is inherently problematic. We will specifically adopt an economic perspective, but one that goes well beyond that of conventional neoclassical economics.

INTS 4399 Issues in Global Economics and Financial Security (4 Credits)
This course is for Korbel in DC participants only. The course discusses global economic and financial security issues through the prism of the current crisis and its aftermath. We begin by developing the analytical framework and then applying it to key countries/regions. We consider the causes, the policy responses and prospects. We look at ways of ensuring global monetary and financial stability, including appropriate policies to ward off financial crises and asset prices bubbles. Other key topics, including food and energy security and the role of finance in promoting development, are also discussed as time permits. The focus is on applied economics and finance, and their importance as analytical tools in policy discussions on economic security and development. This course is less narrowly technical, more policy and political economy oriented, but nonetheless appropriate for students concentrating in global markets, development, finance and trade. These are a few guest speakers on special topics, in addition to answering questions about career choices and professional development.

INTS 4404 Cities, Security, and Health (4 Credits)
This course will present a framework to analyze the impact of urbanization on human development and security in a comparative context of major urban centers in the developed and developing world. It will provide a practicum for utilizing cross-disciplinary methods and perspectives to address specific challenges to urban and human development. We will examine urbanization through a framework of human development, environmental health and security, and explore how public policy and planning can create short- and long-term impacts on multiple outcomes.

INTS 4423 Introduction to Epidemiology (4 Credits)
Decisions and policy related to global health are based on data from various disciplines such as demography, medicine, and epidemiology. Therefore, it is crucial to correctly understand and interpret what health data and the data in general tell us. This course provides the knowledge and skills required to critically assess data, and understand both strengths and limitations of data and research. This course covers the basic principles and concepts of descriptive and analytic methods in epidemiology and their application to research and practice in public and global health.

INTS 4427 The Political Economy of Sustainable Development in Africa (4 Credits)
This course introduces the political economy of sustainable Development in sub-Saharan Africa (SSA). It uses a multidisciplinary approach that draws on literature from development economics, international relations, comparative politics, sociology, and history, as well as a broad range of country case studies. We engage with the main theoretical and empirical debates on sustainable economic and human development in SSA and examine a diverse range of country case studies. The topics covered include past and current political and economic conditions for economic growth and the improvement of human welfare levels, sustainable agricultural development and governance of natural resources, increased resilience - socially and economically - to rapid environmental change, and the role of foreign aid in African development. We explore the region's integration into the global political economy and examine the role of the state in Africa's development today. The course helps students to understand the major development challenges facing African societies today by illuminating patterns as well as diversity in development trajectories across the region.

INTS 4428 Political Economy of Human Rights (4 Credits)
What does one mean by human rights? What can be the political economy of such rights? These are the two central questions that we will explore in this course. The goal is to understand the underlying social, political and economic processes that led in an evolutionary sense to the present human rights discourse. The nature and implications of economic rights will be given special attention. In particular, the implications of such rights for human wellbeing in both advanced capitalist and developing economies will be studied. The social capabilities approach to rights developed by Amartya Sen and others will be extended to the understanding of human rights.

INTS 4435 Health and Development (4 Credits)
Looks at how health status of populations affects culture and environment, and also how successful development affects health.

INTS 4437 American Public Opinion & Foreign Policy (4 Credits)
This course examines American public opinion and its impact of foreign policy. The course begins with an investigation of what is public opinion in general and how it is collected, analyzed and used. The primary sources of American public opinion data and analyses are identified. The course proceeds to outline the controversies of American public opinion related to foreign policy decision-making using historical perspectives and the most recent challenges from the first Iraq War to the Arab Spring. Although foreign policy is often a secondary issue for the public compared to domestic issues, in recent times it has been mostly responsible for the transition from a Republican-dominated era to the Democrats’ ascendance. A series of principles that have informed practitioners and foreign policy experts concerning American opinion related to foreign policy is examined and affirmed or debunked. Also, media and its persuasive power in opinion formation are considered. At the conclusion of the course, students should be familiar with a selection of foreign policy challenges that America has confronted in the modern era, the role of public opinion in the national decision-making and the existence of guiding principles of public opinion and their exceptions.
INTS 4438 International Public Opinion and Foreign Policy (4 Credits)
This course examines international public opinion and introduces the major international opinion trends that impact foreign affairs. The course first reviews international public opinion worldwide, then by major regions and finally a selection of leading countries. The theoretical question is how public opinion influences foreign policy in countries around the world, and if and when it does, under what conditions. Also, how international opinion affects American foreign policy, including the views of foreign publics toward America and its policies, is also examined. The course begins with an investigation of the history of collection and diffusion of international survey research, the quality of the data and the techniques used to collect it. The relationship of public opinion research and democratic government and media freedom is examined. The second part of the course outlines some of the public opinion benchmarks, their variations and similarities among countries and regions, and their change over time. A variety of the best sources of opinion data are used. Benchmarks include: level of satisfaction with the direction of own nation; satisfaction with and preferences for form of government; satisfaction with and preferences for economic system, the role of government intervention and entrepreneurial values; nationalism and approach to neighbors; attitudes toward Americans, American leadership and foreign policy; and impact of cell phones and Internet on opinion formation and collection. The course's orientation is both from an American foreign policy perspective and from the perspective of key international organizations, such as the UN, OAS, EU, etc. At the conclusion of the course, students should be familiar with the history and sources of international public opinion research, the major similarities and differences in international and regional public opinion, and the impact that it has on both American and international, multinational organization foreign policy decision-making. When available, there are guest speakers concerning the impact of public opinion on foreign policy decision makers.

INTS 4447 Making of Chinese Foreign Policy (4 Credits)
This seminar course examines and analyzes the making of foreign policy in China, a rising power in the 21st-Century. We look at and identify major driving forces behind China's foreign policy-making, including ideational sources (historical legacy, strategic culture, communism, and nationalism), domestic and institutional sources (foreign policy making institutions, elite politics and key players), and international sources (international system and regimes). We also examine China's strategic relations with major powers and its Asian-Pacific neighbors. This course is aimed to equip students with sophisticated understanding of the ongoing debate about the role that a rising China has played and will play in world affairs.

INTS 4450 Democracy and Militarism in Latin America (4 Credits)
Many note that even as democratization has taken place throughout Latin America, there has been a persistent and evolving role for the military, police and private security forces in many cases. The purpose of the class is to explore this apparent contradiction by examining the various internal and external pressures that have come to bear on these societies. Through approaches derived from comparative politics and international political economy we study domestic factors such as interest groups, political parties, social movements and governing institutions on one hand, and the role of international relations and organizations on the other. From this standpoint, the state becomes a mediator of internal and external pressures and is shaped by these pressures in turn. In the first half of the class, we specifically apply institutions, political realist, class analytic and market globalization perspectives to the study of the military. In the second half, we look at the interplay between democratic development and security issues in a changing global environment. This includes a study of the nature of democratization in Latin America, so heavily applauded by scholars, politicians and others, the impact of the truth and reconciliation process that emerged after the bureaucratic-authoritarian era, and the role of civil society and international organizations. In the final part of the class, we turn to the issue of citizen security amid high levels of crime, gang activity, and drug trafficking with a focus on Central America.

INTS 4453 Political Economic Development in Latin America (4 Credits)
In the first five weeks of the class we consider various theories of political economy. These include dependency, hegemonic stability, class conflict, neoclassical economic theory, and the study of institutions and international regimes. Each approach is illustrated through and examination of a historic issue in development - patterns of land ownership, the role of the military, the rise or revolutionary politics, neoliberal development and the promotion of democracy. During this time, students are asked to choose a theoretical framework as a foundation for the required research paper. A term paper prospectus including a description of the framework is due week five. In the second five weeks of the class we consider specific topics in political economic development in the last three decades or what is often called the "global era." These topics include the emergence of "uneven" development, the rise of social movements and role of civil society, transnational migration, the rise of illicit networks of trade, and U.S. foreign policy considerations. Students are encouraged to draw from this or closely related material for the subject matter of the research.

INTS 4459 Global Business, Governance & Corporate Social Responsibility (4 Credits)
In an increasingly globalized world, civil society, states and businesses are trying to discern how to govern business conduct across the borders of nation-states. Many of the issues our society faces today—global financial crises, environmental degradation, and corruption, to name a few—are impossible to tackle within a given country. This course will dive into contemporary global governance mechanisms to better understand the opportunities and challenges that states, business, and civil society face when in engaging with issues such as global financial crises, labor standards, respect for human rights and the environment.

INTS 4460 Politics of China’s Modernization (4 Credits)
After more than a century of decline and stagnation, China is reemerging as a great power in the twenty-first century. China's rise to the glorious has never been easy and still faces many changes in the year ahead. This course is designed to provide students with a comprehensive understanding of China's rise in the context of its political development. We examine how revolution, nationalism, communism and liberalism have all affected the development of modern China with a focus on the political dynamics of the People's Republic of China (PRC) and the politics of post-Mao economic and political reform. We start by analyzing the rise of the Chinese Communist Party and its state and nation building efforts in the early years of the PRC and move on to examine the Mao's failed socialist transformation and political campaigns (the Hundred Flow Campaign, Great Leap Forward, and the Cultural Revolution). The remainder of the course explores political dynamics of post-Mao economic and political reforms and the prospect for a democratic China. This course aims at equipping students with an analytical perspective for understanding contemporary Chinese politics.
INTS 4465 Population and Society (4 Credits)
Population can play a key role in defining the fates of societies, yet Auguste Comte’s notion that “demography is destiny” has been subject to two centuries of oversimplification, misinterpretation, and manipulation. This course seeks to reverse key misconceptions and open up new avenues of inquiry through an in-depth look at the key elements of population - population size and growth, demographic events, and population structure - and their relationship to development, security, health, the environment, and human rights. The course begins with a look at theories on the relationship between population and the fates of societies from Malthus to Marx to the present day. In doing so, we move from thinking of population change in aggregate to considering the impact of three demographic events - birth, death, and migration - that occur according to highly measurable and predictable age and sex patterns. Armed with a powerful conception of demographic change as a product of population structures and events, we explore the implications of demographic shift and long-term demographic structures for national and global outcomes under a range of political, economic, and social conditions. We will use case studies to address salient issues such as the limits to the human life span; prospects for reversing or mitigating the effects of very low fertility; the consequences of coercive solutions to population control; prospects for global migration; and the impact of HIV/AIDS on society.

INTS 4468 Politics of Development (4 Credits)
Course explores political factors and parties which affect developing nations and hinder new development.

INTS 4478 Donald Trump, Democratic Decline and Authoritarian Populism (4 Credits)
To affirm that on a global level, liberal democracy is declining and authoritarian populism is ascendant, is to state the obvious. This confirms a trend that Larry Diamond predicted ten years ago about a “democratic recession” that shows no sign of abating. What is most intriguing and in need of explanation is the decline of democracy and the rise of authoritarianism in liberal societies of the West, where democracy has long been established and consolidated. According to the 2018 Democracy Index (published by the Economist Intelligence Unit), the United States in the era of Donald Trump, is better described as a “flawed democracy” rather than a “full democracy.” Similar trends are discernible in Europe, Latin America and Asia. How can we explain this development? What social conditions have produced this outcome and what are the implications for world order and the study of international affairs? Can the slide toward authoritarian populism be reversed? We will examine these questions theoretically, historically and comparatively.

INTS 4483 Practical Applications in Global Health (4 Credits)
This course is designed for students interested in a career in Global Health with a focus on low resource settings including humanitarian settings. This course focuses on analyzing and developing solutions to global health problems in a systematic and creative way. Students are introduced to a problem-solving paradigm and, working in small groups, apply this model to a global health issue of interest to them. In addition, we cover other critical issues that need to be considered in addressing global health issues including equity, social determinants, and health systems as well as leadership, innovation and working in multidisciplinary teams. At the completion of the course, students should be able to: apply a methodical approach to problem solving in global health; analyze the range of factors that contribute to global health problems and understand the importance for finding solutions; examine critically the implications of policy or programmatic solutions to global health problems; develop and present a program proposal.

INTS 4484 Agriculture and Sustainable Development (4 Credits)
This course provides an overview of world agriculture and an introduction to agricultural populations, politics, policy paradigms, and institutions. It contain modules in: the history of agricultural production for economic growth and food security; global distributions of (1) agricultural production regimes, (2) land (including historical and contemporary “land grabs”) and other productive factors, and (3) uses of agricultural products for food, fuel, feed, fiber, and agro-based construction materials; effects of agricultural trade on economic growth, livelihoods, and food security; relationship between humanitarian food aid and agricultural production and food security; social organization of agriculture and related productivity and human development issues, with special attention to gender; environmental constraints to agricultural sustainability and agricultural constants to environmental sustainability (climate change, water demands and conversation, agricultural energy production and consumption, causes of soil loss and degradation); technological change and innovation in agriculture; and culture and agriculture.

INTS 4485 International Trade and Economic Negotiations (4 Credits)
This course is for Korbel in DC participants only. The purpose of the course is to explore the challenges confronting international trade and economic policy, as well as current negotiations designed to address these circumstances.

INTS 4492 Health and Humanitarian Aid (4 Credits)
According to the World Health Organization, “Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.” In order to address health in humanitarian settings we must therefore respond to a range of needs and consider the diversity within affected populations. In this course, students will have the opportunity to explore some key sectors of humanitarian aid and how they relate to health. By following a specific ongoing crisis throughout the quarter, each student will have the opportunity to gain a better understanding of the particular challenges inherent in humanitarian assistance and to analyze how the “theory” is actually implemented in practice. Whether the student’s future is in the field or at headquarters, internationally or at home, he or she will likely need to quickly and critically review and summarize available information in order to inform decision-making, and students will have ample opportunity to develop this skill during the quarter.
INTS 4495 Civil Wars and International Responses (4 Credits)
Throughout the post-cold war period and into the 21st century, the scourge of war today is seen in mostly internal conflicts fought along ethnic, religious, ideological, or economic lines that divide societies and lead to devastating armed conflict. This course investigates the problem of contemporary civil wars. This course explores theories, concepts, and empirical research in the analysis of contemporary civil wars and in-depth, student-led evaluation of specific cases. The course covers these themes: evaluation and patterns of armed conflict and war termination in the 1990s and early 2000s with a focus on methods for systematic, multi-causal conflict assessment methodologies; exploration of the processes of escalation in armed conflict and of concomitant peacemaking by international mediators; and evaluation of the concepts of "peace processes" and scrutiny of the terms of negotiated settlements in armed conflicts today. The principle learning outcomes for the course is to gain a complex and detailed understanding of the modal form of contemporary armed conflict-civil wars and concomitant international intervention by the international community (particularly the United Nations) to this form of armed conflict. Students who successfully complete the course gain an understanding of contemporary civil wars, issues in conflict duration and processes of war termination, and introduction to the scholarly and policy-relevant literature that has developed in the last two decades related to challenges of conflict prevention and of "peacemaking" or negotiation and mediation of civil war conflicts.

INTS 4496 Field Operations for Humanitarian Assistance (4 Credits)
Within a disaster response, various interrelating factors determine the ability of the humanitarian community to adequately respond. From coordination among governments, donors, non-governmental organizations (NGOs) to internal working components within an agency that drive programmatic support, the realm of humanitarian operations is a complex system that should be understood by anyone with an interest in supporting relief efforts. The main focus of this course is concentrating on the practical, specific systems that drive field operations - namely security, logistics, finance, monitoring and evaluation, human resources, administration, and advocacy that support program planning and implementation. Through understanding these components, the challenges that are encountered, and how each interrelates within an organization and the wider response community students gain a balanced understanding of humanitarian operations. While each emergency response comes with varying contextual challenges, the humanitarian imperative mandates the relief community to respond in a neutral manner based on need. Doing so, places strains on the operational systems that need to be overcome to provide quality interventions. Through this course we take an in depth look at both theoretical and practical ideals for humanitarian assistance.

INTS 4497 International Campaign Management (4 Credits)
This course will examine the principles of political campaign management and their application in a number of international political, public affairs and human rights campaigns. It will be an introduction to the tools of political campaign management: message development, survey research, audience targeting, paid and earned communications, fundraising and organizational structure. Case studies of campaigns in countries such as Sweden, the UK, and Australia will be used as examples of these techniques. Class will be comprised of lectures, discussion and some simulation exercises. Efforts will be made to bring outside specialists and experts to the class or by teleconference. Readings may include contemporary journals, periodicals, newspaper reports and excerpts from major studies of campaign and organizational management.

INTS 4499 Evolving Global Security Landscape (4 Credits)
This course is for Korbel in DC participants only. Change brings with it challenges—at the individual, organizational, and systemic levels. It involves behaviors and cultures with often deep-seated traditions. This course will explore the scope and magnitude of the transformational forces at work in the U.S. and to a lesser extent the global security and defense establishments. By its nature the course will be about peace and war—how the nation goes about the business of preparing, equipping, and training itself to deter and if necessary to fight traditional wars and the new kinds of challenges that might lead to armed conflict as well as shaping the post war environment for an enduring peace—but do NOT think about this as a linear process. It will also be about sociology, bureaucratic politics, the role of the media, economics, health care, power... Most of all this semester it will be about the transformational nature and effects of ROBOTICS, AUTONOMOUS SYSTEMS, and ARTIFICIAL INTELLIGENCE (RAS/AI) on security and the budget pressures on the national security/ defense budgets—and where to consider taking acceptable risks—geographically and functionally and force posture wise (for example, do we need a $1Trillion nuclear modernization program; or 2400+ F-35s; or 12 carrier battle groups?). THIS AGENDA NOW IS BEING SHAPED GOVERNMENTS and the PRIVATE SECTOR—COMMONLY KNOWN AS THE 3rd OFFSET. (The roots of this can be found in Secretary Hagel's 214 Innovation Initiative. http://www.defense.gov/News/Article/Article/603658).

INTS 4500 Social Science Methods (4 Credits)
Prerequisites:The course presumes a basic competence in statistics, social science, international relations, and comparative politics. This is an advanced, fast-paced course that seeks to provide students with a sensitivity to research design choices, both for designing their own projects and as critical consumers of the works of other scholars. The course is primarily intended for Ph.D. students at the pre-dissertation prospectus stage as well as for advanced MA candidates pursuing thesis projects. The course content covers diverse methodological approaches from the discipline of Political Science as well as methods from other fields. The course will cover topics including: research questions and ‘puzzles’ in political and social science; causality and causal inference; theory construction; measurement; the comparative method; case selection; and quantitative and qualitative methods. Students should enter the course with several research interests in mind since the final project for the course entails producing a research design that could serve as the basis for a future prospectus. The class sessions will include a formal introduction to different methods, a discussion of readings, and work-shopping of student work. We will also informally discuss tips and tradeoffs in the academic profession and for publishing. The class meetings will rely heavily on student participation and peer critique. At the end of the course, students should be able to identify the strengths and weaknesses of different research designs.
INTS 4501 Comparative Politics in the 21st Century (4 Credits)
INTS 4501, Comparative Politics: States and Societies in the 21st Century, is a core course in the graduate program curriculum of the Josef Korbel School of International Studies. The course explores theoretical perspectives and policy-relevant knowledge in comparative politics, a sub-field of contemporary political science that considers the ways in which states and societies govern themselves or "allocate value" in countries around the world. Governance is arguably the pivotal variable in the realization of contemporary global development and human security objectives. The principal question the course addresses is: What is "governance," and how does it serve to work for, or against, peace and development in countries around the world?.

INTS 4502 Comparative Revolutions (4 Credits)
An intermediate course focused around the major revolutions that occurred in England, France, 19th century Europe, and in Russia and China during the 20th century. Emphasis is placed on historical facts, key theoretical debates generated during the various social upheavals, and diverse interpretations seeking to understand the nature and causes of revolutions and their impact on societies. Prerequisites: INTS 4702.

INTS 4509 Food Security, Nutrition, and Sustainable Development (4 Credits)
This policy-oriented course will examine structures and processes that result in varying food security outcomes across space and time. Food security outcomes reflect interactions among political, economic, socio-cultural, and physical environmental systems. These systems, which are both dynamic and permeable, give rise to particular forms and patterns of food production, distribution, and consumption, and to more or less environmentally-sustainable uses of the natural resources critical to food supply.

INTS 4514 Population, Environment, and Development in Latin America (4 Credits)
This course engages the complex and interlinked dynamics of changes in population, systems of production, and the physical environment. Navigating among scales from global to local, we examine the interactions of trade regimes, markets, natural resource tenure systems, migration, livelihoods, technologies, health, and natural resource stocks. Taking a political ecology perspective, we will interrogate the distributions of wealth and power that affect control of natural resources, human well-being, and environmental sustainability. We also investigate the multiple social and cultural meanings of "natural resources" to actors who are variously positioned in terms of class, ethnicity, and gender. These dimensions of the population/environment/development nexus are examined for the following sectors: water conflicts and watershed management in the Andes; colonization, cattle, and energy development in the Amazon; non-traditional agricultural exports and aquaculture development in Central America; and forests throughout Latin America.

INTS 4516 Major Diseases in Global Health (From Pathophysiology to Action) (4 Credits)
As future global health practitioners and policy makers, it is imperative that we each have a complete and solid understanding of the mechanisms, physiology, epidemiology, transmission patterns, and clinical impact of the major diseases affecting global health. How and when does a person transition from simple HIV infection to full-blown AIDS? Why is dracunculiasis so readily amenable to eradication whereas filariasis is not? For what populations is co-infection with HIV and TB or HIV and malaria so critical and why? On the individual patient level, how and why do certain diseases manifest so differently in resource-poor versus resource-rich or urban versus rural settings? Who are the vulnerable populations and how does disease impact them physiologically? When and where would specific program interventions work over other programs and for whom? In this course, the students develop an understanding of the etiology, agents, vectors, burden, methods of detection, basic treatment complexities, and life cycles of major diseases impacting the world. Specifically, this course details HIV/AIDS, TB, malaria, maternal/reproductive health, some protozoa, helminthes, and major parasites, chronic disease such as cancers and diabetes, and violence/trauma. As there is no shortage of amazing and interesting diseases globally, students learn a sound method of inquiry with which to address and disease process. Students also apply this method directly toward program analysis, and in the development of teaching sessions for community health workers.

INTS 4517 Politics of Deeply Divided Societies (4 Credits)
This course focuses on the politics, conflicts, and conflict transformation approaches to deeply-divided societies. While ethnic, religious, and other types of communal conflict have been around for millennia, since the decline of colonization, and especially since the end of the Cold War, such struggles seemed to have exploded onto the world scene. This course focuses on these "contemporary" ethnic, religious, racial, and other communal conflicts to better understand why and how such conflicts develop. We then examine both theory and practice on what can be done to ameliorate or remedy them. Units focus on the nature of identity and identity politics; the use of political violence to pursue identity or nationalistic goals, and nonviolent approaches to identity conflicts. We then look at alternative political and conflict-transformational approaches to such conflicts including frameworks for living together (such as consociationalism, federalism, and power-sharing, and scenarios for separation (partition or succession). We also look at the negotiation, mediation, and other peace processes that have been utilized to try to accomplish such ends, and examine which have worked better than others and (to the extent possible) why. Readings will include both case study and theoretical material. Students are required to make several short class presentations, participate actively in discussions and exercises, and prepare and present a term paper analyzing one currently destructive deeply-divided society, analyzing the cause of the current unrest, and possible remedies to that situation.

INTS 4521 Cultures of Development (4 Credits)
Explores cultural dimensions of economic and social change from perspectives of actors who create, promote, negotiate, and resist different agendas from global to local.

INTS 4522 Philosophy of Social Science (4 Credits)
What is the nature of social science and the knowledge that it produces? This course, which is intended to complement INTS 4500 Social Science Methodology and INTS 4010 Epistemology, it introduces students to the leading mainstream perspectives on the philosophy of social science. Special attention is given to Positivism and Post-Positivism, Post-Structuralism, Pragmatism, and Scientific Realism.
INTS 4525 Religion-State Relations in Comparative Perspectives (4 Credits)
This seminar course provides an introduction to the key readings, concepts and debates on religion-state relations. While the focus is on the Western political tradition we explore the case of India and the Islamic world at the end of the course. Themes such as freedom of belief, the role of religion in the public sphere and debates over the political construction, location and meaning of secularism are examined.

INTS 4526 Modern Islamic Political Thought (4 Credits)
This seminar course explores the key writings of Muslim thinkers who have shaped Islamic political thought during the 20th Century. We begin with the writings of Jamal Eddin Al Afghani and his Egyptian disciple Muhammad Abduh. We then proceed to read from the selected writings and speeches of Hassan al-Banna (founder of the Muslim Brotherhood), Sayyid Qutb (radical Egyptian Islamist theoretician), Adul Ala Maududi (Pakistani Islamic thinker and founder of Jamaat-I Islami) and Ayatollah Ruhollah Khomeini (leader of Iran’s 1979 Islamic Revolution). We also investigate some of the writings of Islamic reformist thinkers such as Abdolkarim Soroush, Nasser Hamed Abu Zayd and Khaled Abou El Fadl. The emphasis in this course is on understanding the historical and political context which has shaped Islamic political thought during the 20th Century.

INTS 4534 Topics in Middle East Politics (4 Credits)
The 2011 Arab Spring is widely viewed as a turning point in the modern politics of the Middle East and North Africa. Longstanding authoritarian regimes and dictators have fallen while others cling to power in the face of popular protests. The region is headed for uncertain waters with Islamist parties on the ascendance, liberal and secular forces struggling to assert themselves while a Western world watches these developments with a combination of hope, concern and consternation. This course is devoted to examining the Arab Spring revolutions and more broadly the changing politics of the Arab-Islamic world. We do so by collectively reading one book per week on the Arab Spring and other situations in the Middle East. Specific themes that are analyzed include the legacy of authoritarianism, the process of democratization, religion-state relations, the role of external powers and the transformation of Islamist politics. Part of the course looks at how these books have been reviewed both in intellectual and scholarly journals. This class is designed for students who seek a deeper grasp of the Middle East and a more refined understanding of the politics and history of this region. This is not an introductory course on the Middle East, Islam, or the Arab world and previous course work is assumed. Those uncertain about their status should consult with the instructor before enrolling.

INTS 4536 Economics: Fundamental Knowledge, Global Applications (4 Credits)
This course provides an introduction to the methods used to analyze contemporary global economic events by examining the environment in which individual economic agents interact. We analyze what the economic problem is, how consumers and business firms make economic decisions, how markets work and how they fail, and how government public policy decisions affect individual and aggregate behavior in both domestic and international markets. A special feature of the course is the application of economic principles to real world problems.

INTS 4539 Food Security in the United States and the World (4 Credits)
This course discusses: food security in the United States (community food security, food insecurity); stunting and chronic nutritional deficiencies; global water crisis; land degradation; land deals; climate change; dictatorship and kleptocracy; economic approaches (westernized view, food justice, food sovereignty); World Food Summit; achieving food security (the agriculture-hunger-poverty nexus, biotechnology for smallholders in the (sub)tropics); risks to food security (fossil fuel dependence, genetic erosion in agricultural and livestock biodiversity, hybridization, genetic engineering and loss of biodiversity, price setting, treating food the same as other internationally traded commodities); access to basic food supplies; infant feeding; determining nutritional status; supplementary feeding; therapeutic feeding; malnutrition, nutrient requirements and sources.

INTS 4543 Religion and International Studies: The Apocalyptic Tradition (4 Credits)
The relationship between religion and international politics is an important and understudied topic. For year, religion was, at best, a handmaiden to international relations as scholars focused on state actors only. Since 9/11 this has changed in dramatic fashion because of the rise of radical Islam, the importance of the religious right in the United States and its role in Middle East politics, and a growing awareness of how religion can divide populations within states and in many regions of the world. This course begins with an evaluation of the thousand year history of religious conflict before 1648 when faith and international politics were inseparable. We study the struggles between Islam and Christianity as well as “heresy” in both of these religions which lead to events like the Protestant Reformation. We explore the role of religion in politics from the eighteenth to the twentieth centuries and conclude with readings on such topics as suicide bombing, shifting religious values, demographics, and projections on how religion will shape international politics in the 21st century.
INTS 4557 Cross-Cultural Communications (4 Credits)
This course is designed to prepare graduate students for careers as international professionals by focusing on the cultural factors that influence communication in international relations as well as the rules that proscribe and prescribe behavior. The course emphasizes culture and will explore how different cultures: perceive and interpret their surroundings, and create and communicate a shared, cultural construct of reality and identity; develop unique communication rules; and evolve culture-specific verbal and non-verbal communication behaviors. Students will immerse themselves in a particular culture (its history, values, world views and associated thought processes, religion, gender and social perception, language, and nonverbal communication) and research its communication conventions, practices, standards, core metaphors, terms, cultural premises, and meaning systems. Students are expected to demonstrate a critical and informed awareness of cultural content and identity, as well as the communication imperatives and procedural issues in their country through class presentations, discussions, and a long paper. The course rationale is that cross-cultural communication is inevitable, and without an understanding of the cultural communication imperatives, it is very difficult, virtually impossible to understand, work with, manage, or influence individuals from another culture. The course will involve theory and proven models, but will primarily focus on cultural immersion, skills development, practical applications, and case studies—exploring how culture both influences and reflects communication dynamics, how to communicate effectively in a multicultural environment, and how to manage and resolve cross-cultural conflicts.

INTS 4555 Professional Communications (4 Credits)
This course is designed to help graduate students improve their ability to communicate professionally to a variety of national and international/ intercultural audiences for a variety of purposes, and to manage through communications. While INTS 4557, Cross-Cultural Communications, focused heavily on immersive experiences in verbal and non-verbal communication in professional, cross-cultural scenarios, this course will use professional writing in cross-cultural contexts as its starting point. Students will learn the tools they need to adapt their writing in varied professional, cross-cultural contexts and to translate it into effective verbal presentations in these settings. In particular, students will develop an awareness of professional language, written conventions, and multimodal communication, including verbal, written, and digital/visual modes. Students will learn skills in rhetorical analysis, which will enable them to adapt to multifaceted professional writing scenarios in the future. They will apply these skills in the context of case studies and other examples that will address challenges professionals must problem-solve using written communication All students will complete a professional writing portfolio by the end of the quarter with the goal of being more prepared for the job search.

INTS 4549 Managing Microfinance: Balancing Business with Development (4 Credits)
This course builds on the topics in “Introduction to Microfinance” and delves more deeply into the challenges of managing microfinance institutions (MFIs) and effective social entrepreneurship. How do MFIs make sure they stay in business (with good risk management and financial management) and make sure they have real social impact? How can they innovate financial services and other market-based solutions that create lasting economic opportunity or social change? Whether a market-oriented NGO or a socially-motivated business, an MFI needs a clear development strategy, a clear business strategy, and the operational tools to implement both strategies well. Regardless of legal structure, both NGO and for-profit MFIs need good management and financial information to meet both sustainability and social goals. Whether used for poverty alleviation and or banking services for the poor, there are shared characteristics among successful microfinance organizations, as well as common pitfalls and challenges. As organizations figure out the “business” side of providing loans and savings, they also need to figure out which development services have greatest benefit for clients, choose strategies for social change (e.g. basic education, health care, business skills), and assess how well those strategies are working. For example, large-scale MFIs in India and Latin America have been very successful financially, but have only recently focused on their social impact. Smaller NGOs may serve the poorest and provide many development services, yet struggle to find a viable business strategy and sustainability. MFIs share challenges faced by many development organizations: (1) How do we balance our financial and impact goals; (2) How do we choose where to invest resources for greatest impact (e.g. financial services for many or in-depth assistance for fewer?); (3) What information do we need to ensure financial transparency and accountability; (4) How do we assess social and financial performance to keep improving our business strategies? This class will use weekly readings and case studies of specific microfinance organizations to: Illustrate business challenges and specific business risks in microfinance; Review basic financial statements and key financial measures to assess financial performance and risk, for both for-profit and non-profits; Review different approaches to answering the question “are we making a difference?”; Analyze management situations of “too much profit” and “too much development”; Compare pros and cons of for-profit and NGO legal structures, and implications; Discuss governance and boards of directors, compare and evaluate approaches; Highlight examples of social entrepreneurship powering market-driven change in microfinance and other areas (mobile banking, small-scale solar electricity, etc). Cases include Adelante Foundation, BRAC, Fonkoze, Kenya Women's Finance Trust, ACCION's Center for Financial Inclusion, and others. The first half of each class focuses on a real MFI case study to highlight the issues and understand the topic; the second half on the financial implications of these risks, the financial principles involved, and how well the tools work. Students gain a better understanding of financial statements, MFI operations (with case studies from around the globe), and credit risk, as well as key principles of financial management and good governance.
INTS 4566 Global and Sustainable Development (Case of Coffee & Chocolate) (4 Credits)
In recent years, the issue of sustainable development has received considerable attention from academia, governments, and international organizations. Of particular concern are countries that are heavily dependent on the export of commodities. Can sustainable development be achieved by such countries? Chocolate (cocoa) and coffee are not only among the world's most popular little pleasures, they are also among the most traded commodities. Originating in Latin America and Africa respectively, their global diffusion has influenced the culture, society and politics of developed and developing countries for decades and continues to do so today. Coffee exports (the primary source of foreign exchange for many poor countries such as Ethiopia) are valued at about 9 billion annually. 25 million people in Asia, Latin America, and Africa struggle to earn a living through coffee production, it too is a major source of income for many countries in Latin America and West Africa. Yet, many problems have been identified such as farmers unable to earn a survival wage, the exploitation of child labor, and the damage that production processes inflict upon the environment. In short, these important commodities are apparently contributing little to sustainable development. Various organizations and individuals are involved in efforts to change this situation by promoting the establishment of specialty, organic and fair trade coffee and chocolate products. The degree to which these efforts can help turn the existing situation around remains unclear but the lives of millions of people and the future of many countries hangs in the balance. This seminar is designed to address such issues. We explore the meaning of sustainable development and consider the nature of globalization and the ways in which it has shaped the cultivation and consumption of coffee and chocolate over time. In order to understand this linkage, we utilize the concept of the "commodity chain", an approach that allows us to conceptualize the nature of the international linkages, their key nodes, the distribution of power, and the ways in which external factors influence a country's development efforts. The course is divided into three parts. In the first, we cover the basic concepts and seek to answer such questions as: 1) How have the coffee and cocoa commodity chains been shaped by globalization? 2) What has been the role of key actors - producers, local traders, governments, and multinational corporations - in shaping production and consumption patterns over time? In the second part we consider three basic forces that have shaped the commodity chains - the state and its policies, culture and consumption patterns, and entrepreneurs and technology. Here the questions are: 1) How have the policies of producing and consuming states affected the commodity chains? 2) How have changes in consumption patterns reflected in the growth of Starbucks influenced the situation in developing countries? 3) How have external technologies such as transportation and communication technologies as well as internal technologies such as instant coffee changed the chains?.

INTS 4567 Democratization in Africa (4 Credits)
Since the mid-1970s, the world has seen an ongoing wave of democratization. Some 70 countries have undergone transitions to democracy since the 1970s, with some 40 countries having gone through such a transition in the 1990s and early 2000s. Perhaps nowhere is the "third wave" more fully felt than in sub-Saharan Africa, which has seen since the 1990s a myriad of transitions from one-party states to multiparty democracies, as well as war-to-democracy transitions as countries today raise a number of important retrospective questions about the underlying drivers of democratization, the various paths that countries go through on the road to democracy, whether such changes are sustainable over time (and why or why not). The very word "transition" is rightly questioned: Is there a proverbial point of no return when democracy is "consolidated" and country goes from the transitional category to a fully formed democracy? While democratization may lead to peace over time, the actual process of political reform is destabilizing for societies, and that in the short term there may be real and direct threats to peace in democratizing societies as a result of the uncertainty and competition that democracy introduces into restive social environments. In Africa, despite celebrated transitional elections and a few clear success stories (such as Namibia), democratization has been fraught with challenges, from elections as the spark to civil war or massive political violence, to corruption, fraud, and rent-seeking by elected elites, to widespread discontent over the inability of democratically elected regimes to foster socio-economic development. As well, there is a critical concern that electoral processes in Africa are often accompanied by widespread political violence. Thus, Africa's experience with democracy lies between the powerful force of liberation that guided the continent's politics in the formative years, and the uneven, non-linear, and for the most part elusive goal of "consolidation." The course explores democratization - the means and methods by which countries in recent years have moved form a non-democratic to democratic regime type. What theories, concepts, and methods should be used to understand democracy and democratization in today's complex, multiethnic societies? How does the Africa experience relate to broader theories and perspectives on democratization?.

INTS 4569 Migration (4 Credits)
Migration is a fundamental feature of our lives. Indeed, every aspect of our civilization and our self-conception is shaped by the exodus of all humans from our origin as a species in Southern Africa 200,000 years ago. In our own era, the aging of western populations, the rise of new economic powers, and dramatic improvements in human capital have given rise to an era of labor migration unparalleled in magnitude and diversity, though not entirely unique. New technologies have risen to facilitate further migration, enable the transmission of resources and knowledge across borders, and create new transnational patterns of residence and livelihood that challenge our notions of nation, identity, and even the very meaning of the term migrant. To put it simply, migration is the human face of our modern era of globalization, entailing incredible costs, risks, and returns for migrants along with important impacts for host societies, and the global system. Migration comes in many varieties in terms of destruction, permanence, and level of coercion, yet common theoretical, empirical, and policy unite these different forms of mobility. This course offers a holistic view of the migration process from multiple perspectives, at multiple levels of analysis, and on multiple aspects of our world today. As a uniquely individual behavior, migration has proven over time to be notoriously unfriendly to policy, which is often ineffectual or even counterproductive. We explore this cross-cutting concern through case studies illustrating the promise and pitfalls of migration policy.

INTS 4575 Systems Thinking for Social Scientists (4 Credits)
The purpose of this course is to introduce students to systems thinking as an approach for understanding and analyzing real-world issues. In addition to introducing the basic principles of systems thinking, questions that will be addressed include: Why do systems behave the way they do? Why do systems resist change and often end up getting worse when we try to change them? How do you find points of leverage within a system? This course uses examples drawn from a range of issues across the field of international studies. In doing so, it illustrates how a systems perspective can allow you to see parallels between seemingly disparate issues. This course introduces both qualitative and quantitative approaches for analyzing systems and discusses the benefits and limitations of each. Quantitative, computer-based modeling is used in this course, but no background is required.
INTS 4576 Seminar: Community-Based Research Methods (4 Credits)
This course offers a weekly seminar in methods for community-based research in health, development, population, and humanitarian assistance. The course is intended as preparation for students preparing for a community-based research partnership in Delhi, Nairobi, Jerusalem, or Iquitos, Peru, but is open to all students preparing to go to the field. Focus is on practical methods for gathering quantitative and qualitative data at the individual, household, village/neighborhood, facility, and total community level including “windshield observation”, key informant surveys, household surveys, and gathering of secondary data from census and other government and non-government sources. Methods of data collection include Geographic Positioning System (GPS), facility/provider surveys, community governance/needs assessments, and knowledge-attitude-practice (KAP) behavioral surveys. Topics of particular emphasis include maternal and child health (MCH), water and sanitation (WASH), and primary health care (PHC).

INTS 4577 International Futures (4 Credits)
Futures forecasting involved decisions about priorities. Decisions require forecasting the trajectory of a society with and without interventions of various kinds. This course involved students in the forecasting and analysis process. In the lab, students learn to use the International Futures (IFs) forecasting system. That system represents multiple issue areas (demographics, economics, energy, agriculture, education, health, socio-political, and environment subsystems) and is supported by a very large database. Students study the structure of each of these modules, how they are linked to other subsystems, and what they tell us about the processes of change globally and in countries and regions around the world. Students use the system for forecasts and analyses of their own.

INTS 4581 Introduction to Humanitarian Systems (4 Credits)
The Humanitarian field has changed significantly since the founding, in 1863, of what is now the International Committee of the Red Cross. Since the early 1990s there have been efforts to improve coordination between humanitarian actors and to improve the quality of international humanitarian response. High profile humanitarian crises such as the Rwandan genocide, the 2004 Indian Ocean Tsunami, the Haitian earthquake, and the conflict in Syria have highlighted weaknesses in the system and spurred reform efforts. Through readings, class discussions, guest speakers, group work and individual assignments, students gain a better understanding of the development of humanitarian systems and policies and how these affect current humanitarian practice. Key debates in the humanitarian system are also discussed and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. At the completion of the course, students should be able to: Discuss the history of humanitarianism; Recall key components of the humanitarian infrastructure; Describe the humanitarian principles, their interpretation and application; Identify ethical issues which may arise for humanitarians; and discuss the implications for humanitarian practice of key emerging challenges.

INTS 4583 International Protection in the Humanitarian Context (4 Credits)
At the conclusion of World War II after witnessing the horrific and historic loss of life, and in an effort to save future generations from the direct impact of war and conflict, the Western powers created several important legal instruments to protect civilians. These instruments are largely derived from human rights, refugee, and international humanitarian law. These initial legal instruments were later combined with additional instruments, both regional and international in scope, and are collectively and cumulatively considered the legal framework for “International Protections.” After sixty years of the progressive legal and theoretical development of international protection and its practical implementation, a slow but evident shift has developed over time. Theoretically speaking, a shift from the end of the Cold War’s position of absolute sovereignty to the ideals of the 1990s and the “responsibility to protect” which developed in direct response to the failed efforts of the international community to protect in Bosnia, Rwanda and other conflicts. As a result of the changing nature of conflicts, confusing mandates, ambiguous definitions, and political will, we have witnessed the failure of international protection in numerous humanitarian settings.

INTS 4591 Advcd Fundraising Workshop (4 Credits)
This course compliments INTS 4391, in which an overview of non-profit fundraising - along with financial management - is given. In this course, we take an in-depth look at the major methods of non-profit fundraising, namely, annual giving, special events, corporate fundraising, grant writing, major gifts, and planned giving. The teaching methodology to be employed is that each 3 hour class session is, in effect, an intense workshop on a specific fundraising topic. During each class session, a fundraising professional from the community, who is actively engaged in the particular fundraising activity being discussed, joins the professor in leading the workshop. Due to the advanced nature of this course, enrollment is limited to those who have already been introduced to the major methods of fundraising through the previous completion of INTS 4391, the concurrent enrollment of INTS 4391, or previous fundraising experience or educational pursuit in the fundraising field that is judged by the professor to be sufficient to be an active participant in this course.

INTS 4593 Knowledge for Development (4 Credits)
Knowledge plays a critical role in improving human welfare. Rapid progress in science and technology in the recent times and an increasingly interconnected world facilitated by such progress have raised the potential for using knowledge in bringing development everywhere in the world within foreseeable future. This course examines the role of science, technology and innovation in achieving economic and social development through creation, diffusion, transfer and adaptation of knowledge within and across national boundaries. Course participants examine the role of knowledge and innovation in fostering economic growth and social development. They scan the modern science and technology challenges and opportunities especially those useful for development. They also study the various activities, institutions and policies that can help developing countries devise (or strengthen) and maintain a state of the art knowledge system. They have hands-on experience of designing a knowledge policy plan for a developing country or region. The course brings in material from various disciplines though the major focus remains on international development. It can be cross listed as a development, a technology policy or a GFTEI course. No prerequisites.
INTS 4595 Civil Wars and International Responses: Evaluating Post-War Peacebuilding (4 Credits)
Today, civil wars constitute the principle, realized threat to international security (measured in lives lost). This seminar critically explores the problems to international peace and security posed by contemporary civil wars and the efforts of international - primarily, United Nations - “peace building” missions to implement negotiated settlements aimed at substantially ending such wars and preventing their recurrence. The concept of peace building seeks to capture the complex, multidimensional task of implementing the terms of settlements to end war preventing the recurrence of war, and addressing the deep-seated causes of social conflict and deep divisions that gave rise to protracted armed conflict in the first place. Furthermore, the notion of peace building have been augmented by the concept of state building, which implies that the principle strategic objective of external efforts is to help develop and create legitimate, capable states that are able to realize the provision of security and human development and to manage future social conflict through nonviolent bargaining processes and institutions. The scope of the course includes the analysis of theories, concepts and empirical research in the analysis of post-war international interventions in civil wars and in-depth, student led evaluation of specific cases. Prerequisite: INTS 4495.

INTS 4599 Ethics and International Affairs (4 Credits)
This course examines the following: social "science" and ethics, power-rivalry and capitalism versus human rights and democracy, what are the dimensions of poverty, what role does the World Bank play, "laws of people," two classes of human rights (according to Rawls), national interest, and tolerance.

INTS 4620 Introduction to Middle East and Islamic Politics (4 Credits)
According to 2017 Global Peace Index, the Middle East and North Africa are the least peaceful parts of the world. The instability from this region has gone global and is now destabilizing large parts of the entire world. Why? Answering this question is the focus of this course. The approach taken will be historical and comparative with an emphasis on the relationship between religion and politics in the Islamic Middle East.

INTS 4622 Global Governance (4 Credits)
This course surveys a range of arguments about how, whether, and/or the conditions under which global or transnational issues are governed. It examines different ways of thinking about governance and the governance process. It unpacks the variety of authorities that govern transnational issues. This course also considers different arguments about how the variety of actors engaged in a particular issue affects to the amount and type of governance possible. The course is intended for both masters and PhD students.

INTS 4624 Private Actors and Conflict (4 Credits)
General approaches to conflict focus on violence between the military forces or states. The conflicts of the last two decades, however, involved a variety of other actors: private military companies training or fighting with armies, relief workers trying to mitigate the impact of conflict on noncombatants, environmental NGOs working to lessen the impact of conflict on endangered species, multinational corporations trying to continue their business dealings, paramilitary and/or other citizen groups trying to defend their private property or other rights, criminal networks working to exploit conflict for personal gain, and terrorist networks. How do these different actors behave in conflict situations? Does their presence alter the way conflict unfolds, strategies of conflict (and conflict resolution), and/or the prospects for long-term security (peace, stability and development)? How? How do we decide whether these actors are public or private? How do today’s “private” actors in conflict compare with the past? Is this a new phenomenon or simply a return to what has been typical at numerous points in history? This course explores the questions presented by the variety of actors involved in conflict today, compare today’s situation with the past, and examine the way states and non-state actors are coming to terms with each other in conflict situations.

INTS 4625 East African Development and Human Rights (4 Credits)
For our purposes, East Africa encompasses the countries of Sudan, South Sudan, Ethiopia, Eritrea, Djibouti, Somalia, Kenya, Uganda, Rwanda, Burundi, and Tanzania. This course begins with an introduction to the cultural richness and diversity of East African societies, with an overview as to how tribes, chiefdoms, and states function. Religious influences are noted. This history of development, as externally conceptualized, begins with the Berlin Conference of 1884/85 and the so-called “scramble for Africa.” If features socio-economic and socio-political processes. 20th- and 21st-Century external development programs are covered, most recently exemplified by the former Soviet Union, the United States, and China. Principles of induced development and participatory development are contrasted. Regarding the latter, indigenous innovations are stressed. The history of human rights, as externally conceptualized, begin much later, with the 1969 refugee-related innovations of the Organization of African Unity (now, the African Union). The “classic” issues of tribalism, corruption, and resource exploitation are covered, as well as the “late-breaking” issues of food security, refugee repatriation, and child soldier rehabilitation. Conceptually and theoretically, the course is grounded in disciplinary understandings derived from cultural anthropolo, political science, ecology, and history. Resource use, in the context of socio-cultural systems development, are foundational. Special projects are featured, exemplified by those involving University of Denver personnel in Kibera, Kenya (water and sanitation); Mai Misham, Ethiopia (literacy); and Juba, South Sudan (indigenous leadership). At the broadest level, examples are most often drawn from the water/sanitation, agricultural, and health/mental health sectors.

INTS 4626 Civil Resistance (4 Credits)
Civil resistance is the application of unarmed civilian power using nonviolent tactics such as protests, strikes, boycotts, demonstrations, without using or threatening physical harm against the opponent. This method of struggle occurs worldwide in places as diverse as Russia, Moldova, Serbia, Spain, Egypt, Iran, Maldives, the Niger Delta, the West Bank, Thailand, and Burma, among many others. As a consequence of the growing use of civil resistance, the foreign policy community has become interested in understanding the causes, dynamics, outcomes, and consequences of civil resistance campaigns. This course serves as a primer on the topic of civil resistance, introducing students to the primary texts in the field, as well as the policy implications of empirical research on the topic. This five primary goals of this course are to: (1) present leading theories and concepts for understanding civil resistance; (2) explore international history to evaluate theories of civil resistance; (3) apply these theories to analyze current trends and make predictions about future development; (4) provide students with opportunities to synthesize their knowledge in a major written assignment; and (5) allow students to deepen their knowledge about several historical cases around the globe.
INTS 4627 African Security (4 Credits)
This is intended to be an advanced political science graduate course examining African politics and (in)security. The aim of this course is to introduce students to theoretical frameworks that, in turn, facilitate their understanding of African politics, conflict and security issues – especially as they pertain to human security. Importantly, this class takes a critical look at the concept of sovereignty as it relates to security. Through the reading, students become familiar with major analytic frameworks and debates in the analysis of contemporary African politics; students become conversant in relevant political, civil-military and human security issues as they relate to sub-Saharan Africa. The focus of this course is for the student to develop an analytical framework by which to make sense of context. Context is important, but without a cohesive theoretical framework to inform the practitioner it is insufficient. With the understanding that modern elites benefit from the existing structures and associated incentives, this course seeks to understand the modern African state in order to best engage said structures/elites to further development and, most importantly, individual security. Of note, it is clear that security is a fundamental condition for effective governance and development. Further, whereas it is true that weak empirical states, interstate wars, and conflicts over natural resources have proliferated throughout the continent and that ethnic, religious and regional violence is a common syndrome, we often forget basic (human) security needs. Specifically, we overlook that importance of access to potable water or an individual’s ability to pursue economic gain without fear of violence. At the heart of security lies the individual. Weak states or elites might affect inter-state relations and security (e.g. militant groups in under-governed spaces), but it is the individual who suffers. Thus, security in this context seeks to understand issues that affect individual lives.

INTS 4628 Soc Movements: Latin America (4 Credits)
The past year has been witness to Tahrir Square and Occupy, reminding us of the power and innovation of popular sectors making their voices heard. Latin America is a particularly useful place to explore popular movements, as it has long been the site of popular protest and national revolution, and it is currently a region governed by a significant number of Leftist governments with important ties to social movements. This course addresses major theories of social movements, including classical, structural, and new social movement theories. These theories have attempted to answer fundamental questions of what triggers mobilization among excluded groups, how they facilitate their action, and what changes they potentially trigger to basic rights and identities. The course also places social movements in their broader context, locating them to the political, social and economic structures that have shaped exclusion in Latin America over time. In the process, the course explores the role of popular movements in broader processes of democratization, economic development, and citizenship. We examine traditional and well-studied examples of social movements, including movements among workers, indigenous, women, environmentalists, and advocates for democracy and human rights. We also explore newly emerging and transnational movements, including those that articulate alternative models of globalization. The course takes an interdisciplinary approach, drawing on economics, sociology, anthropology, and political science. It places special emphasis on the political economy of popular organization, acknowledging the contested nature of development and the ongoing struggle for deeper democracies and more equitable societies.

INTS 4629 Cultures of Globalization: Networks, Commodities, Affections (4 Credits)
This course explores the effects of neoliberal globalization on the lives of individuals and their communities. In an increasingly interconnected world, how do everyday people and communities negotiate the opportunities, dislocations, and/or disjunctures engendered by neoliberal globalization? Does globalization contribute to increasing global homogeneity or does it restructure difference and inequality in new ways? We explore how a ground-up view of globalization can highlight some of its contradictory effects. We discuss how globalization influences increasing inequality, restructures individual and group identities, as well as the relation between globalization and migration. From a ground-up perspective, we attune to growing global connections to understand how transnational commodity circuits intersect with individual lives and communities. We ask: How are commodity chains also cultural objects that shape, and are shaped by, how we see the world? Moreover, we pay attention to the development of grassroots networks and social movements that forge connections across borders to channel and/or challenge the current trajectory of globalization. We also find it imperative to understand the affective dimension—how do human beings think about their emotional relationships, families, and identities in relation to changing global dynamics? We end by examining alternatives to thinking in terms of neoliberalism, while examining its ramifications in the current economic context. A central question we ask is: As everyday life becomes increasingly commoditized, how do people cope, find support and value, and reveal alternate ways of conceptualizing how we can all connect to one another.

INTS 4630 Civilian Protection in Armed Conflicts (4 Credits)
Studies of armed conflict tend to focus on the production of violence to the neglect of how civilians might instead be protected. In this course, we will study how to limit violence against civilians. We will begin with an overview of theories of violence and legal and ethical frameworks governing the use of force. We will then consider how various actors throughout society, from state actors, to international actors, to illegal arms actors, to NGO’s, to civilians and their communities—the would-be victims of violence—can either promote or restrain the use of violence. We will also consider the conditions under which the protection of civilians is most feasible as well as research methods for analyzing populations and their protection strategies. In their final projects, students will analyze the threats of violence faced by a particular population and design appropriate protection strategies and polices to deal with them.

INTS 4631 The Politics of Civil Society (4 Credits)
Every intractable problem of politics, many significant changes in regimes and much of the pressure on government for good or ill, depending on the point of view, emerges from the civil association of citizens. There are limits, however, to what people can and cannot do. In this way, the overall objective of this class is to explore how people exert political power outside of the formal political structures. Towards this end, student gain a greater understanding of the make-up and roles of civil society, beginning with its origins and definitions and working up to current thinking, including the post-Berlin Wall opening up of civil society. The class considers the linkages between social and political objectives, studying how both formal and informal forms of associations limit and open up the possibilities of people’s power.
INTS 4632 Qualitative Research Methods (4 Credits)
This course provides training in ethnographic and engaged research methods while giving students the opportunity to apply their skills to the local Denver immigrant community. This class requires a commitment to doing fieldwork outside of the classroom and to organizational partners in the community. Students should expect to spend 3-4 hours a week in the field and 1-2 hours on their field note write-ups. Students will work on the Wage Theft in the Denver Construction Industry project being led by Professor Galemba in collaboration with El Centro Humanitario, a day laborer center in Denver. Or they may choose projects with Casa de Paz and the Colorado Immigrant Rights Coalition. Students will gain experience with participant observation, qualitative interviews, data security protections, qualitative data coding, analysis, reflexivity and positionality in research, and writing. The course culminates in a public presentation to share results with the community. Spanish skills are a plus, but are not required for all students.

INTS 4633 Int'l Project Evaluation (4 Credits)
It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Evaluation course is to provide students with a better understanding of and practical tools for designing, implementing, and reporting project evaluations. In all cases, a good evaluation design that is well implemented will allow the project manager to identify supportable findings, conclusions, and recommendations. The recommendations from both performance and impact evaluations can be directed to decision makers to support changes necessary to correct project deficiencies or to provide lessons learned for designing subsequent development interventions. Project managers can also use community or stakeholder participation in the process to build evaluation capacity and to gain support for the results. More specifically, students will learn about similar approaches used by four organizations that evaluate project, programs, and policies—the U.S. Government Accountability Office, the World Bank, United Nations Development Program, and United States Agency for International Development (USAID). Each of these organizations has developed templates for evaluation design, use similar methods and techniques to collection and analyze data, and share common elements in the framework of their evaluation reports. Two of these organizations have protocols to contract out evaluations to other groups through the preparation of an evaluation statement of work (SOW) or terms of reference (TOR). In this course, students will have the opportunity to compare evaluation approaches and to apply these approaches in preparing evaluation products. Small student teams will produce an evaluation SOW patterned after USAID guidance and defend their design in a final presentation.

INTS 4634 Practical Public Diplomacy (4 Credits)
When Madeleine Albright spoke at the Korbel School, she made a plea for more courses on the nuts and bolts rather than the theory of diplomacy. This course is a response to that plea; drawing on 28 years of experience as a Foreign Service Officer and practitioner of public diplomacy. In this hyper-connected world of ours, public diplomacy has taken on ever more importance. It is essential to use the traditional tools of public diplomacy, such as exchanges, cultural centers, language courses, etc., and meld them with the new tools of social media and social networks. The course is a combination of lectures and student presentations as well as talks by numerous experts in various aspects of the practice of public diplomacy.

INTS 4635 Civil-Military Relations (4 Credits)
Who guards the guardians? has been a long-standing dilemma in international politics. How can we make sure that military leaders enjoying the control of coercive power submit to civilian political authorities? How can military organizations be powerful enough to counter external threats without becoming themselves a threat to the political community they should protect? How can hierarchical institutions created to exert physical violence be compelled to respect human rights and democratic values? These questions lie at the heart of civil-military relations theory. Analyzing the different ways in which military organizations, political authorities and the broader society interact is crucial to understand political outcomes such as state-building, democratization and the outbreak of war. This course provides students with a comprehensive understanding of the problems surrounding civil-military relations. Besides looking at the theoretical foundations of the field, it offers a comprehensive overview of civil-military relations over time and across countries. Specifically, it focuses on some topical and yet poorly understood cases and phenomena, such as the impact of the rise of private military and security companies on control over the use of force and the role played by military in Middle Eastern countries such as Turkey, Egypt, Syria, Libya, and Pakistan.

INTS 4636 Diplomacy in the 21st Century (4 Credits)
This course will focus on the array of factors, interactions, and mechanics that must be engaged and synchronized for the effective execution of diplomacy. The course will explore these themes using first via an array of historical case studies and then will take those same themes and apply them to the current and future context as framed by Ambassador Hill's real world experience. In the end, the students will have gained professional insight into the array of key elements and challenges associated with carrying out diplomacy in the current context. Enforced Prerequisites and Restrictions: INTS 4700: US Foreign Policy, or INTS 4701: US National Security Policy, or INTS 4702: Major Issues in International Security.
INTS 4637 Comparative State building (4 Credits)
The modern state is of central interest to students of political science, Latin America, development, sociology, and public policy. For some, the state is an instrument of repression and domination; for others it is the shepherd of development. For all, it has been the fundamental unit of national political authority for at least the last two hundred years. This course explores the nature of stat authority and the processes by which different types of states emerged at different moments in world history and in different regions of the world, as well as how the nature of states has evolved over time. We explore the modern states that emerged first in Western Europe, and then the transplantation, imposition, and emergence of state authority in other regions, including Africa, East Asia, and Eastern Europe. The second half of the course focuses entirely on Latin America, highlighting the way in which states emerged and shifted over time in that region through close study of particular cases. We end the course with a consideration of the nature of state authority in the current world characterized by more intense flows of people, goods, capital, and ideas.

INTS 4638 Modern Iranian History and Politics (4 Credits)
The Islamic Republic of Iran remains a mystery for many in the West. The policies of the Iranian regime represent one of the greatest challenges to U.S. foreign policy today, as reflected in the global debate about Iran's controversial nuclear program. War seems inevitable and Iran and the West are in confrontation on a number of fronts around the world. How did we get to this point in global affairs? What is the relevant historical background needed to understand Iranian culture, society, politics and foreign policy at a deeper level? What are the key moments in modern Iranian history that have shaped the contours of the current conflict between Iran and the United States? These are the overarching questions that this course seeks to examine. The course is the first of a two course sequence that seeks to demystify Iranian politics and society. Themes explored include the origins of Iran's troubled relationship with the West, the emergence of the modern Iranian state, the construction of Iranian national identity, the tension between religion and politics, the struggle for democracy and the persistence of authoritarianism and the roots of the 1979 Islamic Revolution.

INTS 4639 Post-Revolutionary Iranian Politics (4 Credits)
The focus of this course is on Iran’s post-revolutionary period. The goal is to provide students with an objective examination of Iranian society and politics. Several themes are explored: the rise of religious politics and the consolidation of clerical rule, the nature and interaction between Iranian state institutions, civil-military relations, the Iranian economy, the domestic opposition and the prospects for democracy, the crisis in US-Iranian relations, and the role of women in Iranian society.

INTS 4640 Global Financial Crisis (4 Credits)
This course provides an in-depth and critical analysis of the global economic crisis of 2007-2009. The goals of the class are to provide: a) an understanding of the causes of the crisis, b) an overview of the onset of the crisis, including its similarities and differences with past crises, and c) a critical appraisal of the policy response to the crisis, including financial bailouts, monetary policy, fiscal policy and regulatory reforms since 2009. The class will take both a US and a global perspective, and will conclude with an outline of the aftermath and general lessons to be drawn. This course goes well beyond a historical treatment of the global economic crisis and provides general analytical frameworks that can be used to understand economic crises more generally. Each class will be organized around one or two topics related to a theoretical understanding of economic crisis and will apply them to an understanding of the 2008 crisis. The frameworks draw from the fields of microeconomics, macroeconomics, finance, international relations, global political economy, real estate and international economics, integrating and extending the knowledge obtained from other economic and policy courses. Basic Macroeconomics and Microeconomics, while not strictly a prerequisite, is highly recommended. Basic economic concepts will be used repeatedly during the class and basic knowledge of economics will be assumed. The format of the course is a classroom discussion of the reading and class debate. As such, it is imperative that you come well-prepared, having done all of the readings as this course entails a substantial amount of readings to prepare for class. The instructor has a point of view, but challenging that point of view will be encouraged, and even required. Lively class participation will be essential to the success of the course. Visitors from the worlds of finance and policy will contribute on occasion and will be announced.

INTS 4641 East Asia in the Global Political Economy (4 Credits)
The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between the East Asian Regional Economy and the Global Economy. What is the role of the East Asian Regional Economy within the current global political economy (GPE). What is sustainable development in the East Asian Regional Economy? What are the global dimensions of sustainable development in the East Asian Regional Economy? What are the linkages between technology and sustainable development in the East Asian Regional Economy. After an initial exploration of these issues we focus critically on the more recently developed social capabilities approach developed by Amartya Sen and others. In particular, we explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy and the East Asian Regional Economy. For this purpose we try to find the approximate but deep casual structure of GPE and the place of the East Asian Regional Economy within this GPE.

INTS 4642 Environmental Security (4 Credits)
This course surveys the expanding literature on the complex interrelationships between the environment, natural resources, conflict, and human security. Since the dawn of agriculture (~7000 BCE), but rapidly accelerating in the industrial age (1750 CE to present), humanity has conducted an uncontrolled experiment in bending the natural environment to fit human needs and desires. Despite the perceived distance that technology has placed between our physical environments and our daily lives, human interactions with our natural environment are still fundamental. Since the end of the Cold War, much attention has been paid to the role of natural resources and environmental scarcity as a source of conflict, ranging from “water wars” between states sharing a common river basin to communal conflict between pastoralists and farmers in the Sahel. This course will survey the expanding literature on environmental impacts on conflict, as well as conflict impacts on the environment, and the potential for making co-management of valuable natural resources and wildlife a source of cooperation, rather than conflict, between communities and states.
INTS 4643 Japan in East Asia: Economic, Business, and Trade Relations (4 Credits)
This course presents an overview of Japan's economic, business and trade relations in East Asia (ASEAN plus China, South Korea and Taiwan). The focus is on the evolution of Japan's economy and big business and its shifting role and impact in East Asia. The course is organized to provide a backdrop to understanding: (a) the growth of big business in Japan; (b) the rise of the 'developmental state' in Japan and its impact on East Asia; (c) the experience of Japanese multinationals with foreign direct investment in East Asia and creation of Asian production networks; and (d) the current trend of free trade agreements and other emerging trade arrangements in East Asia. Students work in groups to explore, for example, the experiences of major Japanese companies in East Asia or a period or specific event connecting the economy of Japan with those in East Asia.

INTS 4644 Human Rights Research Methods (4 Credits)
This course is about how social science research can be used as a tool to understand and promote human rights. The field of human rights is bedeviled by several challenging obstacles to research, including reporting bias, hidden abuses, missing data and politicization of the facts. To deal with these obstacles, we learn about various methodological tools and how they are applied for the analysis of special human rights topics. By the end of the course, students are equipped to compile and present information to highlight patterns of rights abuses and identify patterns of cause and effects.

INTS 4646 European Integration: States in Transition (4 Credits)
Not only have the global financial turmoil threatened by the Eurozone crisis and the negotiations of a trade agreement between the European Union (EU) and the United States made the study of EU integration increasingly important for students of International Relations. As a unique political entity distinct from both states and traditional international organizations, the EU remains an unidentified object, whose development has challenged the traditional paradigms of both international relations and political science. Besides providing an in-depth knowledge of a crucial political and economic actor, the study of the EU integration process, its drivers and its shortcomings will therefore enhance students' understanding of some of the most crucial theoretical debates underlying today's international studies. This course intends to provide students with a comprehensive knowledge of the politics and institutions of the EU, analyzing its development from its origins until the present day and beyond. It will do so by focusing on the following core issues: Firstly, it will briefly analyze the history of the EU, seeking to identify the rivers of the integration process and explain why, after the end of World War II, European countries have set aside their centuries-old antagonism and embedded themselves within an ever closer political Union. Secondly, it will examine what the EU is and how it functions, analyzing its key institutions, the architecture of its system of multilevel governance and its policy-making processes. Thirdly, it will investigate some key consequences of European integration, focusing on topical debates such as whether and to what extent migration has been a driving force of national decision-making powers at the EU level has created a democratic deficit, what is the impact of EU enlargement on the flow of goods and services, the integration of the member states and what have been the economic and political consequences of the introduction of a single currency. Finally, the course intends to engage students in a debate on what is the future of the European Union in light of the latest development brought about by the entering into force of the Lisbon Treaty and the economic and financial crisis suffered by Southern European member countries. Prerequisite.

INTS 4647 Critical Issues in International Humanitarian Assistance (4 Credits)
In recent decades, the humanitarian system has undergone significant changes related to developments in global governance, lessons learned and relationships between agencies (UN/NGO), governments (donors, affected countries), as the nature of crises themselves the contexts in which they occur and actors involved in crisis response continue to evolve, the humanitarian system and those that work within it must contend with new challenges and critiques. Through readings, class discussions, guest speakers and assignments, students have the opportunity to gain a better understanding of the major emerging policy issues and internal and external challenges facing the international humanitarian system. The class discusses important debates in the humanitarian system and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. This course is aimed at those with an interest in humanitarian policy as well those who wish to explore the challenges that may face them as they prepare to work in the humanitarian field. Prerequisite: INTS 4581.

INTS 4648 Theories of Security in World Politics (4 Credits)
In the 40 years following World War II, the study of security assumed a divide between international relations (the politics between states) and domestic politics (the politics within states) and gradually became separated from studies of international economics. International or national security largely centered on one empirical and two different theoretical enterprises. The empirical enterprise explored the relationship between the US and Soviet Union, focusing particularly on deterrence and the effect of nuclear weapons. The theoretical enterprises explored the likelihood of conflict between states in different systems and scenarios (when does conflict occur? When is stability more likely?) and examined the causes and consequences for actors of pursuing different strategies (What determines which strategy states will choose and what are the consequences for security – i.e., war, conquest, security gain, security loss, etc. – of different choices). After the end of the Cold War debates about the meaning of security joined change in the prevalence of intra-state conflicts and growing attention to terrorism in ways that led many scholars to question the usefulness of assumed differences between international and domestic politics, and, to a lesser extent, between security and economics. Also studies of conflict and stability have increasingly focused on a variety of transitional and global actors that do not fall into the realm of the nation, the state, or even the "international" system at all. This course focuses on this post-Cold War security agenda. The class begins with a (rather old by now) debate over the definition of "security", then consider the role of states and other actors and finally turn to a list of prominent questions. In examining these questions, the class reads studies based in a variety of explanations, research strategies and methods. Students are encouraged to think about prominent explanations that stretch across the questions in different weeks. Students should also consider the costs, benefits, and alternatives to the research strategies and methods that individual authors have chosen. While the focus is on the substance of debates in security studies, the professor hopes to also spend time each session talking about how to frame productive questions and research strategies. In the way of background, if students have never read Kenneth Waltz, Man, the State, and War, they are recommended to do so. It would also be useful to have some familiarity with some basic texts in political theory, particularly Hobbes, Machiavelli, Kant, and Weber.
INTS 4649 Human Rights and the Middle East (4 Credits)
This course is shaped in three parts; each focuses on a set of critical human rights questions drawn from different phases of the Arab uprisings. Part I focuses on the Arab Uprising and Promises of Human Rights Progress and asks: 1. What can we learn from past contagion of human rights struggles, while the class analyzes the Middle Eastern social transformation? 2. What are the main causes that shook the Arab Middle East? 3. What was/is the role of major social actors? Part II covers the Rise of the 2012 Islamist tides, which gained new momentums after the electoral victory of the Muslim Brotherhood in Tunisia and Egypt and asks: 1. Are these religious trends consistent with human rights efforts? What accounts for waves of contagious revival of religious fundamentalism in the Middle East and North African region before and after 2012? 3. What is the impact of religious fundamentalism and nationalism among Israelis and Palestinians? Part III analyses the Possible Paths of Democratization and Human Rights in the Middle East and explores: 1. What accounts for different Revolutionary Arab Paths? 2. Is there a human rights answer to the Israeli/Palestinian quandary regarding one or two state solution? What are the current and possible roles of external forces for the region (international and/or regional)?

INTS 4650 Globalization and Economic Crime (4 Credits)
This course explores the policy issues raised by international economic crime, a phenomenon that has mushroomed with globalization and now accounts by some estimates for one-fifth by value of all international commerce. But who gets to define “crime?” Are there standards applicable globally to all situations? Nation states, corporations, nongovernmental organizations and political advocacy groups have issued multiple and often conflicting definitions of acceptable and unacceptable behavior and have been free in affixing blame on other sectors. To assess the part played by economic liberalization in the increase of crime, readings focuses attention on the political, technological and economic factors that encourage criminal activity and on the direct and indirect economic costs of activities such as identity theft and counterfeiting; mislabeling and trade in illicit goods; political corruption; money-laundering; and securities and accounting fraud. The class discusses activities posing defitional challenges to policymakers, such as currency and commodity speculation, re-export, gray marketing and state sponsorship of organized crime. This class also looks at policy options available when state-supported criminal economic activity is deemed to violate peremptory norms, create a substantial domestic effect, or constitute an act of war. This course examines self-help programs such as due-diligence and know-your-customer rules as well as statutory regimes such as the U.S. Foreign Corrupt Practices Act, and the movement toward transparency and uniform financial standards.

INTS 4651 Field Knowledge for Agriculture and Sustainable Development (4 Credits)
Agriculture across the globe faces numerous challenges: feeding a growing population; adapting to climate change; reversing environmental degradation; and adapting to changing food consumption patterns, natural disasters, resource scarcity, global trade agreements and political pressure. Farmers and related businesses must deal with these challenges while also maintaining livelihoods and contributing to economic growth. These economic, environmental, social and political challenges shape the entire agricultural system. These challenges influence what the farmers grow and other important production and marketing decisions; these challenges also can discourage fundamental change. Farmers must negotiate tradeoffs that have negative consequences in one area to gain benefits in another. This class will analyze sustainability in agriculture through a regional lens, engaging with agricultural people and systems along the Front Range. We aim to understand the economic, environmental, social and political issues that regional farmers face while taking a fine-grained look at critical components of farming: land, labor and water.

INTS 4652 Contemporary Issues in Refugee Studies (4 Credits)
This course is designed to provide a stimulating interdisciplinary environment in which students explore contemporary issues in refugee studies. Through examination of relevant international instruments, research, case studies, agency policies and reports, students will begin to develop the skills necessary for understanding refugee-serving agencies and associated programs in large scale refugee operations. Specific emphasis will be given to recent developments in - refugee terminology, refugee status determination, urban refugee populations, refugee camps, durable solutions, and extremely vulnerable refugees. Throughout, the course will focus on humanitarian assistance and protection frameworks, including analysis of guiding principles and associated policies of refugee-serving organizations such as the United Nations High Commissioner for Refugees (UNHCR). The importance of reliance on refugee voices to frame the debate will also be emphasized. At the end of this course students should be able to integrate and apply knowledge of innovation policy and practice to begin to address contemporary challenges faced by humanitarian agencies working with refugee populations.

INTS 4653 Political Economy of the Resource Curse (4 Credits)
This course is about one of the more curious findings/non-findings in the history of economics and international relations; that valuable natural resources, such as oil, natural gas, and other mined commodities are not, in the main, associated with better development outcomes and may even depress long-run rates of economic growth and discourage democratization and effective governance. Common sense would seem to suggest that if one finds oneself sitting on a gold mine, then one should mine gold (or drill oil, as in the example above). But countries that have specialized in the production of extractive or “point-source” resources, such as mined commodities like gold, diamonds, and oil, tend to be poor, creating a nagging sense that specialization in extraction is a losing proposition in the global division of labor, condemning countries to be the “hewers of wood and drawers of water.” This course briefly reviews the basic economics of the resource curse before turning to a discussion of its effects for deeper institutional determinants of long-run development outcomes: democracy, gender equality, state capacity, and civil strife. It then moves into the realm of interstate politics, examining the ways that resource wealth shapes the foreign relations of resource exporters and major importers, principally the United States and China. The last third of the class investigates both domestic and multilateral attempts to address the resource curse through policy interventions, including civil society-led good governance initiatives like the Kimberley Process and the Extractive Industries Transparency Initiative. This course presumes no deep knowledge of economics but will be of interest to students across the realms of security and development.

INTS 4658 Understanding Diplomacy in Peace and War (4 Credits)
The role of the US in the world has changed greatly in the past half-century. The purpose of this course is to examine how the practice of that change has been both informed by, and informs the scholarly political science literature. This course draws on several broad themes in international relations - democratic peace, balance of power, civil-military relations, war and its termination-and relates them to experiences in the practice of diplomacy worldwide.
chains within which the greater part of trade (so-called inter-trade) is now conducted. The third question that is central to understanding what has happened with trade, and that concerns the melding of trade as traditionally understood with its consequences – including initially widespread opposition by organized interests and ongoing battles with labor organizations in particular. There is a need to understand the potential for emerging powers to alter international relations, as well as the implications of different strategies of international insertion for domestic social sectors, especially those that have traditionally been excluded.

INTS 4665 Technology and War (4 Credits)
This course introduces graduate students to past, present, and future trends in warfare, focusing especially on the how technological advances affect the ways in which states engage in international conflict. The course begins by introducing students to a number of theories that help shed light on why technological developments occur and how they affect the conduct of war. Subsequent classes will then examine important technological developments and assess how each has impacted the use of force over time. Topics include the invention of gunpowder and the use of machine guns, the development of nuclear weapons, the use of unmanned technologies on the battlefield, and the growing importance of the cyber domain to future inter-state conflict.

INTS 4670 Gender, Security and Human Rights (4 Credits)
This course examines the gendered dimensions of security and human rights, with a particular focus on periods of violence and insecurity. Gender equality has been at the heart of human rights and development efforts over the past half-century. Legal and normative instruments have been created to address the ongoing marginalization of women and girls around the world, including the 1979 Convention on the Elimination of Discrimination Against Women (CEDAW) and the 1995 Beijing Platform of Action. More recently there has been increasing attention to the importance of “gendering” discussions of international security. For instance, UN Security Council Resolution 1325, passed in 2000, is widely seen as a landmark framework for ensuring women’s inclusion in the post-war peace process.

INTS 4671 Climate, Science, and Society (4 Credits)
This course examines the role of the natural and social sciences in the climate change issue. Climate change is a complex international problem that challenges scientific and policy analysis. Its effects extend far into the future, are globally widespread, and impact many aspects of society and ecosystems. Many of the costs of climate change policies will be borne in the short term, by countries and sectors that may not be the ones subject to the greatest impacts. There are also substantial uncertainties in the extent of future climate change, its consequences, and the effectiveness and cost of policy responses. All of these aspects of the climate issue make it ripe for political disagreement on how best to respond and for science to be used in various ways, from informing policymakers and the public to advancing political agendas.

INTS 4675 Advanced Topic: Defense and Security Policy Lab (4 Credits)
This is an advanced topics course centered on International Security students gaining, developing, and practicing their professional skills (specifically research and analytics, integration of creativity, academic material, and analysis, peer to peer leadership and coordination, project management and collaborative tools, and communications) via engagement with material/techniques associated with as well as the actual development and execution of a group based professional grade defense/security policy analysis. While the class will contain some traditional academic elements to provide all participants with an enhanced tool kit of skills and analytic options, the bulk of the class takes place through the development of the group defense/security policy analysis executed by 6 person student Project Teams that will be developed through an iterative process over the course and then presented to a group of defense and security professionals for their appraisal. Through this process, security students will be able to get a sense of how real world projects are developed and executed as well as the challenges that confront the production thereof.

INTS 4678 The Politics of Global Trade, Investment and Production: The Origins and Consequences of Open Border (4 Credits)
The last half century has seen national borders opened to the multiple flows now characterized as ‘globalization’ — the movement of traded goods, capital and people, all of which deserve attention. But if the financial crisis alerted the world to the consequences of free capital flows some years ago, the consensus on free trade and foreign direct investment outside of the developed economies is only now being questioned in national politics, most recently and notably in the 2016 US presidential campaign. In that campaign, both candidates questioned the wisdom of the mega-trade deals – the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP) – and one of them promised reverse the tide of outward US company relocation. The loss by the Democrats of much support among voters in blue-collar states affected by deindustrialization has forced a reconsideration of both political strategy and policy orientation. The renewed salience of trade politics invites a number of questions, first about how the world managed the politics of surrendering to a large extent trade protectionism from the 1970s onwards, and second, how countries and regions have managed to govern an increasingly open trading order, both in terms of regulating the flow of goods but also in dealing with the domestic consequences – including initially widespread opposition by organized interests and ongoing battles with labor organizations in particular. There is a third question that is central to understanding what has happened with trade, and that concerns the melding of trade as traditionally understood with the transnationalization of production, whereby older and new forms of foreign direct investment (FDI) have created an international web of supply chains within which the greater part of trade (so-called inter-trade) is now conducted.
INTS 4680 Introduction to Political Theory (4 Credits)
Political theory analyzes and interprets the foundations of political life and evaluates its principles, concepts and institutions. It is fundamentally concerned with the normative political relationships among human beings that revolve around the organization and basis of government. This course provides an introduction to Western political theory through key texts and thinkers that are essential reference points in the social science literature. The focus will be on the Enlightenment tradition and the approach will be geared toward understanding how the seminal texts and thinkers of this period have shaped—and continue to shape—our understanding of political ideas and norms. This course will also have a pragmatic component, where the books and ideas under consideration will be applied to contemporary international debates and issues. Please note that this course is geared toward students without a strong background in political theory. No previous knowledge is required or assumed. All that is needed is an open mind and willingness to work hard. Professor Nader Hashemi will be the course coordinator and guest lectures will be delivered by several Korbel faculty members. For more information about the study of political theory at the Josef Korbel School, go to: www.du.edu/korbel/politicaltheory/.

INTS 4700 United States Foreign Policy (4 Credits)
An intermediate course on issues and perspectives for evaluating American foreign policy. Topics discussed include theories of foreign policy; historical epochs in Superpower relations: the Cold War, Dente, and confrontation; America’s role in the post-Cold War; war, peace, and trade in relation to U.S foreign policy planning and assessment.

INTS 4701 US National Security Policy (4 Credits)
An intermediate course which examines the post-war history of U.S. policy and America’s response to the post-Cold War environment. Current issues include alternative strategies in nuclear deterrence and arms control; and security policy toward the Third World, Europe and the Atlantic Alliance, and Japan. Prerequisite: INTS 4702.

INTS 4702 Major Issues in International Security Policy (4 Credits)
This course focuses on contemporary challenges to global security. It seeks to familiarize students with the nature of these challenges and analytical tools with which to make sense of (and consider potential responses to) them. In the context of thinking about general issues, students learn about prominent individual instances (or “cases”) of problems, think about problems through different theoretical lenses, and consider both logic and empirical evidence in evaluating different arguments. Beyond the substantive focus, the course also encourages students to develop analytical skills and their ability to communicate their analyses effectively.

INTS 4703 Security & Strategy (4 Credits)
This course will focus on the array of factors, options, and realities associated with the creation and execution of Strategy in order to achieve security objectives. The course begins with and centers on the classic works, concepts, and thinkers associated with strategy and then seeks to apply the foundational ideas to a range of current security challenges.

INTS 4704 Globalization and Security (4 Credits)
Course uses historical approaches to evaluate connections between economics and security and how views on security have been shaped.

INTS 4706 Topics in Int'l Studies (1-4 Credits)
INTS 4708 Topics in International Studies (1-4 Credits)
INTS 4709 Topics in International Studies (1-4 Credits)
INTS 4710 Topics in International Studies (1-4 Credits)
INTS 4711 Topics in International Studies (1-4 Credits)

INTS 4715 Problems and Challenges of Democratization in Contemporary Democracies (4 Credits)
This is a course in the field of comparative democratization studies. The class covers political science perspective topics such as the transition to democracy, consolidation of democracies, how and why democracy has spread around the world and the debates on the virtues and perils of democracy and on the nature and quality of the resulting representative democracies. The class focuses on the major explanatory factors for democratization: the case study/actor-centric approach, the statistical/structure-centric approach, and the region-centric approach. Additionally, the class studies many of aspects that might influence the process of democratization such as: institutional design and institutional functioning, political culture, democratic support and the structure of the party system. The geographical focus is global, due to the comparative nature of the theoretical discussion, but it will be mostly focused upon the Southern, Eastern European, and Latin American cases and the time frame is concentrated to the so-called “Third Wave of Democratization” that it started with the Greek and Portuguese transition during the mid-1970s.

INTS 4720 Capital Markets in Africa (4 Credits)
Capital markets – the buying and selling of equity and debt – are vital to the functioning of an economy. Using a comparatives study of capital markets in America and Africa, we will explore how they work, and how inefficiencies and structural challenges can inhibit private investment and access to capital among middle and lower classes in emerging economies generally. The tools in this course will also allow students to assess the efficiency of capital markets in emerging economies throughout the world. The course comprises five modules: 1) Banking and microfinance; 2) Mortgage and housing finance; 3) Private equity (including venture capital); 4) Stock markets; 5) Mobile money. For each module, we will begin with a study of how the industry functions in the United States, which is widely regarded to have the most efficient capital markets. We will then compare the US model to markets in Africa, examining the structural and practical limitations that impede those markets in sub-Saharan Africa (and, by extension, other emerging markets). The course will not attempt a comprehensive analysis of specific African countries, although examples will be drawn from specific markets. Instead, we will focus on many of the structural challenges to the development of mature capital markets in sub-Saharan African countries (mostly excluding South Africa). We will explore questions such as, Can microfinance be profitable? Why isn’t housing finance widely available? What types of “mobile money” systems are developing in Africa, and what are their business models? Why aren’t there more IPOs in Africa? Class participation is important, as the subject matter will range beyond the readings.
INTS 4723 Citizens in Representative Democracies and Comparative Political Behavior (4 Credits)
Citizens’ behavior and attitudes are fundamental for understanding the nature of the relationship between citizens and the state, and for assessing the QUALITY OF representative contemporary democracies and the nature of modern citizenship. This course focuses on the core aspects of citizens’ behavior and their core political attitudes. First, departing from a classification of the different modes of political participation, the class discusses some of the most important aspects that might influence the individual act of participating. Second, departing from the classic models of voting behavior, the class discusses how citizens make up their mind when they vote and the theoretical implications of that process. Third, departing from Easton’s and Almond and Verba’s seminal works, this course studies the key dimensions of political support and political attitudes and the relationship among them. This class deals extensively with key concepts such as democratic support, political disaffection, political disengagement, political discontent, and social capital. The study of the factors influencing the different levels and evolution of these attitudes across countries are also covered. This course and its materials refer to studies using survey data and survey indicators, so some basic knowledge of statistics is recommended, although it is not a must.

INTS 4730 Introduction to Homeland Security (4 Credits)
This course will examine the post-1945 history of United States efforts at homeland security, and include an overview of other national efforts (e.g., by the Soviet Union, Switzerland, and Israel.) It will then turn to identifying and analyzing the spectrum of issues associated with U.S. homeland security, in the context of evaluating the United States post-9/11 response to date. Those issues include: framing homeland security, prevention, response and recovery overview, foreign actors and issues, domestic actors/issues, problems of intelligence, terrorism vs. violent crime, public expectations, role of the media, funding and resources, and how to address broad spectrum threats.

INTS 4731 Homeland Defense: Prevention & Mitigation (4 Credits)
This course will examine the following issues: political leadership, foreign and domestic intelligence organization and functions, role of intelligence, principles of indications and warning, legal/civil rights issues: balancing human rights and security, law enforcement, Public health, and the role of various U.S. federal agencies: Department of Energy, Environmental Protection Agency, the INS, border security among others, plus the role of first responders in prevention/detection, and establishing indicators and reporting procedures.

INTS 4733 Introduction to Strategic Cyber Threats and Policy (4 Credits)
At its core, cyber is a suite of complex, interrelated technologies affiliated with computers, communications networks, and digitalization. Like any powerful technology, cyber provides the capabilities for a range of political actors across a range of levels of analysis to increase their capabilities to achieve both benevolent and malignant goals (and which of these any particular effort is often rests in the eyes of the beholder). Yet, the massive scale of the utilization, both current and future, of cyber technologies and the speed, range, and impact that these technologies potentially generate also make cyber a realm, an area of practice, action, and, thus, policy. The challenge with the rise of such a sweeping development in national and international security is understanding the nature of the threat, how unique the characteristics of the threat are versus how much they resemble previous security challenges, how much existing security mechanisms and policies are applicable versus the need for the development of novel solutions and what are the trade-offs that have to be made, and thus will come to define, cyber security policy at the national and international level. This course will engage all four of these basic questions in survey fashion, setting students up for follow-on academic or professional engagement with the realities of strategic level cyber security issues.

INTS 4734 Homeland Sec & Civil Soc (4 Credits)
Examines host of potential societal consequences of homeland security efforts.

INTS 4735 Defense and Security Methods (4 Credits)
The purpose of this overview course in defense analysis methods is to provide students with the foundations to successfully conduct research and analysis in defense-related topics, whether within the national security community, in academia, or as a contractor. This course should also help prepare the student to complete his or her Master’s thesis. The course aims to improve the student’s ability to comprehend and assess the graduate-level readings assigned in other courses, and to write research papers and complete other written assignments for those courses. The course is intended to provide take-away skills that can be applied to professional activities after graduation: in particular, students should have greater confidence in their abilities to locate, read, commission, design, or conduct relevant research, and to draft research proposals. This class focuses on methods employed in both policy analysis and the social sciences. The emphasis is on qualitative rather than quantitative methods.

INTS 4736 Strategic Intelligence Data Collection and Analysis (4 Credits)
Course focuses on analytical prod. of strategic intell relative to int'l security issues.

INTS 4738 Current Issues in Strategic Intelligence (4 Credits)
Advanced seminar which investigates current issues relative to strategic intell within international studies.

INTS 4739 Defense and Security Quantitative Analysis (4 Credits)
This course is the follow-on to INTS 4735 Defense and Security Methods and is designed to engage students in a professional conversation about the applicability of quantitative analysis and big data based analytics for the execution of defense and security analysis/research. Continuing the development of the students’ individual research design proposal, but now introducing an array of quantitative ideas, options, and methods, this course begins with the foundational realities of coding and descriptive statistics before introducing students to bivariate and multivariate analysis, index/scale construction, and hypothesis testing techniques. In addition, the course continues to develop the students ability to engage with and understand real world defense and security research, in this case particularly quantitative analysis. Prerequisites: INTS 4735.

INTS 4742 International Weapons Proliferation (4 Credits)
This course explores the worldwide proliferation of weapons and military hardware. Special attention is given to weapons of mass destruction including fundamental principles of weapons development and deployment; unique characteristics and effects of nuclear, biological, and chemical weapons; and delivery systems. Capabilities and strategies to counter this international problem are developed.
INTS 4744 Gender and International Security (4 Credits)
In this course we will pay particular attention to the gendered dimensions of human security as they relate to war and political violence. We will talk about how security is a distinct concept from human rights or human development, but will also discuss how all are necessary and related. We will explore feminist approaches to international security and critically engage concepts like militarization, peacekeeping, and intervention. We will emphasize the importance of looking at structural cases of insecurity and at the linkages between various forms of insecurity. We will pay particular attention to the agency of local actors and to the strategies employed by women and women's movements to oppose war, secure peace, and promote human security. We will cover landmark international resolutions—such as R2P and UN Resolution 1325—in order to breakdown the impact these resolutions have had on gendered power dynamics in conflict zones, as well as to identify areas were more attention is needed.

INTS 4746 Gender and Human Rights (4 Credits)
This course examines the gendered dimensions of human rights, with a particular focus on human rights during (and after) periods of violence and insecurity. Gender equality has been at the heart of human rights and development efforts over the past half-century. Legal and normative instruments have been created to address the ongoing marginalization of women and girls around the world, including the 1979 Convention on the Elimination of Discrimination Against Women (CEDAW), the 1995 Beijing Platform of Action, and the 2000 UN Security Council Resolution 1325. Indeed, measures to prevent discrimination based on sex have been ingrained in nearly every human rights treaty since the United Nations Charter in 1945. Yet, gender-based rights violations continue to occur around the globe with alarming pervasiveness and frequency. Drawing from critical gender analyses and postcolonial feminist thinking, this class will introduce you to the concept of gendered rights, challenge you to think about intersectionality as a way of considering “rights,” and introduce you to many of the contemporary human rights crises unfolding around the world today. Critically, this class takes an inclusive view of “gender,” examining the human rights of women, men, queer, trans, or gender non-conforming people.

INTS 4750 The Policy Making Process (4 Credits)
Governments make public policies through a complex process, which varies in its details from country to country and even from issue to issue within the same country. In this course we study various parts of those processes and some of the inputs into them. In addition, we play close attention to problem framing or problem definition in those policy processes. Within all these disparate policy processes political actors must have some notion of what problem they are trying to solve and what constitutes the set of feasible solutions to those problems. These ideas about problems and feasible solutions are not given exogenously, are not some fact of nature, but instead arise from complicated interactions among actors and institutions in the policy process. The quest we ask throughout the course is how policy problems and solutions could be framed differently, how we can learn to look outside the conceptual box that partisans to policy debates try to draw for us. Students write a series of papers during the course following a policy issue of their choice through the policy process.

INTS 4751 European Foreign and Defense Policy (4 Credits)
The focus of this course is on foreign and defense policies of key states and international organizations in modern Europe, from the Atlantic to the Urals. After introducing Europe as a cultural, political, and geographical construct, we focus on the North Atlantic Treaty Organization and the European Union before turning to a comparative analysis of six leading European states. Security in an increasingly globalized world deals not only with defense issues, but also with economics, human rights, and questions of identity. We focus on Germany, France, the United Kingdom, Italy, Russia, and Turkey, underscoring their bilateral and multilateral associations with other European states, the United States, and the European Union, NATO, OSCE, and Council of Europe. We conclude with considerations of what “Europe” really means, and what the future holds for this vital content.

INTS 4753 Intelligence and National Security (4 Credits)
Focuses on the craft of U.S. Intelligence and its role in the making and implementation of national security policy.

INTS 4760 Russian Foreign and Defense Policy (4 Credits)
Course explores Russian foreign and defense policy from Vladimir Lenin to Vladimir Putin - heavy focus on security policy.

INTS 4767 Cultures of Capitalism (4 Credits)
This seminar lays the theoretical foundations for a cultural critique of capitalism. With an eye towards colonialism, modernity, and globalization, readings are devoted primarily to different schools of thought parsing out capital as a social relationship, object of value, and form of mediation. The purpose of this class is to establish temporal and spatial commensurability across tendencies and discontinuities in capitalism by i) locating the phenomenological, ontological, and epistemological conditions of possibility for the reproduction of value and ii) asserting history, experience, and embodied praxis as productive features in the imagined abstraction of economic life and market discourse. More than an attempt to historicize the contemporary moment of deregulation, precariousness, or flexible accumulation, the course is designed primarily to unveil concurrent theories of value and the work of abstraction and reification, morality, and power, labor and materiality foregrounding the processual logics of capitalism. To do so, this course explores the theoretical stakes of production, circulation, and consumption occurring in time-space relations of commodity exchange, markets, and global finance in late capitalism. How to account for the increasing disconnect between the "real" economy and the "fictitious" value of virtual markets, financial derivatives, and future trading? How to make sense of the work of mediation - or perceived gaps therein - between consumers and producers, the labor of abstraction and the concrete reification of economic objects? Registration by departmental approval only; restricted to students participating in the Geneva travel program.
INTS 4768 Introduction to a Critique of Market Society and its Solidarity Alternatives (4 Credits)
This course is taught in French. Le séminaire propose d'introduire ou de conforter une vision "indignée" de l'hégémonie des marchés en s'appuyant principalement sur la lecture socialiste et chrétienne de l'économie par Karl Polanyi et ses critiques en particulier d'Adam Smith et de Karl Marx. Ceci se réfère surtout au concept de marchandise fictive (appliqué aux ressources naturelles comme au travail humain et à la monnaie), de richesse commune partagée et d'interdépendance économique (appliquée aux mécanismes complémentaires et antagoniques de concurrence, de redistribution, de solidarité et de partage). Une large part de cette réflexion interdisciplinaire doit ressortir des propres expériences des étudiant(e)s et de leurs recherches. Elles doivent aussi permettre de comprendre l'élaboration des alternatives, leurs potentialités et leurs limites. La situation de Genève, capitale des spéculations sur les matières premières sera notamment interpellée. Registration by departmental approval only; restricted to students participating in the Geneva travel program.

INTS 4770 The Politics and Economics of International Energy (4 Credits)
Although it is becoming increasingly evident that the world does not face an imminent shortage in the availability of fossil fuels, access to energy resources and security of energy supply remain important preoccupations for governments and companies alike. Utilization of fossil energy resources will be increasingly constrained by environmental considerations and the threat of global warming. Energy will remains a key concern in international relations for the coming decades and will influence the perception of national interest and the pattern of international exchanges and interdependence. The course aims at providing students with the critical knowledge and skills to avoid superficial generalizations and stereotypes - which unfortunately remain all too common. Requires departmental approval; registration is restricted to to students participating in the Geneva travel program.

INTS 4771 Trade and Development (4 Credits)
Development, trade and their interlinkages are among the most controversial topics of today. Economics has much to say concerning these issues, and constitutes a powerful tool in terms of debunking commonly held misperceptions. This course considers a number of topics associated with the links between international trade and development. A particular emphasis is placed on the consequences of trade openness on outcomes in developing countries, i.e. on inequalities, growth and poverty, institutions and financial development, the impact of export instability and countries' specialization, terms of trade, financial crises, trade and environment. The course is applied-oriented: after reviewing basic theories associated with each topic, each lecture involves presentations of recent empirical papers. By the end of the course, it is hoped that participants will be able to intelligently read and critically assess policy documents on the topics covered that are commonly produced by international institutions. Requires departmental approval; registration is restricted to students participating in the Geneva travel program.

INTS 4775 Droit diplomatique international (4 Credits)
Ce cours vise à combler une lacune, l'enseignement du droit diplomatique ne faisant généralement l'objet que de développements à titre incident, ce malgré l'importance séculaire de ce domaine du droit international. Axé sur l'évolution de la pratique étatique des relations diplomatiques (y compris les relations avec les organisations internationales) et la jurisprudence pertinente de la CIJ, le cours se propose d'analyser les grands thèmes du droit diplomatique, tels que le droit de légation, la création et l'extinction des relations diplomatiques, les fonctions et droits/obligations liés à la mission diplomatique, le contenu et les limites des immunités des personnes, biens et locaux diplomatiques, ou encore les mécanismes sanctionnant les violations du droit diplomatiques. Il fera finalement une place à la pratique récente relative aux immunités des Chefs d'Etat et Ministres des affaires étrangères. Registration by departmental approval only; restricted to students participating in the Geneva travel program.

INTS 4776 Financial Crises (4 Credits)
This is a seminar designed to go over the literature on the sources, channels, characteristics and impacts of financial crises. The sessions are devoted to the study of papers, some older fundamental contributions and some very recent early analyses inspired by the crises that started in 2007 and is not yet over. The seminar is primarily designed for second-year Master and PhD students. Students from other programmes and departments may attend if they have a strong background in economics. Registration by departmental approval only; restricted to students participating in the Geneva travel program.

INTS 4777 Governing Global Threats: Expert and Legal Regimes (4 Credits)
This course examines major threats to human security (from climate change to nuclear proliferation and terrorism, and the global financial crises), and how these threats can be prevented by legal, political and social mechanisms. Theoretically, this course focuses on various socio-historical approaches to law and expertise in transnational settings. It focuses specifically on the role that legal regimes (either made of treaty-based rules or soft-law regulations articulated by experts) play in contemporary modes of global governance, which go beyond the forms of state authority that are traditionally called upon to interpret and enforce these rules. We will survey different disciplinary approaches to the topic and to illustrate their approach by research.

INTS 4778 Rise and Fall of the "Third World (4 Credits)
This seminar explores ideas and movements for colonial unity and solidarity since the late-19th Century and the programs for solidarity they inspired amongst nations emerging from decolonization. Where and who did these ideas originate? How effectively did they translate into political programs? How were such ideas and programs deployed in changing international contexts? What wider influences did they exert? In what ways did the international system deal with these ideas and programs? What prospects exist for such solidarities in the contemporary world? These and similar questions will be explored in this seminar.
INTS 4780 Terror in History: Challenges and Responses (4 Credits)
Terror/ism has been a feature of political relations for more than 2000 years and has a history that reaches back far beyond 9/11. This seminar will look at the historical evolution of terrorism and antiterrorism as well as the different stages they have gone through since antiquity. The main focus, however, will be the past 150 years, with the emergence of what David C. Rapoport calls "modern terror." The course will 1) highlight the difficulties of defining the phenomenon; 2) explore the different experiences with and debates about terror–anarchist/social-revolutionary, ethnic, religious, "lone wolf," state (-sponsored) terror--in various regions and countries since the 1880's (such as Russia, Italy, Germany, the US, Spain, Ireland, Israel/ Palestine, Namibia, Algeria, etc.); and 3) address how the countries concerned and the international community at large dealt with the challenges deriving from terrorism (e.g., at the League of Nations and the UN).

INTS 4782 Law without the State (4 Credits)
This course discusses situations, theoretical and empirical, in which law is made primarily outside state power. It reviews instances of private ordering and governance that enjoy a relatively important autonomy from state law. The absence of the state as a possible cause of ethical issues will be entertained. Other parts of the course will proceed at a higher degree of abstraction, asking for instance whether the orderings identified properly deserve to be called law. It will thereby delve into preliminary questions, too often neglected, that influence how the debate is framed on the whereabouts of non-state law: Why does 'being law' matter? How do definitions of what law is matter? What makes a definition of law of good definition? Can something be relatively law but not fully? Who decides on what law is and for whom such pronouncements are authoritative?.

INTS 4783 Economics and Development (4 Credits)
The course provides a broad overview of the sort of topics that development economists work on, both on the micro and on the macro side. On the micro side, we will cover fundamental topics such as household consumption, insurance, credit, land markets, and migration.

INTS 4784 Foreign Policy of Major Powers (4 Credits)
This course is designed to review and analyze leading puzzles of foreign policy, based on the substance of foreign policies of major countries in the present time and the recent past. The objective is to develop analytical skills to use when confronting new foreign policy puzzles. Much emphasis will be given in this course to the relevance of foreign policy scholarship to understanding real-world, contemporary world affairs. It is important that students make themselves aware of what is happening in the world.

INTS 4785 Modern China: Reform and Revolution (4 Credits)
This course introduces the modern Chinese history since 1840s. The focus is on the historical, cultural, political, and economic interactions between modern Chinese state and its people and between China and the outside world. The modern fate of China has been alternating between revolutions and reforms, internal wars and external conflict had been the norm rather than exception until recent decades. It examines the features of modern Chinese political system, economy and social and cultural identities. It also traces the roots of recent reforms in China that have transformed the country in a fundamental way. The relationships between state and society, between politics and economy and between China and foreign powers will be discussed in detail.

INTS 4786 Planning and Assessment in Complex Environments (4 Credits)
The primary mission of this course is to provide participating students grounding in the planning methodologies, approaches, and expectations used within the US government in both military and civilian agencies as well as increasingly in the security related private and non-profit sectors. The starting point for this effort is Operational Art & Design and the military's Joint Operational Planning Process (JOPP) as well as related literature. Military planning serves as the starting point both because it is the most mature and sophisticated government planning methodology and because most other US government planning practices are direct, contextually appropriate derivatives of DoD planning mechanics.

INTS 4787 Civil-Military Practices in Humanitarian Responses (4 Credits)
Changing U.S. national security priorities following 9/11, including updated Department of Defense doctrine, have led to U.S. military actors prioritizing humanitarian assistance as a central component of theater security cooperation arrangements. This trend includes not only considerations of protection of civilians during military operations but also planning for natural disaster response and steady state engagement to build the capacities of host nations to address crises, including natural and man-made disasters. Through readings, class discussions, group work and individual assignments, students in this course will gain a better understanding of the issues and roles of civilian and military actors in the humanitarian space, with a specific focus on how legal and policy guidance impacts the decision to utilize U.S. military forces in disaster response situations. While this course will focus specifically on how the U.S. government approaches humanitarian activities and the role of the U.S. Department of Defense assets, it will locate this discussion within the broader about the appropriate use of Military and Civil and Defense Assets in international humanitarian community.

INTS 4788 To Save and Defend: The History of Politics of Humanitarian and Security Organizations (4 Credits)
This interdisciplinary seminar looks at the policies and politics of humanitarian and security organizations. We will critically explore and contrast the concepts of "protection," "save," and "defend." We will focus on the perspective of those who save and defend as well as on those who are supposed to be saved and defended. Attention will be given to theories, practices, geographies, organizational cultures and underpinning ideologies of saving and defending.
INTS 4789 Violence, Memory, Cinema: Comparative Perspectives on Latin America & the Middle East (4 Credits)
This seminar aims at investigating the role of cinema (documentaries and fiction) in (re) shaping the collective memories of societies living in a context of armed conflict, post-civil war or political transitions from authoritarian rule. We will focus in particular on the role of the different generations of film directors as social actors in these processes; on the effects of censorship (the State-sponsored one, the forms of self-censorship and its indirect forms through distribution and production); and on the role of film festivals as arenas of power and of circulation of ideas. The first part of the seminar will develop problematically the relations between memory and history through present debates related to the visual arts and the politics of memorialization in Latin America and the Middle East. The seminar topic being at the crossroad of several disciplines, we will explore different anthropological, political, and historical paradigms, including the contributions of film studies. In the second part of the seminar we will focus on the specific topic of ‘exiles and refugees’, their representation through cinema and the contribution of fictions and documentaries in forging national identity and in keeping the memory of those who left and came back or for whom the return has become not an option anymore. In parallel to the main seminar, a series of 3-4 workshops will be organized for watching movies, with the presence of external lecturers. Finally, the seminar is conceived in the larger framework of the contribution of arts to reconciliation and peace-building, an emerging field of academic interest and policy investment.

INTS 4790 International Law and Development (4 Credits)
The course aims at providing a systematic overview of the main issues related to sustainable development from the standpoint of public international law. It strikes a balance between theoretical and practical questions, focusing on primary sources and international decisions. After a concise discussion of the basic principles and notions of the international legal order, the course deals with the evolution of development law from the United Nations resolutions on the New International Economic Order to the Monterrey Consensus and its follow-up. Particular attention will be paid to the attempt to conciliate economic growth with the protection of the environment and human rights. The course is then completed with the examination of (a) the activities of the World Bank Group and the International Monetary Fund in the field of development; (b) the participation of developing countries in international trade; and (c) the promotion of foreign investment as a vehicle for economic growth and development.

INTS 4793 Development Economics (4 Credits)
The course covers major issues in development economics from both the macro and micro perspectives. Topics where research is active will be covered. The focus is on acquiring the necessary theoretical and empirical skills to understand the challenges related to the socio and economic transformation in developing countries.

INTS 4794 Inequality in Latin America and the Caribbean (4 Credits)
This course will examine the historical roots of inequality in Latin America and the Caribbean. It begins by introducing students to the concept of inequality and the social construction of race, ethnicity, gender, sexuality, and class. It then explores how these structures have been shaped by a variety of forces including Spanish and Portuguese colonization, labour systems, cultural practices, and religion. We will also explore how various actors have attempted to challenge this inequality at different points in time through everyday resistance and revolutionary, populist, feminist, black nationalist, and liberation theology movements. This course will approach these issues using a mix of historical and anthropological case studies from across the region that allow us to consider not only how inequality is created, maintained, and challenged on a large scale, but also how it has been experienced in the day to day life of Latin American and Caribbean people.

INTS 4802 Foundational Ideas in Social Science: Marx and Weber (4 Credits)
Marx’s is the most striking and complex theory of revolutionary change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen’s Association, the Second International, the Third International). "Capital" is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington "consensus" about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals’ vision of a new society. Further, Marx’s vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatriate on what Marx’s views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx’s views are often misrepresented, dismissed without investigation as “obviously wrong.” This course provides an opportunity to read the first volume of "Capital" and some of Marx’s other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.

INTS 4804 Realism and Democracy (4 Credits)
Course answers questions such as: Can democracy check international cruelty? Why, according to Kant, Doyle, and Rawls, are democracies unlikely to go to war with other democracies? We discuss democratic individuality and Vietnam, democracy, and Realism as well.
INTS 4820 Democracy and War (4 Credits)
This course explores Socrates’ speech at his trial and decision to go to his death as, surprisingly, initiating two central features of modern democratic theory. First, Socrates is often depicted as simply hostile to the many, looking down on Athenian democracy. But what he in fact looks down on is tyrannical mob rule, the “monarchy” of a particular interest arbitrarily enforced (what we might call a demented Joe McCarthy-kind of democracy). In contrast, Socrates also incarnates the idea of asking questions in a democracy, that is, dissent (prefiguring what is sometimes called today deliberative democracy). That makes a democracy capable of realizing, sometimes, a common good. Second, Socrates provides a paradigm for modern civil disobedience or satyagraha in Gandhi - we read Gandhi’s translation of Plato’s Apology - and Martin Luther King’s letter from the Birmingham City Jail. Nonviolent civil disobedience is necessary in a modern democracy because party-competition focuses mostly on personality issues and not on fundamental injustices. Further, this kind of protest promises major change even in dictatorships (consider Erica Chenoweth and Maria Stephan, Why Civil Resistance Works). Thus, this emphasis is a novel interpretation of Plato as opposed to, in scholarship and politics, Plato’s supposed link to authoritarian “commander-in-chief” power (Heidegger, Leo Strauss and William Kristol for example) which we also contrast in this course. The course explores the subtlety of these dialogue - the question of what Plato intended to teach his long-standing students like Aristotle who studied with him for 20 years - but leave the main points of Gandhi’s and King’s interpretation intact. Third, the course explores Thucydides, History of the Peloponnesian War and Plato’s response to it in the Republic in terms of modern critiques of Empire building and the “unhinged” wars by American democracy (we look at W. Robert Connor’s elegant break with previous understandings of Thucydides during Viet Nam and John Mearsheimer’s striking criticisms of post-Cold War American policy, echoing Obama’s 2013 speech at the National Defense University, in “America Unhinged.” Thucydides is a far deeper account of imperial expansion and the corruption of and threat to democracy at home than modern realist and neo-realist gestures at him. Neo-realists methodologically attempt to separate global politics from its domestic consequences as supposedly different levels of analysis; this interplay is the heart of Thucydides’ argument and deepest insight into the meaning of war and democracy.

INTS 4822 Contemporary Political Theory (4 Credits)
An examination of current 21st century political theory and how the events of the 20th century helped mold these ideas/ concepts.

INTS 4851 Theories of Non-Violence (4 Credits)
Can a state be non-violent? Course explores topics such as the distinction between power and violence; whether nonviolent politics is possible; the distinction between an ethic of responsibility and an ethic of intention; is capitalism consistent with democracy? This seminar is interactive and class participation is required.

INTS 4854 Rising China and Challenges to the Global Order (4 Credits)
This course is for Korbel in DC program participants only. This seminar focuses on contemporary challenges to the global order posed by China's growing economic power. The course charts China's reform and opening, its development and integration into the global economy, and the challenges created for Western economic and security institutions and alliances. Specific topic areas covered include China's non-market status and trade conflict, competition for technological leadership, ICT governance and standard setting, the Belt and Road Initiative, and the implications of China's South China Sea activity. The course will combine extensive background readings, lectures, and discussion. Students will benefit from frequent guest lectures and discussions with experts from the Center for Strategic and International Studies.

INTS 4856 Global Sustainability and Development (4 Credits)
This course is for Korbel in DC participants only. This course considers the interaction of environmental, economic, and energy issues on global ecological systems. It offers an overview of relevant international legal frameworks and national governance systems, the state of major ecosystems – forests and species habitats; wetlands, oceans and rivers, and the atmosphere and selected policy issues related to each. Emphasis is less on "what" to think than on "how" to think about and formulate policy responses to complex, multidimensional issues.

INTS 4875 Human Rights and Foreign Policy (4 Credits)
Global human rights issues and how those issues help mold foreign policy decisions.

INTS 4890 Revolutions and State Building (4 Credits)
Marx’s is the most striking and complex theory of revolutionary change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen’s Association, the Second International, the Third International). “Capital” is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington “consensus” about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals’ vision of a new society. Further, Marx’s vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatiate on what Marx’s views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx’s views are often misrepresented, dismissed without investigation as “obviously wrong.” This course provides an opportunity to read the first volume of “Capital” and some of Marx’s other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.

INTS 4900 International Politics (4 Credits)
Topics on discussion include: levels of analysis; realism; neo-realist structuralism; international society and the English school; international anarchy; process variables and international institutions; international security institutions; rationalism, constructivism, and the purposes of theory; norms and ideas; gender and identity; and postmodernism and post-structuralism.
INTS 4903 Social Construction of International Society (4 Credits)
Examines recent theoretical work in the field of international relations that treats international society and its practices as social constructs.

INTS 4905 War and Peace (4 Credits)
An intermediate course which examines the historical relationship of war to politics, such as the military profession, military organizations, economics of defense planning, limited use of force, demobilization, war reconstruction, military rule, and civilian control. Current world trends toward democratization focus attention on the issue of creating a democratic army for a democratic state. Readings cover western industrialized, communist, post-communist, and 3rd world countries.

INTS 4906 Classics of International Theory (4 Credits)
Professor will choose various books by classic political theorists for students to read and discuss in class.

INTS 4907 International Terrorism (4 Credits)
This course will examine the literature on international terrorism both before and after 9/11. It will include an overview of the origins, history, goals, strategies, and capabilities of significant terrorist groups (emphasizing Al Qaeda). It will also examine the history of United States and international efforts to combat terror, focusing on post 9/11 debates over grand strategy and tactics (e.g., the relationship between offense and defense, active vs. passive defenses, intelligence reform, multilateralism vs. unilateralism, the relationship between "rogue states" and terror, etc.).

INTS 4909 Climate Justice (4 Credits)
The science of climate change, while continuing to become more exact and nuanced, is clear—human behavior has caused the planet to warm unnaturally. Now that the science has been established the next question is how will it affect the ecosystem and, especially human habitation. As seems to be the norm, those most affected by climate change will be the poor, the disempowered, and native populations. The understanding and the possible solutions must be interdisciplinary—human rights, law, economics, development, gender and race equity, security, science— to name a few. The course will look at the history and philosophy of climate justice, which includes such disciplines as environmental justice and sustainability, move through an analysis via a number of different viewpoints, and conclude with a look into the future in terms of education and activism. Climate justice requires a sharp, critical look at systems and an understanding of the interconnectedness of science, ethics, and politics. Examples of this might include the rising of sea levels displacing very large numbers of people adding to the already impossible strain on refugee and IDP resettlement. Or the Brazilian economy's almost sole reliance on hydro-electric power in face of the drying up of rivers and water basins. Or the role of the world's religions and religious leaders in climate justice. One of the unique characteristics of this course will be the number of guest lecturers. It is incumbent on universities and colleges to take a multi-disciplinary approach to climate justice and lower the "silos" between academic units. To that end colleagues from DU and other institutions will bring their disciplines and insights to bear on the topic.

INTS 4912 Development in Africa: Challenges, Constraints and Strategies (4 Credits)
This course is for Korbel in DC participants only. As the Developed World falters over its financial difficulties, many eyes are turning to the third world for resources, markets and solutions. In a real sense, Africa is the "last frontier." With this in mind, this seminar provides an overview of Africa and Development through the eyes of practitioners and scholars from the US and Africa who have devoted considerable effort to trying to affect development on the continent and speculating on what more it will take to make Africa prosperous. Beginning with an overview, the course proceeds through traditional development sectors (agriculture, health and education), newer perspectives and drivers (private sector, ICTs, democratization and China), and the three "C" barriers (corruption, conflict and climate change). Lively exchanges over the role of outsiders and the efficacy of aid as well as Africa's growing role in the outside world, balance more traditional development perspectives.

INTS 4914 Statecraft and Smart Power in the Digital Era (4 Credits)
This course is for Korbel in DC participants only. This course examines new approaches to the practice of statecraft in an era of rapid global change. Globalization is upsetting traditional international order and institutions, and changing the pace and intensity of decision making. Nation-state governments, while still the primary actors, must adjust to new sub-national, regional and transnational forces and players in a far more complex global arena. Digital Communication is revolutionizing relationships and interaction in the global arena. More groups and the general public are involved or mobilized in public participation than ever before. Vastly more information flows ever more quickly. Partisanship rises with segmentation, threatening fragmentation in public life. The new era reflects the imbalances and strains of major demographic change, especially the impact of an expanding tech-savvy younger generation. A significant youth bulge in volatile developing nations fuels reform efforts, but also creates the potential for conflict arising from continuing injustice and unmet expectations. Foreign policy institutions and decision makers here and abroad are increasingly subject to cross-pressures from competing domestic and transnational interests. In the U.S. the Inter-Agency must balance influential single-issue stakeholders and constituencies here and abroad. The course explores how the U.S. and other governments are responding to the new global challenges. Participants see to frame new "rules" of statecraft in the digital era.

INTS 4920 Conflict Resolution (4 Credits)
An introductory course which identifies the collective factors leading to successful reconciliation or agreeable compromises in conflicts; analyzes the role and influence of cultural norms, gender conditioning and different bargaining strategies on the resolution process; applies the practical fundamental of negotiation on particular problem-solving techniques.

INTS 4924 Democratization in the Middle East (4 Credits)
The promotion of democracy process and its implementation of democracy have emerged as a major goal for U.S. and world policy makers and have attracted the attention of many scholars. Democracy is now widely regarded as a political system that minimizes conflict, promotes sustainable development, and is a vital tool in the struggle against terrorism. However, the results of efforts to create democracies in various countries, including Iraq and Afghanistan are a clear illustration of the difficulties involved in making transitions to democracy. In this seminar, we shall focus on what is known about democratization, consider the nature and role of Islam, examine the state of democracy in key countries of the region, and consider the ways in which the U.S. and other external actors might strengthen democratic forces in the region.
INTS 4928 Torture (4 Credits)
This is a reading/seminar course. Students are asked to be well-prepared and contribute to the discussion. We explore mostly modern forms of torture. The use of torture has not abated in the last 100 years despite conventions, treaties and watchdog organizations. What has occurred is that torture has become "stealth," to use Professor Rejali's term. These "stealth" techniques leave no mark and have been developed equally by democratic states and totalitarian regimes. It is also clear that the U.S. has engaged in state sponsored torture (see The Constitution Project bi-partisan report of April, 2013). An important question before us is if there is any place for torture in the 21st century and if torture is an effective means to gather intelligence. If the answer to both questions is "no," and torture violates the most basic ethical, moral, and legal norms of humanity, why does it persist?.

INTS 4931 International Organizations (4 Credits)
An intermediate course on approaches to the study of international organizations, including institutionalism, neofunctionalism, complex interdependence, international regimes, and epistemic communities. Case studies examining collective security and peacekeeping, human rights, Antarctica, and the environment are discussed.

INTS 4934 Intervention: Policies & Pract (4 Credits)
Procedures, policies and practices of international organizations and the roles they play in helping resolve internal issues and conflicts.

INTS 4935 International Humanitarian Law of Armed Conflict (4 Credits)
This course is a theoretical and practical introduction to international humanitarianism law (IHL). IHL is known by many other names such as "humanitarian law," "law of conflict," and "laws of war." All these terms refer to the rules regarding the treatment of civilians and non-combatants in areas of armed conflict and the rules of engagement for soldiers and combatants. These "rules" are especially important to know if you eventually work for an IO or NGO that finds itself in areas of armed conflict. Cross listed with CPSY 4560.

INTS 4936 International Law and Human Rights (4 Credits)
An introductory course examining the concept of human rights, including political, economic, social, and cultural rights. International, regional and national institutions, norms and procedures to protect individual and group rights are discussed. Recommended prerequisite: INTS 4940.

INTS 4939 Genocide and the Human Condition (4 Credits)
The well known Holocaust scholar, Daniel Jonah Goldhagen has argued that genocide is worse than war and we look at the mas killings of the past one hundred years he is probably correct. This course not only examines genocide comparatively by studying the Holocaust and genocide in Rwanda, Cambodia other countries and regions of the world but focuses on the question of if it can be ended. Does the popular phrase "Never Again" have any meaning or will genocide continue and even escalate in the twenty first century.

INTS 4940 Introduction to Human Rights (4 Credits)
An introductory course focused around historical and theoretically relevant texts in humans rights. First and second generation rights are emphasized. Early liberal, conservative, and socialist understandings of human rights are highlighted against their respective historical background.

INTS 4941 Human Rights and International Organizations (4 Credits)
An introductory course exploring the changing roles of international organizations in their efforts to protect and promote human rights. Examination of both the global and regional levels of human rights activities of international intergovernmental organizations are discussed. Recommended prerequisite: INTS 4940.

INTS 4951 Comparing International Societies (4 Credits)
Course explores variations in societies of states across time and place.

INTS 4954 Human Rights Research and Design (4 Credits)
The purpose of this course is to acquaint students with graduate level research and writing strategies that facilitate the composition of concise, articulate, and informative pieces of scholarly and policy-oriented work. We explore an array of research options and techniques and look critically at the ways in which different uses of language are constitutive of meaning and structure in written works. This is considered a "skills" course which is designed to allow students to explore in depth a sub-topic of interest within a broader topic in the field of Human Rights. The topic varies each term. The work completed by students is edited minimally, and published in the Human Rights and Human Welfare Digest, the Josef Korbel School's online human rights journal. This digest is intended to serve as a resource for policymakers, non-profit organizations, and human rights advocates, by presenting concise and reliable information that is both informative and accessible. In the first half of the class, we focus on building practical research strategies, including: determining the parameters of research; identifying and accessing appropriate sources of information; using bibliographic management software; and compiling an annotated bibliography. The second half emphasizes the development of writing techniques that culminate in the production of an analytical essay and annotated bibliography of publishable quality. Attention is paid to grammar, syntax, structure, stylistics, and appropriate language use.

INTS 4955 Human Rights Clinic I (0 Credits)
Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.
INTS 4956 Human Rights Clinic II (4 Credits)
Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.

INTS 4964 Political Risk Analysis (4 Credits)
Investigates risks associated with political instability or uncertainty in countries with emerging markets.

INTS 4965 Technology and Sustainable Development (4 Credits)
Technology has always been a major influence on cultures and societies, national and international. Today, all countries recognize the key role that technology plays in achieving sustainable development and are striving to harness its potential while minimizing its negative impacts. New technologies such as robotics, genetics, information and communication all promise transformations that can greatly improve the quality of life of peoples everywhere. At the same time they can also develop in ways that do not lead to as sustainable a future. Thus, they generate controversy and difficult policy choices for governments and peoples everywhere. Accordingly, it is essential to understand the nature of technology and its role in social and political change as well as the ways in which it can be controlled and harnessed for positive ends. In this seminar we will focus upon the relationship of technology to sustainable development and pay special attention to emerging technologies and to such issues as technology transfer, the relationship between technology and democracy, technology assessment and control, the role of appropriate technology, and how developing countries can develop modern scientific and technological capabilities that promote sustainable futures.

INTS 4966 Applied Field Methods (4 Credits)
An introductory course for students planning to conduct research in developing countries. Practical information is presented on transforming hypothesis into a fieldwork setting, questionnaire construction and administration, and interviewing techniques.

INTS 4972 Global Environmental Governance (4 Credits)
Global environmental problems pose seemingly intractable problems for international relations and policy. In this seminar, we probe some of the practical and theoretical difficulties associated with solving such problems. These problems include: How can sovereign nation-states agree to cooperate on environmental problems and how can such cooperation include businesses and civil society? No international institution can legitimately coerce nations into such cooperation. Therefore, international institutions much get them to agree to cooperate, must find ways to bring business and civil society into those agreements, and then find ways to monitor and enforce the agreements. This task is harder than it might seem, and we explore both theories and cases that illuminate it.

INTS 4981 Internship (0-4 Credits)
The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student’s education. An internship should both complement the student’s academic field of study and relate to his/her career goals. Through internships, students will: Apply acquired academic theory, knowledge, and skills to professional practice; Further develop knowledge and skills needed to work effectively in the field; Gain greater understanding of the private, public, or nonprofit/NGO sectors; Build a network of professional contacts; and Develop career-related skills applicable to the future job search. The course is open to currently enrolled Korbel MA candidates. Registration is by instructor approval after review of materials.

INTS 4987 Forced Labor and Human Trafficking (4 Credits)
This course looks at a brief history of slavery, especially as it pertains to the British, West African, West Indies, and American triangle. We then look at contemporary issues of forced labor, human trafficking and contemporary slavery. Human trafficking is a very complex problem that requires a sophisticated, inter-disciplinary critique.

INTS 4989 North American Defense and Security (4 Credits)
This course will challenge students to analyze the evolving North American Defense and Security environment since 1945. The course will begin by focusing on the history of the Canada - United Status (CANUS) defense and security relationship that began in the wake of World War Two and was predicated upon protecting the North American continent from Soviet attack with the formation of the Permanent Joint board on Defense (PJBD), Military Cooperation committee (MCC), and North American Air Defense Command (NORAD). However, the end of the Cold War and subsequent terror attacks of 9/11 dramatically changed the North American Defense and Security environment and created the need for enhanced cooperation between the United States, Canada, and Mexico.

INTS 4991 Independent Study (1-12 Credits)
A special individual arrangement for students to pursue more advanced work beyond that available through regular courses. Such study is arranged between professor and student prior to registration. Academic grades are assigned for course performance. Tutorial Record Form required.

INTS 4992 Directed Study (2-4 Credits)
Emphasizes aiding international students in perfecting their English writing skills as well as assisting them in developing ideas and solutions for specific course papers. Students receive advice on writing logic and structure as the instructor individually reviews draft papers and provides written comments. Classroom sessions provide students with the opportunity to share ideas as well as problems. An online portion will provide students with samples of scholarly writing, exercises, and classroom discussion supplements. Former participants are welcome to attend as part of independent study. Course can be taken for 0 or 1 credit and may also be repeated.
INTS 4995 M.A. Thesis Research (1-8 Credits)
This course allows a student to receive credit for research and writing undertaken as part of the master’s thesis. Such study is arranged between professor and student. Academic grades are assigned for performance. Independent Research form required.

INTS 4996 Substantial Research Paper (0-4 Credits)
A Substantial Research Paper (SRP) is a problem-focused paper designed to engage student in the process of applied research. In contrast, an independent study tends to be a more general research project, while an MA thesis involves in-depth academic research typically undertaken by students interested in pursuing a PhD. An SRP is typically shorter than an MA thesis, and does not require a review committee or an oral defense. Rather, the SRP will be supervised and graded by a single appointed faculty member.

INTS 5991 Independent Study (1-12 Credits)
INTS 5992 Directed Study (1-5 Credits)
INTS 5995 Ph.D. Dissertation Research (1-8 Credits)
This course allows a student to receive credit for research and writing undertaken as part of the doctoral dissertation preparation. Grades of "P" (pass) are assigned after the dissertation is accepted by the committee. Prerequisite: Ph.D Candidacy (passing Comprehensive exams).

Judaic Studies (JUST)

Courses

JUST 3023 Great Thinkers: Maimonides-Politics, Prophecy and Providence (4 Credits)
Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on: principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with PHIL 3023 and RLGS 3023. Prerequisite: junior standing or instructor’s permission.

JUST 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)
Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides’ core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is “metaphysics?”; God’s unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God’s ways as well as "negative theology"—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity; vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with PHIL 3024 and RLGS 3024. Prerequisite: Junior standing or instructor’s permission.

JUST 3026 Levinas and the Political (4 Credits)
Emmanuel Levinas (1906-1995), famous for his arresting insight of “ethics as first philosophy,” is a key figure in the histories of phenomenology, metaphysics, and theology. In this class, we examine the implications of Levinas’ thought for politics and the political through close readings of his insights on peace, proximity, and justice in such works as “Reflections on the Philosophy of Hitlerism” (1934), Totality and Infinity (1961), Otherwise Than Being or Beyond Essence (1974), and “Peace and Proximity” (1995) in dialogue with key companion works in political thought and political theology, including Benjamins Divine Violence, Butler on postmodern politics, Connolly on agonism, Critchley on anarchism, Marxist intersections, and Derrida and other “Jewish theologies” of messianic impossibility. Themes addressed include: Justice; Covenant; Law; the grounding and paradox (or betrayal) of politics-with-ethics; phenomenologies of hospitality and strangers, friends and enemies; liberalisms, socialisms, fascisms; revolutions and anarchies; agonisms v. antagonisms; impossibility; messianisms without Messiahs; logics of works v. logics of grace; on the role of love vs. justice; anarchic grounds; temporalities of covenant and justice; fraternity; forgiveness and its limits; “the 3rd”; rational peace, peace between the wars, and impossible peace. This course is cross-listed: PHIL and JUST. Pre-reqs: This course is open to juniors and seniors except by special permission of the instructor.

JUST 3152 Philosophy Meets Mysticism: A Greek, Jewish and Islamic Neoplatonic Journey (4 Credits)
Neoplatonism is a unique genre - somewhere between philosophy and mysticism. In this course, we investigate some of the leading themes of Neoplatonism, tracing the Greek ideas of Plotinus (the third century "father of Neoplatonism") into later Jewish and Islamic textual traditions. As part of our journey, we investigate a host of philosophical writings, including the Theology of Aristotle and the Liber de Causis, as well as works by Plato, Plotinus, Proclus, Ibn Tufayl, Avicenna, IsaacIsraeli, Solomon Ibn Gabriol, andAbraham Ibn Ezra. Themes to be covered include emanation and creation, apophatic discourse, divine desire, the theological significance of imagination, inward reflection, and the call to virtue. Cross listed with PHIL 3152. Prerequisite: junior standing or instructor’s permission.

JUST 3700 Topics in Judaic Studies (1-4 Credits)
Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

JUST 3702 Colloquium in Jewish Studies (1-4 Credits)
Topics in Judaic Studies reflecting the interdisciplinary nature of the department and studies of the faculty.
JUST 3703 Topics in Judaic Studies (1-4 Credits)
Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

JUST 3704 Topics in Judaic Studies (1-4 Credits)
Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

JUST 3740 Bodies and Souls (4 Credits)
This course examines the unique place of the body in biblical religion. We ask how the Bible and its interpreters have shaped current views on sex and the gendered body in Western society. How has the Bible been (mis)used in relation to current understandings of the physical body? Is the saying that a "human" does not have a body, but is a body as true for the Hebrew Bible as the Christian New Testament? How has Judaism and Christianity (de)valued sexuality, procreation, and celibacy? How do the biblical traditions shape our modern opinions about the ideal physical body and body modifications? How can we understand "out-of-body" experiences and notions of death and afterlife in Western religion? Students are encouraged to interpret the Bible and their own beliefs from a uniquely embodied perspective. Cross listed with GWST 3740, RLGS 3740.

JUST 3743 Modern Jewish Literature (4 Credits)
Stories, novels and memoirs by 20th-century Jewish writers; consideration of issues of generation, gender and idea of Jewish literature as a genre. Cross listed with ENGL 3743.

JUST 3891 Justice: A Biblical Perspective (4 Credits)
This course explores the ways in which the Bible has been applied to questions of social justice in contemporary society. In addition to studying major theological and philosophical theories of justice, students read a variety of biblical texts related to major issues of social and economic justice such as world hunger, the poor, revolution, just war theory and pacifism, environmentalism, and the role of government. This course includes a service-learning component. Cross listed with RLGS 3891.

JUST 3982 Internship (1-5 Credits)

JUST 3991 Independent Study (1-5 Credits)
Prerequisites: HEBR 1003 or JUST 1003 or equivalent and instructor's permission.

JUST 4700 Topics in Judaic Studies (1-5 Credits)
Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

JUST 4701 Topics in Judaic Studies (1-5 Credits)
Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

JUST 4702 Topics in Judaic Studies (1-5 Credits)
Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

JUST 4991 Independent Study (1-10 Credits)

K-12 Administration (ADMN)

Courses
ADMN 4700 Special Topics in K-12 Administration (1-5 Credits)
ADMN 4810 School Administration: Case Studies (3 Credits)
Focus on current critical aspects of work of effective superintendents and other administrators in key decision-making roles; includes reading, discussions and guest presenters who are practicing administrators; problem scenarios presented for resolution.

ADMN 4812 Perspectives in District Leadership (4 Credits)
District leaders must focus their actions on the common goal of improving student learning and school systems must be organized to make this the fundamental priority. The purpose of this course is to examine district-level leadership, policies, and practices that support a school community committed to and focused on achievement of all students. The district role is emphasized in supporting school improvement, closing achievement gaps, providing resources, monitoring and using accountability data, and working with the community and school board leadership. This course includes an experiential learning component.

ADMN 4817 Administrative Internship (0-6 Credits)
Opportunity to be supervised in on-the-job experience to better prepare school administration students for district administration careers.

ADMN 4819 Organization Theory & Behavior (3 Credits)
Educational institutions are complex, political organizations with a wide variety of constituents and many layers of sometimes competing cultures, systems, and explicit and implicit goals. Leaders who work with these systems must find ways to make meaning of the organization and the context in which work occurs. This course will look at organizational behavior from several points of view, with the goal of understanding major theories that have been developed and learning to apply these theories in the management and study of organizations. The roles and responsibilities of various members of the organizations will be examined as well as the governance and control issues surrounding education. Organizational analysis will be viewed through the lens of structural, political, human resource and symbolic frames. This course includes an experiential learning component.
ADMN 4820 Educational Program Evaluation (4 Credits)
The purpose of this course is to review theories of program evaluation, evaluation designs and analysis, and current trends in evaluation. Program evaluation aims to determine whether a program, regulation, or policy is achieving its objectives by ascertaining whether it had the desired effect on intended outcomes. The evaluation process may include evaluation of programs, products, personnel, policy, performance, proposals, technology, research, theory, and even of evaluation itself. The course equips students with basic evaluation tools and understandings necessary to be thoughtful consumers and effective users of program evaluations in improving policy outcomes and designing more effective programs and policies. It is designed to provide students with the meaning and methods of program and policy instrument evaluation in education with the intent to contribute to informed decision making and enlightened change. Students analyze evaluations of the effectiveness of a variety of programs through discussion, field work, and case studies. This course includes an experiential learning component.

ADMN 4821 Improvement Science and Action Research (5 Credits)
The course focuses on school reform and improvement through improvement science and action research. Improvement science is an emerging concept which focuses on exploring how to undertake continuous quality improvement. Action Research is a strategy for professional development and collaborative, transformative school improvement. The aim of this class is to merge strategies of improvement science and action research to develop educators’ knowledge and skills to uncover and use data that exist in classrooms and schools for the purpose of promoting educational change and improvement. The participants in this course will create and conduct an action research or improvement science project. This course includes an experiential learning component.

ADMN 4822 Leadership in Complex Systems (4 Credits)
The purpose of this graduate course is to support leaders in melding theory and practice relative to sustaining complex organizations through developing skills that facilitate the convergence of leadership, communication and change. This course will focus on research applications of theoretical frameworks of leadership and successful leadership actions for complex systems. Leadership is a process that involves influence and goal attainment and occurs in a group context of uncertainty and complexity. Today’s solutions often become tomorrow’s problems. When changes occur in one part of the system, many others are affected in a cascading manner. Leadership is the lever for change. “Give me a lever long enough…and single-handed I can move the world” (Archimedes). The course is highly interactive and demands significant participation from students. This course includes an experiential learning component.

ADMN 4823 Educational Policy Making in the United States (4 Credits)
This course focuses on policy and advocacy in educational leadership. The course is designed to develop aspiring and current leaders’ understanding of local, state, and federal policy systems with a focus on the socio-cultural context surrounding educational policy decision-making. The course examines the basic governmental structure, the expansion of federal powers in policy making, the role and power of interest groups, the function of the state board, and the role of local boards of education. This course includes an experiential learning component.

ADMN 4824 Foundations of Educational History and Philosophy (3 Credits)
This foundational course examines the various theoretical, ethical, historical and philosophical perspectives that will inform educational leaders as policy and change strategies are formulated. This course includes an experiential learning component.

ADMN 4825 Leadership for the 21st Century: Using Creativity to Build Effective Schools (3 Credits)
Designed to assist leaders, at the district or building level, in the implementation of standards-based education to improve student learning and achievement. Primary emphasis is given to applying strategies for addressing critical issues in sustaining the equitable access to learning in a standards-based educational organization.

ADMN 4834 Seminar in Multicultural Issues (3 Credits)
Extends understanding of complex systems’ operations and responses by examining multicultural issues in the historical and social context and complexity of schools and school districts. Opportunities will be provided for students to develop an understanding of issues of diversity and the relationship of these issues to the roles and work of school/district administrators. The exploration of multicultural issues will occur through the examination of various themes relative to school/district administration such as curriculum, administration, human resources, policy and reform. Particular emphasis will be given to the exploration of the historical and future purposes of schooling in a democratic/pluralistic society in an effort to help students to develop critical knowledge and skills essential for providing leadership in 21st century schools.

ADMN 4835 Leading Teaching and Learning (4 Credits)
This course will examine educational practices that are meeting success as schools and districts attempt to learn, grow, and reinvent themselves using the principles of organizational learning and improvement science. Participants will understand basic systems theory and gain practical and theoretical tools to improve curriculum development, instruction, and student learning. This course includes an experiential learning component.

ADMN 4836 Improving Organizational Culture (4 Credits)
The purpose of this course is to understand organizational culture as a complex and challenging issue to shape and lead. The complex culture of schools or other educational organizations means many things including climate, organizational members’ engagement, culturally competent practices and the quality of human relationships in the organizational environment. This course will enable leaders to analyze the components of an educational organization’s culture and develop specific plans to create a culture that supports improved learning outcomes for every student, using high-quality, best instructional practices. Following the collection and analysis of data, students will be prepared to serve as Equity Oriented Change Agents (EOCA), leading the improvement of school culture focused on equitable access to high-quality instruction and services for every student. This course includes an experiential learning component.
ADMN 4840 Strategic and Transformative School Leadership (9 Credits)
Effective school administration is guided by research and best practices which inform governance, vision, leadership, and implementation processes. Understanding personal values, developing leadership skills and building a strong knowledge base regarding research and best practice are a key focus of the course. In addition, this course also examines strategies for visioning, mission building and branding; defining and assessing value and quality; developing competitive strategy; building networks and partnerships; assessing risk and gauging opportunity; building systems and sustainability; recruiting and developing staff, boards and stakeholders; engaging communities; and acquiring sources of funding. Students must be accepted into an ELPS certificate or MA program.

ADMN 4841 Instructional Leadership for Equitable Schools (5 Credits)
This course serves aspiring principals in the development and application of skills and knowledge associated with standards-based instructional practices, curriculum planning and development, assessment, and program evaluation. Students are assisted in developing and understanding issues of diversity and multiculturalism and their influence on the development and supervision of the instructional program. Although the major focus is on local aspects of standards-based education, some attention is given to the national role in this area. School leaders need to apply quantitative and qualitative research skills in a variety of ways to understand and improve the work of schools. This course reviews methods, applications, and data sources, including assessments and large-scale datasets, for continuous school improvement and program evaluation. In addition to the issues of instructional leadership, considerable attention is given to the examination of the needs of the individual student in the learning environment as well as research on learning styles, learning theories and models of teaching. Primary focus areas are supports for special education students, English Language learners, gifted students, and students in poverty. Students must be accepted into an ELPS certificate or MA program.

ADMN 4842 Human Resource Leadership (5 Credits)
This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation are discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Formal and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

ADMN 4843 Strategic Resource Management for School Leadership (5 Credits)
This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation will be discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Formal and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

ADMN 4844 Policy Analysis for Educational Systems (4 Credits)
This course introduces students to theories and methods of policy analysis including analyzing resources used and benefits gained from educational programs, policies, and organizations. Prerequisites: Introductory Statistics; acceptable Program Evaluation course. This course includes an experiential learning component.

ADMN 4845 Network and Systems Analysis for Educational Settings (4 Credits)
This course works with a variety of applied research methods for analysis of networks, systems, and program and policy impacts, with a focus on education and community/social services settings. Prerequisites: Introductory Statistics; acceptable Program Evaluation; acceptable Policy course.

ADMN 4848 Business Design and Innovation for School Leaders (4 Credits)
A school district is a large and complex business organization. By design, the course has a broad focus ranging from legislative issues, to manners and matters of local governance, to school finance, capital planning and budgeting concerns to more directed school and district support services. The course demands practitioners become aware of and demonstrate critical thinking as to what constitutes an effective and equitable use of people, time, technology and money in order to ensure achievement for all students. Being able to think differently, create a culture of innovation, and lead a systematic approach to implementing new ways of doing things is one of the most critical aspects of being a school leader. This course will be enhanced with a design thinking framework that takes a human-centered design approach to helping organizations innovate and grow.

ADMN 4849 Action Research for School Leaders (4 Credits)
This course emphasizes the use of research methods which are linked to research needed in schools. Students will learn to identify, analyze and solve problems. Some of the action research methods include focus groups, interviews, observations, school records and surveys. Capstone project will relate directly to the improvement of school policy and practice.

ADMN 4859 Action Research Capstone (1 Credit)
Provides support for students as they develop their action research project into the Capstone for the Masters in Educational Administration.
ADMN 4860 Principal Internship (2 Credits)
The purpose of a formal internship with a principal is to participate in supervised practical training in many of the aspects of school building administration. It is imperative that an applicant have as many first hand experiences as possible in all phases of building administration which focus upon the standards set for principals in Colorado. Must be accepted into an ELPS certificate or MA program.

ADMN 4900 Advanced Inquiry and Analysis (4 Credits)
This course is part two of a two-part course series. In part one of this series, Introductory Qualitative Research (RMS 4941), you learned about the foundations of qualitative research including philosophical perspectives, theoretical underpinnings, key characteristics, and common approaches to inquiry and research design: case studies, ethnography, narrative (testimonios), grounded theory, phenomenology, and action research. You ended the course with a design of a qualitative study proposal informed by the extant literature and your personal, practical, and intellectual goals. You completed the course with the design of a qualitative research study. ADMN [xxxx], Advanced Inquiry and Analysis, is the counterpart where you will go in the field to execute your qualitative study designed in your Introductory Qualitative Course. This intermediate level qualitative course builds on the content of other qualitative research courses at the University of Denver. In this course, you will continue to learn the skills and competencies needed to gather, analyze, and report high quality data. You will leave the course well-grounded in the application of the IRB process, data collection, data analysis, data interpretation, handling concerns about reliability, validity, and ethics; and writing the final report. The final product for this course will be the execution of a rigorous qualitative research design with preliminary findings that could be presented at a professional conference and with further development for manuscript publication.

ADMN 4991 MA Independent Study (1-10 Credits)
ADMN 4992 Directed Study (1-10 Credits)
ADMN 4995 Research - M.A. Thesis (1-10 Credits)
ADMN 5900 Research Planning and Design (3 Credits)
This course is designed to support doctoral students to design research and successfully defend a research proposal for their culminating project/dissertation.

ADMN 5991 PhD Independent Study (1-10 Credits)
Special projects in the field of education, taken by arrangement of Educational Administration faculty.

ADMN 5992 Directed Study (2-10 Credits)
ADMN 5993 Doctoral Research Seminar (1-4 Credits)
The Doctoral Research Seminar is designed to prepare students to undertake the completion of doctoral research or a dissertation. The research process can often be confusing and overwhelming, especially for students coming from a cohort-based program. This course assists students in turning a research idea into the EDD doctoral research project or a polished dissertation proposal and provides students strategies for making the process manageable and enjoyable.

ADMN 5995 Dissertation Research (1-10 Credits)

Leadership (LDRS)

Courses
LDRS 3991 Independent Study (1-5 Credits)

Liberal Studies (MALS)

Courses
MALS 4020 Graduate Research and Writing (4 Credits)
Critical thinking, accomplished through solid research and clear writing, is paramount to success in one's academic and professional pursuits. This course enables students to develop clear analytic and rhetorical writing skills at the graduate level; these skills are utilized throughout the curriculum in all degree areas. Each student organizes and produces a focused paper on a topic related to the student's degree field that contains a continuing argument centered around a clear thesis statement supported by the work of experts. Sources are evaluated for validity and incorporated in the paper with regard to the absence of plagiarism and proper Turabian author-date documentation. Focusing on the thesis statement, students research and analyze current data and trends in the field, build a rhetorical argument, and draw conclusions. The course stresses editing and revision for mechanics, style, and language. It is designed to improve writing and communication skills for use in academic and professional settings. This course is required of all degree seeking students and should be taken in the first two quarter of enrollment. A final grade of B or better must be earned in this course to meet degree requirements.

MALS 4050 World Visual & Performance Art (4 Credits)
This course draws upon global artistic traditions of visual art and performance in conveying how human beings express ideas, themes, and emotions. Students view and experience artistic forms and movements throughout history and from a variety of traditions across the world, critically analyzing art movements and forms across time. They synthesize ideas across cultures, traditions, and types of creative expression and make connections and distinctions between genres and art forms. A different, rich, artistic theme is the focus each time the course is taught.
MAL5 4200 Grant Writing for Arts and Culture (4 Credits)
This course explores the unique approaches to grant writing required by a variety of government and private entities that offer support for the arts and humanities. By identifying the special character of each entity's mission, its funding history, its place in the funding ecosystem, and the personalities involved, students learn how to produce effective funding proposals that align the goals of the funding entity with the programming goals of arts and culture organizations.

MAL5 4210 Inspiring Individual Donations for Arts and Culture (4 Credits)
Students in this course learn the most effective ways to cultivate relationships with individuals in their community who are engaged with arts and culture and then inspire them to donate both time and money to organizations that align with their interests.

MAL5 4220 Acquiring Sponsorships for Arts and Culture (4 Credits)
Students in this course learn how to identify businesses in their communities that care about arts and culture programming and value their programming enough to sponsor their efforts. The course presents case studies of sponsorship acquisitions, and students develop approaches of their own based on the most successful methods used by similar organizations.

MAL5 4280 Funding Arts and Culture Programming and Development (4 Credits)
Arts organizations must always consider funding when developing programming. Organizational strategic planning is analyzed, and fundraising is examined as a major component of that planning. Various tools and techniques for fundraising, including communication and planning skills, are analyzed and applied to case studies. Students explore different forms of fundraising and their implications for programming, which may include private or public grants, governmental funding, fundraising events, and private donations.

MAL5 4281 Event Planning (4 Credits)
Events and festivals play a large role in promoting the arts and developing links between the arts community and wider audiences and patrons. Students address various topics associated with event and festival planning and management, such as program development, marketing and audience development, venue considerations, and building partnerships. Students create an event program and plan.

MAL5 4283 Strategic Marketing Planning for Arts and Culture (4 Credits)
This course provides a strategic approach to audience and markets. Students study basic principles of marketing and audience identification. They build strategic marketing plans that are cohesive with the mission and programming of the organization, utilizing various forms of media. Audience characteristics are examined from various perspectives, and theories of creating commitment to the arts are studied. Students create an arts marketing plan for an organization or event.

MAL5 4284 Arts and Culture Entrepreneurship (4 Credits)
In any sector of the Arts and Culture field, whether government, non-profit, or for profit, it is essential to be able to develop programs and/or organizations from conception through implementation and assessment. This development requires the clear communication of what is needed to develop, implement, and sustain this plan over time. In this course, students take an entrepreneurial approach to develop a program or organization in the arts and culture field. Students develop and present a comprehensive business plan to define, map, structure, and assess the program/organization in either the non-profit or for profit sector.

MAL5 4285 Basics of Arts and Culture Marketing (4 Credits)
This course provides a strategic approach to audiences and markets through an arts and cultural lens. Students will study basic principles of marketing, audience characteristics, and theories of creating commitment to the arts.

MAL5 4286 Social Media and Digital Marketing for Arts and Culture (4 Credits)
Marketing arts and culture in the digital age is an art unto itself. Today's arts marketers are expected to produce visual, audio, and written content that matches the quality of the art, on stage or in the gallery, or the cultural programming presented to the public. This course provides students with a framework for producing engaging digital campaigns that build communities around art and culture, a skill that is immediately marketable in their job search after graduation.

MAL5 4287 Managing Demand and Pricing for Arts and Culture (4 Credits)
Tomorrow's arts leaders need to be prepared to face the emotional subject of pricing in a way that is responsive to the community yet supports a sustainable business model. This class takes an evidence-based approach to determining demand for arts and culture programming and setting prices for programs and events offered by arts and culture organizations. Students will explore dynamic pricing strategies, approaches to communicating the relationship between price and value, and how artistic and cultural programming enriches the broader community.

MAL5 4300 Operational Strategy for Arts and Culture (4 Credits)
This course introduces students to the operational challenges faced by leaders in arts and culture organizations. Operational leaders shape the structures and systems that help organizations realize their strategies and objectives. These structures and systems enable creative solutions at every level of the organization, cultivating a relatively open culture that encourages individual commitment and innovation as well as effective group collaboration. Students learn to analyze and assess productive operational strategies based on understanding the organization's goals; its financial, technical, and regulatory constraints, and the limitations and opportunities presented by the communities it seeks to serve.

MAL5 4310 Program and People Management (4 Credits)
In this course, students learn a variety of approaches to managing people and programs in arts and culture organizations, with the aim of encouraging creative engagement and commitment to the mission of the organization as expressed in its programming.

MAL5 4340 Arts and Culture Leadership for Social Change (4 Credits)
Arts and Culture organizations historically have been at the forefront of social change. In this course, students examine the role of arts and humanities in inspiring and shaping social change and learn how to integrate social change goals into the programming of arts and culture organizations.
MAL 4410 Writing and Healing (4 Credits)
Many writers attest to the emotional, spiritual, and even physical benefits of writing. In this course, students will explore a variety of ways in which written expression can help them navigate the human journey. Students learn leading theoretical models of journal and poetry therapy (interactive bibliotherapy), assess poems based on their usefulness in personal growth contexts, and participate in experiential discussions and writing exercises. Students focus on the writing and healing process rather than their own self-explorations of healing through writing. Students submit a portfolio of reflection writings, as well as complete a final paper on a writing topic that intersects with a personal growth experience or interest. Cross-listed with PWRI 4410 Writing and Healing.

MAL 4440 Artists on Art (4 Credits)
This course explores the professional life of the artist, including how artists conceive of a vision for their work, organize their time and space, and communicate about their art. Students read significant works (diaries, correspondence, and essays) by and about artists, and have opportunities to interact with working artists. Students keep and produce a journal to explore ideas, plan projects, and describe methods and media to be used in their current or proposed work.

MAL 4444 Emerging Trends in Art (4 Credits)
This course focuses on what is "going on" in the arts: contemporary trends, what's hot, what's not, and why. Selected themes in modern and contemporary art are reviewed to help students discover how their art will fit into or counter emerging trends in art. The latest cutting edge developments in art are explored, and students are challenged to describe the place and purpose for their work.

MAL 4470 Arts and Culture: History, Context, and Trends (4 Credits)
This course examines the significant and growing economic, social, and educational impact of the arts in today's rapidly changing environment. Discussion of current and historical trends in the visual, performing, literary, and media arts provide a context for practical applications in the field.

MAL 4475 Organizational Vibrancy and Measurement (4 Credits)
As database and analytics systems for arts organizations grow ever more sophisticated, arts leaders must be literate in basics concepts of statistics, finance, and data analysis. This course will prepare students to examine data critically, explore the stories that data can tell, and determine how to measure success and vibrancy.

MAL 4480 Arts and Culture: Best Practices and Practical Skills (4 Credits)
This course provides a comprehensive overview of nonprofit best practices with specific applications to arts and culture organizations. Governance, budget planning and management, organizational development, advocacy, marketing and fundraising, community and rural development, event planning and facilities management are discussed using exemplary and diverse arts organizations as case studies.

MAL 4485 Legal Landscape of Arts and Culture (4 Credits)
Professionals in arts and culture, whether they are artists, managers, directors, or others working in the private, government, or nonprofit sector, will encounter a variety of legal issues during their careers. Through readings, case studies, assignments, and research, students will be introduced to a complex interdisciplinary system of relevant laws that impact and, in some cases, govern arts and culture organizational activities.

MAL 4490 Cultural Participation and Program Planning (4 Credits)
In this course, students explore changing attitudes and participation in the arts and the need for innovative approaches to engage audiences. Audience development and involvement is explored, especially in terms of arts education. The connection between cultural participation and program planning is closely examined. Various models are discussed on a theoretical level, and diverse arts organizations serve as case studies for practical applications.

MAL 4491 Topics in Literature (4 Credits)
The content of this course varies each term. The topics may include time-sensitive issues in the area of literature, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

MAL 4492 Topics in Writing (1-4 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues in the areas of writing and literature, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

MAL 4493 Topics in Film (1-5 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues from the film industry, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

MAL 4494 Topics in Art (1-5 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues from the film industry, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.
MALS 4740 Natural Science and Literature (4 Credits)
The natural sciences have inspired some of the most entertaining, creative and provocative works in international literature. Writers like Thoreau, Gould, McPhee, Kingsolver and others have explored some of the most complex theories that explain the majesty of the physical world. Students read and analyze many works in this popular genre. Specifically, the class looks at how these writers use story to shape their work, how they introduce and explain multifaceted theories for the layperson, and how recent scientific theory has shaped our culture. Students also have an opportunity to write about scientific subjects in their own voice.

MALS 4745 Children's Literature (4 Credits)
This course is an introductory study of all levels of children's literature for the student who is interested in literature, the student who is planning to teach, and for those who are or will be parents. This course introduces students to types, genres, and varieties of literature for reading to children as well as reading by children. The main focus is to remember the joys and wonders of reading as a child and young adult, and to approach the literature selected not as "just a kid's book," but as literature with real quality standards and room for critical and analytical discussions.

MALS 4750 Literature to Film (4 Credits)
In this course, we examine the adaptation of literary works into films. We closely study selected modern literary works and the film interpretations of each work. Focusing on the transition from one narrative form to another, the course aims at enhancing the critical skill of students as well as their creative ability. Therefore, we also have mini scripting workshops as a way of imaginatively highlighting the sort of considerations that go into the making of the film script.

MALS 4755 World Literature (4 Credits)
In this course, students take a literary tour of the world in 70 days. Stops along the way include classic works of the 20th-Century from Africa, Asia, Europe, and Latin America - fiction, nonfiction, and poetry. As with any whirlwind tour, students learn a little about "the other" and a lot about themselves. An emphasis can help us see our own literary and cultural assumptions with new eyes. Students are also asked to reflect on thematic relationships and differences among texts from different times and places.

MALS 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.

MALS 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and independent topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

MALS 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.
MAL 4905 Graduate Social Research Methods (4 Credits)
Graduate Social Research Methods is an exploration of the methods and purposes of social science research from the perspective of the researcher as well as that of the informed professional and consumer of information. Students will learn about the process of research, including the development of research questions, the purpose of various social science research methods, the role of professional ethics, and general approaches to the analysis and interpretation of data. Students will develop the ability to read and critique basic social science research articles and to implement simple research designs. Students will develop and write a research proposal around a specific research question informed by a review of the literature. Technical requirements include the ability to read and modify Microsoft Excel documents. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

MAL 4915 Research in Humanities (4 Credits)
Graduate Social Research Methods is an exploration of the methods and purposes of social science research from the perspective of the researcher as well as that of the informed professional and consumer of information. Students will learn about the process of research, including the development of research questions, the purpose of various social science research methods, the role of professional ethics, and general approaches to the analysis and interpretation of data. Students will develop the ability to read and critique basic social science research articles and to implement simple research designs. Students will develop and write a research proposal around a specific research question informed by a review of the literature. Technical requirements include the ability to read and modify Microsoft Excel documents. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

MAL 4920 Portfolio Capstone (4 Credits)
The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the Portfolio Capstone produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field. Students must complete the Portfolio Capstone with a grade of B or better.

MAL 4980 Internship (1-4 Credits)
The internship is designed to offer students a purposeful experience in a practical, industry-related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master’s programs.

MAL 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

MAL 4992 Directed Study (1-8 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

Library & Information Science (LIS)

Courses

LIS 4000 Foundations of Library, Archival, and Information Science (3 Credits)
An overview of the theoretical and conceptual foundations of library, archival, and information sciences and an introduction to the information professions, including principles, values, professional organizations, publications, current and future challenges.

LIS 4010 Organization of Information (3 Credits)
This course introduces basic concepts in the theoretical, practical, and technological aspects of information organization. It provides an overview of the methodologies for organizing and representing information resources in the library, archives, and museum settings.

LIS 4011 Information Access & Retrieval (3 Credits)
Information retrieval is defined as the process of searching for (and retrieving) relevant information within a document collection. The document collection could be textual (bibliographic records), structured and unstructured data, library databases, web based information resources, multimedia resources, and numerical data. This course introduces students to important access and retrieval tools and technologies used to retrieve information that are relevant to a user’s information need. In addition to the underlying principles and processes revolving around access and retrieval such as text operations, indexing, query languages, and searching, the course covers relevant topics such as library discovery systems, web based information retrieval technologies, and enterprise search systems.

LIS 4015 User and Access Services (3 Credits)
Overview of human information processing and user services in the changing information environment and different communities of practice. This course introduces the concepts of user information needs, seeking, and processing as a foundation for understanding users and designing user-centered information services. The course examines both traditional reference and current/emerging information services in different settings and populations. Course also introduces the concepts of information literacy, user education, and assessment of information services. Recommend prerequisite: LIS 4015.
LIS 4040 Management of Information Organizations (3 Credits)
An introduction to current theory and practice of management in information organizations through the study of organizations, communications, decision making, planning, leadership, human resources and budgeting. Prerequisite: LIS 4000 or instructor approval.

LIS 4050 Library and Information Technologies (3 Credits)
A foundation course on the applications of information and communications technology in libraries and information agencies. Integrated library systems and the acquisition, evaluation, and implementation of library automation solutions, including electronic resource management systems are explored. The course further introduces database design, Internet technology, web services, cloud computing, computer networks, telecommunications, and computer security. Hardware, software, and other productivity tools and utilities from organizations such as OCLC, Amazon, and Google are discussed.

LIS 4060 Reference (3 Credits)
Information resources include a number of different kinds of reference materials in a wide variety of formats. These include guidebooks, encyclopedias and dictionaries, indexes and abstracts, handbooks, bibliographies, biographical finding tools and biographies, data sets and much more. Many of these resources are available on-line, as well as in print and other digital formats. This course will help students identify and evaluate the most likely resources for information queries in particular settings. It will also provide the opportunity to find answers to real research questions. The course will cover the primary resources for the broad disciplines of business, humanities, sciences, social sciences and government publications in print and electronic formats. Class exercises will reflect the multidisciplinary and multicultural interests and characteristics of library users. Prerequisite: LIS 4015. Recommended prerequisites: LIS 4000 and LIS 4011.

LIS 4070 Cataloging & Classification (3 Credits)

LIS 4135 Scholarly Communication (3 Credits)
This course will provide a broad understanding of scholarly communication systems regarding the creation, dissemination, and evaluation of scientific information. The concept of scholarly communication refers to the ways researchers publish and disseminate their research findings in the digital environment and encompasses formal and informal channels of communication among scholars. Traditionally, scholarly dissemination systems have involved conference presentations and publication of books and articles in subscription-based journals. Digital technology has transformed scholarly communication by introducing open access publishing models and alternative ways of measuring scholarly impact. This course will explore the changing nature of scholarship and will examine the topics of scholarly publishing, peer review, intellectual property, the open access movement, digital repositories, bibliometrics, and altmetrics.

LIS 4206 Web Content Management (3 Credits)
This course will include instruction in web page creation, selection, and evaluation of web content as well as web site management. Selection of web page content will be discussed in the context of organizational knowledge management and competitive intelligence needs. Differences in information needs for provision of public information and competitive intelligence on Internet pages versus the organizational information needs of Intranets in knowledge management will be explored. This course also will address human-computer interface design to allow web page designers to create effective web pages according to established principles of design.

LIS 4208 Usability (3 Credits)
This course provides an overview of usability analysis and user experience research and introduces students to practical methods and techniques in conduction usability evaluation. The focus of the course will be on the selection of appropriate evaluation methods, as well as planning, designing, and conduction usability evaluations of information services. In addition, the course will discuss the methods and tools of user-experience research, the theoretical underpinnings of usability, and the role of usability in iterative design and the development of information systems.

LIS 4209 Information Architecture (3 Credits)
The web is a complex information environment consisting of billions of web pages, users, and clicks and interaction every single day. This course introduces students to the fundamentals of web information architecture (IA) - a discipline that aims to understand the information needs and activities of web visitors and create design elements to help users find their way around in the complex information environment with ease. The course will cover various strategies and skills, in which information architects structure, organize, label, navigate, and search for information on large websites. A service learning component is built into this course so that students can transfer their IA knowledge and skills to a real-world project. The course is designed following a project management approach and students will be exposed to different activities from start to finish.

LIS 4210 Data Visualization (3 Credits)
This course provides a practical introduction to the principles, theories, and applications of information visualization in the research data context. This course contextualizes modern practices in information visualization by examining historical approaches to visualization with an eye on theories that inform contemporary visualization best practices. Using a hands-on component, students will get real-world experience in visualizing datasets, and building visualization dashboards that integrate multiple visualizations.
LIS 4220 Data Curation (3 Credits)
Across the academic domains, digital data are becoming more visible as critical products of scholarly work. Digital technologies, such as sensor networks in the environmental sciences, social networking tools in the social sciences, and the digitization of cultural artifacts in the humanities, allow researchers to produce far greater volumes and complexities of digital data than were possible in the past. Digital technologies, and the data that they produce, offer tremendous opportunity for researchers in every academic discipline to ask questions that were previously impossible to study. Some digital technologies enable researchers to study very local phenomena in great detail. Others enable the integration of many diverse data streams in order to conduct synthesis and longitudinal studies. But while the possibilities of digital data are exciting, they also present tremendous challenges: how to best organize and manage data, how to make data discoverable and accessible to diverse user communities, and how to store and preserve data over the long term.

LIS 4230 Database Management Systems (3 Credits)
This is a foundation course on the principles of database design and the use of database management systems for information professionals. The course covers database systems, data modeling, relational models, relational algebra, SQL, emerging NoSQL systems, data storage and querying, query languages, query optimization, OLAP, transaction management, data warehousing, and data mining. In addition, fundamentals on systems analysis and the database application lifecycle will be reviewed.

LIS 4235 Scripting for Large Databases (4 Credits)
This course will introduce students to the basics of data storage and acquisition as part of a multi-step data gathering, processing, analysis and visualization effort. The logic and structure of relational databases will be reviewed, exploring the more common databases like SQL Server and Postgres. along with exploration of JSON and NoSQL based data stores. Techniques and methods for automation and scalable data processing will be introduced under the Python programming language with a focus on using Pandas and other libraries to simplify data tasks. These skills will be integrated and applied by the student through the use of prepared data sources, along with use of APIs and web scraping technique to acquire data through internet sources.

LIS 4320 Outreach (3 Credits)
Outreach as a library service is evolving at a rapid pace. This course will examine the history, current practice, and future promise of outreach across all kind of library organizational settings. Topics addressed in this course will include competencies for outreach librarianship; practices in outreach services; definition and scope; planning, designing and budgeting for services; environmental scanning, key performance indicators, and barriers; developing and maintaining partnerships.

LIS 4321 Collection Management (3 Credits)
Topics addressed in this course include collection development and access policies, selection methods and practices, collection assessment, preservation and conservation, de-selection, treatment of rare material, manuscripts and archives, U.S. government publications, non-book and digital formats management, juvenile, and other special materials.

LIS 4330 Library Instruction (3 Credits)
This course provides an introduction to the principles of library instruction and information literacy including a historical overview of their place within the profession. Emphasis is on instruction within an academic setting, but students will learn important educational theories that can be applied to a variety of settings. ACRL and AASL standards will be examined as well as types of instruction, instructional design, collaboration with faculty, various competencies, assessment, and lifelong learning. The class has a strong emphasis on public speaking, communication skills, and the practical application of educational theory.

LIS 4350 Adult Materials & Services (3 Credits)
This course provides the student with an opportunity to explore readers advisory service from a customers perspective. Students study the readers advisory literature and examine all types of genre fiction. Lecture, readings and class discussion will focus on specific genres and authors within them. Students will also be required to read in all the genres.

LIS 4370 Database Searching (2 Credits)
Nearly all historic, traditional search and retrieval tools such as library catalogs, indexes, microform guides, and archival findings aids have migrated to web-based systems. This course explores the complexities of searching for materials in an online environment. Topics to be covered include database and field structures; controlled vocabularies and indexing schema; search syntaxes, reference linking; data exploring and manipulation; non-textual database searching including numerical, image, and multimedia data; metasearch and web-scale discovery technologies.

LIS 4404 Metadata Architectures (3 Credits)
Provides an overview of the principles and theories of metadata development in the digital environment. Focuses on the design and application of metadata schemas for distinct domains and information communities, issues in metadata interoperability, vocabulary control, quality control and evaluation. Examines international standards, activities and projects. Prerequisites: LIS 4010.

LIS 4510 Children's Materials and Services (3 Credits)
This course is designed to prepare librarians to work with children (ages birth to 12 years) in school and public libraries. Topics covered include children's development, reading interests and needs, materials selection, collection development (including print and non-print materials), discussions of specific genres, reading motivation skills, designing a children's area, and developing various programming ideas. Students read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks and stories, become familiar with review sources, and design a one-year plan for youth services in a school or public library.
LIS 4520 Young Adult Materials & Services (3 Credits)
This course prepares librarians to work with young adults (ages 12-18) in school and public libraries. Topics covered include young adult development, reading interests and needs, materials selection, collection development (including print and non-print materials), and discussions of specific genres, reading motivation skills, designing a YA area, programming, and intellectual freedom issues. Participants will read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks, become familiar with review sources, and design a one-year plan for a YA department in a small school or public library.

LIS 4535 School Libraries (2 Credits)
This course is a study of school libraries and the characteristics that make them different from other types of libraries. There is an emphasis on information literacy and educational technology standards as they apply to school libraries, the collaborative instructional process, and standards-based instruction including summative and formative assessment revision techniques. Collaborative planning and curriculum development through the school library program is addressed, as well as an understanding of networks and instructional delivery systems. Various strategies to improve students’ reading will be addressed, as well as a variety of methods for promoting children’s and teen literature through collaboration with classroom teachers. Administration of the school library is addressed in a review of mission statements, goals and objectives, strategic planning, policies and procedures, and communication with school administration. The discussions will create an awareness of the important of leadership and professionalism through educational and professional organizations, lifelong learning, educational research, and mentoring. Most of the concepts in this class will have been introduced in other classes. This class will specifically tie the concepts to the school library setting.

LIS 4700 Topics in LIS (1-5 Credits)
This flexible library and information science course will provide students with the opportunity to explore issues of current importance in the field. Topics and credit hours will vary and will address subjects such as emerging technologies, new methodologies, specific reader services, standards and practices, and social and economic trends in the profession. Prerequisite courses may be recommended or required as determined by the content of the specified course.

LIS 4701 Reference Topics (1 Credit)
This course provides the student with an opportunity to explore information resources in specific subject materials. Lecture, readings, class discussions, and exercises will address all formats of materials including print, electronic, and web resources.

LIS 4702 Type of Library: Topics (2 Credits)
This course is a study of specific types of libraries, such as public libraries, academic libraries, and special libraries, and the characteristics that make them different from other types of libraries. Specific topics covered will depend on the type of library, but may include collections, management, budgets and funding, as well as professional competencies.

LIS 4800 Intro Archives & Records Mgmt (3 Credits)
This course provides an introduction to the objectives and methods of the archival and records management professions including an overview of terminology, issues, and common practices. The systematic control of records throughout their life cycle from creation through processing, distribution, organization, retrieval and archival disposition will be covered. Prerequisites: LIS 4000 and LIS 4010, or instructor permission.

LIS 4805 Records Management (3 Credits)
This course covers the establishment of information maintenance plans, evaluations and audits of records and information management Programs, the records and information survey, retention policies and legal requirements, and techniques for integrating automation to records and information management.

LIS 4806 Advanced Archives (3 Credits)
In this course, students will be given the opportunity to put into practice basic archival principles and functions. Students will perform the actions of appraisal, accessioning, arrangement, description, and access solution review for both analog and digital archival collections. Additionally, students will be given the task of providing solutions for new paradigms in archival processing such as creating a web archive, processing email collections, and capturing social media content. The course will be a combination of lecture, demonstration, lab time, discussion, and projects.

LIS 4810 Digital Libraries (3 Credits)
This course provides a theoretical foundation for the study of digital libraries and discusses the technological, organizational, social, and legal issues associated with the development and use of digital libraries. Through this course students develop an understanding of digital library components and explore theoretical and practical approaches to constructing, maintaining, and evaluating digital libraries. Topics examined include digital library definitions, design and architecture of digital libraries, information access in the digital library environment, digital library users and user services, data repositories, digital curation, digital preservation, digital library evaluation, and digital librarianship.

LIS 4820 Digitization (3 Credits)
The course offers an introduction to issues and trends in planning, developing and managing digitization projects at libraries, archives, and museums. The focus of the course is on the conversion process of analog materials into the digital format, online delivery, and preservation of master files. The course discusses collection development policy for digital projects, copyright, digital imaging technology, digitization standards and best practices for text, images, audio, and video, metadata for cultural heritage collections, delivery platforms, preservation, project management, sustainability, documentation, promotion, and evaluation of digital projects.
LIS 4930 Building Digital Collections (3 Credits)
This course provides a theoretical foundation and practical experience in building interoperable digital collections. It will introduce students to all aspects of building digital collections, including planning, user needs analysis, selecting standards and content management systems, creating digital objects and metadata, designing user interface, preservation of digital objects, and management and evaluation of digital collections. Topics covered include content creation standards and best practices, metadata, interoperability, sustainability, scalability of management systems, and concepts related to designing access tools and delivery systems. Discussion of technology and its application to digital library practices will be a major theme. The course will be combination of lecture, discussion, and problem solving. It requires participants to conduct independent research and writing. Critical reading of course materials is essential to stimulate active participation in class discussions.

LIS 4950 Digital Preservation (3 Credits)
Students will learn the principles and practices of preserving access to information encoded in digital form. They will learn how to assess digital preservation needs within an institution, write digital preservation policies, and how to collect and present data to make a case for acquiring funds for digital preservation activities. Students will learn the basics of digital information encoding as it applies to the technological aspects of digital preservation, and will learn about current tools and practices used to preserve access to digitally encoded information over time. The course will be a combination of lecture, discussion, and problem solving. It requires participants to conduct independent research and writing. Critical reading of course materials is essential to stimulate active participation in class discussions.

LIS 4901 Capstone Course (3 Credits)
Students in this course will design and complete a project to demonstrate the ability to integrate and synthesize their masters course work and apply their knowledge to a topic. The class meets with an instructor regularly over the nine-week summer quarter. The instructor monitors and guides the students to ensure that they complete the phases of the project in accordance with the proposed timeline and goals. Evaluation will be based on individual performance, with respect to the quality and professionalism of the research, the management of the project, and analytical and writing skills. Prerequisite: Minimum of 45 quarter hours of graduate LIS course work completed, including all core courses, a proposal approved by the academic advisor and faculty permission.

LIS 4902 Internship (1-4 Credits)
This course will offer up to 4 credits for an internship position in libraries and archives. Students are encouraged to gain practical experience.

LIS 4910 Culminating Internship (3 Credits)
This course is designed to supplement the classroom experience by giving students practical experience working in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include fields of medicine, law, art, public, and academic libraries. It is the students responsibility to select a practicum site and a field supervisor, who must be approved by LIS faculty. One hundred hours of service over a 10-week quarter are required. The student, faculty, and field supervisor will determine specific requirements for the final paper or report. Students must notify the LIS academic advisor one quarter before enrolling in Culminating Internship. Prerequisites: Completion of a minimum of 38 quarter hours of graduate LIS coursework, including all core courses.

LIS 4911 Elementary School Culminating Internship (2 Credits)
This course is designed to provide elementary school practical experience for teacher-librarians by working a minimum of 80 hours in an elementary school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

LIS 4912 Secondary School Culminating Internship (2 Credits)
This course is designed to provide secondary school practical experience for teacher-librarians by working a minimum of 80 hours in middle or high school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

LIS 4920 Service Learning in LIS (1-4 Credits)
This course is designed to supplement the classroom experience by giving students an opportunity to participate in a service learning project. Students will propose an independent study component highlighting the learning aspects of the project. The experience should provide practical work in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include many areas related to the information needs of an underserved population. It is the students responsibility to select a site and a field supervisor. The student, faculty coordinator, and field supervisor will work together to establish the goals and objectives of the experience. A minimum of 40 hours of service is required for two quarter hours of credit.

LIS 4991 MA Independent Study (1-10 Credits)
Independent study projects allow students more in-depth investigation of the many facets of library and information science. Students must work with an approved faculty advisor and submit a proposal outlining the objectives, scope, outcomes, and evaluation criteria. The faculty advisor and the department director must approve proposals. Prerequisites: Completion of a minimum of 30 quarter hours of graduate LIS coursework, including all core courses and a minimum GPA of 3.0.

LIS 4992 Directed Study (1-10 Credits)
Courses

MGMT 4201 Leading Teams (4 Credits)
“Leading teams” is a graduate course to prepare students to provide formal and informal leadership to a team. Students will learn about the fundamental design principles of high-performing teams as well as common pitfalls that teams are subject to. Students will also learn about how to sustain team performance through effective information-sharing, decision-making, and conflict management. Students will also cover current topics in teams including virtual teams, team creativity and team-based innovation. This course is designed to stimulate student learning by letting students integrate abstract knowledge through concrete firsthand experiences.

MGMT 4202 Leading Self (4 Credits)
The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual human/social interaction. This course will focus on providing students the critical skills to “lead the self” towards personal/professional goals as the context for studying intentional change. Students will revisit assumptions held about themselves as they develop intentional strategic approaches to identify career opportunities in their selected fields and lead the self towards the accomplishment of professional objectives.

MGMT 4203 Leading Organizations (4 Credits)
Students will develop the ability to think strategically by examining a firm’s mission, vision, and values, business model and financial health of the organization. After assessing the firm’s strengths and weaknesses, the focus is then placed on the industry and competitive environments using a series of tools and frameworks that result in identifying opportunities and threats. Synthesis in the course takes place when the student is able to provide strategic recommendations that generate added value and competitive advantage for the firm. Learning is facilitated through a work-shop atmosphere that uses case studies of industry leaders currently in the news.

MGMT 4204 Springboard (1 Credit)
This course helps you to develop your abilities as a leader and follower working in teams; since most success and progress in business will take place by working with others. Your personal development as a leader and follower is thus of the utmost importance. In short, we hope to fire your imagination as to what is possible, as well as ground your dreams in the realities and complexities of working in the 21st Century. The personal development aspect begins with self-awareness in Leading at the Edge. Within the first few weeks of their graduate program, students are taken to a nature camp 9,000 feet up into the Rocky Mountains where they participate in an intensive (some say “grueling”) three-day exercise in self-awareness, outdoor leadership, team-building, and problem solving. Unlike most “rocks ‘n ropes” exercises, this intellectually rigorous component, often referred to as Leading at the Edge, is designed to enhance the classwork students engage in, especially in working together on the challenging exercises that make up the MS in Management program. The value creation aspect is supported by a series of workshops.” In these workshops, students will focus on applying their new found knowledge to real world situations. The purpose of these Daniels Engagements is to match the personal development aspects of Leading at the Edge with discussions and exercises on creating value, for your self and for your organization, but for the community and for the larger social realms in which businesses operate. For the exercises, students will explore and discuss some of the definitive writings by thought leaders on business. This is intended to facilitate learning basic “business literacy” – exposure to fundamental ideas and concepts that business leaders and writers currently struggle – and to provide material with which to engage your developing skills in (1) critical and creative thinking, and (2) clear communication with others.

MGMT 4240 Global Business (2 Credits)
The International Experience is designed to expose students to the challenges and opportunities of doing business globally. How do you make well-informed decisions in a global environment, taking into consideration the economic, political, environmental, cultural and historical context of a particular country or region? Conducting business outside the United States involves a unique set of challenges; diverse cultures, laws, languages, and currencies add to the complexity of putting together and managing international business ventures. The international experience will help you prepare for these types of activities by exploring the basic questions which focus on various aspects of international business. As a part of the international trip, students will meet with business executives and organizational leaders across a variety of industries to gain a broad understanding of the business environment in a host country. In addition to completing secondary research beforehand, students will also be responsible for conducting primary research by setting up small team meetings in-country in order to develop a hands-on understanding of the business environment on the ground. Another aspect of the trip will include working with a non-profit or other NGO on a social capital project while in the host country, to allow students to experience, personally, the local cultural and socio-economic environment.

MGMT 4280 Business Design (4 Credits)
Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. That innovation(s) is discovered through an investigation of the existing business models and the competitive landscape including: suppliers, customers, competitors, substitutes and barriers of entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of strategies in: marketing, sales, operations, human capital, social responsibility, financing, corporate governance and technology. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of business planning. The result is a written business plan and presentation to funding sources reflecting a sustainable competitive advantage and creation of a defensible market.

MGMT 4301 Organizational Psychology (4 Credits)
This course focuses on psychosocial and behavioral issues in management and leadership to better understand how to drive performance and well-being. The course is founded upon an interdisciplinary approach, with major inputs coming from social psychology, administrative science, engineering, medicine, sociology, and philosophy. The course will center around behavioral analysis and organizational concepts. Students will gain a solid understanding of the latest in organizational psychology from a declarative knowledge standpoint, then put this knowledge into use for procedural knowledge.
MGMT 4302 Leading Talent (4 Credits)
A management course for graduate students grounded in a strong foundation of real experiences managing and leading Human Resource organizations. This course is designed to unify strategy, human resource strategy and principles of management in a highly interactive format employing multiple learning methods.

MGMT 4303 Negotiations and Change (4 Credits)
Negotiations take place daily throughout our lives. Whether it is negotiating as a student with a professor on an assignment extension, a job candidate with a potential employer on salary and benefits, or a chief executive within an organization executing on its strategy, we must know how and when to leverage negotiating strategies and skills in order to achieve a successful outcome. This course explores, through a variety of scenarios, real-world cases, simulations, and role-plays, how negotiators leverage their skills to execute on their strategies to either arrive at a satisfactory agreement or to simply back away from the negotiating table without a deal. Sometimes the best deal, is no deal at all. We will explore a number of perspectives including: (1) Definition and characteristics of negotiations, (2) Interdependence and Relationships of the parties, (3) Dynamics of conflict and conflict management, (4) Integrative negotiating process, (5) Negotiating strategy, (6) Ethical conduct, (7) Communications, (8) Negotiating power, (9) Multiple parties, groups, and teams in negotiations, (10) International and Cross-cultural, (11) and Best practices.

MGMT 4304 Project Management for Leaders (4 Credits)
This course will introduce the student to the key elements of a successful project delivery system. The project delivery system consists of five components: training, tools, core skills, company support, and a project delivery process. The process is the means by which projects are consistently and efficiently planned, executed, and completed to the satisfaction of clients. The system is aligned with the principles of a total quality improvement program, namely client focus, project manager commitment, evaluation and measurement, corporate support, and continuous improvement.

MGMT 4305 Business Model Design and Innovation (2 Credits)
Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. Innovation(s) is discovered through an investigation of the existing business models and the industry landscape including: customers, competitors, substitutes, suppliers, and barriers to entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of financial, marketing, sales, operation, talent, technology, and social responsibility strategies. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of a Business Model and a Business Plan. The result is a written business plan and presentation to a potential funding panel.

MGMT 4306 Virtual Business Management Simulation (2 Credits)
The focus of this course is on gaining new venture experience. Through an online/virtual computer simulation, students will be placed into a very realistic international business setting, where they will start up and run a company through multiple rounds of decision-making. The online simulation allows students to build entrepreneurial firms, experiment with strategies, and compete with other student teams in a virtual business world. Designed to mimic the competitive, ever changing marketplace, the simulation lets students gain experience in market analysis, strategy formulation, and the management of a new venture.

MGMT 4330 Financials for Leaders (2 Credits)
This course is intended to help students develop a financial decision-making framework that can be used to assess and understand how financial decisions positively and negatively affect their company's short- and long-term well-being. Its emphasis is to introduce students to various tools and techniques used in financial management and to demonstrate how they are applied to the managerial decision-making process. This will be accomplished through a combination of class discussions and case study analyses. Topics include decision making, financial statements, ratio analysis, and return-on-investment.

MGMT 4340 Strategic Human Resource Mgmt (4 Credits)
This course focuses on the effective management of human resources in order to create sustained competitive advantage. The course covers the major policy areas of employee influence mechanisms, staffing, training and development, performance appraisal, reward systems, and work design so that students are better prepared to provide direction to the creation and implementation of effective management systems. Prerequisite: MGMT 3900 or permission of instructor.

MGMT 4345 Performance & Rewards System (4 Credits)
Measuring and improving human performance, techniques of individual objective settings including MBO, appraisal and feedback systems, creating and managing compensation programs, job design, analysis and redesign of reward systems in various organizational contexts. Prerequisite: MBA 4121 or equivalent.

MGMT 4350 Business Summit Series: Current Business Issues and Topics (4 Credits)
The Business Summit Series is an elective course that provides students with insights into a variety of contemporary business issues and topics with a practical approach to developing business leadership skills and competencies. Before the course commences, students are invited to provide input and help faculty select the topics that are covered in the series. The faculty will develop modules, with each module covering a discrete business topic a workshop format. The workshops are taught in four-hour segments, with some workshops covering more than four hours, depending on content and learning outcomes. Workshops span practical topics that are not covered in-depth during the core PMBA curriculum, and they also include emerging business subjects. Topics include: Go-To-Market Strategy, Business Development Strategies, Mastering Sales Techniques, Business Consulting Skills, Becoming a Manager, Organizational Change Leadership, Franchise Business Model, and Colorado's Marijuana Industry. Other emerging business topics may include the Colorado small business market and new industry segments. Industry leaders may present to the class as subject matter experts.
MGMT 4401 Global Leadership (4 Credits)
The operation of a far-flung global enterprise (large or small) imposes special demands upon its leaders. This course explores, through a variety of leadership perspectives, actions and strategies that can be employed to succeed in a global firm. These perspectives include: (1) the headquarters and chief executive officer; (2) global functional disciplines (with special emphasis on global human resource management); (3) the country manager; (4) the global product/service manager; and (5) the host country. Throughout the course, students will systematically examine the cross-cultural, operational and ethical complexities of leading and managing a truly “global” company.

MGMT 4402 Ethical Leadership (4 Credits)
Consideration of ethics in business and organizations is relevant for being an effective and successful manager and leader. The course is designed to strengthen capacities in terms of ethical awareness, analysis, and application. An important learning outcome of the course is to facilitate the growth of students in terms of making practically wise and ethically sound decisions in their future careers. Decisions include fulfilling responsibilities to create and sustain ethical climates and cultures for teams, business units, and organizations. This course introduces students to fundamental ethical concepts and ethical decision making frameworks. Students will apply these frameworks to cases and issues relevant to one’s role as a future manager and leader. Students will also be introduced current research in moral psychology and behavioral ethics, and students will apply this knowledge in assessing a current case related to business and management ethics. The course will cover current issues such as sexual harassment, privacy in the workplace, and whistleblowing. Students will develop a personalized values-based leadership plan.

MGMT 4403 Business and Society (2 Credits)
This course examines the role of business in society and explores important issues in the relationships between business, government, and society. These issues are approached from a stakeholder perspective, integrating business strategy with law, ethics, and social responsibility. The obligations of business to its multiple stakeholders are established and applied through analysis of companies, cases, and current events.

MGMT 4405 Strategic Execution and Summit Team Competition and Assessment (3 Credits)
Strategic Execution is a Challenge Driven Educational (CDE) course that builds off several previous MS Management courses. Students will leverage the contents from accounting, finance, management, marketing, strategy, and business analytics to engage with corporate partners to examine real-world problems. This course provides you with the opportunity to apply what you have learned so far in the MSM program with a live client. You will work on a project focused on business and management. Scoping the project will be a key learning outcome.

MGMT 4410 Qualitative Research Methods (2 Credits)
This course provides students with an overview of and experience with qualitative methods. You are introduced to a wide variety of qualitative methods, including ethnography, observation, interviewing, grounded theory, discourse analysis, deconstruction, historical methods, and action research. The course is roughly divided into two major sections. The first half of the course introduces you to the epistemological foundations of qualitative research and emphasizes design and data collection. The second half of the course introduces a variety of techniques for coding and analyzing qualitative data and provides exposure to many exemplars of qualitative reports/studies. We will examine conventions for ensuring that qualitative work is rigorous and appropriate for action. Throughout the course you will be given opportunities to try on various methods and gain some hands-on experience in several areas.

MGMT 4450 Power and Influence (4 Credits)
This course presents conceptual models, tactical approaches, and self-assessment tools to help you understand political dynamics as they unfold around you, and to develop your own influence style and negotiation skill. By focusing on specific expressions of power and influence, this course gives you the opportunity to observe its effective—and ineffective—use in different contexts and stages of a person’s career. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life.

MGMT 4490 Global Strategy (4 Credits)
Management of multinational enterprises; identification, analysis, and discussion of key policy issues for the international manager within various functional areas; home and host country relationships including assessment of political risk, selection of foreign locations, entry and ownership strategy, personnel and staffing considerations, technology transfer, multinational labor relations, organizing for international operations. Prerequisite: Should be taken in the last possible quarter before graduation and after completion of all advanced requirements and ITEC 3900, MGMT 3900, MKTG 3900, STAT 3910, and FIN 4610.

MGMT 4503 Comparative Management (2 Credits)
Exploration of similarities and dissimilarities of management practices in various cultures, determination of political, economic and cultural factors primarily affecting management theory and practice, transferability of certain management practices to other cultures. Introduction to basic assumptions and approaches of comparative research methodology. Prerequisite: MBA 4121.

MGMT 4515 Introduction to Sport and Entertainment Management (4 Credits)
The purpose of this course is to provide students with a very broad but significant exposure to the business of sports, which represents a global, multi-billion dollar industry. By critically analyzing numerous facets within this business from the perspective of a manager, student come away with knowledge that is wide enough but deep enough to foster a solid understanding of this dynamic and exciting industry. At the same time, this course provides students with specific and valuable insights that foster and stimulate deeper interest in a particular aspect within this industry through subsequent and additional coursework, independent study, and/or internship opportunities.

MGMT 4520 Managing Sport & Entertainment Contracts (4 Credits)
This is a comprehensive and interactive seminar on managing sports and entertainment contracts. The class covers intellectual property, the role of entertainment and sports managers and agents; general contract principles and theory; contract negotiation; management and operating agreements; and sponsorship, endorsement, and licensing agreements.
MGMT 4525 Facility Management (4 Credits)
What is a Public Assembly Facility? Public assembly facilities such as arenas, stadiums, convention centers, and theaters evolved out of the need by social communities to build permanent structures for public assembly, for political and commercial activities, religion, sports, spectacles, artistic expression and for commercial and educational assemblies. This course examines the specific areas of responsibility that one must acknowledge and understand to operate a successful venue of this type. We discuss the core competencies required and the unique areas of concentration that separate a public assembly facility from other venue types. Students realize the significant impact and benefit that facilities like these have on the social, educational and economic environment of communities.

MGMT 4530 Technologies for Sport & Entertainment Management (2 Credits)
This is a specialized course for the MBA student interested in expanding their knowledge of the sports industry as a business and as a world economic force. It provides students with a framework for understanding the scope of the sports business across various venues, as it relates to information technology. Management Sport Technology focuses on understanding the practical uses of computer applications as a tool in sport management activities. Emphasis is placed on demonstrated proficiency in project management, spreadsheet management, database management, and Web page development.

MGMT 4535 Managing Sponsorships for Sport & Entertainment Events (2 Credits)
The purpose of this course is to give students an understanding of sports sponsorship from the perspective of the corporate sponsor and the sports entity. The course identifies and describes the several media distribution channels that are used in corporate sports sponsorship. In addition, students learn how to use sports media distribution properties to create an effective sports marketing plan for corporate sponsors. Students put together a corporate sports marketing plan with a sample sports team.

MGMT 4540 Advanced Seminar in Sports and Entertainment Management (4 Credits)
The purpose of this seminar is to consider current topics in sport and entertainment management. Topics vary by quarter depending on timeliness of topics and interest of students. Potential topics may include public policy questions; ethical issues; current economic impacts and analysis; sport and entertainment management factors and how the various segments (professional, amateur, collegiate, high school, recreational and others) relate; environmental impacts; global issues and other issues that impact the current and future fields of sport and entertainment management.

MGMT 4545 Leadership, Team, and Career Development (2 Credits)
Daniels MBA students are preparing for leadership roles as entrepreneurs, in corporations, and in not-for-profit organizations. In this course we will look at leadership from a variety of perspectives. Once we have reviewed what the experts have to say about leadership, we will turn our focus to helping you develop your personal theory of leadership. You will answer on important questions: How will I lead? Armed with this knowledge, you will be better equipped to handle leadership challenges as you go forward in life.

MGMT 4555 Interdisciplinary Projects for National Park Service (4 Credits)
A practical application of key business and managerial knowledge, skills, and competencies designed to integrate graduate program elements and provide students with a unique opportunity to work on value-add projects with key managers from the National Park Service. This is an experiential course for integrating and applying multi-disciplined learning outcomes and experiences to real-world challenges, problems, and dilemmas, resulting in solutions for the National Parks Service.

MGMT 4560 Leadership of the Future (4 Credits)
In nearly every aspect of life - science, business, pop culture, environment, technology, global politics - we are inundated with data about how much and how fast the world is changing. How will these major shifts impact what we think of as leadership, and how can one develop to be prepared to lead in a fast-moving, volatile, and complex world? Leadership of the Future is a course that takes a deep look at how we've thought about what “leadership” is in the past from a business perspective, and considers what the future will require of leaders as they seek to effectively lead and make a difference in a complex world. The course is founded upon an interdisciplinary approach, drawing from a variety of disciplines including psychology, administrative science, literature, medicine, and philosophy. The course will center around behavioral analysis and active reflective practice: together we will think deeply about leadership as a behavior within a particular context, and as a practice to cultivate. Students will articulate a set of leadership development goals for themselves and engage experientially in service of self-observation, personal growth, and learning. Cross-listed with MGMT 3560.

MGMT 4620 Organizational Dynamics (4 Credits)
In this course, you will: (1) understand and develop a set of management and leadership skills critical for effectiveness in high performance work environments; (2) develop the ability to analyze organizations and environments from multiple perspectives; (3) explore policies and practices for facilitating organizational change; (4) become a valued and effective member of a work team; and (5) learn how to incorporate effective communication, critical thinking, creative problem solving, and technology, into organizational behaviors and processes.

MGMT 4625 Leading People & Organizations (4 Credits)
This course focuses on the effective management of people, every organization's most critical resource. Employees' knowledge, skills, commitment, creativity, and effort are the basis for sustained competitive advantage. It is people who deal directly with customers, have creative ideas for new products or for process improvements, who devise marketing strategy or take technologies to the next level. In this course, we approach the people side of business from a general management perspective, integrating concepts from organizational behavior, human resource management, strategy, and organizational design. Course topics include motivation, reward systems, engagement; feedback; processes by which work is done and decisions are made, including attention to teams, power dynamics, conflict, and negotiations; the structure of the organization and its systems, including job and organizational design and systems and policies affecting human capital; the organization's culture and history; and the external environment within which the organization operates, including legal, regulatory, demographic, economic and national cultural factors.
MGMT 4630 Strategic Human Resources Management (4 Credits)
This course advances the argument that effective human resource policies will create sustained competitive advantage. To that end, this course will address the effective management of human resources in various policy areas: staffing, diversity, training and development, voice and influence, performance appraisal, and reward systems. Rather than taking a traditional, staff personnel perspective, we will discuss human resource management from the strategic perspective of a general manager. Prerequisite: MGMT 4620.

MGMT 4650 Introduction to Management Consulting (4 Credits)
This course is designed to provide a broad overview of the management consulting profession, including its industry and competitive dynamics, major practice areas, approaches to implementation, management of consulting firms and the future of consulting. In addition, emphasis is given to the practice of consulting through the development of certain high impact skills in evaluation, proposal writing, data gathering and client presentations. The course is relevant to those who: 1) are specifically interested in consulting careers, 2) have job interests that involve staff positions in corporations, 3) want to become line managers who might one day use consultants, 4) wish to develop general consulting skills and familiarity with the consulting industry. The learning process in class will consist of lectures, cases, readings, exercises and guest speakers. This wide variety of learning methods is intended to convey both the necessary knowledge and practical skills necessary for building a sound foundation for becoming a professional consultant. It is essential that everyone comes well-prepared to class, as the learning process depends heavily upon participation.

MGMT 4690 Strategic Management (4 Credits)
This course builds from the premise that managers make decisions that influence the overall success of their organizations. We will concentrate on how top managers create and maximize value for their stakeholders. You will learn about how companies compete against each other in the quest of achieving high performance and market victories. You will learn about how and why some companies are successful while others are not. This course is about strategy. The primary task of strategy is the allocation and commitment of critical resources over relatively long periods of time in pursuit of specific goals and objectives. Strategic decisions take account of the conditions that prevail within the industry environment, both positive and negative, and the resources and capabilities available to managers for meeting environmental challenges. Strategy also requires establishing and managing an internal organizational system that creates and sustains strategic value.

MGMT 4700 Topics in Management (1-4 Credits)

MGMT 4710 Sustaining Family Enterprises (4 Credits)
Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family “banks,” family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

MGMT 4740 Global Business I (2 Credits)
Almost all business is impacted by global trends. This course will help students develop a global mindset and understand challenges and opportunities arising from doing business across national boundaries and cultures. Addressing such issues as diverse cultures, laws, languages, currencies and economic contexts, the course will help students make well-informed decisions giving due consideration to the local and global context in which a given business operates. This course must be taken prior to MGMT 4745 and both courses are to be taken as a sequential series.

MGMT 4745 Global Business II (2 Credits)
Almost all business is impacted by global trends. This course will help students develop a global mindset and understand challenges and opportunities arising from doing business across national boundaries and cultures. Addressing such issues as diverse cultures, laws, languages, currencies and economic contexts, the course will help students make well-informed decisions giving due consideration to the local and global context in which a given business operates. This course must be taken after MGMT 4740 and both courses are to be taken as a sequential series.

MGMT 4790 Managing Strategic Alliances (4 Credits)
The purpose of this course is to examine and expand upon the current understanding of the challenges of developing and managing strategic alliances. Reflecting the breadth of the novel features of the structure, the course draws from both strategic management and organizational behavioral disciplines. To order the discussion, we take a process view in addressing why and then how to use a strategic alliance. We initially focus on when to use an alliance. We then turn to the formation of an alliance - examining how to select a partner, which structure to choose and how to negotiate. Following, we discuss post-formation issues of partner relationships, management of the alliance, performance evaluation and alliance termination. We conclude the course with sessions devoted towards managing a portfolio of alliances and network management in general.

MGMT 4980 Graduate Internship in Mgmt (0-10 Credits)
Hours and times arranged by student.

MGMT 4991 Independent Study (1-10 Credits)
Individual research and report. Hours and times arranged by student.
MGMT 4992 Directed Study (1-4 Credits)

MGMT 4995 Independent Research (1-10 Credits)

MGMT 6300 Seminar in Leadership Strategy Research (4 Credits)
The field of strategy is broad and covers a diverse set of ‘macro’ organizational theories and topics. In this course, you will have a solid overview of research in the field of strategy. This course will enable you to develop a conceptual view of the field and its theoretical roots, topics, and branches and begin to apply strategic management theories to address original research questions and to solve problems within your own organizations. This will require you to critique extant knowledge and to identify what is missing and what is needed to advance understanding. Finally, this course will provide a beginning point for your knowledge of strategy theories that can guide future pursuits. That is, it is not possible to cover the immense strategy literature in one semester but this course should provide you with the knowledge needed to explore the field of strategy on your own as you move forward.

MGMT 6301 Ethical Leadership Research Seminar (4 Credits)
The seminar focuses an exploration of the role of ethics from the lens of a leader. In this area, the course examines a range of ethical and social performance issues and challenges that leaders must confront. Our goal is to broaden student understanding of the different theoretical arguments and tensions in this area, with a focus on issues faced by modern day organizations.

Marketing (MKTG)

Courses

MKTG 4000 Foundations of Marketing (0 Credits)
This is primarily an online course. The purpose of the course is to ensure that all incoming students have some foundational knowledge of marketing. Most of our incoming students have undergraduate degrees in business and work experience in marketing, and so will already have a working knowledge of marketing vocabulary and may be able to pass the self-check exams in this course without further study. Other students will need to do some reading to pass the assessments. Assessments may be taken as many times as necessary to achieve a score indicating that the student has achieved foundational knowledge of marketing. The course will also integrate a few on-campus professional development tasks to ensure that students get an early start on the next phase of their careers.

MKTG 4100 Marketing Concepts (4 Credits)
Ever wonder what’s behind those Super Bowl ads we love to watch? Or, how Apple decides the price of its newest electronic wonder? Did you notice you can almost always find what you are looking for at the grocery store, whether it’s in season or out? How does that happen? This course provides students with a lens through which they may view the world as a consumer and as a marketer, relating marketing principles and models to consumer and business actions. The course investigates marketing strategy and tactics using contemporary examples from the headlines, active class discussion, and a marketing strategy simulation or client engagement.

MKTG 4220 Customer Experience Management (4 Credits)
In their best-selling book, The Experience Economy, Pine and Gilmore set the stage for what today's organizations are facing—customers that connect with brands on the basis of the experiences they receive: products and service are no longer a sufficient differentiator. This course takes the student beyond the ‘better product, better service’ approach to the cutting edge concepts of customer experience management (CEM). It provides an understanding of CEM, its best practices, and the tools for its implementation and evaluation. The course considers the challenges of creating and delivering customer experiences in a variety of settings— in-store operations, branded products, and web-based operations. One of the special features of this course is the use of live, case studies from a variety of companies. Among the companies recently represented by guest speakers are Charles Schwab, Comcast, Starbucks, and others.

MKTG 4380 Supply Chain Management (4 Credits)
Today’s economy of globally sourced manufacturing, developing markets, synchronized e-commerce, international trade lanes, and intertwined economies demand supply chains of global reach to bring goods and services from around the world to local stores or even the consumer’s front door. This course addresses the challenges and illustrates the tools required to build, maintain, and expand global supply chains. The course develops the ability to make sound strategic, tactical, and operational supply chain decisions via an on-line simulation tool, and superior supply chain design and performance is taught through in-depth case studies from the world’s top 25 supply chains. Students are able to connect improvements in supply chain design and performance to the financial performance of a firm. Cross listed with MKTG 3380. Prerequisites: MKTG 4360 and MKTG 4370.

MKTG 4400 Social Awareness and Ethics (2 Credits)
Social awareness & ethics uses a fresh integrated approach to applying the basic fundamentals of marketing to complex and evolving scenarios involving social change and insight, cultural trends and topics, and tricky, often emotional, ethical situations. This course also helps students learn skills in a safe environment and leverage their experience and knowledge to investigate business situations and opportunities in a thoughtful and sophisticated manner. This course develops a student’s ability to make sound business planning decisions using real information from the external environment. This course will combine business ethics’ overarching intent to protect employees, the environment, and their customers with marketing ethics’ principles of honesty, fairness, responsibility, and respect. As part of this, students will learn about and apply Daniels Fund Initiate Principles: http://www.danielsfund.org/_Assets/files/Ethics%20Initiative%20Principles.pdf Prerequisites: Pass foundations exam or MKTG 4100.

MKTG 4510 Consumer Behavior (4 Credits)
What makes consumers tick? This course draws on a variety of sources, including concepts and models from psychology, sociology, anthropology, and economics, to offer helpful frameworks for understanding why consumers buy what they buy. These concepts are applied to real-world situations to give students practice at making better product, promotion, pricing, and distribution decisions based on consumer insights.
**MKTG 4515 International Consumer Behavior (4 Credits)**
The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond one’s home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Prerequisites: MKTG 4510.

**MKTG 4520 Marketing Metrics (4 Credits)**
There’s no escape; even marketing managers need to understand financials. This course is designed to introduce MS Marketing students to the principles of financial decision-making and the use of marketing metrics, including customer lifetime value (CLV) and media mix modeling. Students learn how to compute marketing ROI and how to make marketing decisions that enhance the bottom line. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

**MKTG 4530 Marketing Research (4 Credits)**
Understanding consumers requires careful observation and thoughtful questions. Marketing research represents a methodology for getting the answers needed to be successful in business. This course introduces students to a broad array of marketing research tools, including focus groups, ethnographic studies, survey research, and experiments. Students will learn how and when to apply these tools, as well as how to interpret the results to make sound marketing decisions. Highly recommended students take statistics prior to taking this course. Prerequisites: MKTG 4100.

**MKTG 4540 Product and Service Innovation (4 Credits)**
Developing and introducing new products and services are the lifeblood for companies and a primary responsibility of product management. This course is focused on the most current innovations in materials, hardware, CPG, and software. This is a travel course and students will be required to travel to the Consumer Electronics Show in addition to attending class on campus. We’ll be using Google Ventures rapid sprint framework to develop/test new product ideas. At least eight hours of graduate level MKTG courses or with instructor permission.

**MKTG 4550 Marketing Planning (4 Credits)**
It has been said that “planning without action is futile, and action without planning is fatal.” The objective of this course is to enable students to utilize a rigorous planning process to develop action-oriented marketing programs. This activity involves an integrated application of concepts and theories characterized by the logical use of facts -- leading to alternatives -- leading to actions. By the end of the course students should be able to develop effective marketing programs, and to understand the strength and limitations of the principal planning tools a marketing manager has at his/her disposal. The skills developed in this class are particularly important because many organizations now use the marketing plan as the basis for developing the business plan. In fact, marketing-developed plans often must precede the subsequent decisions in planning production, finance, and other corporate activities. Each student will apply the planning process, develop an action plan, and identify specific marketing outcomes for an existing or prospective enterprise. The course utilizes current practices, contemporary exemplars, and rigorous communication/presentation platforms. Eight hours of graduate-level marketing credit or with instructor’s permission.

**MKTG 4560 Pricing Strategy (4 Credits)**
This course provides an overview of all aspects of Pricing, a key driver of growth and profitability. As one of the 4 “Ps” of Marketing, attention and interest in Pricing is growing. This is not surprising, given that Price is the one “P” that drives the topline, with a direct impact on revenue growth, customer growth, market share, and profitability. This Pricing survey course examines established and emerging pricing strategies and principles. In addition, students learn some basic analytical tools that can be applied to pricing strategy decisions and explore approaches to optimize the impact of pricing strategies and tactics, including segmentation, addressing the competition, and communicating value. Prerequisites: MKTG 4100, MKTG 4520, and MKTG 4530 or instructor permission.

**MKTG 4570 Digital Strategies (4 Credits)**
We’re 20 years into the digital marketing revolution and the ecosystem continues to evolve. From the birth of the Internet and email to the recent addition of messaging apps and the Internet of Things: It’s a fantastic time to be a marketer. In this class, we will take what you learned in consumer behavior and extend it in the social/mobile/search realm. We’ll utilize lessons learned from cognitive neuroscience combined with qualitative/quantitative data to create one-to-one marketing experiences for B2B/B2C consumers. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

**MKTG 4580 Insights to Innovation (4 Credits)**
Innovation is a driving force of change for organizations and markets. It is becoming increasingly clear that the development of novel and compelling offerings requires the contributions of multiple stakeholders, including customers. Companies such as Apple, Facebook and Google, focus on engaging an ecosystem of partners to develop new value propositions to continually improve customer experiences. This course explores the collaborative processes that drive value creation and innovation. Students will learn to strategically apply design thinking and community-building approaches to innovate customer experiences in ever-changing markets. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.
MKTG 4605 Current Marketing Perspectives (4 Credits)
Like most disciplines, marketing is evolving constantly. One can learn about marketing and its classic terms and notions by reading a textbook. But to familiarize oneself with the current pressing issues, emerging ideas, and innovative applications, one must consult both industry practitioners and academic gurus. In this course, students and faculty will meet and interview several top business executives in the Denver area as well as visit their facilities. Such interaction with the managers and faculty will help the students understand the interface of theory and application. In addition, by identifying the current issues in marketing and learning how to develop strategies to handle them, students add to their preparation for the job market.

MKTG 4630 International Marketing (4 Credits)
The shrinking planet and constant pressure to maintain a firm's growth mean that global marketing continues to grow in importance. This course introduces the various economic, social, cultural, political, and legal dimensions of international marketing from conceptual, methodological and application perspectives, and emphasizes how these factors should affect, and can be integrated into, marketing programs and strategies. This course provides students with methods for analyzing world markets and their respective consumers and environments, and to equip students with the skills in developing and implementing marketing strategies and decision making in international contexts. It includes a combination of lectures and discussions, case analyses of real global marketing issues, videos and readings from the business press, country snapshots, and a group research project in which student teams launch a discrete product in a foreign country of their choice. Prerequisites: MKTG 4100.

MKTG 4635 International Consumer Behavior (4 Credits)
The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond one's home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Cross-listed with MKTG 3635. Prerequisite: MKTG 4510 or instructor permission.

MKTG 4660 Sports & Entertainment Marketing (4 Credits)
There are few products for which consumers are more passionate than their sports and entertainment expenditures, so this topic is always an exciting one in marketing. This course provides an in-depth look at the processes and practices of marketing sports, concerts, film and other entertainment. The course emphasizes the practical use of advertising, promotion and public relations in creating athlete or entertainer images, providing a quality fan experience, promoting sponsorships or driving event ticket sales. Participation in a current sports marketing project provides context for graduate students to apply theory to practice. Cross listed with MKTG 3660. Prerequisites: MKTG 4100.

MKTG 4670 Competitive Strategies (4 Credits)
This course will examine what is happening in the world of corporate marketing today. Which companies’ marketing strategies are working and why? Which are not working and why? Who is winning in the competitive marketplace and who is losing? How do you know? What is the connection between a company’s marketing strategy and its financial strategy? Prerequisites: MKTG 4100.

MKTG 4675 Entrepreneurial Marketing (4 Credits)
The course objective is to give students the necessary tools and concepts to think strategically and tactically about value creation through new product management.

MKTG 4705 Topics in Marketing (1-4 Credits)
TOPIC CHANGES EACH TERM.

MKTG 4800 Global Integrated Marketing Communication (4 Credits)
The Global IMC class is for graduates who have worked in marketing communications or have taken marketing communications classes and want to gain an understanding of how use this knowledge in the global marketplace. It helps students to understand similarities and differences between markets and how to most effectively approach them. What are the IMC tools that work best and how do you use them with cultural sensitivity? The class features a number of guest speakers and at least one off-site agency visit. The finale to this high-intensity class will have competing teams demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Cross-listed with MKTG 3635. Prerequisite: MKTG 4510 or instructor permission.

MKTG 4805 Foundations of Digital Marketing (4 Credits)
Knowing how to use digital marketing tools as part of an integrated marketing strategy is critical in today's marketplace. This course provides the knowledge and skills to plan and implement a digital marketing strategy using three powerful digital marketing elements: (1) UX/UI - User eXperience design is one of the most difficult aspects for businesses to define and yet it’s essential to map out when creating a holistic strategy. User Interface design is one part of the user experience and we will work together to show you best-in-class examples. (2) Facebook Advertising – Facebook is quickly becoming the hyper-targeted advertising platform for businesses of any size. You will walk through Facebook's Blueprint Training to help you understand what types of digital advertising are possible. (3) Email Marketing – Email has long been a staple in digital marketing. We will show you the ins and outs of this digital medium and teach you how to take control of this evolving channel. Cross-listed with MKTG 3480.
MKTG 4810 Integrated Marketing Communication (4 Credits)
IMC is a critical component of marketing strategy and is vital to business success in today's economy. Organizational, technological, and social trends of the past few years have considerably impacted marketing communications by necessitating new communication strategies and adding new delivery tools (e.g., digital and social). Thus, it is important to integrate all marketing communication activities into one master plan. This course is based upon the notion that marketing communications include much more than advertising. The course provides students with a foundation in the development and execution of communications strategies for any organization (large, small, public, or private). Primary emphasis is placed on consumer insight, branding, market segmentation and positioning, message strategy, sales promotion and the execution of marketing communications through appropriate media technologies. Students will develop an understanding of marketing communications practice through a real-world project, readings, lectures, case analyses and discussions. Prerequisites: MKTG 4510 and MKTG 4530 or instructor permission.

MKTG 4815 Social Media Marketing (4 Credits)
Social media marketing is an evolving field with consumers driving the changes marketers are seeing. Based on your business model, social media may be more than just distribution and consumers will be a part of your long-term business strategy beyond revenue. We'll illuminate the increasing importance of social media as it relates to consumer behavior, the purchase cycle and the rise of messaging apps as it relates to business success. We will also develop a strategic model for a diverse range of businesses (B2B, B2C, Product, Service, Online, Online with Brick and Mortar) that will empower you as a marketer to determine your best strategy. Cross-listed with MKTG 3490. Prerequisites: MKTG 4100.

MKTG 4820 Brand Management (4 Credits)
“How do leading organizations create compelling brands that inspire trust, build a sense of community, and fuel loyalty? As consumers find their digital voice, how are brands co-created by firms and users alike? And what can brand managers to do insure their brand equity is sustainable throughout the product lifecycle? In this project-based [WINTER] or interview-based [SUMMER] course, you'll learn the underlying principles and theories from brand authorities, then apply them to real-world client challenges. Join us as we create goal-driven brand strategies, harness tactics to build and amplify the brand, foster brand experiences, conversations and relationships, and then learn ways to measure the resulting impact on brand value. Prerequisite: MKTG 4100. Concurrent enrollment allowed.

MKTG 4825 Mobile Marketing (4 Credits)
Smartphones are the device for today's consumer. Mobile usage easily eclipses all other digital venues and you will be learning how to harness this ever-evolving field. Knowledge of mobile search, mobile applications, mobile advertising and location-based services are essential for today's business leaders. This course will enable students to build creative mobile marketing campaigns that complement digital and traditional marketing strategies. This fast-paced course is a must for people interested in marketing. Cross-listed with MKTG 3475.

MKTG 4835 Search Engine Marketing (4 Credits)
The digital marketing landscape has thousands of tools that marketers can utilize to increase revenue, execute on strategies and develop deep brands. This course will review the most essential of those tools: Google Analytics and Google AdWords. Our goal is to enable students to attain individual certification in Google Analytics and begin the process of getting Google AdWords Fundamentals certified. You will be working with real-world clients, helping them increase revenue! Cross-listed with MKTG 3485.

MKTG 4845 Tech in Marketing: Design Tools and Digital Foundations (4 Credits)
"Software is eating the world." That was the quote from Marc Andreessen way back in 2011. His point was now that software had disrupted the tech industry, it was now evolving into every other industry. Agriculture. Mass transit. Construction. Everything. This prediction has become true with companies like Google and Uber. We're at a point where coding/technology are now a matter of literacy. We are going to work together as a class to make you more literate. We are going to learn how to utilize digital design tools such as Adobe Photoshop and Illustrator to create brand imagery. We'll then move on to learn HTML/CSS and APIs: the building blocks of the Internet. We'll also spend some time prototyping software such as Axure and tap into memes and Gifs. This is a tactical, hands-on class. Cross-listed with MKTG 3485.

MKTG 4850 Integrated Marketing Communication Campaign (4 Credits)
This course builds on all of the courses in the IMC program/concentration as well as other courses offered through the Department of Marketing. In this sense, it is a capstone course, integrating the knowledge and experience acquired through these other courses. Integration is the primary objective of this course—that is, to develop skills in integrating content from other courses into a complete IMC campaign for a brand of the student's choice. IMC Campaign is a major project course with a single significant outcome, the IMC Campaign. The project is conducted in a team environment with the guidance of the instructor. Prerequisites: MKTG 4810 or instructor permission.

MKTG 4865 SXSWi: Marketing, Technology & Innovation (4 Credits)
This class is focused on documenting/sharing lessons learned from the SXSWi conference in Austin Texas, the premier innovation conference in the US. The course is divided into two distinct halves. First, we will research the SXSWi sessions around subject matter and speaker background as well as planning the final deliverable that summarizes the entire SXSWi event. The second half includes participation in the conference to learn the most up-to-date digital marketing techniques in social, mobile, data and usability.

MKTG 4900 Advanced Marketing Strategy (4 Credits)
Making sound strategic marketing decisions in the real world is complex and challenging, even for seasoned executives. Determining sound strategies is critical. Implementing them effectively and profitably is essential. How can managers increase their chances for making better strategic marketing decisions leading to more successful outcomes more often? This course applies concepts, constructs and learning acquired in prior marketing courses to complex strategic decisions. Live cases are at the heart of the course, challenging teams and individuals to make specific marketing decisions in the context of larger strategic marketing and company contexts, including accounting for top- and bottom-line impact. Prerequisites: At least eight hours of graduate level MKTG courses or with instructor permission.
MKTG 4980 Marketing Internship (0-10 Credits)
We learn by doing. That's what a marketing internship at Daniels is all about. Recent studies show that one to three internships on a resume go a long way towards landing that first job in marketing. At Daniels, we network with some of the top marketers in Denver and across the US. Our marketing students have worked at National CineMedia, Integer Advertising, Bank of America, Enterprise, Northwestern Mutual Insurance, eBags, Crispin-Porter + Bogusky, Einstein’s, Johns Manville, Skis Magazine, the Pepsi Center, 15 Million Elephants, Flextronics, Merrill Lynch, Dish Network, AEG Live, Altitude Sports & Entertainment, and the list goes on. Not only will students earn school credit, they may very well land a paid internship, and eventually a full-time job. Course requirements include an internship report that covers your experience on the job, a study of the industry, and what they learned from their company. It’s a win-win course where you put into practice the marketing concepts you’ve learned at DU, and discover new marketing tactics from your company co-workers. “Thanks to the University of Denver for fostering this partnership and providing such great students” (NCM Media Networks).

MKTG 4991 Independent Study (1-10 Credits)
Hours and times arranged by student.

MKTG 4998 Marketing Leadership and Professionalism (1 Credit)
This course involves several executive coaching experiences. Beyond the first year, students are expected to remain engaged in several experiences in and around campus to continue to improve their leadership skills. The course is pass/fail for all students. In the weekend leadership experience, you explore yourself as an ethical leader in the world of marketing in the 21st Century. How can you add value to and derive value from the business world that surrounds you? You will evaluate the styles of leadership that will best empower and inspire you to find success in your work. As an introduction to and exploration of your personal leadership style, this course addresses: 1. Your leadership style and how it relates to current and future trends for business, government, and society. 2. How to improve your leadership in three critical areas of marketing—creating economic, social and environmental value. Understanding the power that you have to make an impact as a leader or a follower working in teams, recognizing that most success and progress in business will take place by working with others. Your personal development as a leader and follower is thus of the utmost importance. In short, we hope to fire your imagination as to what is possible, as well as ground your dreams in the realities and complexities of leadership in the 21st Century.

MKTG 4999 Marketing Assessment (0 Credits)
Some experiences are essential to a student’s development, but don’t fit well within the confines of a traditional course. This is a face-to-face, zero-credit required course, held throughout your program. The course involves a series of executive coaching experiences with experts within and outside of Daniels, networking with fellow students and professionals in the Denver area, and assessment of your development through the program.

MKTG 6300 Marketing Research Seminar (4 Credits)
This doctoral seminar focuses on research in marketing strategy which is concerned with understanding the choices and planning of resource deployments to achieve marketing objectives in a target market. This course will expose students cutting-edge research in marketing models in order to help them to define and advance their research interests. This course will also offer in-depth discussions on some important topics in marketing and tools and methodologies required for conducting research in those areas.

Materials Science (MTSC)

Courses
MTSC 4010 Mechanical Behavior of Materials (4 Credits)
Effects of microstructure on mechanical behavior of material; emphasis on recent developments in materials science, fracture, fatigue, creep, wear, corrosion, stress rupture, deformation and residual stress. Cross listed with MTSC 3010.

MTSC 4020 Composite Materials I (4 Credits)

MTSC 4215 Composite Materials II (4 Credits)
A continuation of MTSC 4210: Strength and toughness of composites, thermal behavior, fabrication methods, examples of applications. Prerequisite: MTSC 4210.

MTSC 4450 Fracture Mechanics (4 Credits)
Topics include stress field at a crack tip, linear elastic fracture mechanics, energy release rate, stress intensity factors, plastic zones, plane stress, plane strain, fracture toughness, Airy stress functions, elastic-plastic fracture mechanics, J integral, crack tip opening displacements, experimental testing, fatigue, life prediction, crack closure, weight functions, failure analysis. Cross listed with MTSC 3450.

MTSC 4800 Advanced Topics (MTSC) (1-5 Credits)
Selected topics (depending on student and faculty interest): fracture mechanics, fatigue, nonlinear constitutive models, dynamic behavior of materials, corrosion resistant design, thermodynamics of solids II.

MTSC 4900 Materials Science Seminar (1 Credit)
Weekly presentations by graduate students, faculty, outside speakers, etc., on research in progress or other topics of interest.
MTSC 4991 Independent Study (1-10 Credits)
MTSC 4992 Directed Study (1-10 Credits)
MTSC 4995 Independent Research (1-16 Credits)
MTSC 5995 Independent Research (1-16 Credits)

Mathematics (MATH)

Courses

MATH 3000 The Real World Seminar (1 Credit)
Lectures by alumni and others on surviving culture shock when leaving the University and entering the job world. Open to all students regardless of major. Cross listed with COMP 3000.

MATH 3040 Lattices and Order (4 Credits)
Ordered sets, lattices as relational and as algebraic structures, ideals and filters, complete lattices, distributive and modular lattices, Boolean algebras, duality for finite distributive lattices. Prerequisite: MATH 2200.

MATH 3050 Set Theory (4 Credits)
Zermelo-Fraenkel axioms, axiom of choice, Zorn’s Lemma, ordinals, cardinals, cardinal arithmetic. Prerequisite: MATH 2200.

MATH 3060 Mathematical Logic (4 Credits)
Classical propositional calculus (deductive systems and truth-table semantics), first-order logic (axiomatization and completeness), elements of recursion theory, introduction to nonclassical logics. Prerequisite: MATH 2200.

MATH 3090 Mathematical Probability (4 Credits)
Limit theorems for independent random variables, multivariate distributions, generating functions. Prerequisites: MATH 2080 and MATH 3080.

MATH 3151 Advanced Linear Algebra (4 Credits)
Vector spaces, linear mappings, matrices, inner product spaces, eigenvalues and eigenvectors. Prerequisite: MATH 2060 and MATH 2200.

MATH 3161 Introduction to Real Analysis (4 Credits)
A theoretical introduction to the structure of real numbers, to convergence of sequences and series, and to the topology of the real line, including limits and continuity. Prerequisites: MATH 2080 and MATH 2200.

MATH 3162 Introduction to Real Analysis II (4 Credits)
A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisite: MATH 3161.

MATH 3166 Group Theory (4 Credits)
Groups and homomorphisms, isomorphism theorems, symmetric groups and G-sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 4166. Prerequisite: MATH 3170.

MATH 3170 Introduction to Abstract Algebra (4 Credits)
Examples of groups, permutations, subgroups, cosets, Lagrange theorem, normal subgroups, factor groups, homomorphisms, isomorphisms, rings, integral domains, quaternions, rings of polynomials, Euclid algorithm, ideals, factor rings, maximal ideals, principal ideals, fields, construction of finite fields. Prerequisite: MATH 2060 and MATH 2200.

MATH 3260 Metric Spaces (4 Credits)
Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 4260. Prerequisite: MATH 3161 or equivalent.

MATH 3311 Linear Programming (4 Credits)
Linear optimization models, simplex algorithm, sensitivity analysis and duality, network models, dynamic programming, applications to physical, social and management sciences. Prerequisite: MATH 2060.

MATH 3312 Markov Chains (4 Credits)
Discrete-time and continuous Markov Chains, ergodic theorems, random processes, elementary queueing theory, applications. Prerequisite: MATH 2060 and MATH 3080.

MATH 3400 Introduction to Geometry (4 Credits)
Specific geometrical systems including finite, Euclidean, non-Euclidean and projective geometries. Prerequisite: MATH 2200.

MATH 3451 Chaos, Dynamics & Fractals (4 Credits)
Introduction to one-dimensional dynamical systems, fractals; fixed and periodic points; sources and sinks; period doubling and tangent node bifurcations; chaotic dynamical systems; Sarkovskii’s Theorem. Prerequisite: MATH 3161.

MATH 3550 Introduction to Theory of Numbers (4 Credits)
Concepts of nonanalytic number theory and its history; prime numbers, divisibility, continued fractions, modular arithmetic, Diophantine equations and unsolved conjectures. Prerequisites: MATH 2200.
MATH 3651 Ordinary Differential Equations (4 Credits)
Modeling of phenomena by ordinary differential equations; techniques of analysis and solution of such equations; oscillation theory and boundary value problems, power series methods, special functions, Laplace transforms and difference equations. Prerequisites: MATH 2060 and MATH 2070.

MATH 3661 Partial Differential Equations (4 Credits)
First and second order linear equations, Fourier series, the wave equation, the Cauchy problem, the heat equation, maximum principles, Laplace's equation, Green's functions. Prerequisites: MATH 2070 and MATH 2080.

MATH 3701 Combinatorics (4 Credits)
The principle of inclusion and exclusion, elementary counting techniques, systems of distinct representatives, partitions, recursion and generating functions, Latin squares, designs and projective planes. Prerequisite: MATH 2200.

MATH 3705 Topics in Mathematics (4 Credits)
Varying selected advanced topics in mathematics, depending on student demand and instructor interest.

MATH 3710 Graph Theory (4 Credits)
Paths, cycles, trees, Euler tours and Hamilton cycles, bipartite graphs, matchings, basic connectivity theorems, planar graphs, Kuratowski’s theorem, chromatic number, n-color theorems, introduction to Ramsey theory. Prerequisite: MATH 2200.

MATH 3720 Coding Theory (4 Credits)
Goals of coding theory and information theory, instantaneous and Huffman codes, Shannon theorems, block and linear codes, generating and parity-check matrices, Hamming codes, perfect codes, binary Golay code, Reed-Muller codes, cyclic codes, BCH codes, Reed-Solomon codes, ideas of convolutional and turbo codes. Prerequisite: MATH 3170.

MATH 3851 Functions Complex Variable (4 Credits)
Complex numbers, analytic functions, complex integration, series expansions, residue theory, conformal maps, advanced topics and applications. Prerequisites: MATH 2060 and MATH 2080 and MATH 2200.

MATH 3900 Mathematics Internship (0-1 Credits)
Graduate students in mathematics may receive elective credit for mathematically related work performed for employers with the approval of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned.

MATH 3991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in regular course schedule for that particular year.

MATH 3992 Directed Study (1-10 Credits)

MATH 4050 Combinatorial Set Theory (4 Credits)
Beginning with a quick review of ZFC, the standard axioms of set theory, the course covers advanced ordinal and cardinal arithmetic and infinitary combinatorics, including Ramsey theory. Additional axioms such as the Continuum Hypothesis, Martin's Axiom, and combinatorial principles such as Diamond and their consequences for mathematics are studied. Prerequisite: MATH 3050.

MATH 4060 Descriptive Set Theory (4 Credits)
Descriptive Set Theory is one of the main branches of modern set theory. Set theory provides techniques for the precise study of real analysis. This course covers trees as tools for analyzing sets of real numbers, Polish spaces, the Borel hierarchy, Baire-measurability, extensions of continuous functions, separation theorems, and more. Prerequisite: MATH 3050.

MATH 4070 Proof Theory (4 Credits)
Hilbert-style systems, Natural deduction, (simply typed) lambda calculus, combinatory logic, the Curry-Howard correspondence, normalization, cartesian closed categories, Sequent calculi, cut elimination and applications, structural rules; logical systems: classical, intuitionistic, relevance, linear, algebraic semantics. Recommended prerequisite: MATH 2200.

MATH 4080 Algebraic Logic (4 Credits)
Elements of universal algebra, lattice theory and first-order logic; elements of abstract algebraic logic (deductive systems, algebraization, deduction filters, deduction theorems, matrix semantics); sequent calculi for substructural logics, residuated lattices, structure theory for congruences and deductive filters; subvariety lattices (atomic varieties, axiomatizations of joins, translations); algebraic cut elimination; (un)decidability and finite model property. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

MATH 4110 Topology (4 Credits)
Point set topology including topological spaces, connectedness, compactness and separate axioms; preparation for advanced courses in analysis. Prerequisite: MATH 3161. Cross listed with MATH 3110.

MATH 4120 Algebraic Topology (4 Credits)
Fundamental groups, simplicial homology, Euler characteristic classification of surfaces, manifolds. Prerequisites: MATH 3170 and MATH 3110/4110.

MATH 4162 Rings and Modules (4 Credits)
Ideals, left and right R-modules, simple modules, totally decomposable modules, Wedderburn-Artin theorems, Artinian and Noetherian rings and modules, Hopkins theorem, Hilbert basis theorem, free modules, projective and injective modules, Kaplanski theorem. Prerequisites: MATH 3176 or MATH 4176.
MATH 4163 Universal Algebra (4 Credits)
Universal algebras, congruences, lattices, distributive lattices, modular lattices, Boolean algebras, subdirectly irreducible algebras, Mal'cev theorems, varieties, Birkhoff theorem. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

MATH 4164 Galois Theory (4 Credits)
The fundamental theorem of algebra, field extensions, ruler and compass constructions, normal and separable extensions, field automorphisms, Galois correspondence, solvability and simplicity, calculating Galois groups. Prerequisite: MATH 3176/MATH 4176 and MATH 3166/MATH 4166.

MATH 4165 Introduction to Real Analysis II (4 Credits)
A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisite: MATH 3170.

MATH 4166 Group Theory (4 Credits)
Groups and homomorphisms, isomorphism theorems, symmetric groups and G-sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 3166. Prerequisite: MATH 3170.

MATH 4168 Lie Groups and Lie Algebras (4 Credits)
Lie groups and Lie algebras, fundamental theorems of Lie, general structure theory; compact, nilpotent, solvable, semisimple Lie groups; classification of semisimple Lie algebras; representation theory of compact and semisimple Lie algebras and Lie groups. Additional topics as time permits: universal enveloping algebras, symmetric spaces. Prerequisites: MATH 3161 and MATH 3170.

MATH 4176 Rings and Fields (4 Credits)
Rings, domains, fields; ideals, quotient rings, polynomials; PIDs, UFDs, Euclidean domains; maximal and prime ideals, chain conditions; extensions of fields, splitting fields, algebraic and transcendental extensions; brief introduction to Galois theory. Cross listed with MATH 3176. Prerequisite: MATH 3170 or equivalent.

MATH 4181 Loop Theory (4 Credits)
Quasigroups, loops, latin squares, 3-nets, isotopy, multiplication groups, inner mapping groups, nuclei, commutant, center, associator subloop, inverse properties, power-associative loops, Bruck loops, Bol loops, Moufang loops, octonions. Prerequisites: MATH 3166 or MATH 4166.

MATH 4260 Metric Spaces (4 Credits)
Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 3260. Prerequisite: MATH 3161 or equivalent.

MATH 4270 Hilbert Spaces (4 Credits)
Schwarz and triangle inequalities, Reisz lemma, subspaces and orthogonal projections, orthonormal bases, spectrum of bounded linear operators, compact, self-adjoint, normal and unitary operators, spectral theorem and, if time permits, unbounded operators. Also, if time permits, applications to partial differential equations, physics and engineering. Prerequisites: MATH 3260 or MATH 4260 or MATH 3110 or MATH 4110.

MATH 4280 Measure Theory and Applications (4 Credits)
Definition of Measure spaces; Lebesgue measure; limit theorems; Raydon-Nikodym Theorem; introduction to L_p spaces. Prerequisite: (MATH 3260 with a minimum grade of D- or MATH 4260 with a minimum grade of C-) or (MATH 3110 with a minimum grade of D- or MATH 4110 with a minimum grade of C-).

MATH 4290 Dynamical Systems (4 Credits)
Topological and measure theoretic dynamical systems; properties and invariants of systems; symbolic dynamics; Ergodic Theorems; applications. Prerequisites: MATH 3110/4110 or MATH 3260/4260.

MATH 4300 Graduate Seminar (1-4 Credits)
Students research a topic of their choosing with the aid of a faculty member, and then prepare and present a formal lecture on the subject. Prerequisite: graduate standing or consent of the instructor.

MATH 4400 Differential Geometry (4 Credits)
Planar and spatial curves, global properties of curves, surfaces in three dimensions, the first fundamental form, curvature of surfaces, Gaussian curvatures, geodesics, Theorema Egregium, hyperbolic geometry. Prerequisites: MATH 3170 and either MATH 3110/4110 or MATH 3260/4260.

MATH 4501 Functional Analysis (4 Credits)
Advanced topics in structure of linear spaces; Banach spaces; Hahn-Banach Theorem and Duality; Uniform Boundedness Theorem; Open Mapping and Closed Graph Theorems; Stone-Weierstrass Theorem; Topics in Hilbert Spaces. Prerequisite: MATH 4280.

MATH 4700 Special Topics in Mathematics (1-4 Credits)
Basic enumeration techniques; representations of combinatorial objects; algorithms for searching, sorting, generating combinatorial objects, graph algorithms. Prerequisites: MATH 3701 or MATH 3710.

MATH 4705 Special Topics Applied Math (1-5 Credits)
Varying selected advanced topics in mathematics, depending on student demand. Possible alternatives include of variations, partial differential equations, algebraic topology, differential manifolds, special functions.

MATH 4991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in course schedule for that particular year.
MATH 4992 Directed Study (1-10 Credits)
Research projects undertaken in conjunction with a faculty member.

MATH 4995 Independent Research (1-10 Credits)
Research leading to a dissertation.

MATH 5000 Doctoral Seminar (3 Credits)
Techniques, methods used in mathematical, computing research. Includes proofs, bibliographic searching, writing styles, what constitutes an acceptable dissertation.

MATH 5991 Independent Study (1-10 Credits)
Cannot be arranged for any course that appears in the regular course schedule for that particular year.

MATH 5995 Independent Research (1-10 Credits)
Research leading to a dissertation.

MBA - General (MBA)

Courses

MBA 4000 Business Speaking Lab (4 Credits)
Provides students whose primary language is not English the opportunity to enhance their English language skills. No credit toward degree.

MBA 4001 Business Writing Lab (4 Credits)
Provides students whose primary language is not English the opportunity to enhance their English language skills. No credit toward degree.

MBA 4010 Business Speaking Lab II (1 Credit)
Provides students whose primary language is not English the opportunity to enhance their English language skills. No credit toward degree.

MBA 4011 Business Writing Lab II (1 Credit)
Provides students whose primary language is not English the opportunity to enhance their English language skills. No credit toward degree.

MBA 4050 Business Innovation Challenge I (4 Credits)
Apply business skills to a live project in the form of a competition. Learn to use brainstorming and innovation techniques to design, recommend, and build break-through solutions to solve a problem or take advantage of an opportunity.

MBA 4060 Business Innovation Challenge II (4 Credits)
Apply business skills to a live project in the form of a competition. Learn to use brainstorming and innovation techniques to design, recommend, and build break-through solutions to solve a problem or take advantage of an opportunity.

MBA 4110 Enterprise Challenge (2 Credits)
In recognition of the special value that comes from deep immersion into a subject, students in this course will start a business. Students will incorporate their business, put together an advisory board, identify customers, write an executive business summary, and have a professional business presentation. The final class will consist of presentations to entrepreneurs, representatives from the financial sector, and industry representatives. Students will learn about business by starting a business. This is a highly unstructured class. Students have to structure their projects and present to investors just as an entrepreneur would do.

MBA 4120 Strategic Transitioning from Uncertainty to Risk (2 Credits)
Strategically Transitioning from Uncertainty to Risk is a course that introduces the student to the confluence of entrepreneurship and strategic management. Students will use an organized approach to rapid design leveraging their business ideas created for the Enterprise Challenge in order to develop a sustainable competitive advantage based upon iteration of the business model. Iteration that is discovered through an analysis of the existing business model and the competitive landscape that includes consideration of competitors, customers, suppliers, substitutes, and new entrants. Opportunities to create competitive advantage are analyzed through the design of generic competitive strategies in domestic and international markets, alliances and partnerships, and corporate diversification.

MBA 4130 Corporate Financial Reporting (2 Credits)
The purpose of this course is to provide students with an understanding of the financial statements issued by companies to external parties, such as shareholders and creditors. The course covers the fundamentals of accounting, from recording economic events in the accounting records to the preparation of the company's financial statements, as well as major transaction categories and accounting policies of business firms and their financial statement implications. In addition, the course introduces students to publicly-traded companies’ Form 10-K annual reports.
MBA 4140 Ethics in Practice (2 Credits)
The fundamental purposes of the course is to 1) engage students in ongoing reflection and dialogue about their responsibilities as managers and leaders, 2) understand cognitive, behavioral, and principled approaches to ethics, and 3) advance your job prospects by focusing on ethical skills, practices, and exercises that will make you better managers and leaders. Of particular emphasis are the ethical and social responsibilities of managers and leaders, especially as it relates to numerous stakeholders. This course focuses on a systems-oriented approach to the ethical and social relationships of business leaders and business organizations in their communities. These roles will be examined by analyzing a variety of representative issues that characterize current concerns with business ethics. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that may emerge in their business careers. While the core of the curriculum will strengthen foundation business and management skills and competencies, the assumption of this course is that all of these skills and competencies must be grounded in a solid ethical and social commitment to values and principles. This course attempts to explore these values in various business contexts.

MBA 4150 Understanding Your Market (2 Credits)
This course focusing on “knowing your customer” through the Segment, Target and Position Model. The STP Model consists of three steps that help you analyze your offering(product or service) and the way you communicate its benefits and value to specific groups. STP stands for: Step 1: Segment your market. Step 2: Target your best customers. Step 3: Position your offering. This model is useful because it helps you identify your most valuable types of customer, and then develop products and marketing messages that ideally suit them. This allows you to engage with each group better, personalize your messages, and sell much more of your product. This course explores the development, evaluation, and implementation of marketing strategy in complex environments. The course deals primarily with an in-depth analysis of a variety of concepts, theories, facts, analytical procedures, techniques, and models. The course addresses strategic issues such as: -In what environment do we operate? What impact will the environment have on marketing decisions? -How should the market be segmented for best return on investment? -Which market should be targeted to achieve highest profitability? -How shall we position the offering in the minds of our customers? -Which marketing models are most appropriately applied to the business problem at hand?.

MBA 4160 Opportunities with Data Skills I (2 Credits)
Develop an understanding of the basic concepts of probability and statistics, and how they relate to managerial type problems and decision making. Develop experience performing and interpreting standard data analysis methodologies. Obtain familiarity with a statistical software package.

MBA 4170 Navigating the Global Economy (2 Credits)
Businesses today, whether domestic or multi-national, are part of a complex global economy. The challenges firms face today—global financial crises, corruption, and finite resources, to name a few—are impossible to tackle without a solid understanding of the broader political and economic institutions and environment. This class will provide a foundation to students’ understanding of the international political economy, international institutions, and trends and patterns across developed, emerging, and developing countries. Students will explore some of the myths of the global economy, the variations of capitalism that exist across time and space, as well as the role of international institutions and emerging economies in shaping the business environment.

MBA 4205 Strategic Career Management (4 Credits)
Strategic Career Management offers graduate business students a theoretical and practical understanding of career management within the context of the current and projected labor market. The course facilitates the development of personal short- and long-term career action plans, and provides students with the tools and frameworks for developing other employees’ careers once they are in managerial roles. This course is offered in conjunction with the Suitts Center for Career Services. Major components of the course include in-depth self-assessment, labor market assessment (macro and micro), creating a career development and action plan, positioning and branding oneself within the marketplace, and lifelong career management. Prerequisite or Corequisite: BUS 4610.

MBA 4210 Creating Community Capital: The Social Good Challenge (2 Credits)
Creating Community Capital: The Social Good Challenge is a Challenge Driven Educational (CDE) course that builds off prior foundational and experiential courses. The course is a practicum designed to address social issues; its purpose is to provide the opportunity for students to address a social issue with the discipline of business tools and techniques. Through the Challenge experience, students learn first-hand how to use business skills for social change as they design organizational initiatives to address social problems. The goal for students will be to create a novel response to a social problem that is more effective, efficient, sustainable, or just than current responses. The course emphasizes learning by doing, supported by intensive faculty coaching and field work. A small number of formal class sessions will provide structure in the course, and will focus on collaborative problem solving; the remainder of time students will engage with community for-profit, non-profit, and government organizations to design and execute a social good initiative.

MBA 4220 Leading Effective Organizations (2 Credits)
This course introduces the human side of organizations. Its theme is leading people and organizations for high performance in changing times. It includes traditional organizational behavior concepts such as motivation, power and politics, organizational design and culture. The global context of business is emphasized as a central factor in leading organizations; and the course includes integrating themes of sustainability, engagement, and inclusion – creating organizations that are sustainable, that attract and engage talented people, and that exemplify inclusive excellence. Critical and analytical thinking skills are developed and reinforced throughout the course.

MBA 4230 Managing Cost Information (2 Credits)
Managing cost information is essential for the execution of a business strategy because it enables managers to understand the financial implications of their decisions. In this course, students will learn how to measure, report, interpret, and use cost information. Topics in the course include (traditional and advanced) costing system design; breakeven analysis; cost information for decision making. Prerequisites: MBA 4130.
MBA 4235 Profit Planning and Measuring Performance (2 Credits)
Profit Planning and Measuring Performance provides students with the necessary skills to effectively perform planning and performance evaluation processes. In this course, students will learn how to prepare operating and capital budgets, analyze budget variances, identify key performance indicators, and design management control systems. Prerequisite: MBA 4234. Concurrent enrollment allowed.

MBA 4250 Values in Global Marketplace (4 Credits)
This course examines the ethical, legal, and public policy dimensions of business in the global marketplace. Prerequisite: BUS 4200.

MBA 4260 MBA Internship (0-8 Credits)
The internship typically is taken in either the third or fourth quarter of the MBA program and is a full-time work experience (roughly 400 hours of work) at a sponsoring company. A participant can register for additional courses beyond the internship with approval of the sponsoring company. Prerequisites: MBA 4220, MBA 4231, BUS 4300.

MBA 4265 Introduction to Analytics (2 Credits)
This course is designed to expose students to the world of analytics. Analytic thought and management are covered to show the students the world better decision making through data. Unintended consequences and ethical use of data and analytics are also a topic.

MBA 4270 Integrative Challenge (4 Credits)
Field study experience at end of MBA program to provide students with exposure to current, relevant and challenging issues faced by Colorado businesses; practical application of business knowledge, managerial skills, professional competencies designed to integrate all graduate program elements and provide distinctive advantage in career development. Prerequisites: MBA 4221, 4232.

MBA 4280 Mastering Managerial Financial Competencies I (2 Credits)
This course and Mastering Managerial Financial Concepts II discusses basic principles of finance and provides practical tools for financial decisions and valuation. The purpose of these two courses is to give students a thorough introduction to the basics of finance. You will learn how to value distant and uncertain cash flows. You will learn how to apply the tools to make investment decisions for a firm. You will also survey the fundamental drivers of financing policy in a corporation and learn how financial markets interact with businesses. Unless you understand finance, you cannot have a thorough understanding of a company’s decision-making process. Prerequisites: MBA 4130. Concurrent enrollment allowed.

MBA 4285 Mastering Managerial Financial Competencies II (2 Credits)
This course and Mastering Managerial Financial Concepts I discusses basic principles of finance and provides practical tools for financial decisions and valuation. The purpose of these two courses is to give students a thorough introduction to the basics of finance. You will learn how to value distant and uncertain cash flows. You will learn how to apply the tools to make investment decisions for a firm. You will also survey the fundamental drivers of financing policy in a corporation and learn how financial markets interact with businesses. Unless you understand finance, you cannot have a thorough understanding of a company’s decision-making process. Prerequisites: MBA 4280. Concurrent enrollment allowed.

MBA 4290 Economics for Decision Making (2 Credits)
MBA 4290 emphasizes the standard tools of microeconomic analysis for the business manager. The focus is on managerial decision-making, and to emphasize real world economic decision makers for firm managers. The goal is for students to understand the current business environment and possess the tools to make sound managerial choices. The course will emphasize analytical problem solving to highlight the decisions managers must make under constrained conditions. There will be a series of short quizzes to emphasize these skills based on class lecturers and homework. We will also use case studies to develop practical insights into managing the firm’s resources to achieve competitive advantage.

MBA 4310 Experiencing Strategic Management through Corporate Challenges (2 Credits)
Experiencing Strategic Management through Corporate Challenges is a Challenge Driven Educational (CDE) course that builds off several previous foundational and experiential courses. Students will leverage the content from accounting, finance, management, marketing, economics, globalization, business stats and analysis in order to engage with corporate partners to examine real-world problems. Students will address issues involving vision / mission / values of the organization, the key industry forces that influence the corporate environment, ways of maintaining and sustaining a core competency, and critical strategy implementation issues that lead to a competitive advantage. The course will be offered in a work-shop atmosphere in which students will meet in class once a week and the remaining time outside of the classroom where students are expected to apply the various aspects of strategic analysis and management.

MBA 4340 Creating Sustainable Enterprise (2 Credits)
All students should be able to demonstrate an understanding of: (1) the concept of sustainability as a decision-making model; (2) the environmental, cultural, social justice, equity, and economic issues inherent in principles of sustainability; (3) the intra- and inter-generational aspects of sustainability; (3) the interconnectedness of individuals, societies, eco-systems, cultures and cultural products in understanding issues of sustainability; and (4) the roles that multiple academic disciplines and perspectives play in identifying, understanding, and addressing issues of sustainability. All students should be able to demonstrate the ability to: (1) apply critical thinking and analysis toward understanding and solving problems related to sustainability; (2) communicate about issues of sustainability across academic disciplines and to non-academics.

MBA 4350 Bien’s Int Bus Exp in Europe (1-4 Credits)
The objective of this course is to provide an international experience to our students who are interested in international business. This is achieved through field trips, academic and professional presentations, journaling and cultural immersion. Students reflect on similarities and differences in business practices and broader cultural issues that exist between the U.S. and Scandinavian countries.
MBA 4351 Doing Business in Europe (4 Credits)
The objective of this course is to expose students to issues of international business and cultural diversity through field trips and academic and professional presentations in four Scandinavian countries. Topics to be covered include managing production and operations, international marketing, the European Union, personnel development, cross-cultural aspects of international management, and the role of government. The course includes office visits and plant tours of both large and small production facilities and presentations by industry management. The course is intended also to be an interesting and informative cultural experience with visits to a Viking museum, a ship museum, several castles, and with time for individualized travel in Europe after the course is over. A research project of 15-20 pages is required and due at the end of the summer quarter.

MBA 4360 Opportunities with Data Skills II (2 Credits)
Develop an understanding of more complex concepts of probability and statistics, and how they relate to managerial type problems and decision making. Develop experience performing and interpreting complex analysis methodologies. Obtain further familiarity with statistical software packages. Develop experience integrating data skills with project for Corporate Challenge. Prerequisites: MBA 4160.

MBA 4410 Global Challenge I (0-4 Credits)
This course provides you with the opportunity to apply what you have learned in the first year of your Denver MBA program with a live client. You will work on a project focused on entrepreneurship, social good, or a corporate partner. Scoping the project will be a key learning outcome, as will learning about cross-cultural issues. Students will design an on the ground itinerary and travel to a foreign country. Enforced Prerequisites: MBA 4110, MBA 4210, and MBA 4310.

MBA 4470 International Business Theory in Practice (2 Credits)
International business is its own field of academic study with rich theories and frameworks. Facing a dynamic, and increasingly chaotic, external business environment, business students need to understand both the theories and how they can be applied. To that end, this course draws on the rich international business writings to better understand global business practices and to ultimately make better business decisions. Students will actively explore current international business issues, will interact with local international business leaders, and learn specific concerns facing key regions or countries globally. Prerequisite: MBA 4170.

MBA 4490 Global Macroeconomics (2 Credits)
Managerial macroeconomics covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the global economy and affect the business environment. It explores issues related to inflation, interest rates business cycles, and monetary and fiscal policies. The course will use case studies to analyze real-life macroeconomic issues. Students are encouraged to investigate the potential and limitations of macroeconomic theory with real-world problems, and the goal is to understand the macroeconomic environment. Prerequisites: MBA 4190.

MBA 4510 Global Challenge II (2 Credits)
This course provides you with the opportunity to apply what you have learned in the first year of your Denver MBA program, plus what you learned on the ground during your travel, on a project with a live client. You will work on a project focused on entrepreneurship, social good, or with a corporate partner. The key learning outcome is how to pivot based on your learning while in the host country.

MBA 4540 Mitigating Risk, Securing Value, and Navigating Public Policy (2 Credits)
This course is a cornerstone graduate course delivering a comprehensive introduction to major topics, theories and issues relevant to business in its interactions with Business & Society.

MBA 4545 Business Law: Principles, Strategy and Tactics (2 Credits)
This course provides an overview of essential topics in business law, introducing the ways in which legal considerations impact business strategy, inform business tactics, and affect managerial decision-making.
MBA 4550 Strategic Marketing Decision-Making (2 Credits)
Strategy sets the direction for an enterprise, all of its employees, programs, tasks and activities. All must be planned and executed “on strategy”. Marketing Strategy essentially is the overall company’s strategy applied and executed within the Marketing Department. Deciding upon a strategy offering the best opportunities for the organization to succeed is critical. Being able to implement it effectively is essential. Making informed strategic marketing decisions in the real world is highly complex, challenging and demanding. Choosing among strategic alternatives requires qualitative and quantitative analysis of options, making tough choices and trade-offs, and assessing requirements for executing a bona fide option successfully. Case analysis provides the primary learning methodology for the course. This is a case-based course. This course effectively approaches strategic decision-making through the lens of Marketing; that is, through marketing-focused cases and decisions, although making successful decisions in a marketing context requires evaluating them in a larger strategic perspective and company context. It also requires thorough understanding and application of basic marketing concepts, industry (external) and company (internal) situation analyses, and identification of critical issues and success factors, and the application of basic financial analysis—all of which are foundation blocks for making successful strategic decisions out in the real world. Each case features a specific marketing situation that serves as a “portal” for strategic decision-making. The specific situations include pricing, distribution, new product introductions, branding, communications, sales and distribution and the like. Every case evaluation, like every real-world decision, requires financial analysis. Students must be able to analyze income statements and selective balance sheet factors. Marketing and financial metrics play roles in case strategic decision-making. (Students will be provided with a financial “refresher” package in the first class that includes problems representative of those the cases contain. A student who struggles with the practice financial problems is likely to struggle analyzing cases in the course. The good news is that this course provides a great opportunity to learn how to use financial analytical tools before it really counts—later in your careers. Suggestion: seize this opportunity to improve your financial skill set; you will need it someday.) The course involves identification, synthesis, integration and application of basic marketing concepts within strategic decision-making contexts. Core marketing concepts are reviewed in classes on a high level. (PowerPoint slides on each review topic will be posted in Canvas, and these become the de facto “textbook” and reference for course content.) Prerequisites: MBA 4150.

MBA 4610 Business Law and Public Policy (4 Credits)
The political and legal risks confronting business are among the most serious and can even affect corporate survival, as demonstrated by the scandals and crises of the past three decades. This course attempts to equip managers with the tools and perspectives to manage such enterprise risks, to prevent conflicts from escalating into crises, and to properly respond to legal challenges and political controversies when they do occur. In particular, this course provides a background and foundation in the fundamental concepts of business law and public policy. It elevates your ability to (1) analyze important legal questions and problems facing business, and (2) analyze trends and forces in public policy that affect business.

MBA 4620 Leadership Capstone: Integration and Transition (2 Credits)
This course is a capstone course to integrate the leadership learning and development across the two-years of the MBA. In it, students will explore further their three core areas of development as a leader: 1) Emotional Intelligence; 2) Self-Leadership, and 3) Capacity to Develop Teams. These areas of study are reflective of interconnected areas of development within the Daniels Leadership Development (p3) model. At its core the model investigates purpose, principles, and presence, and in its outer ring explores perspective, partnerships, and practices. Students in this course will deepen their understanding and fluency with the P3 model by exploring the particular areas of emotional intelligence, self-leadership, and team building. They will conclude the course with a study of models of organizational and individual change and transition, in preparation for their own professional transition and deepening of capacity to lead change. The course is designed to be experiential – work will be done in the context of a team – and reflective, with an emphasis on self-reflection and individual learning. The course is organized to provide students with a platform for integrating learning during the last quarter of the MBA.

MBA 4670 Global Issues (2 Credits)
Develop a personal viewpoint regarding the “Global Tilt.” Explore current global issues and their implications for business and careers. Develop future scanning strategy/skills to keep up with global issues. Assess the changing “permeability” of national borders. Prerequisites: MBA 4470.

MBA 4690 Enterprise Solutions (4 Credits)
A practical application of key business and managerial knowledge, skills, and competencies designed to integrate all graduate program elements and provide students with a distinctive advantage in career development.

MBA 4691 Project Analysis 1 (2 Credits)
Capstone class for MBA program. Students should be full-time MBA students in their final 2 quarters of the program or receive faculty permission.

MBA 4692 Project Analysis 2 (2 Credits)
Students should be full-time MBA students in their final 2 quarters of the program or receive faculty permission. Students must have taken Project Analysis 1 to enroll.

MBA 4900 MBA 4900 Topics: (4 Credits)
MBA 4900 is a topics course. That is, you may take this course up to a maximum of four times when registering for an extension elective. The extension elective follows an immersion and is generally, though not always, held in another country. In some instances, this course may be held in the U.S. You will notice that each topic on your transcript will have a different course title. You are not allowed to repeat the same title course. This course will introduce you to the application of international business practice in an international setting while offering opportunities for acquiring hands-on cross-cultural experience to participants in the course. Assigned work and online interaction during the quarter preceding the travel course will prepare students for the experience so that time on the ground can be leveraged for maximum impact. The countries visited offer an outstanding opportunity to learn about international business issues. Students will have the opportunity to meet first hand with a variety of business and other organizations as well as conduct field research to better understand the Italian business environment and its role in the global economy.
MBA 4980 MBA Internship (0-10 Credits)
Denver MBA students have an opportunity to take for-credit internships. You and your supervising professor should develop an internship proposal which contains (a) a description of the experience and why it is important, (b) a detailed outline of the paper you will submit. You may or may not get paid for the internship work.

MBA 4991 Independent Study (1-10 Credits)
MBA 4992 Directed Study (1-5 Credits)

Media Film Journalism Studies (MFJS)

Courses

MFJS 3120 Media Ethics (4 Credits)
Analysis of problems affecting mass communications profession that result from interaction among governmental, legal, institutional and socioeconomic forces in mass communications systems. Senior standing required.

MFJS 3150 Activist Media: A Historical Overview 1960-Present (4 Credits)
Today’s alternative cultures use internet and mobile technologies to access and circulate mainstream information, but also to rapidly exchange information that exists outside mainstream media channels. Activist movements today with access to digital tools and networks are no longer dependent on newspapers and broadcast networks to represent them and to disseminate their messages. We are, however, just beginning to see how the proliferation of alternative networks of communication, and the content, practices, and identities they facilitate, interact with traditional political and business organizations, as well as with traditional media products and practices. This course focuses on media activism over the past half-century tied to various social movements with an emphasis on contemporary protest movements and their use of new and old media tools and strategies. Cross listed with EDPX 3725, MFJS 4725. Prerequisite: junior standing or permission of instructor. MFJS, SCOM, MDST, COMN, JOUR, MCOM, IIC, or DMST majors only.

MFJS 3160 Networked Journalism (4 Credits)
This course traces the shift that has taken place over the past 15 years from mass-mediated journalism to networked journalism, with emphasis on experiments in citizen and participatory news and on the changing relationship between journalists and their publics. It explores emergent communication technologies and practices and how they are changing the news media landscape. Prerequisite: junior standing or permission of instructor. MFJS, SCOM, MDST, COMN, JOUR, MCOM, IIC, or DMST majors only.

MFJS 3201 Digital Graphic Design (4 Credits)
Students explore digital publication and graphic design, from printed layouts (newspaper and magazines) to digital packages (eBooks and mobile apps). Courses focuses on raster and vector tools to create effective presentations and user interfaces. Laboratory fee required. Prerequisites: MFJS 2140 or instructor approval.

MFJS 3203 Women and Film (4 Credits)
This course explores the major intersections of the terms "women" and "film." It is concerned, for example, with the representation of women in film, both in the dominant Hollywood cinema and in alternative filmmaking practices (independent, experimental, documentary, and other national cinemas), with films by women and with women as cinema viewers or spectators. This course examines a variety of feminist approaches (historical, critical, theoretical) relevant to the subject matter. Lab fee. Cross listed with GWST 3203. Prerequisites: MFJS 200 or GWST 1112 or permission of instructor.

MFJS 3205 International & Development Communication (4 Credits)
The course uses a variety of methods and approaches to inspire critical reflection about the complex relationship between communication, culture, media and globalization, (trans)national identity(ies) and development.

MFJS 3206 Film History I: Silent Cinema (4 Credits)
This course explores the international history of film, from the origins of cinema through the late silent period. We examine the ways in which important events such as massive immigration, the Progressive movement, colonialism, World War I, modernism, and the Bolshevik Revolution have altered the face of film history, and look at some of the most important cinematic movements of the period. We discuss film historiography and the special challenges posed by film historical research and writing. Lab fee required. Note: This course is writing-intensive. Prerequisite: Permission of the instructor.

MFJS 3208 Narrative and Longform Journalism (4 Credits)
Students spend time learning the nature and functions of in-depth news reporting for online and print, with a focus on magazine-style feature article writing and editing. Laboratory fee required. Prerequisite: MFJS 2140.

MFJS 3212 Film History II: Sound Cinema (4 Credits)
This course explores the international history of film, from the development of sound cinema through the post-World War II period, 1926-1960. We examine the ways in which important events such as the Great Depression, the rise of fascism, the Second World War, and the Cold War have altered the face of film history, and look at some of the most important cinematic movements of the period. We discuss film historiography and the special challenges posed by film historical research and writing. Lab fee required. Prerequisite: Permission of the instructor.
MFJS 3216 Film History III: Contemporary Cinema (4 Credits)
This course explores the history of film from 1960 to the present. We examine the ways in which important events such as the Cold War, struggles against colonialism, the Vietnam War, globalization, and the rise of religious fundamentalisms have altered the face of film history and look at some of the most important cinematic movements of the period. We discuss film historiography and the special challenges posed by film historical research and writing. Note: Lab fee required. This course is writing-intensive. Lab fee required. Prerequisite: Permission of the instructor.

MFJS 3224 Introduction to 16mm Film and HD Digital Cinematography (4 Credits)
This course focuses on the visual aspects of telling a cinematic Story. Students learn the basics of black and white cinematography using 16mm film cameras and/or the basics of color cinematography using high definition digital cameras. The class emphasizes silent storytelling, using lighting, art design and camera movement to develop character and theme. Students read from seminal film theorists about varying approaches to cinematography and write analyses of their own work. Lab fee required.

MFJS 3229 Video Editing is for Everybody (4 Credits)
The goal for this course is for students to have a basic working knowledge of editing using various media elements (video, audio, photos, music, graphics), developing proficiencies using different editing software, and applying a mixture of editing theories and techniques. This is a summer course only.

MFJS 3310 Advanced Newswriting & Reporting (4 Credits)
Application of investigative techniques to interpretive reporting in areas of contemporary social concern. Laboratory fee required. Prerequisite: MFJS 2140.

MFJS 3320 Screenwriting for TV & Film (4 Credits)
This course leads students through advanced scriptwriting formats based on instructor expertise. Lab fee required. Prerequisite: MFJS 2150.

MFJS 3330 Broadcast & Video Journalism (4 Credits)
Students in this course learn and practice the techniques used by broadcast journalists as they write, shoot and edit news packages for television. Laboratory fee required. Prerequisite: MFJS 2140.

MFJS 3501 Web Design & Content Development (4 Credits)
This course covers the building and management of web pages. Students must be comfortable planning, creating and integrating social media and third-party content into web sites, along with analytical tools that measure audience engagement. Laboratory fee required. Prerequisite: MFJS 2140.

MFJS 3504 Advanced Multimedia Storytelling and Publishing (4 Credits)
The course introduces students to the reporting, writing, editing and multimedia production and editing skills and knowledge learned and practiced in previous journalism studies classes and apply them to building from scratch, an open content management based multimedia web site. Laboratory fee required. Prerequisites: MFJS 2140 and MFJS 2240.

MFJS 3852 Advanced Design, Layout, and Editing (4 Credits)
This course teaches students advanced layout and design for media publications using contemporary software applications for journalists and public relations professionals.

MFJS 3900 Topics in Media Film & Journalism (1-4 Credits)

MFJS 4000 MFJS Graduate Assessment Requirement (0 Credits)
This zero credit hour course is designed to enable graduate students enrolled in the Department of Media, Film and Journalism Studies’ M.A. in Media and Public Communication and the M.A. in International and Intercultural Communication degrees to complete an assessment file prior to their graduation. The requirement does not take place in conjunction with a single quarter but is rather completed throughout the student’s academic career according to the required coursework within both the M.A. in IIC and M.A. in MEPC (Media and Globalization or Strategic Communication concentration).

MFJS 4020 Emergent Digital Cultures (4 Credits)
This course introduces graduate students to some of the major historical, cultural, sociopolitical, philosophical, and other critical trends in this field of digital media. The rapid growth of participatory culture online has significant social implications and brings up issues of privacy, consumer power, intellectual property, and the nature of community and public engagement. This class will explore these issues as they manifest in various cases including politics, intellectual property, youth culture, activism, journalism and art. Particular emphasis will be placed on the question of how new media differs from mass media across various fields of cultural production (music, news, advertising, for example) and on what influence new digital products and practices might have on these industries and on cultures and societies more generally.

MFJS 4050 Foundations of Strategic Communication (4 Credits)
Focusses on understanding and implementing public communication campaigns. Central to the course is the exploration of the theoretical social science framework underlying communication campaigns and examination of the ways theories are used to define and explain communication problems and to plan and evaluate campaigns.

MFJS 4055 Media and Cultural Studies (4 Credits)
This class surveys key ideas and authors in the interdisciplinary field of cultural studies with a focus on their contributions to the study of media and communication. Some theoretical concepts to be discussed include: representation, identity, cultural production, ideology, hegemony, intersectionality, and power as these relate to the analysis of media institutions, technologies, cultures, audiences/users, texts, and artifacts. Students will develop an understanding of cultural studies as a theoretical, methodological, and political project, devoted to social critique and transformative praxis.
MFJS 4060 Strategic Messaging (4 Credits)
Continues the focus on learning and applying public relations techniques, emphasizing media relations and media writing. Students develop the ability to formulate and evaluate appropriate communication objectives, strategies, and tactics in response to real-world public relations problems, paying attention to ethical considerations. Students produce a portfolio of written public relations materials. Prerequisite MFJS 4050 or instructor permission.

MFJS 4065 Public Diplomacy and Nation Branding (4 Credits)
Drawing on research from strategic communication, cultural studies, international relations, and marketing, this interdisciplinary course examines how nation-states strive to manage their reputations and increase their influence in the context of globalization and mediatization. Students will learn about the evolution of public diplomacy and nation branding from the Cold War to present day and will discuss current developments and challenges. The course will introduce several theoretical approaches and will use a variety of case studies to help students gain insights into public diplomacy and nation branding as fields of research and practice.

MFJS 4070 Seminar in Strategic Communication (4 Credits)
Through a combination of course readings, case study analyses and guest speakers, students will observe and learn about the practice of public relations in the health and nonprofit sectors. Students will also learn about the goals, challenges and opportunities specific to these sectors. Prerequisite: MCOM/MFJS 4060 or permission of instructor.

MFJS 4080 Global/Multicultural Campaigns (4 Credits)
Explores aspects of international and intercultural public relations, including intercultural communications issues, international media issues, international corporate PR, cross-cultural and diversity training, international media relations, and international public relations of governments. The class focuses on relevant theories and issues, rather than on techniques. Prerequisite MFJS 4050 or permission of instructor.

MFJS 4160 Media Theories (4 Credits)
Surveys a number of theoretical approaches to the study of media and mass communication, paying attention to the historical context in which they arise. Students explore the relationships among media technologies, institutions, content, and audiences as well as their impacts on culture and society. The class prepares students to formulate theoretically grounded research questions within the field of media and mass communication.

MFJS 4165 Global Health and Development Communication (4 Credits)
This course will begin with an overview of health communication (which includes but is not limited to health promotion and behavior change). We will discuss individual, social, cultural & technological factors, and relevant theories and concepts in relation to international health communication and development. Students will then learn about the role of communication in international health development and the way it is practiced in the field. We will also discuss and apply the social and cultural factors that influence the design, delivery, reception, and effectiveness of international health communication programs, the role of international health’s important players big and small (e.g. WHO, UNAID, PEPFAR, Doctors without Borders, pharmaceutical companies, local village leaders, local ministries of health, husbands, mothers, etc.), and the ways in which the use of both upstream and downstream communication is imperative. We will examine case studies and the latest research for international health communication and its effectiveness while we also apply health communication theories from a variety of perspectives.

MFJS 4175 Multicultural Health Communication (4 Credits)
The course will begin with an overview of Health Communication in the United States and the ways in which health and illness are defined through communication, including media. We will discuss existing health disparities and social determinants of health as we examine health communication in multicultural settings in the U.S. We will further examine multicultural audiences and perspectives about health and illness, including diverse meaning systems and their influences on health attitudes and behaviors. Students will learn about cross-cultural concepts of health and disease and how those are represented in communication about health and illness. As students learn about what it means to develop culturally grounded health communication campaigns, they will examine culture centered messaging in health promotion. We will also discuss the ways in which health care systems are promoting patient-centered, culturally sensitive health care.

MFJS 4200 Topics in Mass Communications (4 Credits)

MFJS 4218 Narrative Film/Video Production I (4 Credits)
This is the first of a two-course capstone sequence focused on the filmmaking process and the completion of a short narrative film. Using an intensive workshop method, the class examines the scriptwriting and pre-production processes, and students finish the quarter with a completed pre-production notebook that includes a shooting script, a producer analysis, a script breakdown, production boards, casting decisions, location scouting reports and a shooting schedule. Likewise, through readings, discussions and screenings, the course is designed to expose students to the larger world of narrative filmmaking. Lab fee required. Cross-listed with MFJS 3218. Prerequisites: MFJS 4450 and MFJS 4470 or permission of the instructor.

MFJS 4219 Documentary Film/Video Production I (4 Credits)
This is the first of a two-course capstone sequence focused on the filmmaking process and the completion of a short documentary film. This course focuses on historical modes and styles of documentary, ethics, and documentary pre-production. Students pitch films, form filmmaking teams and research and write a proposal for their films. Reflective writing about process and outcome anchors student learning. Lab fee required. Cross listed with MFJS 3219. Prerequisites: MFJS 4470 or permission of instructor.

MFJS 4220 Narrative Film/Video Production II (4 Credits)
This is the second of a two-course capstone sequence focused on the filmmaking process and the completion of a short narrative film. The class uses an intensive workshop method to hone work on films pre-produced in Narrative Film/Video I. Specifically, students focus on shooting, directing, editing and sound development for their short narrative film. Lab fee required. Prerequisites: MFJ 4450, MFJS 4470, and MFJS 4218.
MFJS 4221 Documentary Film/Video Production II (4 Credits)
This is the second of a two-course capstone sequence focused on the filmmaking process and the completion of a short documentary film. The course focuses on documentary structure, production and post-production. Additionally, using an intensive workshop style, students critique their own and each other’s work. Reflective writing about process and outcome anchors student learning. Lab fee required. Prerequisites: MFJS 4470 and MFJS 4219.

MFJS 4222 Experimental Theory and Production (4 Credits)
This course is an historical, critical overview of experimental film/video movements; training in experimental projection techniques; production of own experimental projects. Lab fee required. Cross listed with MFJS 3222. Prerequisite: MFJS 4470 or permission of instructor.

MFJS 4223 Advanced Editing (4 Credits)
Building on the basic non-linear editing skills gained in Introduction to Field Production and Editing, this course focuses on advanced editing techniques including image and sound manipulation that utilize rhythmic, graphic, metaphoric, temporal and spatial approaches. In addition, the class addresses advanced sound sweetening and image color correction. Students read from seminal film theorists about varying approaches to editing and write analyses of their own work. Lab fee required. Cross listed with MFJS 3223. Prerequisite: MFJS 4470 or permission of instructor.

MFJS 4229 Video Editing is for Everybody (4 Credits)
Video has become ubiquitous. Whether on YouTube, Hulu, television or a friend’s Facebook page, people are exposed to thousands of edited videos every year. From business to anthropology, chemistry to journalism, students in every discipline want to create videos to enhance class projects, aid business plans, promote good works, accompany science processes and create lasting memory. This course is designed to provide students with a basic understanding of television and film editing. When completing this course, the goal is for students to have a basic working knowledge of editing using various media elements (video, audio, photos, music, graphics), editing software and applying a mixture of editing theories and techniques (continuity and montage style editing). There are no prerequisites for this course.

MFJS 4255 Space, Place and Globalization (4 Credits)
This class explores how developments in media technologies converge with expanded forms of mobility (migration, tourism, business travel, etc.) to create new practices and experiences with space and place. Responding to a globalizing context where places have become increasingly networked and/o virtual, this course pulls together research at the intersection of communication and geography studies.

MFJS 4300 Mass Media Law (4 Credits)
Introduction to freedom of expression and media law. Students learn how the American legal system works and gain an understanding and appreciation of the philosophical foundations of free expression. In addition, students confront many of the issues facing professional communicators today. Topics include incitement, hate speech, student speech, copyright, defamation, and other issues crucial to mass media professionals. The course examines also explores challenges to free expression brought by new(er) communication technologies. The purpose of this class is to give students the knowledge and critical thinking skills needed to be successful in today’s rapidly changing communication environment. Cross-listed with MFJS 3040.

MFJS 4310 New Media Law & Regulation (4 Credits)
Examination of current conflicts in mass communications law. Particular emphasis is given the legal problems of communications technologies. Topics may include libel, privacy, obscenity, news gathering, copyright, media ownership and comparative approaches to media law. The course provides insight into how the legal process works and an understanding of the principles and philosophies that underlie the restraints on new communication technologies.

MFJS 4320 Brands and Identities (4 Credits)
Reviews theories and cases of the role and meaning of brands in a consumer society, with a particular emphasis on understanding how brands are implicated in the construction and presentation of personal and group identities. The course combines insights from marketing, social psychology, and cultural studies to explore the importance of brands for both consumers and practitioners. Students master core branding concepts and use them to critically analyze salient social and cultural issues.

MFJS 4450 Scriptwriting (4 Credits)
Utilizing film and written texts, this course examines the fundamentals of narrative scriptwriting. Students produce a short narrative script (10-15 pages) while learning about the various processes involved in this art form. Cross listed with MFJS 2150. Lab fee required.

MFJS 4470 Introduction to Field Production and Editing (4 Credits)
This course focuses on the complete production process: pre-production (planning), production (lighting, shooting and sound gathering) and post-production (editing). The goal of the course is for students to gain a basic understanding of the process involved in producing a field-based production, the skills necessary to complete it and the critical understanding behind all decision. Lab fee required. Cross listed with MFJS 3215.

MFJS 4501 Web Building & Site Management (4 Credits)
An introduction to the fundamental concepts of Web site development and management, including HTML, DHTML, graphical Web-building tools (Macromedia DreamWeaver and others), multilevel site planning and construction, navigation schemes, basic interactivity (via Javascript and CGI), information organization, Web site management and delivery of basic multimedia content.

MFJS 4550 Media Effects & Consequences (4 Credits)
Examines the psychological effects and sociological consequences of mass communications. The course combines theoretical perspectives from social science inquiry that seek to explain how audiences use the mass media and the effects which media have on audiences. Emphasis is placed upon areas of inquiry which have a bearing on mass communications policy.
MFJS 4560 Methods in Communication Research (4 Credits)
Development and application of specific social scientific research techniques to study mass communication. The class surveys both quantitative and qualitative techniques and addresses methods for evaluation.

MFJS 4650 Global Media and Communication (4 Credits)
Major theories concerning international communication flows, the impact of globalization and global media, issues of new communication technologies, the rhetoric and media framing of global politics and culture; international marketing and public relations; and national and cultural sovereignty issues related to communication.

MFJS 4651 Development Communication (4 Credits)
An overview of major theories in development communication concerning past, present, and future roles of media in economic/cultural development around world.

MFJS 4652 Culture, Gender, and Global Communication (4 Credits)
Explore the ways in which culture, gender, and communication intersect and shape a variety of issues from an international and intercultural perspective, including sexuality and gender identity, indigenous and immigration rights, women's rights, and human rights. Using a global feminist perspective, the class examines paradigm shifts in creating social change through social and political movements. Cross listed with MFJS 3652.

MFJS 4653 Language, Power, and Globalization (4 Credits)
This course focuses on scholarly and political debates surrounding the social nature of language, language and (inter)national and individual identity, language policy, multilingualism and linguistic diversity, language and globalization, language and media and communication technologies, and, finally, the future of the global language landscape.

MFJS 4654 Intercultural Communication (4 Credits)
This course focuses on the intersections between culture & communication, including intercultural communication in interpersonal and mediated contexts at the local, national and global levels as shaped by processes of globalization. It covers major theoretical perspectives and methods, the role of power and privilege in the construction and articulation of culture and cultural identity, and intersections with race, ethnicity, gender, sexuality and class, intercultural training and the role of communication and culture in conflict and conflict resolution.

MFJS 4655 Multicultural Journalism (4 Credits)
This course focuses on multicultural approaches to journalism and media, including representations and news coverage related to gender, race/ethnicity, class, and sexuality, disabilities, religion, and nationality, etc. The class explores culture and intercultural communication and ways to apply these to journalistic writing as a creative process and craft. Prerequisite: Prior journalistic coursework or its equivalent (including writing experience). Cross-listed with MFJS 3655.

MFJS 4656 Cross-Cultural Travel Seminar: Immigration, Communication, and Border Cultures (4 Credits)
This is a one-week intensive travel course that takes place in Tucson, Arizona and south to the US-Mexican border region. The focus of this experiential learning class is to study immigration issues, border cultures, and the role of communication and media through testimonies of immigrants, and visits to key sites such as the migrant trail, immigration detention center and courts. Also included are talks by activists and officials involved in the immigration debate. Class meets for two pre-class sessions in spring quarter. Cross-listed with MFJS 3656.

MFJS 4912 Seminar in Media Film & Journalism Studies (1-5 Credits)

MFJS 4980 Internship (1-10 Credits)
Arrange with internship director to complete internship with Denver-area media organization. Prerequisite: varies; consult internship director.

MFJS 4991 Independent Study (1-10 Credits)

MFJS 4992 Directed Study (1-10 Credits)

MFJS 4995 Independent Research (1-10 Credits)

Music-Academic Classes (MUAC)

Courses

MUAC 3002 Form and Analysis (4 Credits)
Analysis of structural elements and stylistic features in solo, chamber and orchestral literature from 1600 to present. Prerequisite: MUAC 2006.

MUAC 3005 Post-Tonal Theory and Analysis: Set-Theory and Serialism (4 Credits)
This course has two components: (1) A study of selected analytical techniques for post-tonal music, primarily pitch-class set theory and twelve-tone (serial) theory; (2) Analysis of representative works from the twentieth century, focusing on the music from the first half of the century (Schoenberg, Berg, Webern, Stravinsky, and Bartok). Six credits of Theory 2 or permission of instructor required.

MUAC 3023 Rhythm & Meter in Tonal Music (4 Credits)
This course gives a general background, including the history of rhythm and meter, different rhythmic analyses, and various topics (dissonance, ambiguity, Schenker, motives, biology, and perception).

MUAC 3024 Introduction to Tonal Analysis (4 Credits)
This course introduces students to various types of musical analysis for tonal music that are more advanced than what is introduced in first- and second-year music theory. Prerequisites: MUAC 2006 and MUAC 2022.
MUAC 3025 Topics in Analysis: Brahms (4 Credits)
This course explores a variety of analytical techniques used to understand the compositions of Brahms. We examine works by musicologists and theorists such as Allen Forte, Walter, Frisch, Arnold Schoenberg, Carl Schachter, and David Lewin. Issues discussed include developing variations, rhythm, form, and ambiguity in Brahms. We cover a wide range of repertoire, ranging from piano works to choral works to symphonies.

MUAC 3030 Seminar-Performance Psychology (2 Credits)

MUAC 3036 Internship (1-5 Credits)

MUAC 3045 Introduction to Studio Recording (3 Credits)
A hands-on introduction to recording popular music in the state of the art Lamont Recording Studio. Students will participate in pre-production and recording of a professional four piece rock band. Students will also learn basic audio theory as it applies to the use of microphones, signal processing, and other studio equipment. Topics to be covered include drum sounds, guitar and bass sounds, basic audio theory and acoustics, basic electricity, digital recording, microphones and DI's, signal routing in the studio, tracking with ProTools HD and Logic Pro7, equalization, dynamics, reverberation and delay, special effects, mixing to stereo.

MUAC 3059 Audio Production II (4 Credits)
This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as on-site training at Lamont School of Music performances. This is the first sequence in the audio production concentration.

MUAC 3060 Extra-Musical Roles of the Music Director (1 Credit)
Under the supervision and guidance of the director of orchestral studies, students will gain hands-on, actual experience with many of the non-musical tasks that conductors face. These experiences will include managing orchestra personnel, librarian activities, running auditions, and recruiting. Open only to Artist Diploma in orchestral conducting students.

MUAC 3061 Audio Production I (4 Credits)
An introduction to analog and digital synthesis, MIDI sequencing, and DAW software.

MUAC 3064 Audio Production IV (4 Credits)
This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as on-site training at Lamont School of Music performances. This is the third sequence in the audio production concentration.

MUAC 3065 Audio Production V (4 Credits)
This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as onsite training at Lamont School of Music performances. This is the fourth sequence in the audio production concentration.

MUAC 3068 Audio Production for Working Musicians (4 Credits)
In this course, students are taught a solid foundation of basic audio production skills that will enable them to record any style of music. Students are also taught the basics of digital music synthesis and how to create music with digital synthesizers and MIDI. The primary digital audio workstation software used in this course will be ProTools, and each student is required to purchase ProTools (about $250 academic price) and an iLok license dongle (about $40). However, the course has been designed so that skills acquired can be easily applied to any regular DAW platform, such as Logic, Cubase, Ardour, etc. Production techniques for various musical genres will be presented, including Rock, Jazz, Classical, Techno, experimental electro-acoustic, etc. This course will be of great value to performing musicians, singer/songwriters, ensemble directors and conductors, composers, or anyone who wants to record and/or produce music. Students are encouraged but not required to purchase an audio interface and microphone or other input device depending on their area of interest, and are advised in class as to what purchases make sense.

MUAC 3069 Jazz Rhythm Section (4 Credits)
Jazz Rhythm Section provides students with detailed performance practice skills and knowledge. This class may be used to fulfill four hours of Jazz Studies and Commercial Music Area Requirements and may only be taken once for credit. Jazz Studies and Commercial Music Major or the performance ability sufficient to perform on a rhythm section instrument in one of the JSCM ensembles.

MUAC 3092 The Business Side of Music (4 Credits)
A personal and clinical approach to developing music business skills and strategies.

MUAC 3105 Studies in Style: Movement, Mannerisms, Gesture and Physical Comedy (3 Credits)
The exploration of period styles in theatrical and historical genres will be introduced to broaden the singer/actor's repertoire of physical gesture and comedic forms of stage movement. The focus of the course will include studies in rhythm, timing, pacing, musicality and lyricism as these elements apply to heightened expressivity within scene work, character development and ensemble performance. Considerable time will be devoted to the physical practice of related skills as preparation and facilitation of performance projects that will serve as an opportunity for peer observation, group discussion and commentary, and student assessment.
MUAC 3106 The Dynamic Body: Foundations in Movement Methods and Body Awareness Principles (2 Credits)
An introduction to fundamental body awareness principles in relationship to physical performance skills for vocal performance majors. Methods for heightening kinesthetic awareness will be learned in the form of movement explorations, improvisations, structures, and learned phrases to gain somatic insight into the performer’s sense of verticality in all places and dimensions of space. The concepts of the body in motion will be a primary context and focus for the progression of studies or 'etudes,' and for the reflective and analytical processes that include observation, journaling, discussion and peer commentary. Studio activities in solo, partnering, and group work will further the student’s knowledge of how to become more responsive, expressive, and communicative when interacting with the surrounding environment and with others. Integrated with the body-mind practice and theoretical study, students will be encouraged to inquire, examine and articulate possible philosophies regarding why the mastery of the performer’s physical body requires an essential sense of discipline that is cultivated in the performing arts, and how the somatic practices being investigated can serve his/her performance presence and support one’s vocal training and health for the long-term.

MUAC 3124 Composition Seminar (1 Credit)
Composition Seminar focuses on the reading and performance of modern scores by Lamont and recognized composers. Any student composing music or wishing to perform new compositions at Lamont may register and participate. Requirements for composers include the completion, rehearsal and performance of a piece of music at the New Music Ensemble concert each quarter. Non-composers are required to rehearse and perform at the New Music Ensemble concert. Composers enrolled in the ensemble may be required to play compositions submitted as well.

MUAC 3165 Music Theater Survey (2 Credits)
A historical overview of the American Broadway musical, performance technique, audition preparation and repertoire. Must be prepared to sing and perform.

MUAC 3166 Music Theater Survey II (2 Credits)
Fundamentals of music theater performance will be addressed through readings of the text, "Acting in Music Theater" by Joe Dee and Rocco dal Vera. Application of these techniques through performance of musical theater literature will be incorporated during the last number of weeks. Additionally, we will highlight prominent composers and their works throughout the quarter.

MUAC 3196 Advanced Composition Tutorial (4 Credits)
MUAC 3200 Recitative in Opera & Oratorio (2 Credits)
The fluid singing of recitative in German, English, Italian and French will be explored and practiced in this class. Students will harmonically analyze examples, add ornamentation, and perform recitative with a knowledge of the translation and emotional content.

MUAC 3212 Digital Music Creation (4 Credits)
In this course, students will create, produce, and present their own digital music. Using one of the industry’s leading digital music creation platforms (such as Ableton Live), students will learn the history of electronic music creation, create their own digital music portfolios, become familiar with relevant copyright issues, and oversee public performances of their music.

MUAC 3234 Cycle of Seasons-Resources (1 Credit)
MUAC 3235 Preschool Music Workshop (3 Credits)
MUAC 3236 Family Music Workshop (1 Credit)
MUAC 3237 Music Makers at the Keyboard (3 Credits)
This 30-hour workshop presents the keyboard method for groups of young beginners ages 5-9.

MUAC 3238 Music Makers at Home & World (3 Credits)
This 30-hour workshop presents the method for a sequential two-year program that guides the musical development of children ages 4-7. Different world cultures are celebrated through music, songs, dances, stories, and rituals.

MUAC 3240 Vocal Pedagogy I (1 Credit)
Psychological and physical aspects of teaching of singing.

MUAC 3241 Vocal Pedagogy II (1 Credit)
Psychological and physical aspects of teaching of singing.

MUAC 3243 Recitative in Opera (2 Credits)
Working as a professional singer your proficiency with recitative should be high. Though a major part of many operas recitative is still often overlooked as a skill set. Through this course we will explore several different approaches to recitative from various compositional styles and time periods.

MUAC 3282 Suzuki Violin Seminar II (2 Credits)
MUAC 3283 Suzuki Violin Seminar II (2 Credits)
MUAC 3284 Suzuki Violin Seminar II (2 Credits)
MUAC 3333 Advanced Vocal Pedagogy (2 Credits)
An advanced study of the science behind the singing voice, including the biomechanics of phonation, identifying systems and changes in the voice, posture and breathing that impact phonation, and a physiologic approach to vocal exercises in preparation for teaching voice. Prerequisite: MUAC 3242.
MUAC 3350 Social History—Modern Britain (4 Credits)
This course investigates the intersections of class, gender, and race in nineteenth-century British society. During this period, Britain became the preeminent world power thanks to its spectacular industrialization and its even more impressive empire. Such success often fostered smugness and complacency, yet British society was also riddled with dissent as people struggled to cope with the enormous changes they were witnessing. Discussions focus on the ways in which Victorian people themselves understood their society and its problems, and how they attempted to construct solutions to those problems. Who was implicitly or explicitly excluded from British society? As we consider these topics, we use a variety of secondary and primary sources, including fiction; one goal of the course is for us to think about how to integrate different kinds of sources as we analyze historical problems and create our own interpretations. Cross listed with HIST 3350.

MUAC 3439 Teaching Note Reading (2 Credits)
MUAC 3460 Suzuki Cello Practicum (1 Credit)
MUAC 3461 Suzuki Cello Practicum (1 Credit)
MUAC 3462 Suzuki Cello Practicum (1 Credit)
MUAC 3463 Suzuki Cello Seminar I (2 Credits)
MUAC 3464 Suzuki Cello Seminar I (2 Credits)
MUAC 3465 Suzuki Cello Seminar I (2 Credits)
MUAC 3466 Suzuki Cello Seminar II (2 Credits)
MUAC 3467 Suzuki Cello Seminar II (2 Credits)
MUAC 3468 Suzuki Cello Seminar II (2 Credits)
MUAC 3470 Suzuki Violin Seminar I (2 Credits)
Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.

MUAC 3471 Suzuki Violin Seminar I (2 Credits)
Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.

MUAC 3472 Suzuki Violin Seminar I (2 Credits)
Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.

MUAC 3477 Suzuki Violin Practicum (1 Credit)
The Suzuki Violin Practicum is designed to give the students enrolled in the Suzuki Seminar classes a forum to practice teaching using the pedagogical points and teaching philosophy covered in the seminar classes. The course will include some lecture focusing on teaching strategies for effective technical development and effective communication in the lessons. Prerequisite: MUAC 3470.

MUAC 3497 Studying Music in the Field: Theory and Method in Ethnomusicology (4 Credits)
This course introduces issues that motivate ethnomusicological research and techniques for carrying out fieldwork, the ethnographic method which has largely come to define the discipline. Our primary texts include Bruno Nettl's classic text, The Study of Ethnomusicology, and Shadows in the Field, a seminal volume of essays discussing ethnomusicological fieldwork. This course also involves hands-on experience in some of the major fieldwork techniques, including field observation and writing fieldnotes, musical transcription and interviewing. This course culminates in a field research project in a Denver musical community determined in consultation with the professor. Note: this course is not open to freshman; sophomores with permission of instructor.

MUAC 3502 Gender & Genre in World Music (4 Credits)
How are concepts of "maleness," "femaleness" and other gendered categories constructed, maintained, and contested through musical performance? This course examines the issues explored and debated in recent studies of gender relation to music of various cultures including Western art music, popular music, and other world genres. We focus on reading and discussion of ethno-musicological and anthropological ethnographies, musicological studies focusing on gender and theoretical writings from gender and women's studies. Lectures and discussions are supplemented by guest lecture-demonstrations, film/video screenings and hands-on workshops. This course is not open to freshman. Sophomores can register with instructor approval.

MUAC 3537 Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music (4 Credits)
Andraé Crouch, Walter Hawkins, and Richard Smallwood have each influenced the course of black gospel music for the last 50 years. Through listening to recordings, watching video performances, score analysis, readings, performance, and improvisation, this course will examine the music of these unique composer/performers and how their contributions have impacted black gospel music. Rather than simply read about and analyze the music, students will play the music of these composers and literally have hands-on experience with the colors and textures of the music that has shaped church music and the gospel music industry for the last five decades.

MUAC 3550 Major Composers—J.S. Bach (4 Credits)
Music of Bach, including chronological development, form and style, studied against background of baroque musical practice and circumstances of Bach's life and temperament. Prerequisites: MUAC 1621, 1622 and 1623.
MUAC 3570 Major Composers: Beethoven (4 Credits)

MUAC 3578 Advanced Composition (4 Credits)
Advanced composition with students composing works of large scope and using a variety of advanced techniques consistent with interests and abilities; emphasis on imagination and originality of personal expression.

MUAC 3579 Advanced Composition (3 Credits)
Advanced composition with students composing works of large scope and using a variety of advanced techniques consistent with interests and abilities; emphasis on imagination and originality of personal expression. May be taken more than once for credit. Prerequisite: MUAC 3020.

MUAC 3590 Guitar History (4 Credits)

MUAC 3600 The Evolution of Rock (4 Credits)
This course traces the history of rock from the Beatles in the early 60’s to the most recent developments of the 90’s. The course provides a concise overview of this most influential musical phenomenon. Designed for the non-music major, it requires no prerequisites. Classes consist of lectures and listening. All listening examples are available via computer to each student.

MUAC 3630 Basic Jazz Arranging (2 Credits)
A study and practical analysis of the foundational techniques involved with composing and orchestrating for small group jazz ensembles. This course will cover the basics of form, notation, and orchestration in the small group jazz idiom, consisting of one to four horns and/or vocals, guitar, piano, bass, and drums.

MUAC 3650 Orchestral Excerpts-Cello (4 Credits)
This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock auditions and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

MUAC 3655 Orchestral Excerpts-Bass (4 Credits)
This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock audition and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

MUAC 3660 Orchestral Excerpts-Violin (4 Credits)
This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock auditions and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

MUAC 3661 Orchestral Excerpts Viola (4 Credits)
This course explores excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students are given a list of excerpts and coached on how to prepare them. They participate in mock auditions and receive feedback. This course also addresses the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

MUAC 3662 Orchestral Studies for Brass (2 Credits)
Study of orchestral literature brass players are likely to be asked to play at auditions for professional orchestras. Undergraduate participants should have passed their Sophomore Proficiency jury with distinction.

MUAC 3663 Orchestral Excerpts, Viola II (4 Credits)
Companion course to Orchestral Excerpts Viola I, this section expands the repertoire list beyond the standard works used for auditions today. In addition to further honing basic requisite material from section I, students study and prepare less frequently required works and principle viola solo repertoire. There is more extensive discussion of the audition process and mock auditions as a part of the course. While it is advised and preferable that students complete the first section of this course it is possible to take the course with the approval of the instructor.

MUAC 3677 Bow Art Ensemble (0-1 Credits)
The Bow Art Ensemble explores the study and rehearsal of traditional and contemporary chamber orchestra repertoire, history, and culture, to be led in conjunction with Lamont performance faculty and guest artists. Students will receive instruction on proper techniques, musical styles, study of traditional and contemporary collaborative leadership and democratic approaches to performing in a conductor-less ensemble.

MUAC 3682 Topics-Orchestral Repertoire (4 Credits)
We explore the history of the orchestra and orchestral literature from the baroque through modern eras, and examine a number of test cases in which conventional understanding has been challenged in recent years. The course concludes with individual research projects and presentations on topics students choose and develop.

MUAC 3683 History of Chamber Music (4 Credits)
Chamber music from baroque trio sonata to contemporary electronic works. Prerequisites: MUAC 1621, MUAC 1622 and MUAC 1623. Winter quarter only.

MUAC 3684 Choral Literature I (2 Credits)
This course is an analysis of the development of choral repertoire from the Middle Ages through the Baroque era.
MUAC 3686 Choral Pedagogy I (2 Credits)
The Choral Pedagogy course focuses on effective choral methods and techniques indigenous to primary schools of thought that have risen to prominence or have proven successful in practice and performance throughout the last 50 years in the academic and professional choral idiom. Through study and analysis of selected works by various composers, effective teaching techniques are explored in performance practice and style interpretation.

MUAC 3688 Choral Pedagogy II (2 Credits)
The Choral Pedagogy course focuses on effective choral methods and techniques indigenous to primary schools of thought that have risen to prominence or have proven successful in practice and performance throughout the last 50 years in the academic and professional choral idiom. Through study and analysis of selected works by various composers, effective teaching techniques are explored in performance practice and style interpretation.

MUAC 3689 Choral Literature II (2 Credits)
This course is an analysis of the development of choral repertoire from the Classical period until the present day. This course is meant to be taken in sequence after Choral Literature I.

MUAC 3698 Carillon History and Mechanics (4 Credits)
A survey of the evolution of signal bells into the musical instrument known as the carillon. This subject is often called "campanology." The history will be traced from the 16th century in the Low Countries through modern times in Europe, North America, Australia/New Zealand and Japan. Topics will include bell foundries, bell casting and tuning, bell chambers, playing actions, carillonneurs, carillon schools, carillon organizations, the use of the carillon in its various regions and basic carillon maintenance.

MUAC 3700 Carillon Repertoire (4 Credits)
A survey of the music expressly produced for carillon from the earliest times through the present. Categories include automatic music (e.g., De Sany, Wyckaert, Eggert), the earliest compositions for manual play (Van den Gheyn and the Louvain manuscripts of the 18th century), and the 20th-century categories: Flemish, Dutch, French and North American. Mainstream publishers as well as incidental publications will be covered. The labs will focus on analysis through recordings and live performances by participants.

MUAC 3704 Pedagogy & Repertoire Tuba (4 Credits)
Teaching techniques and survey of literature and teaching materials for the tuba.

MUAC 3705 Pedagogy & Repertoire Tuba (4 Credits)
Teaching techniques and survey of literature and teaching materials for the tuba.

MUAC 3706 Pedagogy & Repertoire Tuba (4 Credits)
Teaching techniques and survey of literature and teaching materials for the tuba.

MUAC 3707 Pedagogy & Repertoire Horn (4 Credits)
Teaching techniques and survey of literature and teaching materials for the horn.

MUAC 3708 Pedagogy & Repertoire Horn (4 Credits)
Teaching techniques and survey of literature and teaching materials for the horn.

MUAC 3709 Pedagogy & Repertoire Horn (4 Credits)
Teaching techniques and survey of literature and teaching materials for the horn.

MUAC 3710 Carillon Pedagogy I (2 Credits)
An exploration of the physical and psychological elements that can lead to effective carillon teaching: technique, handling/pedaling ("fingering" on the piano), and developing an attitude that fosters successful performance.

MUAC 3711 Pedagogy & Repertoire Trombone (4 Credits)
Teaching techniques and survey of literature and teaching materials for the trombone.

MUAC 3712 Pedagogy & Repertoire Trombone (4 Credits)
Teaching techniques and survey of literature and teaching materials for the trombone.

MUAC 3713 Pedagogy & Repertoire Trombone (4 Credits)
Teaching techniques and survey of literature and teaching materials for the trombone.

MUAC 3717 Pedagogy & Repertoire Percussion (4 Credits)
Teaching techniques and survey of literature and teaching materials for percussion.

MUAC 3718 Pedagogy & Repertoire Percussion (4 Credits)
Teaching techniques and survey of literature and teaching materials for percussion.

MUAC 3719 Pedagogy & Repertoire Percussion (4 Credits)
Teaching techniques and survey of literature and teaching materials for percussion.

MUAC 3724 Pedagogy & Repertoire Guitar (4 Credits)
Teaching techniques and survey of literature and teaching materials for the guitar.

MUAC 3726 Pedagogy & Repertoire Viola (4 Credits)
Teaching techniques and survey of literature and teaching materials for the viola.
MUAC 3727 Pedagogy & Repertoire Viola (4 Credits)
Teaching techniques and survey of literature and teaching materials for the viola.

MUAC 3730 Pedagogy & Repertoire Cello (4 Credits)
Teaching techniques and survey of literature and teaching materials for the cello.

MUAC 3733 Pedagogy & Rep Double Bass (4 Credits)
Teaching techniques and survey of literature and teaching materials for the double bass.

MUAC 3735 Pedagogy & Repertoire Harp (4 Credits)
Teaching techniques and survey of literature and teaching materials for the harp.

MUAC 3736 Pedagogy & Repertoire Harp (4 Credits)
Teaching techniques and survey of literature and teaching materials for the harp.

MUAC 3737 Pedagogy & Repertoire Harp (4 Credits)
Teaching techniques and survey of literature and teaching materials for the harp.

MUAC 3738 Pedagogy & Repertoire Organ (2 Credits)
Teaching techniques and survey of literature and teaching materials for the organ.

MUAC 3739 Pedagogy & Repertoire Organ (2 Credits)
Teaching techniques and survey of literature and teaching materials for the organ.

MUAC 3740 Pedagogy & Repertoire Organ (2 Credits)
Teaching techniques and survey of literature and teaching materials for the organ.

MUAC 3741 Pedagogy & Repertoire Trumpet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the trumpet.

MUAC 3742 Pedagogy & Repertoire Trumpet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the trumpet.

MUAC 3743 Pedagogy & Repertoire Trumpet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the trumpet.

MUAC 3747 Pedagogy & Repertoire Flute (4 Credits)
Teaching techniques and survey of literature and teaching materials for the flute.

MUAC 3748 Pedagogy & Repertoire Flute (4 Credits)
Teaching techniques and survey of literature and teaching materials for the flute.

MUAC 3749 Pedagogy & Repertoire Flute (4 Credits)
Teaching techniques and survey of literature and teaching materials for the flute.

MUAC 3750 Pedagogy & Repertoire Clarinet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the clarinet.

MUAC 3751 Pedagogy & Repertoire Clarinet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the clarinet.

MUAC 3752 Pedagogy & Repertoire Clarinet (4 Credits)
Teaching techniques and survey of literature and teaching materials for the clarinet.

MUAC 3753 Pedagogy & Repertoire Saxophone (4 Credits)
Teaching techniques and survey of literature and teaching materials for the saxophone.

MUAC 3754 Pedagogy & Repertoire Saxophone (4 Credits)
Teaching techniques and survey of literature and teaching materials for the saxophone.

MUAC 3755 Pedagogy & Repertoire Saxophone (4 Credits)
Teaching techniques and survey of literature and teaching materials for the saxophone.

MUAC 3756 Pedagogy & Repertoire Oboe (4 Credits)
Teaching techniques and survey of literature and teaching materials for the oboe.

MUAC 3757 Pedagogy & Repertoire Oboe (4 Credits)
Teaching techniques and survey of literature and teaching materials for the oboe.

MUAC 3758 Pedagogy & Repertoire Oboe (4 Credits)
Teaching techniques and survey of literature and teaching materials for the oboe.

MUAC 3759 Pedagogy & Repertoire Bassoon (4 Credits)
Teaching techniques and survey of literature and teaching materials for the bassoon.

MUAC 3761 Pedagogy & Repertoire Bassoon (4 Credits)
Teaching techniques and survey of literature and teaching materials for the bassoon.
MUAC 3762 Pedagogy & Repertoire Bassoon (4 Credits)
Teaching techniques and survey of literature and teaching materials for the bassoon.

MUAC 3765 Professional Brass Techniques (4 Credits)
This 4-hour per week course will be divided into a lecture/seminar for two hours and performance practicum for two hours. Topics discussed and performed include orchestral playing, sight reading, practice, solo performance, jazz survival, ornamentation, transposition, and warm-up/maintenance routine.

MUAC 3804 Topics in Music (1-5 Credits)

MUAC 3810 Voice Repertoire (2 Credits)
Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.

MUAC 3811 Voice Repertoire (2 Credits)
Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.

MUAC 3812 Voice Repertoire (2 Credits)
Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.

MUAC 3822 Piano Repertoire I (2 Credits)
Performance and analysis.

MUAC 3823 Piano Repertoire II (3 Credits)
Performance and analysis.

MUAC 3824 Piano Repertoire III (3 Credits)
Performance and analysis.

MUAC 3830 Advanced Jazz Arranging I (2 Credits)
A study and practical analysis of small to medium jazz ensemble writing with extended instrumentation. Consisting of nonette-style orchestration including orchestral instruments such as horn, tuba, woodwinds, and voice along with extended electronic textures, this course will cover the basics of form, notation and orchestration in the 21st Century hybrid small to medium size jazz ensemble idiom.

MUAC 3831 Advanced Jazz Arranging II (2 Credits)
A study and practical analysis of large "studio orchestra" type jazz writing with extended instrumentation. Consisting of medium to full orchestral string section, woodwinds, harp, percussion, brass plus jazz rhythm section, voices, and soloists. Exemplified by such modern ensembles as Snarky Puppy with the Metropole Orchestra, this will be a full studio orchestra with modern 21st Century jazz, rock, and pop sensibilities. String bowings and aspects of dynamic ensemble balances in the studio orchestra will be studied, as well as writing for the harp.

MUAC 3832 Arranging for Computer-Based Media (2 Credits)
This course will be an introduction to techniques of composition and arranging music for media, with an emphasis on practical assignments that the student will encounter in the professional world of media composition. Students will learn how to work in collaboration with filmmakers, master techniques of timing and synchronization, use traditional techniques of composition/arranging/orchestration to serve dramatic needs, and work efficiently in the recording studio under time and budget restraints.

MUAC 3841 Jazz & Commercial Music History/Repertoire (4 Credits)

MUAC 3842 Jazz & Commercial Music History/Repertoire (4 Credits)
Writing for small and large jazz groups; accompaniment skills; writing for live performance versus writing for recorded performance. Prerequisite: MUAC 3830.

MUAC 3843 Jazz & Commercial Music History/Repertoire (4 Credits)
Writing for small and large jazz groups; accompaniment skills; writing for live performance versus writing for recorded performance. Prerequisite: MUAC 3830.

MUAC 3844 21st Century Artistry I (2 Credits)
21st Century Artistry I is a course of study that examines the full spectrum of attributes and skills necessary for a student to "survive and thrive" in the ever-changing landscape of the 21st Century. With a two-fold approach of examining effective strategies for a "modern artistry mindset" along with extensive case studies of successful 21st Century professionals, this course will offer the student a wide array of important recourses to guide their career. The case study aspect of 21st Century Artistry I will be based on multiple evaluations of successful artists in the 21st Century in partnership with local presenters.

MUAC 3845 Writing for The Modern Large Jazz Ensemble I (2 Credits)
A study and practical analysis of the major methods for writing for the modern large jazz ensemble (big band) as exemplified by Frank Foster, Sammy Nestico, Slide Hampton, Bob Brookmeyer and other modern practitioners. Application of analysis will be in the form of a complete arrangement or original composition for modern big band.

MUAC 3846 Writing for the Modern Large Jazz Ensemble II (2 Credits)
A study and practical analysis of the major methods for writing for the modern large jazz ensemble (big band) as exemplified by Bob Brookmeyer, Maria Schneider, Gil Evans, Darcy James Argue, and others. A special emphasis will be placed on creating full works for the large jazz ensemble that uses textures and modern extended form approaches indicative of these artists. Application of analysis will be in the form of a complete arrangement or original composition for modern big band.
MUAC 3847 Hip-Hop: Theory and Practice (4 Credits)
Students in this class will examine the socio-cultural, economic, and political significance of hip-hop as a medium of expression for youth around the world. Through analysis of popular writing and media, as well as academic texts, we critically explore issues of race, social justice, masculinity, misogyny, censorship, technology, and intellectual property, as they relate to mainstream and underground hip-hop in America. Having discussed hip-hop’s roots in the U.S., the remainder of the quarter will be devoted to tracing hip-hop’s global routes.

MUAC 3860 Basic Jazz Improvisation (4 Credits)
The study of jazz improvisation techniques and forms. Open to music majors or by instructor permission.

MUAC 3870 Jazz Improvisation & Composition (4 Credits)
Improvisational styles of major jazz soloists studied through transcription and analysis of selected recorded jazz solos; scales and modes; rhythmic styles and devices; practice and development of individual student’s improvisational technique. Prerequisites: MUAC 1011, MUAC 1012, MUAC 3830.

MUAC 3872 Jazz Improvisation & Composition (4 Credits)
Improvisational styles of major jazz soloists studied through transcription and analysis of selected recorded jazz solos; scales and modes; rhythmic styles and devices; practice and development of individual student’s improvisational technique. Prerequisites: MUAC 1011, MUAC 1012, MUAC 3830.

MUAC 3910 Orchestration (4 Credits)
Techniques of instrumental scoring.

MUAC 3933 Graduate Music History Review (0 Credits)

MUAC 3935 Graduate Music Theory Review (0 Credits)
This course provides an accelerated review of materials from the undergraduate theory core, including analysis and written exercises in diatonic and chromatic harmony, counterpoint, tonal forms, and an introduction to 20th-Century theory.

MUAC 3959 Movement and Expression for Conductors (4 Credits)
Conductors use their whole body to communicate and elicit successful performances from their ensemble. If you have unnecessary tension or lack of ease in your body, this is communicated unconsciously to your ensemble, hindering quality of performance. Additionally, physical tension can prevent your ability to communicate and think clearly under pressure. This course is an exploration of freedom of movement and the physicality of musical expression. Classes will include group activities in free-movement, dance, acting, keeping your cool, poise, balance, tension release, as well as hands-on instruction applying Alexander technique to your conducting.

MUAC 3960 Advanced Orchestral Conducting (2 Credits)
Discussions of and exercises in score study, interpretation, and techniques associated with orchestral conducting. Includes practical experience conducting orchestral repertoire. Required of MM Conducting students with Choral or wind concentrations. Open to other students with permission of instructor. Prerequisite: Permission of instructor (not needed for MM Conducting students with Choral or Wind concentration). Fall quarter only.

MUAC 3961 Advanced Choral Conducting (2 Credits)
Conducting complex choral works, including those with instrumental accompaniment; phrasing, interpretation and score reading. Prerequisite: MUAC 2940. Fall quarter only.

MUAC 3962 Advanced Wind Conducting (2 Credits)
Conducting complex wind compositions; phrasing interpretation and score reading. Prerequisite: MUAC 2970. Spring quarter only.

MUAC 3973 Advanced Wind Literature I (2 Credits)
This course is an overview of wind literature appropriate for junior high school, high school, college and professional programs including strategies in effective programming and creation of appropriate program notes.

MUAC 3974 Advanced Wind Literature II (2 Credits)
An in-depth study of successful compositional techniques by prominent composers of wind literature. Prerequisite: MUAC 3973.

MUAC 3980 Advanced Jazz Improvisation and Composition (4 Credits)
A three term sequence continuing the in-depth study of the theory, performance practices, style, and history of jazz improvisation and composition. Prerequisite: satisfactory completion of the three terms of Jazz Improvisation and Composition or consent of the instructor.

MUAC 3990 Internship in Music (0-8 Credits)
Internship in Music will offer opportunities for music majors to experience actual music related careers within a sponsoring music organization chosen by the student and accepted by the supervising faculty of the School of Music.

MUAC 3991 Independent Study (1-10 Credits)

MUAC 3992 Directed Study (1-10 Credits)

MUAC 4000 Introduction to Graduate Study (2 Credits)
Problems of research in various chronological epochs of Western musical culture; research techniques and sources used in research; formal writing style.

MUAC 4002 Form and Analysis (4 Credits)
Analysis of structural elements and stylistic features in solo, chamber and orchestral literature from 1600 to present. Prerequisite: MUAC 2006.
MUAC 4006 Post-Tonal Theory: Mode/Rhythm (4 Credits)
Works of Stravinsky, Bartok, Satie, Debussy, and others are studied, employing various transformational theories, diatonic set theory, and 20th-century metric theories. Prerequisite: completion of Music Theory I and Music Theory II sequences.

MUAC 4007 Post-Tonal Theory and Analysis: Set-Theory and Serialism (4 Credits)
This course has two components: (1) A study of selected analytical techniques for post-tonal music, primarily pitch-class set theory and twelve-tone (serial) theory; (2) Analysis of representative works from the twentieth century, focusing on the music from the first half of the century (Schoenberg, Berg, Webern, Stravinsky, and Bartok). Six credits of Theory 2 or permission of instructor required.

MUAC 4008 Modal Counterpoint, Renaissance Vocal Style (4 Credits)
This course teaches students to compose vocal music in the Renaissance style. After surveying species counterpoint, students learn imitative techniques en route to composing three- and four-voice texted pieces.

MUAC 4009 Tonal Counterpoint (4 Credits)
Eighteenth-century counterpoint using J.S. Bach as a model, with two- and three-part fugue writing.

MUAC 4010 Pedagogy of Music Theory (4 Credits)
Materials, devices, techniques of teaching theory. Students must have successfully completed undergraduate music theory or passed graduate review theory.

MUAC 4020 Introduction to Research in Piano Pedagogy (2 Credits)
This course is designed to support the research requirements for the lecture-recital and/or the independent graduate-level pedagogical project which meet the standard competencies of the piano pedagogy program.

MUAC 4030 Convocation Attendance (0 Credits)

MUAC 4050 Major Adv Repertoire Guitar (2 Credits)
Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

MUAC 4051 Major Adv Repertoire Guitar (2 Credits)
Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

MUAC 4052 Major Adv Repertoire Guitar (2 Credits)
Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

MUAC 4090 Model Composition (4 Credits)
Students in this course deepen their understanding of musical styles and techniques by composing works that imitate major composers before 1900. Music by each student is performed in a final recital. Prerequisite: Tonal Counterpoint, equivalent coursework from another institution, or permission of instructor.

MUAC 4121 Seminar in Music Theory (4 Credits)
Seminar in Music Theory focuses on special topics chosen by faculty members. Students should expect rigorous course work and a final project or paper.

MUAC 4161 Topics in Modern Opera (4 Credits)
This course involves the close study of selected twentieth- and twenty-first-century operas, their respective musical styles and their videotaped performances. This study will include such issues as opera and film, opera libretto criticism, and the personal and public politics of the opera.

MUAC 4189 Jazz Performance Techniques (2 Credits)
Individual study of jazz performance techniques in a directed study environment.

MUAC 4196 Graduate Composition Tutorial (2 Credits)

MUAC 4200 Diction-Graduate Voice Majors (2 Credits)
This course is designed to help refine the diction skills of graduate students in voice, with an emphasis on Italian, French and German. Native speakers will be presented, and the student will learn some basic vocabulary and syntactical aspects of the language.

MUAC 4300 Topics in Jazz History (4 Credits)
A seminar focusing on a major figure of jazz history. Detailed examination of a single artist, their life, music and influences.

MUAC 4301 The Michael Brecker Era - Jazz Fusion 1970 to the Present (4 Credits)
An examination of the music of jazz and pop saxophonist Michael Brecker. From the Saturday Night Live Band through performances on over 700 pop, R&B, and jazz recordings, this course will look at the evolution of jazz fusion through this active musical period.

MUAC 4305 Advanced Bebop Concepts (2 Credits)
An in-depth study of the language of bebop jazz improvisation. The course will combine listening, composing and performing skills with theoretical knowledge of the great improvisers of the 1940s and 50s.
MUAC 4350 Talam: Rhythmic Form and Process in South Indian Music (4 Credits)
This course explores the rhythmic system (talam) of Carnatic music, the classical music of Southern India. We begin the quarter with a general introduction to Carnatic music performance, examining its relationship to religious identity, histories of colonialism and nationalism, and social practices of class, caste, and gender. Having contextualized South Indian classical music socio-historically, the remainder of the quarter will focus on theoretical and practical issues in Carnatic talam. Readings and discussions will examine Indian conceptions of time (musical, cosmological, and cultural), the setting of song-texts, the art of improvisation and accompaniment, as well as the relationship between music, dance, and the body. We will also discuss and analyze cross-cultural applications of Carnatic rhythm in the compositions and pedagogies of several rock, jazz, and classical musicians. Weekly modules in solkattu, a system of spoken syllables and patterned hand gestures, will help students build and sharpen rhythmic skills and develop an analytical understanding for the intricacies of Carnatic meter and rhythmic design. Over the quarter, students will learn increasingly challenging exercises and rhythmic compositions in a variety of tala cycles (3, 5, 7, 8, and 9 beats in length). Some class time will be devoted to hands-on instruction in Carnatic percussion, including the mrdangam, the principle drum of South Indian classical music, as well as other hand drums including the khanjira frame drum.

MUAC 4450 Suzuki Group Lesson Practicum (1 Credit)
The Suzuki Group Lesson Teaching Practicum provides an opportunity for Suzuki Pedagogy master's students and Suzuki Teaching Certificate students to receive feedback on their own group lesson teaching skills from the professor. Prerequisites: MUAC 3478 or MUAC 3461.

MUAC 4492 History of Opera: From Monteverdi to Minimalism and Beyond (4 Credits)
This seminar course surveys the history of opera from the invention of the genre c. 1600 to the present day. In addition to assigned excerpts, students view three complete operas during the quarter. Primary and secondary source readings supplement the required text and class lectures. Students write a research paper that may examine some aspect of a particular opera or that may compare a particular aspect found in several operas. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

MUAC 4493 Approaches to American Popular Music (4 Credits)
We explore a number of topics involved in the study of popular music, including tensions between analytical and cultural approaches; issues of race, class, and gender; and constructions of authenticity and personae. Listening and reading are wide-ranging, encompassing diverse styles. The course concludes with individual research projects and presentations on topics students choose and develop.

MUAC 4494 Music and Belief in World Cultures (4 Credits)
How does music affect religious experience and how does religion shape musical practice? Why is music vital in some religious rituals and expressly banned in others? If humans use music to create, reflect, and comment upon the worlds they experience and imagine, then the use of music in religious practice is among its most powerful and ephemeral. Students are introduced to a wide range of musical traditions and their relationship to many of the world’s religions, including Islam, Judaism, Christianity, Buddhism, Hinduism, Native American belief and the religious practices of Africa and its diaspora. Readings, lectures and discussions are supplemented by guest lecture demonstrations, film/video screenings and hands-on workshops.

MUAC 4498 Music, Dance, and Everyday Life in South Asia (4 Credits)
This course serves as an introduction to a diverse array of performance traditions from the South Asian subcontinent. We examine the significance of music and dance in everyday life, the influence of media technology, and the relationship of performance to issues such as caste, gender, nationalism and globalization. Class discussions are supplemented by guest lectures, hands-on workshops and film screenings. Our study of music outweighs that of dance, and a music background is strongly encouraged.

MUAC 4499 Topics in Musicology (4 Credits)
This course focuses on particular musicology topics determined by the instructor. Course materials may include primary and secondary source readings, theoretical writings from other disciplines, a variety of listening assignments, film/video screenings, guest lecture demonstrations, and hands-on workshops. Students are expected to participate in class discussions and may be asked to write short response papers and/or to give short oral presentations. The course concludes with individual research projects, presented orally and in written form, on topics chosen and developed in consultation with the instructor. Expectations for graduate students enrolled in the course are commensurate with their training and background as compared to undergraduates enrolled in the course. In some cases, with the prior consent of the instructor, students may choose to combine performance with the final research project.

MUAC 4511 Mahler and Musical Culture (4 Credits)
We explore Gustav Mahler’s life, historical context, and music, all in relation to one another. The focus is on recent and important scholarly approaches to this conductor and composer. The course concludes with individual research projects and presentations on topics students choose and develop.

MUAC 4512 Stories of Music History (4 Credits)
We explore a number of case studies in which “conventional wisdom” about a composer, repertory, or a period of time turns out to be not universally “true,” but instead contingent on cultural context and changing ideologies about music. The course concludes with individual research projects and presentations on topics students choose and develop.

MUAC 4513 Wagner and the Ideology of the Artwork (4 Credits)
We explore Richard Wagner’s music dramas, particularly the Ring operas, as well as theories and ideologies surrounding them. The focus is on recent and important scholarly approaches. The course concludes with individual research projects and presentations on topics students choose and develop.
MUAC 4520 Topics in Hindustani Music (4 Credits)
This course explores the melodic system (raga) and rhythmic system (tala) of Hindustani music, the classical music of North India. These conceptual frameworks act both as sound structures to be realized in improvised performance and as aesthetic entities manifested in the related traditions of dance, iconography, and film. A major emphasis of this course will be developing an understanding of raga and tala as musical structures through intensive listening as well as practical instruction. Accordingly, one class each week is designed to incorporate hands-on music-making through singing, rhythmic exercises, and dance. By the end of the quarter, students will become familiar with several ragas and talas and the stages by which they are developed in performance. A second, equally important objective is to learn to appreciate ragas as aesthetic entities. We will analyze their musical characteristics as well as the "extra-musical" characteristics of sentiment (rasa), performance time and/or season and iconographic associations (ragamala painting).

MUAC 4521 Topics in Baroque Music (4 Credits)
Through the study of selected Baroque instrumental, vocal and operatic works, this seminar course considers various approaches to performance practice issues such as "authenticity," the "historically informed" performance, period instruments, ornamentation, continuo realization, and editing. Facsimile editions and primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of Baroque music with an emphasis on performance practice. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

MUAC 4535 Baroque Opera on Stage (4 Credits)
This course will explore aspects of Baroque opera not immediately conveyed by a score - including staging, gesture, scenic design, machinery, theater space, performers response - as they inform our understanding of specific Baroque operas and the cultural context within which they were performed. We will focus on operas by Monteverdi, Cavalli, Purcell, Handel, Lully, Campra and Rameau, among others. Students should expect to participate in class discussions, to write short response papers, to give short oral presentations, and to write a 12 to 15 page paper that examines a Baroque opera or operas in the light of one or more performance considerations. With the prior consent of the instructor, students may submit an alternative final project, one which combines performance with some form of written work.

MUAC 4536 Musics of the African Diaspora (4 Credits)
How have African music-cultures changed in their transitions to new lands? What performative Africanisms have been retained, reconstructed and/or highlighted in the aftermath of legal slavery? And within newer Afro-diasporic communities? What role does musical transmission play in cultural retention and survival? This course will explore the connections and differences in musical practice and worldview throughout the African diaspora. We focus primarily on music-cultures of North, South, and Central America, and the Caribbean, examining traditional forms of music and dance associated with religion and ritual such as Afro-Cuban bata drumming, practices which fuse music and movement such as Afro-Brazilian capoeira, jazz, and popular music such as rap. Lectures and class discussions are supplemented by guest lecture-demonstrations, film/video screenings and hands-on workshops.

MUAC 4537 Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship (4 Credits)
This course is an experiential exploration of the spirituality of African-American sacred song. Participants will sing, consider the history of the music and explore their own connection to the songs, as well as the inspiration and challenge these songs may offer to present and future communities.

MUAC 4538 Cultural and Psychological History of the African American Spiritual (4 Credits)
In this graduate academic music course, we trace the cultural and psychological history of African American spirituals, which are the sacred folk songs that were created and first sung in the 18th and 19th centuries by African women and men enslaved in North America. We explore the cultural and psychological functions of the music during slavery and the different functions of choral and art song spirituals that evolved after slavery, peaking in their cultural impact during the Harlem Renaissance of the 1920s and 30s. We also examine the cultural relationship of the spirituals to gospel music, and the influence of the spirituals tradition on the emergence of the freedom songs of the Civil Rights Movement of the 1950s and 60s. Throughout the course, we reflect on the relationship of the spirituals to larger issues of racial identity and social justice. Finally, we examine the cultural and psychological meanings of the spirituals tradition in contemporary twenty-first century America.

MUAC 4541 Mozart's Piano Concertos (4 Credits)
Cultural context, stylistic sources, stylistic development, meaning, and performance issues with regard to Mozart's 30 works in the piano concerto genre. Principles for the creation of stylistic cadenzas, lean-ins, embellishments, "white-spot" fill-ins, and basso continuo realizations. Considerations of means for integration aspects of the concertos' original cultural context into performance for twenty-first-century pianists, orchestral players, and their listeners. Course is designed for both pianists and non-pianists.

MUAC 4542 Beethoven's Piano Concertos (4 Credits)
Cultural context, stylistic sources, stylistic development, meaning, and performance issues with regard to Beethoven's works in the piano concerto genre, including the triple concerto and the choral fantasia with piano. Consideration of means of integrating aspects of the concertos' original cultural context into performance for twenty-first-century pianists, orchestral players, and their listeners. Course is designated for both pianists and non-pianists.

MUAC 4543 Schubert and the Piano: Sonatas and Chamber Music (4 Credits)
Cultural context, stylistic sources, stylistic development, meaning, and performance issues with regard to Franz Peter Schubert's works in the piano sonata genre - whether for two or four hands - and other closely related genres. Consideration of means for integrating aspects of the works' original cultural context into performance for 21st-Century pianists and their listeners. Course is designed for both pianists and non-pianists.
MUAC 4544 Advanced Keyboard Repertoire: 2-Piano & 4-Hand (4 Credits)
In this course, pianists will explore 2-piano/4-hand repertoire, and discuss its historical development and use as a pedagogic tool. Students are required to perform in a collaborative recital, in which the repertoire may extend beyond two pianists. This course is designed for piano students and have no prerequisites. Permission of instructor required for non-piano students.

MUAC 4545 The Making of Romantic Music: Paris and Leipzig in the 1830s (4 Credits)
With a view to identifying the various interdisciplinary factors that led to the making of romantic music, this seminar course focuses on musical life in Paris and Leipzig in the 1830s. Specific attention is paid to the music of Chopin, Berlioz, Mendelssohn, and Robert and Clara Schumann and the personal and musical connections between these composers. Primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of music and/or musical life in the 1830s. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

MUAC 4546 Advanced Keyboard Repertoire: John Cage's Sonatas and Interludes for Prepared Piano (4 Credits)
In this course, pianists will study Sonatas and Interludes for Prepared Piano by John Cage, and discuss the historical development of prepared piano (a piano that has had its sound altered by placing objects between or on the strings) and the major composers and compositions for such instrumentation. Students are required to perform selection(s) of the work.

MUAC 4547 Topics in Advanced Keyboard Repertoire (4 Credits)
Topics in Advanced Keyboard Repertoire focuses on special topics chosen by faculty members. Students should expect rigorous course work and a final project or paper.

MUAC 4601 Soundpainting: The Study of the Live Composing Sign Language for the Performing and Visual Arts (2 Credits)
In this course, students will study the soundpainting gestural language, a universal live composing sign language for the performing and visual arts.

MUAC 4602 Free Improvisation Techniques (2 Credits)
Free Improvisation Techniques will explore exercises in Tom Hall's book Free Improvisation: A Practical Guide. We will also explore how those exercises relate to the broader concepts of improvising as discussed in Stephen Nachmanovich's landmark book Free Play. This class is best suited for all musicians, especially those who are seeking to expand the way they relate to performing and how performing relates to other aspects of their life.

MUAC 4801 Introduction to Schenkerian Analysis (4 Credits)
MUAC 4831 Current Trends in Piano Pedagogy (2 Credits)
This course will explore current trends including some of the following topics: technology, professionalism, the history of piano pedagogy, employment opportunities and creative projects.

MUAC 4832 Prof Found-Piano Pedagogy (2 Credits)
Literature in musical aesthetics, educational philosophy, psychology; curriculum development; group teaching processes; interpretation and technique; foundations of educational research in music; practice teaching of children and adults.

MUAC 4833 Prof Found-Piano Pedagogy (2 Credits)
Literature in musical aesthetics, educational philosophy, psychology; curriculum development; group teaching processes; interpretation and technique; foundations of educational research in music; practice teaching of children and adults.

MUAC 4837 Pedagogy and Repertoire Organ (2 Credits)
Study of teaching techniques, survey of literature and teaching materials from the 20th and 21st centuries. Prerequisite: MUAC 3740.

MUAC 4840 Piano Teaching Practicum (0-1 Credits)
Guided observations, lesson planning, practice teaching of students of various developmental age groups using foundations and principles developed in Piano Pedagogy.

MUAC 4841 Piano Teaching Practicum (1 Credit)
Guided observations, lesson planning, practice teaching of students of various developmental age groups using foundations and principles developed in Piano Pedagogy.

MUAC 4842 Piano Teaching Practicum (1 Credit)
Guided observations, lesson planning, practice teaching of students of various developmental age groups using foundations and principles developed in Piano Pedagogy.

MUAC 4850 Elementary Piano Pedagogy I (2 Credits)
An in-depth study of methods and curriculum for teaching piano at the beginner and elementary level. Focus on philosophical, psychological, and physiological bases of piano study. Study and evaluation of current educational materials.

MUAC 4851 Elementary Piano Pedagogy II (2 Credits)
This course is designed in a sequence with Elementary Piano Pedagogy I. An in-depth study of methods and curriculum for teaching piano at the late elementary to early intermediate levels. Focus on philosophical, psychological, and physiological bases of piano study. Study and evaluation of current educational materials. Prerequisite: MUAC 4850.

MUAC 4852 Group Piano Teaching Techniques (2 Credits)
An in-depth study of methods and curriculum for group study and the teaching of adults and children. Focus on philosophical, psychological, and physiological bases for teaching the piano in groups of all ages. Study and evaluation of current resources.
MUAC 4853 Intermediate Piano Pedagogy I (2 Credits)
Course content will emphasize teaching methods, materials, and curriculum content at the intermediate level of piano study. Reading and discussions will explore practical issues encountered by the contemporary piano teacher.

MUAC 4854 Intermediate Piano Pedagogy II (2 Credits)
This course is designed in a sequence with Intermediate Piano Pedagogy I. Course content will emphasize teaching methods, materials, and curriculum content at the intermediate to early advanced levels of piano study. Reading and discussions will explore practical issues encountered by the contemporary piano teacher.

MUAC 4929 Tutorials-Theoretical Subject (1-5 Credits)
Individual instruction in all areas of music theory with regularly scheduled meetings allowing students to acquire necessary skills to qualify for upper-division and/or graduate courses. Summer session only.

MUAC 4930 Conducting Tutorial (2 Credits)
Private tutorial in orchestral conducting. Open to Orchestral Conducting majors only.

MUAC 4934 Choral Pedagogy (4 Credits)
A comprehensive investigation of the art and science of choral music instruction. Students use philosophical and theoretical learning to develop a practical approach to choral music instruction. Students identify personal strengths in the area of choral music instruction as well as areas for improvement.

MUAC 4991 Independent Study (1-10 Credits)
MUAC 4992 Directed Study (1-10 Credits)
MUAC 4993 Independent Study (1-10 Credits)
MUAC 4995 Thesis Research (1-10 Credits)
MUAC 4999 Graduate Recital (1-10 Credits)
MUAC 5991 Graduate Thesis (1-10 Credits)

Music-Ensembles (MUEN)

Courses
MUEN 3025 Ensemble Block (3 Credits)
Ensemble Block can be taken by students who are assigned to multiple ensembles in one quarter without full participation in each group. Instructor permission is required for registration.

MUEN 3028 Album Combo (0-1 Credits)
The study and performance of the skills and practices of collective improvisation and composition.

MUEN 3029 Steel Drum Ensemble (0-1 Credits)
The steel drum music of Trinidad and Tobago as well as other styles of music from around the world are studied and performed by this ensemble. Participation in this ensemble does not require music notation. Participation in the ensemble is limited; therefore, students are selected by a simple audition process.

MUEN 3030 Hard Bop Combo (0-1 Credits)
The Hard Bop Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with Hard Bop jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3031 Bebop Combo (0-1 Credits)
The Bebop Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with Bebop jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3032 Latin Combo (0-1 Credits)
The Latin Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with Latin jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3033 Standards Combo (0-1 Credits)
The Standards Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with standard jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3034 Traditional Jazz Combo (0-1 Credits)
The Traditional Jazz Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with traditional (Dixieland) jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.
MUEN 3035 Fusion Combo (0-1 Credits)
The Fusion Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with fusion jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3036 Commercial Music Combo (0-1 Credits)
The Commercial Music Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with commercial music repertoire and performance practices. The combo performs one concert each term on campus and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3037 Vocal Repertoire Combo (0-1 Credits)
The Vocal Repertoire Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with vocal jazz repertoire and performance practices. The combo performs one concert each term on campus and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3038 Vocal Jazz Combo (0-1 Credits)
The Vocal Jazz Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with vocal jazz repertoire and performance practices. The combo performs one concert each term on campus and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3039 Modal Combo (0-1 Credits)
The Modal Combo is coached by one of our faculty of performing jazz and commercial artists and is concerned with modal jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3040 Contemporary Combo (0-1 Credits)
The Contemporary Combo is coached by one of our faculty of performing jazz and commercial music artists and is concerned with contemporary jazz repertoire and performance practices. The combo performs one concert each term on campus, one performance at Flo's Underground Jam sessions, and frequent concerts in the community and on tour. Admission is by audition.

MUEN 3041 North Indian Classical Ensemble (0-1 Credits)
The arts of India are distinguished by their close interrelationship; rhythm, melody and movement are all encompassed by the term "sangeet." In keeping, DU's North Indian Classical Ensemble is dedicated to the practice of all three of these arts, through singing, rhythmic recitation and dance. Participation in this ensemble involves studying the ornate and highly refined systems of Hindustani music and Kathak dance. No prior experience is necessary; all that is required is a positive attitude and a desire to learn!

MUEN 3042 Advanced Vocal Jazz Repertoire (0-1 Credits)
This combo is intended for vocal jazz majors who have completed the first year of Vocal Jazz Repertoire and are ready to progress into more advanced repertoire, as well as composing and arranging for small group settings.

MUEN 3043 Senegalese Drum/Dance Ensemble (0-1 Credits)
This ensemble is dedicated to learning the art of sabar dance and drumming, vibrant traditions of the Wolof people of Senegal, West Africa. In Senegal, sabar drums are played exclusively by griots, a caste of hereditary musicians. Sabar drum troupes perform at a variety of events, baptisms, weddings, wrestling matches, political meetings, and neighborhood dance parties. At most of these events, dance is an essential counterpart to drumming. The drum ensemble consists of numerous parts that come together to create complex polyrhythms. Ensemble members learn various drum parts that form rhythms over which a lead drummer solos, and dance movements that accompany these drum rhythms. They also learn bakks, extended musical phrases played in unison, and songs in the Wolof language. This course may be taken multiple times. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3044 Ghanaian Drumming Ensemble (0-1 Credits)
This class provides a practical and theoretical introduction to the drumming and singing traditions of Ghana, West Africa. Through hands-on instruction and oral transmission, students learn ceremonial and recreational music styles of select ethnic groups. Assigned readings, film viewing, guided listening, and in-class discussion familiarizes students with the social and cultural meanings of the musics performed in class. The course culminates in an end of the quarter concert. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3045 Flex Jazz Ensemble (0-1 Credits)
The Flex Jazz Ensemble is a modern jazz group with open-ended instrumentation. The ensemble consists of traditional jazz instruments and vocalists as well as nontraditional jazz instruments (such as double reed, French Horns, strings, etc). While there is no specific instrumentation for the ensemble, the core of the group will always be the traditional modern jazz rhythm section: piano (keys-synth), bass (acoustic and electric), drums (plus an extra percussionist as needed), and guitar (hollow body and Stratocaster-styles with the full range of pedals and gear. With the addition of non-traditional instrumentation, the ensemble reaches out to the classical side of Lamont to give those students a jazz opportunity. Along with the regular fare of programmed concerts, this ensemble also provides opportunities to other departments (theatre, creative writing, studio art, EDP, etc) to incorporate their disciplines in performances.
MUEN 3046 Indonesian Music Ensemble (0-1 Credits)
This class provides a practical and theoretical introduction to Indonesian performance traditions from the islands of Bali and Java. Through hands-on instruction and oral transmission, students will learn a variety of gamelan (gong/chime ensemble) traditions. While learning this sophisticated cyclic music, class discussions, assigned readings, films, and guided listening will further familiarize students with the social and cultural meanings of the musics performed in class. Additionally, students will have the opportunity to learn basic hand, foot, and eye movements for Balinese and Javanese dance, as well as to study kecak, a Balinese vocal music that imitates the sound of the gamelan. The course will culminate in an end of the quarter concert.

MUEN 3047 Xperimental Jazz Ensemble (0-1 Credits)
The Xperimental Jazz Ensemble is a pan-genre ensemble with a focus on creativity expressed through improvisation, transcription, arrangement, and composition. XJE will have variable instrumentation that may include vocalists, all "classical" and "jazz" instruments, and emergent electronic instruments and software. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3048 Bluegrass Ensemble (0-1 Credits)
In this class, students will receive instruction on proper bluegrass performance fundamentals with traditional bluegrass instruments, the harmony and rhythm of bluegrass music, the art of simultaneous playing and singing, the proper interpretation of the chosen repertoire per the composers' style, and the social and cultural influences that inspired the music. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3100 Lamont Jazz Small Group (0-1 Credits)
All Lamont jazz small groups will focus on the basic elements of communication and musicality that make up high-level jazz performance practices. Students will transcribe, compose and or arrange their own material and will have numerous opportunities to perform each quarter. Admission to all small groups is by audition only.

MUEN 3677 Bow Art Ensemble (0-1 Credits)
The Bow Art Ensemble explores the study and rehearsal of traditional and contemporary chamber orchestra repertoire, history, and culture, to be led in conjunction with Lamont performance faculty and guest artists. Students will receive instruction on proper techniques, musical styles, study of traditional and contemporary collaborative leadership and democratic approaches to performing in a conductor-less ensemble.

MUEN 3710 Opera (0-1 Credits)
Practical experience in operatic performance. One production each quarter; major production in winter quarter. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3712 Lamont Chorale (0-1 Credits)
The Lamont Chorale is a select mixed voice choir that performs choral literature from the Renaissance to present and strives for a high level of artistry. The choir performs works from the great masters of music, as well as living composers, world music, and spirituals. The Lamont Chorale is open to undergraduate and graduate students, music majors, non-music majors, and community members. Credits from this course can fulfill the AI-Society credit requirement for undergraduate students.

MUEN 3720 Pioneer Pep Band (0-1 Credits)

MUEN 3730 American Heritage Chorale (1 Credit)
This ensemble will explore through choral music the various ways in which music written by American composers has been influenced and has its roots in music from other cultures and regions of the globe. Special attention shall be given to music by African American composers. American Heritage Chorale is open to all students interested in singing. Prior choral experience is not required. A brief vocal interview will determine appropriate placement within the ensemble. The course will conclude with a performance at the end of the quarter. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3731 The Spirituals Project Choir (0-1 Credits)
This ensemble will explore African American spirituals as an art form, tradition, and tool for social change through performance, reading, and listening. Because the core of this ensemble is a multi-ethnic, multi-generational community choir, students will have the unique opportunity to join with and learn from a group of singers immersed in this musical tradition. Students will participate in 2-3 performances over the course of the term, the majority of which will be outside of Lamont. Through performance and study of spirituals and related music, students will gain a musical and cultural understanding of this dynamic music and gift from African Americans to the world. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3740 Lamont Men’s Choir (0-1 Credits)

MUEN 3750 Modern Music Ensemble (1 Credit)
The 20th- and 21st-Centuries have produced some of the most expressive, intriguing, and diverse music ever written. In this course, students have the opportunity to prepare and perform chamber music by 20th-Century masters, as well as recent works by living composers and new pieces written for them by students. This repertoire often involved unusual combinations of instruments (potentially including strings, woodwinds, brass, percussion, plucked instruments, keyboards, vocals, and electronics), providing an opportunity for students to work in less familiar ensembles. Students may also participate in the course by conducting or composing. The course is limited to music majors who are graduate students or advanced undergraduate students. Students in their first or second undergraduate year, and music non-majors may enroll with instructor approval.

MUEN 3751 Lamont Jazz Orchestra (0-1 Credits)
This course counts toward the Analytical Inquiry: Society and Culture requirement.
MUEN 3752 Lamont Wind Ensemble (0-1 Credits)
Open to all students by audition and approval of conductor; regularly scheduled concerts. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3753 Lamont Jazz Ensemble (0-1 Credits)
Open to all students by audition and approval of director of jazz studies; regularly scheduled concerts. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3754 University Jazz Ensemble (0-1 Credits)
The study of large ensemble jazz works for non-music majors. Must have high school performance ability.

MUEN 3760 Lamont Symphony Orchestra (0-1 Credits)
The LSO generally performs six symphonic concerts and one opera each year. Students are exposed to orchestral repertoire from all periods and styles of music as well as appropriate performance practices associated with each period and style. The LSO is open to all university students by audition. However, because the course objective is to prepare students for successful professional orchestra careers, all participants are held to a very high standard and level of expectation. This course counts toward the Analytical Inquiry: Society and Culture requirement.

MUEN 3769 Organ Accompanying (0-1 Credits)
Major choral/vocal and major instrumental repertoire with organ accompaniment are studied and prepared for possible performance with chamber groups or local professional/church choirs.

MUEN 3770 Chamber Ensemble-Piano (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3771 Chamber Ensemble-Accordion (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3772 Chamber Ensemble-Harp (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3774 Chamber Ensemble-Brass (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3775 Piano Accompanying (0-2 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3776 Chamber Ensemble-Percussion (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3777 Chamber Ensemble-Strings (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3778 Chamber Ensemble-Woodwind (0-1 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3781 Chamber Ensemble-Guitar (0-2 Credits)
Small ensembles studying chamber music repertoire for various groups.

MUEN 3800 Vocal Chamber Ensemble (0-1 Credits)
A small group of outstanding singers interested in singing soloist vocal chamber music.

MUEN 3900 Lamont Women's Chorus (0-1 Credits)
The Lamont Women's Chorus is a treble voice choir that performs a wide variety of choral literature, including masterworks, a cappella works, spirituals, new music, and world music. The choir is open to undergraduate and graduate students, music majors, non-music majors, and community members. Credits from this course can fulfill the Analytical Inquiry: Society and Culture credit requirement for undergraduate students.

Music-Studio Lessons (MUPR)

Courses

MUPR 3120 Alexander Technique (2 Credits)
The Alexander technique is a skill that can be incorporated into practice, performance, and everyday life. Using the principles discovered by F. Matthias Alexander, students will learn how to identify and change faulty patterns of thought and movement. Emphasis will be placed on recognizing how these patterns affect music-making in practice and performance. Lessons are individually tailored and topics may include injury recovery and prevention, pain and tension reduction, stress management, performance anxiety, freeing the breath, using the back effectively, balance, and ease of motion.
MUPR 3121 Alexander Technique (4 Credits)
The Alexander technique is a skill that can be incorporated into practice, performance, and everyday life. Using the principles discovered by F. Matthias Alexander, students will learn how to identify and change faulty patterns of thought and movement. Emphasis will be placed on recognizing how these patterns may affect music-making in practice and performance. Lessons are individually tailored and topics may include injury recovery and prevention, pain and tension reduction, stress management, performance anxiety, freeing the breath, using the back effectively, balance, and ease of motion. This class is tailored to the needs of students who are experiencing pain or injury and cannot take their regular studio lesson in a given quarter.

MUPR 3190 Jazz Piano (2 Credits)
MUPR 3210 Piano (2 Credits)
MUPR 3230 Voice (2 Credits)
MUPR 3250 Violin (2 Credits)
MUPR 3290 Viola (2 Credits)
MUPR 3310 Bass Violine (2 Credits)

MUPR 3350 Organ Improvisation (2 Credits)
This course is designed for organ students to introduce them to the art of organ improvisation, hymn and ensemble playing, as well as all possible forms of accompaniment. It is meant for undergraduate students (upper division), graduate students, and artist diploma graduates. Prerequisites: knowledge of music history, figured bass, and counterpoint. Permission of instructor required.
MUPR 4191 Jazz Piano (2 Credits)
MUPR 4195 Applied Lessons (2,4 Credits)
MUPR 4210 Piano (2 Credits)
MUPR 4230 Voice (2 Credits)
MUPR 4250 Violin (2 Credits)
MUPR 4251 Violin (2 Credits)
MUPR 4270 Violoncello (2 Credits)
MUPR 4290 Viola (2 Credits)
MUPR 4310 Bass Violin (2 Credits)
MUPR 4312 Jazz Bass (2 Credits)
MUPR 4330 Harp (2 Credits)
MUPR 4350 Organ (2 Credits)
MUPR 4370 Clarinet (2 Credits)
MUPR 4390 Flute (2 Credits)
MUPR 4460 Bassoon (2 Credits)
MUPR 4480 Trombone (2 Credits)
MUPR 4481 Jazz Trombone (2 Credits)
MUPR 4500 Trumpet (2 Credits)
MUPR 4520 Horn (2 Credits)
MUPR 4540 Euphonium (2 Credits)
MUPR 4560 Tuba (2 Credits)
MUPR 4570 Tuba (4 Credits)
MUPR 4600 Classical Guitar (0-2 Credits)
MUPR 4610 Classical Guitar (4 Credits)
MUPR 4621 Jazz Guitar (2 Credits)
MUPR 4660 Percussion (2 Credits)
MUPR 4661 Percussion Set (2 Credits)
MUPR 4671 Percussion Set (4 Credits)
MUPR 4680 Oboe (2 Credits)
MUPR 4780 Saxophone (2 Credits)
MUPR 4900 Carillon (2 Credits)
MUPR 4920 Composition (2 Credits)
One-on-one instruction for composition majors.

MUPR 4930 Conducting (2 Credits)
This course provides individualized instruction in conducting for graduate students majoring in conducting. Repertoire selection, analysis, rehearsal procedures, and gestures will all be studied. Students will prepare assigned repertoire for class each week. Significant time will be spent developing gestures that reflect the artistic and pedagogical intentions of each student. The individual lesson is also a mentoring time to develop strategies for career development and recital preparation. Analysis projects may be assigned to provide an opportunity for in-depth scholarly research and presentation of significant literature relating to the theme of the quarter.

MUPR 4991 Independent Study (2-4 Credits)

Organizational Leadership (ORL)

Courses
ORL 4110 Fundamentals of Organizational Development (4 Credits)
This course explores the history of organizational development (OD), definitions, models, approaches, and how OD is and can be used in organizations today. An organizational development professional requires a multitude of skills to be effective. Students will assess their own skills and develop a plan to develop or increase required skills.
ORL 4115 Organizational Culture and Organizational Development Impacts (4 Credits)
Organizational culture encompasses the organization's vision, mission, values, systems, symbols, structures, language, beliefs, and norms. This course proposes organizational development strategies that match, support, or are synergetic with organizational cultures.

ORL 4120 Team Interventions (4 Credits)
To be successful, organizations of all types depend on teams of people who work together to complete tasks, achieve goals, and to help accomplish organizational change and strategy. As a result, focusing on the effectiveness of teams is a key value in organizational development. In this course, students learn how teams work and what makes them effective. Students investigate the tools and methods needed to conduct team assessments, diagnose the symptoms, and prescribe and evaluate targeted interventions that help teams achieve goals that impact organizational outcomes.

ORL 4125 Evaluate and Sustain Change (4 Credits)
Organizational Development is change. This course explores organization impacts and change processes that are inherent in organizational development in an organization.

ORL 4130 Individual Interventions (4 Credits)
This course explores the theory and practice of an organizational development process as part of an individual intervention, based on unique organizational considerations. This course examines the roles of organizational structure, type of organization, and the depth and breadth of the organizational change affecting individual development strategy and interventions.

ORL 4135 Large Scale Interventions (4 Credits)
This course explores the theory and practice of a large-scale or organization-wide organizational development process—including entering the organization, assessing a strategy for a unique organizational culture, and presenting results—while understanding the human side of change. There are many organizational development strategies that can be used based on unique organizational considerations. This course examines the roles of organizational structure, type of organization, and the depth and breadth of the organizational change affecting organizational development strategy and large-scale interventions.

ORL 4160 Integrating Personal and Organizational Success (4 Credits)
This class explores the dynamics where the organization and the individual are successful and what is the role of the teacher. It analyzes options and opportunities, including the use of a systems thinking model, organizational learning, knowledge management, appreciative inquiry and building an ethical model for success at all levels of an organization; public, private or non-profit.

ORL 4170 Developing Human Capital in Organizations (4 Credits)
This course explores why, with the changes in the workforce, organizations; public, private, and nonprofit; are looking internally for innovation, creativity and strategic change. Based on the premise that organizations continue to evolve or they will become extinct, this course examines the reasons behind developing human capital and discusses concrete strategies for this development, in a sustaining and ethical manner. This course evaluates the advantage of a connected workforce; a shared mission, vision and information, knowledge, reward and communication structures. Stressing that people are an organization's most important resource, this course identifies the role of the leader in developing and retaining human capital.

ORL 4185 Enterprise Management (4 Credits)
The enterprise management course provides a contextual basis for the application of effective cross-functional management methods within the enterprise. The topics taught in this course come from the traditional academic areas of business, industrial engineering, applied statistics, and project management. This course is designed to present and integrate these fundamental knowledge areas into a multi-dimensional enterprise management knowledge base and skill set.

ORL 4190 Value Driven Decision Making (4 Credits)
This course explores both objective and subjective decision making models. Emphasis is placed on decision making and risk assessment for organizational effectiveness in public, private and nonprofit organizations. The rational approach is taught via maximization of expected outcomes and decision tree analysis. The irrational side of decision-making is covered through demonstrations and discussion of decision bias and judgment heuristics. The role of the leader is discussed.

ORL 4400 Leading Strategic Planning in Organizations (4 Credits)
Beginning with a clear mission, strategic planning is an iterative, dynamic process of translating the mission into a series of goals and outcomes in public, private, and non-profit organizations. The organization's vision, values, mission, and goals are the core of the process; strategic planning involves a series of options, understanding opportunities, evaluating risks, developing the plan and building in ethics, communication, implementation, and evaluation. The strengths and limitations of rational planning processes are explored and strategies for coping with unintended consequences are developed. The role of the leader in the process is also discussed.

ORL 4410 Principles of Environmental Scanning (4 Credits)
Environmental scanning is the process of identifying and evaluating external factors that may affect an organization; public, private, or nonprofit; on either a micro or a macro level. The micro level includes the immediate and global competitive environment and the macro level encompasses external trends dealing with the economy, politics, social changes or technology. This course provides students the opportunity to develop a process for environmental scanning and learn to use tools to evaluate trends and the significance of a trend. Casual loop diagrams, systems archetypes and scenario planning are discussed. These tools are useful in all sectors.
ORL 4420 Leading Change for Transformation (4 Credits)
Change is occurring in every type of organization, but since all organizations are composed of people, it is the people who have to change for the organization to change. We'll explore this relationship throughout the course, and give you the tools to become a change leader. The only thing that is constant is change. Beginning with this premise, this class explores the exciting and opportunity-filled world of change and transition. This course will explore the basic change theories and concepts and skills required for effective and ethical change leadership. Students will examine the notion of transformational change, the various stages of individual and organizational change, essential relationships between leadership and management, and assorted organizational models for leading change. The concept of an adaptive organization for producing extraordinary results will be discussed.

ORL 4500 Leadership Development (4 Credits)
This course explores leadership as a dynamic relationship with the organizational environment, stakeholders, and followers. Leadership in context is an essential concept, as well as the research-based core leadership competencies that effective leaders exemplify. Leaders from the public, private, and non-profit sectors will be studied in an inclusive context to assess their core leadership competencies and those practices that may vary due to the organizational structure. Relevant contemporary topics will be examined to gain a broad perspective on leadership and considering the diversity of human interrelationships. The importance of ethical, strategic, and system wide decision-making is examined from the standpoint that leadership opportunities exist at all levels of organizations, in the community as well as the workplace. Strategies used to influence culture, promote learning, and implement change to move organizations forward are addressed. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

ORL 4510 Building the 21st-Century Organization (4 Credits)
This course examines the purpose and roles of organizations in today’s global economy. The main focus is on the design and structure of organizations based on their industry; the internal and external environment; type of culture; degree of complexity and use of technology; routine and non-routine processes; size; and whether they are global, national or local. Differences between public, private and governmental organizations are illustrated. Organizational culture and its effect on ethics, change management, and innovation are examined. The sources of conflict in organizations are explained and students learn how power, political tactics, and collaboration can be used to resolve conflict. Contemporary challenges facing organizations are identified along with the design and structure options that help mitigate these challenges. Students develop an Organization Design Plan that enables a selected organization to effectively operate within its environment at optimal performance. Designing for performance, sustainability and innovation are key aspects of this course.

ORL 4520 Principles of Financing for Organizations (4 Credits)
This course is designed to enable students to discover how basic financial concepts are similar and different across public, private and non-profit organizations. Students compare and contrast the use of these concepts and processes in different organizational types and structures.

ORL 4530 Leading a Culture of Organizational Innovation (4 Credits)
This course examines a proven process of innovation and how it applies to private, public and non-profit organizations; leading to entrepreneurship. The course identifies how organizational culture can have a positive or negative effect on innovation. The role of the leader is also discussed. Determining the right strategy for effective innovation and how to structure organizations to innovate best is explored. Students describe how to implement management systems to assess ongoing innovation, using metrics throughout the process, and determine how to incentivize innovation in work teams. Using the seven rules of innovation, students assess a selected organization on its degree of innovation and propose a plan for integrating innovation.

ORL 4540 Strategic Organizational Partnerships (4 Credits)
Partnerships extend the capability of the organization; public, private or nonprofit; and help to leverage available resources. Strategic partnerships also provide an alternative to vertical integration and a way to complement the organization’s core competencies. This course defines and discusses the roles of various types of organizational partnerships, including internal and external, strategic partnerships, and joint ventures, and explores strategies for ethically managing these external and internal organizational relationships.

ORL 4550 Innovation and Entrepreneurial Development (4 Credits)
This course examines a proven process of innovation and how it applies to private, public and non-profit organizations; leading to entrepreneurship. The course identifies how organizational culture can have a positive or negative effect on innovation. Determining the right strategy for effective innovation and how to structure organizations to innovate best is explored. Students describe how to implement management systems to assess ongoing innovation, using metrics throughout the process, and determine how to incentivize innovation in work teams. Using the 7 rules of innovation, students assess a selected organization on its degree of innovation and propose a plan for integrating innovation.

ORL 4560 Philanthropy Roles and Practices (4 Credits)
This course critically reviews the history of the philanthropic sector in the United States and how this sector has influenced the development of American socio-political values and continues to influence discussions in the present day. This course critically assesses the impact philanthropy has made in the socio-political movements in the U.S. and around the world such as women's suffrage, racial segregation, LGBTQ advocacy, and world hunger and poverty. Topics covered will include, but are not limited to: -History of philanthropy in the US -Global philanthropy -Legal and tax considerations -Mission driven organizations -Philanthropic influence in political discussions -Differences nonprofit driven services for a community versus government/public providing those services -The role of the leader in achieving excellence.

ORL 4610 Cultivating and Sustaining Donor Relations (4 Credits)
This course answers the questions of why donors are needed and how to establish and sustain donors for the organization. This class explores the practice of identifying donors and establishing the relationship in an ethical and sustainable manner. Donors may be business, other organizations, individuals or foundations. Based on the premise that first there is involvement, and then transparency and finally donations, how effectively an organization established and sustains donors supports the long term existence of the organization.
ORL 4615 Principles of Finance for Fundraising (4 Credits)
This course provides fundraising professionals an understanding of financial statements, budgets and IRS issues. Topics include: accounting principles, managing the accounting process, cash flow, cost accounting and analyzing financial statements.

ORL 4620 Principles of Strategic Fundraising (4 Credits)
Beginning with a clear mission, strategic fundraising is an iterative, dynamic process of translating the mission into a series of outcomes and support for the organization. With the organization’s vision, values, mission and goals as the core of the process, the fundraising is done with high ethical standards, ensuring accountability to the donors and compliance with all applicable Federal, State and local Laws. Various fundraising strategies and vehicles are discussed, along with the role of the staff and the board in fundraising. Last, there is some discussion of the current larger issues in fundraising.

ORL 4630 Organizing for Successful Fundraising (4 Credits)
Most organizations are unsuccessful with their fundraising efforts, not because their cause isn’t worthy of support, but because they simply are not organized to fundraise. This course covers the basic elements of a mission statement, preparing the case for support by donors, the roles of staff, board, volunteers, and the legal and ethical issues involved. Organizational structures are discussed, with the balance between bureaucracy and innovation/creativity. The role of technology is illustrated. The local, state and federal laws that govern fundraising are discussed.

ORL 4640 Research and Writing for Fundraising (4 Credits)
This course is an in depth exploration of researching and writing effective proposals and grants. Principles of the Institutional Review Board (IRB) are studied and basic training completed. Funding sources are analyzed and the process of competing for a grant is discussed. At the conclusion, students have the knowledge to research, prepare, and present a grant proposal. Prerequisite: ORL 4620.

ORL 4650 Advanced Board Development (4 Credits)
This course explores the opportunities and challenges with a board of directors from a staff perspective. This course evaluates the value of a knowledgeable and effective board of directors in the success of the organization. The role of the board of directors and the role of a staff member, especially in fundraising, is often unclear and the need for clarity and differences in the roles will be discussed. How to develop and maintain a working relationship with the board of directors’ members to move the organization forward is analyzed. Lastly, this course evaluates how to choose members for the board and explores how to design and implement a development plan. Prereq – ORL 4600 - Philanthropy Roles and Practices.

ORL 4660 Database Management and Technology for Fundraising (4 Credits)
This course explains why having reliable information with regular updates is essential in the development and sustaining of a donor base for nonprofits. All aspects of effective technology uses, including: research, email, electronic contributions, volunteer contact lists and mail generation are discussed. Legal, ethical and costs considerations are investigated. Prerequisites: ORL 4600, ORL 4615 and ORL 4620.

ORL 4670 Advanced Fundraising (4 Credits)
This course provides the opportunity for students to build on the knowledge gained in Principles of Strategic Fundraising. Topics include: current trends, legal concerns, professional development for fundraisers and alternative revenue sources. There is an emphasis on understanding and explaining the financial structure of the organization. Prerequisites: ORL 4600, ORL 4615 and ORL 4620.

ORL 4680 Advanced Volunteer Management (4 Credits)
This course focuses on the recruitment, training and retention of the organization’s volunteers, be it public, private or nonprofit. Including a cost benefit analysis, this course is an in-depth analysis of a volunteer program. There is a discussion of the legal and ethical considerations, advantages and disadvantages, of using volunteers in an organization. Prerequisite: ORL 4600.

ORL 4701 Topics in Leadership and Organizations (4 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

ORL 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.
OGR 4902 Capstone Seminar (4 Credits)
The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentations. Students must have: acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

OGR 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

OGR 4905 Graduate Social Research Methods (4 Credits)
Graduate Social Research Methods is an exploration of the methods and purposes of social science research from the perspective of the researcher as well as that of the informed professional and consumer of information. Students will learn about the process of research, including the development of research questions, the purpose of various social science research methods, the role of professional ethics, and general approaches to the analysis and interpretation of data. Students will develop the ability to read and critique basic social science research articles and to implement simple research designs. Students will develop and write a research proposal around a specific research question informed by a review of the literature. Technical requirements include the ability to read and modify Microsoft Excel documents. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

OGR 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master's degree. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

OGR 4980 Internship (1-4 Credits)
The OGR internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the OGR master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all OGR students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: Students must have unconditional acceptance in the OGR degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

OGR 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted into a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent study is offered only on a for-credit basis.

OGR 4992 Directed Study (1-10 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted into a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.
Philosophy (PHIL)

Courses

PHIL 3000 Plato's Metaphysics (4 Credits)
A systematic study of Plato's Middle and Late Period Dialogues that focuses on his arguments for the existence of abstract objects and the development of Plato's theory of Forms. Prerequisite: At least Junior standing or permission of instructor.

PHIL 3003 Plato's Theory of Knowledge (4 Credits)
A systematic investigation of Plato's treatments of knowledge throughout the dialogues with a focus on the theory of recollection, Forms as objects of knowledge, the relationship between the Forms and perceptual experience, and the challenges posed by notions of true and false belief. Prerequisites: At least Junior standing or permission of instructor.

PHIL 3005 Cosmopolitics (4 Credits)
This class will be a close reading of Plato's dialogue Timaeus, with a special focus on the cosmological, theological, and political dimensions of the text.

PHIL 3010 Great Thinkers: Aristotle (4 Credits)
A study of Aristotle's central theories and doctrines. Prerequisite: junior standing or instructor's permission.

PHIL 3023 Great Thinkers: Maimonides: Politics, Prophecy and Providence (4 Credits)
Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with RLGS 3023 and JUST 3023. Prerequisite: junior standing or instructor's permission.

PHIL 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)
Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides' core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is "metaphysics"?; God's unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God's ways as well as "negative theology"—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-cultural and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and RLGS 3024. Prerequisite: Junior standing or instructor's permission.

PHIL 3026 Levinas and the Political (4 Credits)
Emmanuel Levinas (1906-1995), famous for his arresting insight of "ethics as first philosophy," is a key figure in the histories of phenomenology, metaphysics, and theology. In this class, we examine the implications of Levinas' thought for politics and the political through close readings of his insights on peace, proximity, and justice in such works as "Reflections on the Philosophy of Hitlerism" (1934), Totality and Infinity (1961), Otherwise Than Being or Beyond Essence (1974), and "Peace and Proximity" (1995) in dialogue with key companion works in political thought and political theology, including Benjamin on Divine Violence, Butler on postmodern politics, Connolly on agonism, Critchley on anarchism, Marxist intersections, and Derrida and other "Jewish theologies" of messianistic impossibility. Themes addressed include: Justice; Covenant; Law; the grounding and paradox (or betrayal) of politics-with-ethics; phenomenologies of hospitality of strangers, friends and enemies; liberalism, socialism, fascism, revolutions and anarchies; agonisms v. antagonisms; impossibility; messianisms without Messiahs; logics of works v. logics of grace; on the role of love v. justice; anarchic grounds; temporalities of covenant and justice; fraternity; forgiveness and its limits; "the 3rd"; rational peace, peace between the wars, and impossible peace. This course is cross-listed: PHIL and JUST. Pre-reqs: This course is open to juniors and seniors except by special permission of the instructor.

PHIL 3050 Great Thinkers: Hume (4 Credits)
A detailed study of Hume's "radical" empiricism and its impact on contemporary analytic philosophy. Prerequisite: junior standing or instructor's permission.

PHIL 3061 Kant's Ethics/Aesthetics/Politics (4 Credits)
A study of Kant's "value theory" and its historical significance. Prerequisite: junior standing or instructor's permission.

PHIL 3062 Kant's Epistemology and Logic (4 Credits)
A study of Kant's theory of knowledge, logic and related issues. Prerequisite: junior standing or instructor's permission.

PHIL 3063 Kant on Religion (4 Credits)
A study of Immanuel Kant's major writings on religion and their subsequent influence on theology and the philosophy of religion. Prerequisite: junior standing or instructor's permission.

PHIL 3070 Great Thinkers: Hegel (4 Credits)
Hegel’s “Phenomenology,” later system and place in the history of modern philosophy. Prerequisite: junior standing or instructor’s permission.
PHIL 3075 Marxism (4 Credits)
This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx's work, but it is highly recommended. Cross listed with ECON 3075.

PHIL 3090 Great Thinkers: Heidegger (4 Credits)
Study of "Being and Time" and related essays by a major 20th-century philosopher. Prerequisite: junior standing or instructor's permission.

PHIL 3092 Great Thinkers: The Later Heidegger (4 Credits)
Study of the works of Heidegger after 1930. Prerequisite: junior standing or instructor's permission.

PHIL 3101 Great Thinkers: Kierkegaard (4 Credits)
Each year, the philosophy department offers at least two courses in great thinkers. Specific figures may vary from year to year. Cross-listed with RLGS 3102. Prerequisite: 10 hours of Philosophy at the 2000 level or permission of instructor.

PHIL 3111 Contemporary Continental Philosophy: The Figure of the Migrant (4 Credits)
The 21st century has been described as the century of "people on the move" by UNHCR High Commissioner Antonio Guterres. Some 11 million people are refugees worldwide, fleeing political violence and/or persecution at home; while more than 20 million are internally displaced within the borders of their own countries. Accordingly, the figure of the migrant/refugee has emerged as one of the most important, if not the most important, political figures of contemporary continental philosophy. Despite differences in philosophical orientation, thinkers such as Gilles Deleuze, Judith Butler, Jacques Ranciere, Julia Kristeva, Alain Badiou, and Jacques Derrida have all written at length on the centrality of the figure of the migrant for contemporary political thought. Not only does the figure of the migrant define the people of our time, according to many of these authors, it also defines a positive political way forward. This course thus provides not only a survey of the different traditions in contemporary European philosophy over the last twenty years (post-structuralism, deconstruction, neo-classicism, post-Marxism, third-wave feminism) but also offers a thematic look at the politico-philosophical figure of the migrant and other issues related to migration (human rights, borders, camps, sovereignty, territory, nomadism, and resistance).

PHIL 3120 Metaphysics (4 Credits)
In the course of this study, we will cover a broad range of philosophical topics falling within metaphysics, philosophy of language, philosophy of science, and epistemology. Prerequisite: junior standing or instructor's permission.

PHIL 3130 Knowledge Problems (4 Credits)
Problems in the foundations and justifications of claims to knowledge. Prerequisite: junior standing or instructor's permission.

PHIL 3146 Great Thinkers: Levinas (4 Credits)
Emmanuel Levinas (1906-1995), famous for his arresting and original idea of "ethics as first philosophy," is an important figure in the histories of phenomenology, metaphysics, and theology. In this course, we set out to explore Levinas' insights on ethics, alterity, and infinity, including the connection of his ideas to Plato, Descartes, Kant, and Husserl, as well as his critical responses to Heidegger and his positive contributions to Derrida. In this course, we work through Levinas' two major works, Ethics and Infinity and Otherwise Than Being or Beyond Essence, as well as a number of shorter writings—including material from his Talmudic commentaries. Themes to be covered include: Being, Goodness, Risk, Ethics, Alterity, Transcendence, Law, Judaism, Gift, Forgiveness, Politics, Theology, and Justice. This course is cross-listed with JUST 3146.

PHIL 3150 Metaphysics of Matter: Theory-Building from Science to Philosophy to Theology (4 Credits)
What is matter? How do we make sense of philosophical discussions of an "X I know not what"? Of a "nothing" which is something? Of a "pure potency" that lacks any actual characteristics? In what sense does matter mark the very limits of human theorizing, and how do theories of matter reveal differences (or similarities) between the methods of theorizing that we use in physics, metaphysics, and theology? In this course, we work to understand the metaphysics and metatheory of matter, focusing on a number of views of matter as well as on methodological questions of what it means to theorize about matter in (1) scientific, (2) philosophical, and (3) theological contexts. Drawing on theory ranging from ancient physics and cosmology to contemporary metaphysics, philosophy of science, and philosophy of language, we engage in close readings of ancient, medieval, and modern texts to challenge the ways we theorize about matter (and theory itself) in the history of philosophy. Requires junior standing or higher.

PHIL 3152 Philosophy Meets Mysticism: A Greek, Jewish and Islamic Neoplatonic Journey (4 Credits)
Neoplatonism is a unique genre—somewhere between philosophy and mysticism. In this course, we investigate some of the leading themes of Neoplatonism, tracing the Greek ideas of Plotinus (the third century “father of Neoplatonism”) into later Jewish and Islamic textual traditions. As part of our journey, we will investigate a host of philosophical writings, including the Theology of Aristotle and the Liber de Causis, as well as works by Plato, Plotinus, Proclus, Ibn Tufayl, Aviceenna, IsaacIsraeli, Solomon Ibn Gabirol, and Abraham Ibn Ezra. Themes to be covered include emanation and creation, apophatic discourse, divine desire, the theological significance of imagination, inward reflection and the call to virtue. Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3152.

PHIL 3175 Morality and the Law (4 Credits)
A systematic study of various elements of the relation between law and morality. Are we obligated to obey every law the government enacts? Why? If we do have an obligation to obey the law, are civil disobedients like Martin Luther King, Jr. justified in disobeying the law? Are immoral laws, laws at all, or must a law connect with some higher moral truth to have any authority? To what extent is it morally permissible for the law to restrict our personal freedoms? To what extent is it morally permissible for the law to enforce morality in general? If it is not permissible for the law to enforce morality, do we incur any obligation to obey the law? Prerequisite: junior standing or instructor's permission.
PHIL 3176 Advanced Topics in Philosophy of Law: Rights, Legal Institutions, and Justice (4 Credits)
A critical examination of rights claims and an exploration of those rights claims ought to affect legal institutions. What are rights? How are they justified? How do various different rights claims conflict with each other? Does a theory or rights help provide a justified theory of criminalization? Are there any rights we have just in virtue of being human? How does the concept of human rights apply to issues such as international law, the right to life and whether human rights require a right to democracy?

PHIL 3178 Metaethics (4 Credits)
This course systematically and critically examines the metaphysical, semantic, and epistemic issues central to the study of metaethics. Do moral properties exist? If so, how are they related to natural properties? Do moral properties exist independent of human agency, or do we construct morality? If moral properties exist, how can we come to have justified belief about them? Is it possible to know that a moral belief is true? Doesn't the phenomenon of widespread, intractable disagreement about moral matters establish that there are no objective moral truths? Is the process of gaining scientific knowledge really that different from the process of gaining moral knowledge? Prerequisite: junior standing or instructor's permission.

PHIL 3179 Virtue Ethics (4 Credits)
Virtue ethics purportedly provides a distinct approach to moral deliberation, moral reasoning, moral decision-making, and moral justification. This course is a systematic study of the nature of virtue ethics, the nature of a virtue, and the alleged superiority of virtue ethics over its more familiar consequentialist and deontological alternatives. We also study various responses to the following questions: Have moral psychologists generated any valuable studies on the nature of virtue? What virtues ought we to endorse? At least Junior standing required or permission of the instructor.

PHIL 3180 Socratic Ethics (4 Credits)
A study of Plato's early dialogues in order to discern the ethical views of the historical Socrates. Prerequisite: junior standing or instructor's permission.

PHIL 3185 Philosophy of Action and Agency (4 Credits)
Wittgenstein once asked, "What is left over if I subtract the fact that my arm goes up from the fact that I raise my arm?" Understanding the difference between mere happening and an intentional action became central to the philosophical investigation of action and agency in the 20th century. In this course we examine this distinction and why it should matter to us. Our topics include intentional action, the causal theory of action, the metaphysics of action, agent causation, basic action, acting and trying to act, intentions, weakness of will, strength of will, and mental action. Requires junior standing or permission of instructor.

PHIL 3201 Wittgenstein, Quine, & Kripke on Necessity and a Priori Knowledge (4 Credits)
A study of Wittgenstein, Quine, and Kripke on the nature of necessity, a priori knowledge and their relation to understanding philosophy. Prerequisite: junior standing or instructor's permission.

PHIL 3210 Philosophy of Movement (4 Credits)
Everything is in motion. Yet, philosophers have consistently considered motion to be a derivative or secondary form of being. Why? What are the political and metaphysical consequences of marginalizing motion in the history of philosophy? The aim of this class is to read the history of philosophy with a unique focus on the status of movement and motion from the ancient to contemporary period.

PHIL 3211 Contemporary Pol Philosophy (4 Credits)
This class focuses primarily on the philosophical problems generated by thinking about political authority and justice. We discuss the nature of political authority, justice, rights, equality and the role of property in a modern state.

PHIL 3215 Modern Jewish Philosophy (4 Credits)
Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3215.

PHIL 3445 Cultural Theory and Critique (4 Credits)
This course will provide an overview of the major theories of culture and cultural critique, as well as a consideration of some of the major controversies and recent developments in this field. It will proceed roughly chronologically, beginning with liberal humanist critique and continuing with hermeneutics, materialist and Marxist critique, psychoanalysis, the Frankfurt School, structuralism, post-structuralism, and contemporary British cultural studies. It will also consider more recent developments, such as feminist critique, GLBT critique, postcolonialism. While the approach will be mainly philosophical, implications for other areas such as literature, art, emergent media, religion, and politics will also figure in the discussions, so it is appropriate for students in many fields, not just philosophy. Prerequisite: Junior standing or permission of the instructor. Note that this course will serve as a foundational offering for students interested in participating in the Critical Theory specialization.

PHIL 3450 Phenomenology and Theology (4 Credits)
Cross listed with RLG 3455. Prerequisite: junior standing or instructor's permission.

PHIL 3455 Philosophy and 9/11: Sovereignty in Traumatic Times (4 Credits)
Philosopher's responses to the attacks on 9/11/2001, leading into philosophical study of the connections between trauma and modern assertions of political sovereignty. Prerequisite: junior standing or instructor's permission.

PHIL 3460 Nietzsche's Death of God (4 Credits)
This course involves an intensive reading and discussion of Friedrich Nietzsche's 'Thus Spake Zarathustra,' together with relevant associated materials, especially 'The Gay Science.' Prerequisite: junior standing or instructor's permission. Cross listed with RLG 3460.

PHIL 3465 Derrida and Postmodernism (4 Credits)
Cross listed with RLG 3465. Prerequisite: junior standing or instructor's permission.
PHIL 3466 Contemporary Continental Philosophy (4 Credits)
A critical study of current trends in European philosophy, focusing on such thinkers as Deleuze, Badiou, Zizek, Meillassoux, or Laruelle. Prerequisite: junior standing or instructor's permission.

PHIL 3610 Advanced Topics in Philosophy, Psychology, and Cognitive Science (4 Credits)
This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, psychology, and cognitive science. More specifically, our main goal is to engage in a critical discussion of how the study of the mind requires an interdisciplinary approach that integrates empirical findings with conceptual and philosophical theorizing. Cross listed with PSYC 3610. Prerequisites: PSYC 1001 and junior standing (or instructor approval).

PHIL 3618 Philosophy of Biology (4 Credits)
A survey of conceptual issues that lie at the intersection of biology and philosophy: the central concepts of evolutionary theory (such as natural selection, fitness, adaptation and function), the relation of biology to other “lower” sciences (can it be reduced to physics and chemistry?), whether there are genuine scientific laws in biology, and the relation between biology and other fields like cognitive science and ethics. At least Junior standing required.

PHIL 3620 Philosophical Perspectives on Economics and Social Sciences (4 Credits)
This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

PHIL 3699 Proseminar in Philosophy (4 Credits)
Philosophy is a diverse discipline with various subfields, most of which are becoming increasingly specialized and methodologically autonomous. Specialization is often (rightly) perceived as an indicator of disciplinary progress and intellectual development. However, it is important that students of philosophy pursue breadth as well as depth. The goal of this course is to provide an overview of a series of seminal texts in philosophy, from a variety of subfields, epochs, and traditions. Each weekly meeting is devoted to the presentation, analysis, and discussion of a text that any student of philosophy should read at some point in her or his career. Requires junior standing or instructor’s permission.

PHIL 3700 Topics in Philosophy (1-4 Credits)
Prerequisite: junior standing or instructor’s permission.

PHIL 3701 Topics in Philosophy (1-4 Credits)
Prerequisite: junior standing or instructor’s permission.

PHIL 3702 Topics in Philosophy (1-4 Credits)
Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

PHIL 3703 Topics in Philosophy (1-4 Credits)
Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

PHIL 3704 Topics in Philosophy (1-4 Credits)
Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

PHIL 3991 Independent Study (1-8 Credits)

PHIL 3992 Directed Study (1-10 Credits)

PHIL 4991 Independent Study (1-10 Credits)

PHIL 4992 Directed Study (1-10 Credits)

PHIL 4995 Independent Research (1-10 Credits)

PHIL 5300 Philosophy Colloquium (4 Credits)

PHIL 5400 Cultural Theory Colloquium (1-5 Credits)

Physics & Astronomy (PHYS)

Courses

PHYS 3111 Quantum Physics I (4 Credits)
First of a two-quarter sequence. The Schrödinger equation: interpretation of wave functions; the uncertainty principle; stationary states; the free particle and wave packets; the harmonic oscillator; square well potentials. Hilbert space: observables, commutator algebra, eigenfunctions of a Hermitian operator; the hydrogen atom and hydrogenic atoms. Prerequisites: PHYS 2252, PHYS 2260, PHYS 2556, PHYS 3612 and MATH 2070.
PHY 3112 Quantum Physics II (4 Credits)
Second of a two-quarter sequence. Angular momentum and spin; identical particles; the Pauli exclusion principle; atoms and solids: band theory; perturbation theory; the fine structure of hydrogen; the Zeeman effect; hyperfine splitting; the variational principle; the WKB approximation; tunneling; time dependent perturbation theory; emission and absorption of radiation. Scattering: partial wave analysis; the Born approximation. Prerequisite: PHY 3111.

PHY 3251 Astrophysics: Radiative Processes (4 Credits)
Because light is the primary means by which astronomers learn about the Universe, understanding the production and subsequent behavior of light is key to interpreting astronomical observations. This course introduces students to the physics of astrophysical radiation and its interaction with matter as it travels from its source to our detectors. Topics may include radiative transfer, emission and absorption processes, Compton processes, synchrotron radiation, thermodynamic equilibrium, radiative and collisional excitation, and spectroscopy of atoms and molecules. The course is aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. Credit can apply toward physics or astrophysics minor. Prerequisites: PHY 2252 and MATH 1953, or instructor's permission.

PHY 3252 Astrophysics: Observations (4 Credits)
Astronomy is fundamentally an observational science and as such it is important for practitioners to understand how their data are collected and analyzed. This course is therefore a comprehensive review of current observational techniques and instruments, aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. This class introduces students to the capabilities and limitations of different types of instruments while exploring the sources and types of noise and providing statistical tools necessary for interpreting observational data. Credit can apply toward physics or astrophysics minor. Prerequisites: PHY 2252 and MATH 1953, or instructor's permission.

PHY 3270 Workshop: Practical Astronomy (1-5 Credits)
Capstone coursework featuring studies in experimental, computational, and/or theoretical work in astronomy and astrophysics. Credit can apply toward physics or astrophysics minor.

PHY 3311 Advanced Laboratory I (1 Credit)
First of a three-quarter sequence. Advanced experimental techniques in physics. Meets with PHY 2311. Prerequisite: instructor’s permission.

PHY 3312 Advanced Laboratory II (1 Credit)
Second of a three-quarter sequence. Advanced experimental techniques in physics. Meets with PHY 2312. Prerequisite: instructor’s permission.

PHY 3313 Advanced Laboratory III (1 Credit)
Third of a three-quarter sequence. Advanced experimental techniques in physics. Meets with PHY 2313. Prerequisite: instructor’s permission.

PHY 3510 Analytical Mechanics I (4 Credits)
Lagrangian and Hamiltonian mechanics. Prerequisites: PHY 1113, PHY 1213, or PHY 1214 and MATH 2070 and consent of instructor.

PHY 3611 Electromagnetism I (4 Credits)
First of a two-quarter sequence. Vector algebra; differential vector calculus (gradient, divergence and curl); integral vector calculus (gradient, divergence and Stokes' Theorems); line, surface and volume integrals; Electrostatics: the electric field, electric potential, work and energy in electrostatics; method of images, boundary value problems and solutions to Laplace's equation in Cartesian, spherical and cylindrical coordinates; multipole expansion of the electric potential; electric fields in matter: polarization; the electric displacement vector; boundary conditions, linear dielectrics. Magnetostatics: magnetic fields and forces. Prerequisites: PHY 1113, PHY 1213, or PHY 1214 and MATH 2070.

PHY 3612 Electromagnetism II (4 Credits)
Second of a two-quarter sequence. Magnetic vector potential; magnetic fields in matter: magnetization; fields of magnetized objects; linear and nonlinear magnetic materials; electromotive force, Ohm's law; electromagnetic induction; Faraday's law; Maxwell's equations; the displacement current; boundary conditions; the Poynting theorem; momentum and energy density of the fields; the Maxwell stress tensor; the wave equation and electromagnetic waves in vacuum and matter; absorption and dispersion; wave guides; the potential formulation and gauge transformations; retarded potentials; dipole radiation. Prerequisite: PHY 3611.

PHY 3700 Advanced Topics: General (3 Credits)
Offered irregularly, depending on demand. May be taken more than once for credit. Prerequisite: instructor's permission.

PHY 3711 Optics I (4 Credits)
First of a two-quarter sequence. Gaussian optics and ray tracing; matrix methods and application to optical design; elementary theory of aberrations; light as electromagnetic wave, diffraction and interference; interferometers and their applications. Elementary theory of coherence; selected topics. May include laboratory work as appropriate. Prerequisites: PHY 1113, PHY 1213 or PHY 1214, and MATH 2070.

PHY 3841 Thermal Physics I (4 Credits)
First of a two-quarter sequence. Laws of thermodynamics; thermal properties of gases and condensed matter; kinetic theory of gases, classical and quantum statistics. Prerequisites: PHY 1113, PHY 1213 or PHY 1214 and MATH 2070.
 PHYS 3991 Independent Study (1-10 Credits)
 PHYS 3992 Directed Study (1-10 Credits)
 PHYS 3995 Independent Research (1-10 Credits)

**PHYS 4001 Introduction to Research I (1,2 Credit)**
This course is the first of the 3-course sequence designed to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students review essential material in mathematical physics, learn basic programming techniques and improve upon their skills in literature search and scientific writing, especially proposal writing. Special in-class seminars in collaboration with the Penrose Library and Writing and Research Center are scheduled. Student are introduced to research conducted by Physics and Astronomy faculty so that they can choose a faculty member with whom to take on a Winter Research Project during the winter interterm and winter quarter as part of Introduction to Research II. Students must prepare and submit a research proposal before the end of the fall quarter.

**PHYS 4002 Introduction to Research II (1-3 Credits)**
This is the second of the 3-course sequence to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students conduct an independent research or study project that they have outlined in the research proposal they submitted as part of Introduction to Research I under supervision of a faculty advisor of their choosing. At the same time, students have time to review issues that we face as researchers. Prerequisites: PHYS 4001 and consent of a faculty research advisor.

**PHYS 4003 Introduction to Research III (1,2 Credit)**
This is the third of the 3-course sequence to provide students with the opportunity of learning fundamental skills to conduct independent research in any physical science disciplines. In this course, students complete their Winter research project conducted as part of Introduction to Research II and present the results in writing as a term paper and in oral presentation as part of the Departmental Colloquia. Special in-class sessions in collaboration with the Writing and Research Center are included. Prerequisite: PHYS 4002.

**PHYS 4100 Foundations of Biophysics (3 Credits)**
Focus of the course is on application of basic physics principles to the study of cells and macromolecules. Topics include diffusion, random processes, thermodynamics, reaction equilibriums and kinetics, computer modeling. Must be admitted to the MCB PhD program or related graduate program with instructor approval. Cross listed with BIOP 4100.

**PHYS 4111 Quantum Mechanics I (3 Credits)**

**PHYS 4112 Quantum Mechanics II (3 Credits)**

**PHYS 4251 Intro to Astrophysics I (3 Credits)**

**PHYS 4252 Intro to Astrophysics II (3 Credits)**

**PHYS 4253 Intro to Astrophysics III (3 Credits)**

**PHYS 4411 Advanced Condensed Matter I (3 Credits)**
Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4111.

**PHYS 4412 Advanced Condensed Matter II (3 Credits)**
Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4112.

**PHYS 4413 Advanced Condensed Matter III (3 Credits)**
Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4113.

**PHYS 4511 Advanced Dynamics I (4 Credits)**

**PHYS 4611 Adv Electricity & Magnetism I (3 Credits)**

**PHYS 4612 Adv Electricity & Magnetism II (3 Credits)**

**PHYS 4720 Light-Matter Interaction (4 Credits)**
This course will introduce the theory and applications of light-matter interactions. Fundamental theory will be explored from both semi-classical and quantum perspectives, and photon-carrier interactions will be studied in a variety of physical systems, including atoms, glasses, semiconductors, and metals. Experimental techniques will also be discussed, such as absorption, photoluminescence, and coherent spectroscopies, in addition to ultrafast nonlinear optical interactions. Students will also build their own demonstration and teaching module for elementary-age children, and will use their module to teach children at a local school.

**PHYS 4750 Seminar in Physics (1 Credit)**

**PHYS 4811 Statistical Mechanics I (4 Credits)**
Fundamentals of thermodynamics, microcanonical and canonical ensemble, quantum formulation noninteracting particle systems.
different countries can help us see our own literary and cultural assumptions with fresh eyes.

The primary focus will be fundamentals and techniques of creative nonfiction. Includes popular sub-genres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful fiction works of modern times. Discussions and writing assignments will focus on how exposure to the fiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

A "masterwork" of fiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful fiction works of modern times. Discussions and writing assignments will focus on how exposure to the fiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

A "masterwork" of creative nonfiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful works of modern creative nonfiction. Includes popular sub-genres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Discussions and writing assignments will focus on how exposure to the creative nonfiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.
PWRI 4110 Writing Creative Nonfiction: Foundational Concepts, Skills, and Practice (4 Credits)
This course concentrates on the craft of writing nonfiction, which includes popular subgenres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Students will later apply these classic skills in courses devoted to various nonfiction sub-genres, such as memoir. Class discussions will emphasize essential writing skills and professional approaches to research, taking advantage of a supportive workshop format. Students will express their ideas about both craft and content and workshop their writing with a view toward professional publication.

PWRI 4120 Writing the Personal Essay (4 Credits)
The author Dinty Moore describes the personal essay as being for writers who want to capture a bit of life, producing a written record of their better thoughts. Like the short story in fiction, the personal essay is one of the original forms of creative nonfiction. It is a lively form that has tracked through the ages—from ancient archetypes to the school of Enlightenment essayists, 19th-century realists and romantics to robust 20th-century conventionalists, and on to Digital Age innovators where it deeply informing blogs, social media posts, and other contemporary writings.
Conventions of the craft are covered in this course, but students will not be expected to embrace creativity-stifling rules. The work will be hands-on, with workshop that pushed students to pursue new pathways and fresh approaches in their personal essay writing.

PWRI 4130 Writing the Memoir (4 Credits)
This course concentrates on the craft of writing the memoir, which includes popular subgenres such as coming of age, spiritual development, addiction/recovery, food writing, travel adventures, accounts of career failure and success, and stories of surviving various kinds of trauma. The primary focus will be on applying fundamentals and techniques of creative nonfiction to the writer’s personal experience. Class discussions will emphasize essential writing skills, techniques for exploring and recording memories, and professional approaches to research. Taking advantage of a supportive workshop format, students will express their ideas about both craft and content and workshop their writing with a view toward professional publication.

PWRI 4140 Natural Science and Literature (4 Credits)
This class will explore the practice — and art — of nonfiction writing about science and nature. Students will begin with an examination of influential historical works and move into contemporary writing on science and nature. The course will be a sort of journey, from ruminative essays on the individual in nature to impassioned (and science-heavy) explorations of ecosystem destruction to exuberant studies of love and sex in the animal kingdom. Students will seek to understand the narrative and linguistic machinery that make these pieces of writing “tick” through discussions, short writing exercises, brief reviews, and workshop participation. This course will also address the development of students’ own writing. Specifically, students will seek understanding of the writing techniques that can be used to make the complex fields of science and nature accessible subjects of writing intended for mainstream or literary publications. The key challenge will be to find a topic, a format (memoir, essay, narrative journalism), a structure, and a voice suitable for creating a single, sustained piece of writing that each student will devise, draft, workshop, and polish throughout the course.

PWRI 4200 Masterworks: Poetry (4 Credits)
A “masterwork” of poetry is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer’s point of view, drawing on them to develop a deeper understanding of the way form, structure, style, figurative language, theme, and cultural values work together in some of the most powerful poetic works of modern times. Discussions and writing assignments will focus on how exposure to the poetry of different countries can help us see our own literary and cultural assumptions with fresh eyes.

PWRI 4210 Writing Poetry: Foundational Concepts, Skills, and Practice (4 Credits)
This course is a combination of readings in poetry and poetics, brief lectures, and open discussions focused on the interplay of image, metaphor, rhythm, emotions and ideas in the expressive form of writing called poetry. Students will learn to tap the imaginative sources that all creative writing springs from and flow those energies into poetic form. The instructor will provide examples to illustrate successful uses of key poetic concepts and help students explore, through a range of open-ended exercises, various approaches to expressing themselves fully and clearly. Students will also develop practical critiquing skills with the aim of helping themselves and their classmates write with greater subtlety and power.

PWRI 4220 Writing Traditional Verse and Contemporary Song Lyrics (4 Credits)
This course focuses on the shared building blocks of traditional formal poetry and contemporary song lyrics: meter and rhyme, repetition, and verse/stanza structure. Beginning with simple constructions like limericks and nursery rhymes, and moving swiftly into more sophisticated verse organizations like the sonnet, the villanelle, the ballad, and the popular song, students will explore a variety of existing examples, then produce their own pieces that follow (or break) the established rules of each form. The course will take a workshop format, in which students will generate, share, and receive feedback on their formal experiments; the focus will be on developing a more finely tuned ear for form, and on deploying “traditional” poetic techniques in relevant, radical, and inventive ways. (NOTE: The ability to sing or play an instrument is NOT required for this course; when discussing and writing songs, students will focus on the texts only, not the harmonic/melodic elements of songwriting craft.).

PWRI 4230 Writing Improvisational Verse and Prose Poetry (4 Credits)
This course focuses on the writing of improvisational verse and prose poems, certainly the most popular forms of poetry today both in America and around the world. The course will explore a wide variety of approaches to non-metrical verse and examine how poetry sounds when it appears in prose form. Using a workshop format, students will generate, share, and receive feedback on their poetic experiments, with an emphasis on developing a more finely tuned ear for cadence and phrasing. Robert Frost famously wrote that writing what he called “free verse” was like “playing tennis with the net down.” This course aims to demonstrate why Frost was wrong.
PWRI 4300 Masterworks: Drama (4 Credits)
A “masterwork” of drama is a play or screenplay that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, imagery, theme, and cultural values work together in some of the most powerful dramatic works of modern times. The course will also explore the impact of stagecraft, the needs of actors, and vision of directors on the way a play is developed. Discussions and writing assignments will focus on how exposure to the drama of different countries can help us see our own literary and cultural assumptions with fresh eyes.

PWRI 4310 Writing Drama: Foundational Concepts, Skills, and Practice (4 Credits)
This course uses readings of dramatic texts, brief lectures, writing assignments, and the performance of those writings to develop the skills required to write for the stage. Students learn the essentials of drama, including the design of effective plots, the creation of vivid characters, and the writing of performable dialogue. Students also explore the effects of drama’s necessarily collaborative process and varieties of stagecraft on the way playwrights shape their texts. Examples illustrate successful uses of key dramatic techniques and help students explore various approaches to expressing themselves fully and clearly through a range of open-ended exercises. Students also develop practical critiquing skills with the aim of helping themselves and their classmates create compelling plays that appeal to both theater professionals and theatrical audiences.

PWRI 4320 Writing the Screenplay (4 Credits)
Screenwriting is the art of telling a story in images. This class focuses on elements of form and structure, with particular emphasis on format, character development, plot and dialogue. Movies are studied to illustrate genre, fixed and fluid characters, tragic flaw, the dynamic of relationships, development of protagonist and antagonist, and other screen elements. Numerous in-class exercises, discussions, workshops and screenings enable students to find the dramatic essence of stories, and write a detailed film synopsis, treatment, and the first act of a feature-length screenplay.

PWRI 4330 Writing for Personal Performance (4 Credits)
This course focuses on writing texts that the authors aim to perform themselves, including spoken word poetry, storytelling, one-person plays, presentations in TED Talk and other formats, and even standup comedy. Using a variety of readings and recorded performances, brief lectures, and writing assignments, the course helps writers develop the skills required to shape their work for public performance. Students learn to distinguish between their “page voice” and their “performance voice” so that they can produce more effective texts for performance. Using a supportive workshop format and class discussions, students will apply practical critiquing skills with the aim of helping themselves and their classmates create compelling performance pieces that appeal to audiences of all kinds.

PWRI 4340 Literature to Film (4 Credits)
In this course, students will examine the adaptation of literary works into films. Through close study of modern literary works and the film interpretations of each, the course will focus on the challenging process of transitioning from one narrative form to another. The course aims at enhancing the critical skill of students as readers and viewers of film as well as their creative abilities as writers. This is accomplished through a combination of close reading, study of the visual vocabulary of film, and scripting workshops designed to highlight the considerations that go into the crafting of film scripts based on previously published works.

PWRI 4410 Writing and Healing (4 Credits)
Many writers attest to the emotional, spiritual, and even physical benefits of writing. In this course, students will explore a variety of ways in which written expression can help them navigate the human journey. Students learn leading theoretical models of journal and poetry therapy (interactive bibliotherapy), assess poems based on their usefulness in personal growth contexts, and participate in experiential discussions and writing exercises. Students focus on the writing and healing process rather than their own self-explorations of healing through writing. Students submit a portfolio of reflection writings, as well as complete a final paper on a writing topic that intersects with a personal growth experience or interest. Cross-listed with MALS 4410 Writing and Healing.

PWRI 4420 Literary Translation: Crossing Borders to Enrich Your Own Writing (4 Credits)
Note: No previous formal language study or fluency in a second language is required. Translation is essential for a genuine exchange of ideas between people of different linguistic and cultural backgrounds. Besides being an essential service for cultural understanding, literary translation is also a form of creative writing. This course includes readings in the history, theory, and practice of literary translation, along with analysis of sample translations by leading translators. Students will also practice translation of literary texts, including poetry and short works of fiction and nonfiction. While increasing the student’s awareness of the art of literary translation as an end in itself, the course also demonstrates translation’s value in enriching a writer's development in his or her own work. Students should have basic skills in the source language of their choice, but fluency is not required. Cross-listed with MALS 4420 Literary Translation.

PWRI 4500 The Writing Life: Concepts, Practices, and Professionalism (4 Credits)
This course aims to provide aspiring writers a basic knowledge of the creative and professional tools they will need to succeed, whatever their individual goals or life situation. This course tackles questions and challenges common to all writers at one time or another. Primary considerations include: What exactly does it mean to be a writer? What are my motivations for wanting to write? How can I identify and prioritize writing projects? How do I move my writing projects forward from concept to completion? These primary challenges require writers to narrow their creative focus and to cultivate habits of thought and behavior that sustain creative efforts in a world full of distractions, obligations, and competing claims on their time.
PWRI 4510 Literary Genres for Writers (4 Credits)
This course deals with the four core literary genres: Drama, Fiction, Creative Nonfiction, and Poetry. These genres are distinguished from one another in two ways: first, by the relative weight each genre gives to the key cross-genre elements, and second, by each genre’s distinctive approach to structure and form. Within each genre, subgenres have evolved over time, each recognizable by particular patterns, each playing by a distinct set of rules. Whether writing within or across or even against those rules, writers need to understand how literary genres work in order to write effectively. This course aims to foster that understanding and prepare students to shape their writing in ways that align with their creative vision.

PWRI 4520 The Writers Workshop (4 Credits)
‘A writer writes’ is the universal mantra of the writing life, but one of the critical steps in developing a work in progress is getting constructive feedback. Unfortunately, all too often, a writer ends up disappointed because the feedback received is superficial, too polite, or little more than proofreading. This course teaches students to workshop in a meaningful way, responding to content, focus, coherence, and organizational issues. Students learn to elicit more feedback from their workshop colleagues, demonstrating the relationship between reader and writer. The class will explore a variety of genres, and each student produces short exercises and longer projects that demonstrate a grasp of various aspects of the writing craft. Periodically, guest authors with different writing specialties join the class to discuss the writing experience and shed light on the workshop process.

PWRI 4540 Children’s Literature: From Picture Books to Books for Young Adults (4 Credits)
This course is an introductory study of all levels of children’s literature for the student who is interested in literature, the student who is planning to teach, and for those who are or will be parents. It introduces students to types, genres, and varieties of literature for reading to children as well as reading by children. The main focus of this course will be to rediscover the joys and wonders of reading as a child and young adult and to approach the literature selected not as “just a kid’s book,” but as literature with definable quality standards and offer a firm foundation for critical and analytical discussions.

PWRI 4550 From Romance to Realism (4 Credits)
This course explores novels produced during the period when widespread social, political, and cultural upheaval in Britain generated the continuum, from Romance to Realism, which even today provides the lens through which readers view most genres of fiction. The French Revolution, war with France, the expansion of empire, naval dominance, massive political reforms, and ongoing debates about women created a range of tensions, gaps, and overlaps between these two categories that creative writers still live with today. The course emphasizes both the literature itself and the cultural forces from which the literature developed, with an eye toward helping student writers understand the audience expectations that remain in force today.

PWRI 4701 Topics in Literature (4 Credits)
This course is designed to provide a deep dive into advanced topics of special interest to creative writers. Topics may range from close studies of established masterworks to examining the latest trends in developing genres or wrestling with several works by living masters.

PWRI 4702 Topics in Writing (4 Credits)
This course is designed to provide a deep dive into advanced topics of special interest to creative writers. Topics may range from close studies of compositional techniques used in established masterworks to examining the development of new genre forms or wrestling with texts whose approaches are drawn from multiple genres.

PWRI 4901 Professional Creative Writing Capstone Project (4 Credits)
The Creative Capstone Project provides students the opportunity to apply the knowledge and skills gained through the degree program to create a culminating projecting consisting of three major parts: a creative core (fiction, creative nonfiction, poetry, or some other kind of creative writing); a researched analysis essay exploring an idea, issue, or problem that is closely related to the creative core (however, the essay is not about the creative core); and a reflection essay placing the creative core and the analysis essay in the context of the student’s coursework at University College and his or her writing goals for the future. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the project. Please see the Creative Capstone Project Guidelines for additional details. Note: For the creative core, students should not attempt a genre they have not written in at least one of their University College courses. Prerequisites: earned a C or better in MALS 4915 Research in the Humanities or PWRI 4917 Professional Research for Creative Writers, a Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, and completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.
PWRI 4903 Creative Capstone Seminar (4 Credits)
The Creative Capstone Seminar is a graduate seminar in which students apply the knowledge and skills gained through the degree program to create a culminating project consisting of three major parts: a creative core (fiction, creative nonfiction, poetry, or some other kind of creative writing); a researched analysis essay exploring an idea, issue, or problem that is closely related to the creative core (however, the essay is not about the creative core); and a reflection essay placing the creative core and the analysis essay in the context of the student's coursework at University College and his or her writing goals for the future. Note: For the creative core, students should not attempt a genre they have not written in at least one of their University College courses. The seminar is dependent upon students thoughtfully commenting on one another's work under the facilitation of the seminar instructor. Consistent, high-quality engagement in this process is essential. The course is structured to guide students through both the creative and analytical writing processes, with the instructor providing intensive feedback on the capstone process and papers. Students are responsible for generating the course content through ongoing discussion of and peer feedback on the capstone process and individual work, as well as the analysis and contextualization of focused student creative work and papers within the wider degree field of study. Students will professionally and academically communicate their creations and findings through written work and oral presentation. Students must have: acceptance as a degree candidate; completed at least 40 quarter-hours (including all foundations courses) with a cumulative GPA of 3.0 or better, and, earned a B- or better in MALS 4020 Graduate Research & Writing, MALS 4915 Research in the Humanities, or PWRI 4917 Professional Research for Creative Writers. A final grade of B- or better must be earned in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

PWRI 4917 Professional Research for Creative Writers (4 Credits)
This course examines two types of literary fieldwork that all writers who hope to publish must become proficient in. One, navigating the business landscape of the publishing world: agents, editors, publishing houses, submissions, booksellers, author platforms, copyright issues, contract basics, and more). Two, developing skills in content-oriented research to expand the boundaries of a narrative by refining character development, broadening the landscape of setting, and anchoring historical situations in the realities of the period.

PWRI 4920 Portfolio Capstone (4 Credits)
The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the Portfolio Capstone produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field. Students must complete the Portfolio Capstone with a grade of B- or better.

PWRI 4980 Internship (1-4 Credits)
The PWRI internship is designed to offer students a practical educational experience in an industry-related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the PWRI master’s degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all PWRI students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the PWRI degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

PWRI 4991 Independent Study (1-4 Credits)
This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, have obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

PWRI 4992 Directed Study (1-4 Credits)
This is an advanced course for students wishing to pursue a directed course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, have obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Directed Study is offered only on a for-credit basis.

Psychology (PSYC)

Courses
PSYC 3020 Adolescence (4 Credits)
Development, behavior, special problems, and characteristics of early and late adolescence. Prerequisites: PSYC 2070 and PSYC 3050, must be major or minor in psychology, must have junior standing.
PSYC 3029 Imaging the Mind (4 Credits)
Imaging the Mind is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In this manner, each student will be exposed individually to the decision issues and interpretation pitfalls involved in fMRI data analysis. In class, students will use the smart-to-the-seat classroom. Cross listed with PSYC 4255. Prerequisites: PSYC 2031 and PSYC 3050, must be major or minor in psychology, must have junior standing. Permission of the instructor required.

PSYC 3032 Introduction to Neural Networks (4 Credits)
Introduction to basic principles and computational methods in artificial neural network modeling; neural models of cognitive and psychological processes examined and evaluated. Cross listed with PSYC 4254. Prerequisite: PSYC 1001 and PSYC 3050. Must be major or minor in psychology. Must have junior standing. Permission of instructor required.

PSYC 3035 Seminar: Cognitive Neuroscience (2 Credits)
This seminar is for students in the cognitive neuroscience specialization, a joint program with Biological Sciences. The goal of the seminar is to provide an opportunity for senior-level cognitive neuroscience majors to apply the knowledge and skills they have acquired in other courses to current cutting-edge topics in the field. Prerequisites: PSYC 2031 and PSYC 3050, must have cognitive neuroscience concentration, must have senior standing.

PSYC 3150 Senior Honors Research Seminar (1-5 Credits)
In conjunction with senior research thesis. Prerequisites: PSYC 2750, PSYC 2751 and PSYC 2752.

PSYC 3151 Senior Honors Research Seminar (1-5 Credits)
In conjunction with senior research thesis. Prerequisites: PSYC 2750, PSYC 2751 and PSYC 2752.

PSYC 3152 Senior Honors Research Seminar (1-5 Credits)
In conjunction with senior research thesis. Prerequisites: PSYC 2750, PSYC 2751 and PSYC 2752.

PSYC 3350 Cultural Psychology (4 Credits)
This seminar examines how people's sociocultural context shapes their thoughts, feelings, and behaviors. To approach this question, we read and discuss classic as well as recent theoretical and empirical articles from the field of cultural psychology. Topics include defining culture; dimensions of cultural variation; culture-biology interactions; methodological considerations; cultural influences on cognition, emotion, the self, moral judgment, and health; cultural neuroscience; cultural approaches to race and ethnicity; and mechanisms of cultural influence. Throughout, this course emphasizes sociocultural diversity in psychological processes. Students are encouraged to develop empirically tractable ways of asking and answering questions relating to cultural psychology and to apply concepts of cultural psychology to their own research. Prerequisite: PSYC 2740 and PSYC 3050; must be a major or minor in psychology, must have junior standing.

PSYC 3440 Gender and Society (4 Credits)
Prerequisites: PSYC 1001 and PSYC 3050, must be a psychology major or minor, must have at least junior standing.

PSYC 3666 Brain Development & Cognition (4 Credits)
Examines what the brain tells us about development and what development tells us about the brain. Topics include subcortical and cortical developments to the acquisition of language and drawing. Prerequisites: PSYC 2070 and PSYC 3050; must be major or minor in psychology, must have junior standing.

PSYC 3701 Topics in Psychology (1-4 Credits)
Prerequisites: PSYC 1001 and PSYC 3050; must be major or minor in psychology, must have junior standing.

PSYC 3702 Topics in Psychology (4 Credits)
Prerequisites: PSYC 1001 and PSYC 3050; must be major or minor in psychology, must have junior standing.

PSYC 3760 Field Experiences in Psychology (1-2 Credits)
Students meet weekly with professor and complete an unpaid internship at a community organization. Prerequisites: PSYC 2500 or equivalent, 21 years old by October 1, must be major in psychology, must have junior standing. Permission of the instructor required. Corequisite: PSYC 3759.

PSYC 3761 Field Experiences in Psychology (3-5 Credits)
Students meet weekly with professor and complete an unpaid internship at a community organization. This class has a service learning component. Prerequisites: PSYC 2500 or equivalent, PSYC 3759, PSYC 3760, 21 years old by October 1, must be major in psychology, must have junior standing. Permission of the instructor required.

PSYC 3762 Field Experiences in Psychology (1-5 Credits)
Students meet weekly with professor and complete an unpaid internship at a community organization. This class has a service learning component. Prerequisites: PSYC 2500 or equivalent, PSYC 3759, PSYC 3760, PSYC 3761, 21 years old by October 1, must be major in psychology, must have junior standing. Permission of the instructor required.

PSYC 3991 Independent Study (1-10 Credits)
Maximum of 5 hours per quarter not to exceed a total of 10 quarter hours.
PSYC 3992 Directed Study (1-10 Credits)

PSYC 3999 Psychology Senior Assessment (0 Credits)
This course involves a required assessment of graduating psychology majors’ knowledge of the discipline based on coursework taken one quarter prior to graduation. Prerequisites: at least any four of the following courses required for the major: PSYC 1001 or equivalent, PSYC 2300, 3050, PSYC 2500, PSYC 2070, PSYC 2031, PSYC 2740, and at least 163 total credit hours or at least 30 credits of psychology hours.

PSYC 4002 Prosemin in Memory and Cognition (4 Credits)
Theory/research on thinking, problem solving, language, creative thought, other aspects of knowing process.

PSYC 4011 Prosemin in Emotion (4 Credits)
Social/physiological aspects of emotions, including motivation, physiological processes, basic emotions, cognitive appraisal, cross-cultural issues, empathy, effects of emotions.

PSYC 4020 Prosemin in Personality (4 Credits)
Personality structure/dynamics, theory and findings, interrelationships between personality and socio-cultural determinants of behavior.

PSYC 4021 Prosemin in Social Psychology (4 Credits)
Major theoretical issues and empirical research in social psychology; topics include cultural, social structure, cognitive consistency, social neuroscience, social cognition, person perception, the self, social influence, attitudes, relationships, emotion, coping.

PSYC 4028 Social Cognition (4 Credits)
Social cognition describes how people make sense of themselves and others. The emphasis on “how” is important—social cognition research focuses on perceptual, cognitive, and affective processes that help people think about themselves and others. You will learn about the theories, findings, and methods in a specific area of study.

PSYC 4031 Developmental Prosemin: Cognition & Perception (4 Credits)
Problems/theories in developmental psychology including Piagetian theory, language, emotional, perceptual, personality development, learning, biological bases of behavior, genetic influences.

PSYC 4032 Developmental Prosemin: Social-Emotional (4 Credits)
Problems/theories in developmental psychology including Piagetian theory, language, emotional, perceptual, personality development, learning, biological bases of behavior, genetic influences.

PSYC 4033 Devel Prosemin: Biological (4 Credits)
This course provides an overview of major biological processes during development and their effects on physical, cognitive, and social development. Specific topics will include: history, concepts, and central themes of developmental psychology; theoretical and biological models of human development (e.g., developmental psychobiological systems view); brain development and plasticity; behavioral genetics; sleep and circadian rhythms; sexual differentiation and hormonal influences on behavior; stress and the HPA axis; effects of nutrition and toxic substances.

PSYC 4043 Clinical Approaches: Communitn (4 Credits)
Community psychology; major theoretical/conceptual issues, assessment/intervention techniques.

PSYC 4045 The Developing Brain (4 Credits)
This course presents an overview of current research and methods in the field of developmental cognitive/affective/social neuroscience. The course examines what the brain tells us about development and what development tells us about the brain. Topics include sensitive periods for neuroplasticity, pediatric neuroimaging methods, attention, language, affective and social development. Cross-listed with course 3045. Prerequisite: Instructor permission.

PSYC 4050 Cultural Psychology (4 Credits)
This seminar examines how people's sociocultural context shapes their thoughts, feelings and behaviors. To approach this question, we read and discuss classic as well as recent, theoretical as well as empirical articles form the field of cultural psychology. Topics include: (1) defining culture; (2) dimensions of cultural variation; (3) culture-biology interactions; (4) methodological considerations; (5) cultural influences on cognition, emotion, the self, moral judgment, and health; (6) cultural neuroscience; (7) cultural approaches to race and ethnicity; and (8) mechanisms of cultural influence. Throughout, this course emphasizes sociocultural diversity in psychological processes. Students are encouraged to develop empirically tractable ways of asking and answering questions relating to cultural psychology and to apply concepts of cultural psychology to their own research.

PSYC 4055 The Neuroscience and Psychology of Parenthood and Parent-Child Relationships (4 Credits)
This course explores the theory, research and issues relevant to parenthood and parent-child relationships. The course overviews the evolutionary, neurobiological, and psychological perspective of parent-child relationships with a focus on the understanding of recent advances in neuroscience research. Topics include neuroplasticity of parental brain, maternal vs. paternal biology for parenting, and social and biological determinants of parent-child relationships. Emphasis is placed on discussion of current research, evaluation of the findings, and proposals and ideas of new research in the field. The goal is not to memorize facts but rather to learn to think like a developmental cognitive/social neuroscientist. Cross-listed with course PSYC 3055. Prerequisite: Instructor permission.

PSYC 4060 History and Systems of Psych (4 Credits)
General nature of scientific progress throughout history as relates to evolution of psychology as scientific/academic discipline; history explored by asking whether prevailing Zeitgeist, the appearance of the "Great Mind," or some combination of both factors was responsible for pivotal changes seen throughout psychology's history.
PSYC 4085 Stress & Health (4 Credits)
This course will serve as an introduction to the field of psychoneuroimmunology, with a focus on stress and development. The first section of the course will review basic immunology including immune system components and functions, and relations between the immune system and other systems. The later portion of the course will focus on effects of stress for different disease mechanisms (infection, allergy, cancer etc).

PSYC 4235 Teaching Psychology (1-5 Credits)
Experiential approach to learning techniques for teaching psychology.

PSYC 4241 Seminar-Discourse Processes (4 Credits)

PSYC 4249 Prosem in Reading and Language (4 Credits)

PSYC 4254 Intro to Neural Network Models (4 Credits)
Cross listed with PSYC 3032.

PSYC 4255 Imaging the Mind (4 Credits)
Imaging Cognition is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In this manner, each student will be exposed individually to the decision issues and interpretation pitfalls involved in fMRI data analysis. In class, students will use the smart-to-the-seat classroom. Cross listed with PSYC 3029.

PSYC 4256 Seminar:Cognitive Neuroscience (4 Credits)
Neural systems underlying human perception, memory, language, pathological syndromes that result from damage to these systems.

PSYC 4257 Psychophys & Neuroscience Lab (4 Credits)

PSYC 4258 Social Neuroscience (4 Credits)

PSYC 4260 Psychophysiology (4 Credits)
This course will serve as an introduction to the field of psychophysiology, with a focus on autonomic psychophysiology (e.g., measures of the electrodermal and the cardiovascular system). Such measures uniquely allow researchers to answer questions about mind-body interactions, emotions, cognition, and health, among others. The first section of the course will review theory of psychophysiology and relevant physiological systems as well as introduce students to the basics of psychophysiological measurement. The second section of the course will be hands-on, allowing students either to write a study proposal involving psychophysiological measurement or to use the psychophysiology lab to design and execute their own study using physiological measures.

PSYC 4262 Affective Neuroscience (4 Credits)
Affective neuroscience is the study of emotions in the brain. In this course, we explore how new frontiers in emotion research, from brain scans to psychoactive drugs to monkey colonies, have changed the way we think about emotions and moods. We aim to learn how scientists ask these new questions: how and what can we learn about emotion from animal models, patient studies, genetic studies, brain scans, and drugs? We learn and debate different theories about what emotions are: when are emotions helpful and harmful? Why do we have them? How many are there? Can we control how we feel? Finally, we learn how to think about emotions scientifically: What kind of evidence matters? How do emotion scholars talk about their work? What kind of questions can we ask, and what kind can we hope to answer?

PSYC 4265 Social Perception and Communication (4 Credits)
The way that people look and communicate evoke immediate and sometimes automatic responses from other people. Accordingly, this course includes topics such as facial structure and function, nonverbal communication, social categorization, behavioral mimicry, and thin-slices.

PSYC 4270 Seminar-Social Cognition (4 Credits)
Theory research in cognitive social psychology, including social knowledge structures, categorization of social information, social memory, judgment and inference, cognition-emotion links, effects on social behavior.

PSYC 4295 Research Design & Inference (4 Credits)

PSYC 4300 Correlation and Regression (4 Credits)
The course reviews the logic of statistical inference before introducing the procedures of correlation and regression. We begin with simple bivariate relationships before moving on to multivariate relationships for both categorical and continuous independent variables. Topics in regression include multicollinearity, variable selection, and curvilinear relationships. The course emphasizes the (stringent) requirements needed to be able to interpret correlational data in terms of cause and effect. The course also emphasizes the assessment of interactions in regression analysis for both categorical and continuous independent variables. Also included is basic coverage of logistic regression and regression assumptions. Prerequisite: PSYC 4295.

PSYC 4330 Analysis of Variance (4 Credits)
Complex analysis of variance, other quantitative methodologies. Prerequisite: PSYC 4300 or instructor's permission.
PSYC 4350 Structural Equation Modeling for the Social Sciences (4 Credits)
This advanced course covers the basics of structural equation modeling and how this flexible approach to statistical analysis can be applied in the social sciences. Specific techniques that will be covered will include testing for mediation, path analysis, confirmatory factor analysis, and the analysis of longitudinal data, as well as other related topics. There will be an emphasis on applying these techniques to students’ own research through hands-on demonstrations and homework assignments and an emphasis on interpreting and critiquing structural equation models in published research. A course on correlational methods and regression is a pre/co-requisite.

PSYC 4355 Multilevel Modeling for the Psychological Sciences: Theory and Applications (4 Credits)
This advanced course covers the basics of multilevel (hierarchical) linear modeling and how this flexible approach to statistical analysis can be applied to theory and data in the psychological sciences. Specific techniques that will be covered include the analysis of nested data, family and dyadic data, and longitudinal data as well as mediation and moderation. There will be an emphasis on applying these techniques to students’ own research through hands-on demonstrations and homework assignments. There will also be an emphasis on interpreting and critiquing multilevel modeling analyses in published research. Courses on analysis of variance as well as correlational methods and regression are pre/corequisites.

PSYC 4360 Programming Psychology: Experiment Building with Matlab (4 Credits)
This graduate-level course provides an introduction to computer programming. The goal of the course is to help psychology students develop practical coding skills that will allow them to design and create complex, computer-based experiments. Students will also learn to analyze and plot data in Matlab. No previous experience with programming is required (or expected). The course begins with an introduction to basic principles of programming and the Matlab environment. From there, students learn to code by solving challenges specific to the design/construction of a psychological/vision-based experiment. The class is highly interactive—each class includes a mixture of lecture, group-based problem solving, and coding in teams or alone. This class is highly recommended for students who wish to improve their programming proficiency before enrolling in Psych 4365, although it is not a prerequisite.

PSYC 4365 Programming Psychology: Model-Fitting and Analysis (4 Credits)
An introduction to creating, fitting, and performing statistical inference using computational models with an emphasis on binary choice data. The aims of this course include familiarizing students with the mathematical basis of model-fitting, learning the value of taking a variety of approaches to fitting trial-by-trial data, and giving students practical hands-on experience with maximum likelihood fitting methods. This course will use both MATLAB and R. Though not a prerequisite, this course is intended to follow Programming Psychology: Experiment Building in Matlab (PSYC 4360), and so will assume students already have a basic knowledge of coding in MATLAB (including debugging, scripts, functions, loops, and plotting). This course is open to graduate students outside of the Department of Psychology.

PSYC 4411 Child Assessment-Cognition (4 Credits)
This course will provide students with a graduate level overview of theory, research, and practice in the measurement of cognitive functioning. Students will gain practical skills in administering standardized measures of cognitive and academic functioning. They will also develop skills in interpreting cognitive test results and recognizing patterns in cognitive profiles related to specific learning and developmental disorders.

PSYC 4413 Child Assessment-Personality (4 Credits)
Overview of evidence-based psychological assessment (emotional, behavioral, and social) of children and adolescents with a focus on integrating theory, research, and clinical practice.

PSYC 4511 Prosem in Psychopathology (4 Credits)
Theories of behavioral/personality disorders on children; survey of clinical/experimental literature.

PSYC 4512 Prosem in Psychopathology (4 Credits)

PSYC 4518 Readings in Family Therapy (4 Credits)
This course will survey major historical and contemporary theories from the field of family therapy. Basic family therapy techniques will be covered, and integrated with other modes of therapy (e.g. individual, marital). In the second half of the course, students will work with families and receive group supervision.

PSYC 4525 Prosem in Develop Neuropsych (4 Credits)
Normal brain development, functional neuroanatomy, clinical conditions that can affect brain functioning in children, adults.

PSYC 4526 Prosem in Cog Neuroscience (4 Credits)
This is a graduate-level introduction to cognitive neuroscience. It covers basic theories of cognition and their neurological support.

PSYC 4540 Adv Topics in Cognitive Devel (4 Credits)
Varying topics; theory/research in cognitive development including Piagetian work. Prerequisite: graduate status or instructor's permission.

PSYC 4545 Memory Dvlpmnt:Nature & Nurture (4 Credits)
Theory & research in the field of memory development, with particular emphasis on neurobiological perspectives of memory development. Considers the role of biology (nature), as well as the socio-cultural context (nurture) in which memory develops. Specific topics in memory development will include: early memory development & infantile amnesia, infant visual recognition memory, procedural memory, episodic memory, autobiographical memory, and trauma & memory development. Since the course covers topics in systems level neuroscience (i.e., a class in behavioral or cognitive neuroscience). Classes that fulfill this prerequisite include PSYC 4255, PSYC 4256, PSYC 4257, PSYC 4525 or PSYC 4526 or instructor approval.

PSYC 4565 Systems of Psychotherapy (4 Credits)
The course provides an introduction to evidence-based treatment for children and adolescents. Conceptual and empirical underpinnings of youth therapies are examined. Treatments for three prominent child and adolescent disorders - disruptive behavior problems, depression, and anxiety disorders - are highlighted. Demonstration and practice of specific treatment components is included.
PSYC 4566 Systems of Psychotherapy II (4 Credits)
Conceptual/empirical foundations of interventions for clinical problems, including (but not limited to) parasuicidality, Borderline Personality Disorder, and substance abuse.

PSYC 4571 Multicult Issues & Ment Health (4 Credits)
Theory, research, and practice issues related to the mental health of racial/ethnic minority and other diverse groups.

PSYC 4579 Research Design (4 Credits)

PSYC 4587 Workshop in Marital Therapy (4 Credits)

PSYC 4612 Marital Conflict (1-10 Credits)

PSYC 4620 Advan in Couples Intervention (4 Credits)

PSYC 4625 Marital/Couples Thrpy-Div Popl (4 Credits)
This course will cover the complexities in couples research and intervention that are the focus of current investigations in labs around the world. The major issues revolve around the role that marital problems play in the development, maintenance and treatment of a variety of child and adult problems and vice versa. These will include, adult sexual problems, alcohol and drug use and abuse, anxiety disorders, depression, medical problems, and that marital discord and destructive conflict are generic risk factors for a wide range of child and adult mental health problems and that marital health is a protective factor.

PSYC 4660 Perception: A Cognitive Neuroscience Approach (4 Credits)
An introduction to human perception with a strong emphasis on visual perception. This course evaluates the current understanding of how neural activity in the brain allows people to perceive basic sensory features (e.g., brightness, color, size, position, depth, movement, loudness and pitch) as well as recognize and discriminate complex perceptual patterns (e.g., 2D-shapes, 3D-objects, faces, and scenes). The underlying mechanisms are discussed on the basis of behavioral, neurophysiological, and computational evidence.

PSYC 4688 Clinical Psychopharmacology (4 Credits)
This course offers an in-depth examination of medications used to treat mental disorders, including the neurobiology of these medications. Different options available for each disorder will be discussed, along with issues related to the effective use of psychiatric medications. Prerequisites: Instructor approval required.

PSYC 4920 Ethics-Psych & Rsrch Practice (2 Credits)
Ethical issues on psychological research. Teaching, practice.

PSYC 4925 Clinical Ethics and Professional Issues in Psychology (3 Credits)
Ethical topics related to clinical psychology; professional topics in clinical psychology such as supervision and consultation. Instructor permission required.

PSYC 4930 Psychology Practicum-Clinical (1-5 Credits)
On-the-job training in clinical psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

PSYC 4931 Psychology Practicum-Teaching (1-5 Credits)
On-the-job training in teaching psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

PSYC 4932 Psychology Practicum-Research (1-5 Credits)
On-the-job training in research psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

PSYC 4934 Practicum: DCN Neuropsychology (1-10 Credits)

PSYC 4992 Directed Study (1-10 Credits)

PSYC 5991 Masters Independent Study (1-10 Credits)

PSYC 5995 Masters Independent Research (1-10 Credits)

PSYC 6981 APA Internship (8 Credits)
1 Year APA approved Internship in clinical psychology - the course is not graded.

PSYC 6991 Ph.D Independent Study (1-10 Credits)

PSYC 6995 Ph.D Independent Research (1-10 Credits)

Public Policy (PPOL)
Courses

PPOL 4100 American Public Policy System (4 Credits)
The American Policy Agenda, which is required for MPP students, will provide an intensive overview of the development of American public policy in the 20th century, with special emphasis on the interconnection between the values of the public and private sectors. Through the lens of a useful descriptive model, graduate students will learn concepts of the role of government have evolved from: the (1) constitutional period, wherein political society was thought to be a rational device for the protection of property and liberty and prosperity was equivalent to the free management of affairs; to the (2) administrative period, wherein powerful regulatory agencies were created to control concentrations of corporate power and the idea developed that the market does not always reflect the social good; to the (3) bureaucratic period, wherein the stock market collapse of 1929 and the Great Depression reversed key ideas of limited government inherent in the constitution and, beginning with the New Deal, social engineering in the "public interest" defined virtually every problem as "national," to the (4) social welfare period, wherein government became the source of vast entitlements and benefits and interest groups came to dominate the policy debate; to the (5) current period of stalemate, gridlock, and reconsideration, wherein big government is a given, along with a utilitarian social contract defined as that which provides the most efficiency, the most productivity, and the most consumption for the most people.

PPOL 4200 Microeconomics for Public Pol. (4 Credits)
Microeconomics for Public Policy Analysis will provide a comprehensive, case-based overview for the MPP student of the consequences of contemporary public policies for individuals, households, and firms. Public policy is often said to consist of the distribution of scarce or valuable resources or benefits through the mechanisms of the public sector. This course will provide the opportunity to gain fluency and expertise in the application of economic analysis to such problems as transfer payments, entitlements, government subsidies, taxation, housing, education, labor, welfare and crime. Issues concerned with exploring the government’s role in encouraging innovation, maintaining a growing economy, and budgeting under conditions of "surplus," will be explored using contemporary policy initiatives. Two competing visions of public policy will be examined: the role of economic policy in securing the benefits of "ordered liberty," which accrues to the individual; and (2) the vision of public policy as fundamental to the correction of anomalies in the market and in the distribution of scarce resources, often based on interest group claims of "disparity" and "inequality".

PPOL 4300 Quantitative Analysis-Pub Pol (4 Credits)
This course will provide the MPP student with the tools of mathematical analysis needed for the advanced study of public policy issues and evaluation of alternatives. Topics will include descriptive statistics, probability, sampling, estimation, inference and hypothesis testing, variable analysis and correlation, regression theory, reliability and validity, and prediction and simulation. Students needing review of college-level algebra will be referred to appropriate tutorials. The overall learning objective of this course is to help students recognize and apply basic statistical concepts to Public Policy and, more in general, Social Science analysis. Students will learn how to use statistical software to: build datasets, describe data in a visual and analytical fashion, perform statistical tests, and construct basic statistical inference models. Students will also learn how to report their analytical findings for Public Policy analysis.

PPOL 4400 Analytical & Critical Skills (4 Credits)
This course will provide the student with the analytical tools necessary to evaluate competing points of view, using empirical techniques, logic, and statistical inference. Case studies will be drawn from the current legislative and regulatory environment and will provide the MPP student with opportunities to construct a course of action, based on the use of logically consistent arguments and on the persuasive use of facts and empirical data. Students in this course will also learn the history and development of the scientific method, how to distinguish speculation, theory, fact, and opinion, how to identify the validity, ideological content or irrationality of data, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to argument not based on evidence. Students in this course how to identify the validity, ideological content or irrationality of information, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to arguments not based on evidence.

PPOL 4500 Cost-Benefit Analysis/Pub Pol (4 Credits)
How do we determine if programs have met their objectives? Increasingly, this is a matter for empirical evaluation. This course will focus on quantitative approaches to program evaluation and on the primary tool available to the policy analyst in the modern organizational framework, cost-benefit analysis. Various issues will be considered, including the "costs" associated with taxes (and tax expenditures), governmental mandates, health and safety regulation, environmental regulation, government "investments;" such as those in education, defense, law enforcement, and the regulation of financial industries.

PPOL 4501 Great Issues Forum (2 Credits)
Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, health care, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policymakers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.
PPOL 4502 Issues Forum II (2 Credits)

Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, health care, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policy-makers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.

PPOL 4504 The Policymaking Environment (2 Credits)

This forum aims to provide MPP students with a robust understanding of the essentials of the policymaking process in the United States. We will be examining in sequence three basic topics: 1) The political values and principles that establish the parameters for the policymaking environment; 2) The set of governmental and non-governmental actors who participate in policymaking and how they relate to each other; and 3) What policymaking models can help to explain the way policy is made by those actors.

PPOL 4600 Regulatory Policy (4 Credits)

This course will provide the MPP student with a solid understanding of the legal basis for policy action, through a case-based examination of executive and legislative authority, judicial policy-making, the expansion of the due process and equal protection clauses of the 14th Amendment, and the expansion of administrative authority under the Administrative Procedure Act. Such issues as affirmative action, government contracting, school finance, antitrust, and substantive due process will be presented utilizing a combination of traditional legal analysis and the cost-benefit approach of the policy specialist.

PPOL 4700 Public Management & Budgeting (4 Credits)

This course introduces students to the topic of public management, which includes concepts such as organizational structure, performance management, and strategy development. In addition, the instructor will teach the techniques and concepts of government and non-profit budgeting/financial management. The budgeting process includes program development/implementation, cost and revenue estimation and projection, and budget evaluation. The relationship between public management and budgeting will be explored.

PPOL 4701 Special Tpcs in Public Policy (4 Credits)

Various topics in public policy are covered. Topic subjects to change each term as deemed appropriate with local, regional and federal policy issues and regulation changes. Prerequisite: PPOL 4100. Two examples are: “Denver Dynamics” explores the policy options and responses to the challenges of big city governance. Exclusive interactions with major stakeholders in the City and County of Denver are featured, with a view to giving the student an insider’s view of power, economic development, political influence and decision-making. “Getting Results Inside the Beltway: Power and policy in Washington, D.C.” is a travel course consisting of specially-arranged one-on-one sessions with Washington-based lawmakers, decision-leaders, and policy experts, through which graduate students will gain an understanding of the dysfunctions of the current budget process, political polarization, the interest groups that shape the current policy dynamic, the increasing importance of media in shaping policy, the solutions that will be required for the United States to regain fiscal sanity and solvency—and the challenges that will need to be met to preserve American hegemony and redefine national security.

PPOL 4806 Decision Making in Public Policy (4 Credits)

Provides a new perspective on the process of decision-making in the public and private sectors. Viewed from the perspective of a significant paradigm shift, the “rational model” of policy-making is contrasted with emerging theories based on a view of human nature that is unpredictable, idiosyncratic, and context-based. Case studies are drawn from the current financial crisis and from the ongoing debate over economic stimulus and recovery. Additional examples are provided from the New Deal era, the Vietnam war, Watergate, and from the wars in Afghanistan and Iraq.

PPOL 4808 Health Care Policy (4 Credits)

No prerequisites. The purpose of this course will be to explore the assumptions, the history, the development and the current practices of the U.S. health care systems. What are its strengths and what are its weaknesses? How do we explain its paradox of excess and deprivation? We will spend some limited time examining other nation’s health care systems for comparative purposes. The course will cover a broad range of topics and will explore a systems approach to health, obtaining an understanding of the integration of the public and private sector, free-market and government regulation; the effects on the doctor/patient relationship, the new health care demands, the search for quality, the role of new technologies and the changing ethical standards. Such a course cannot be designed to describe a functional world of health care delivery for even as the description is being formulated, the practical and functional aspects of that world are changing.

PPOL 4811 The Strategy of Public Policy (4 Credits)

Public Policy is formed in many ways: legislation, court rulings, initiative campaigns, executive orders, and regulations, not to mention many other subtle instruments that are often invisible to the public. All of these tools make analyzing policy a difficult task, and they make choosing the right strategy for getting a policy implemented even more complicated. How is it that policy makers choose to implement their policies? Are any options more effective than others? To understand the policy process in the U.S., policy analysts must understand the institutions that exist in government.
PPOL 4812 Supreme Court & Public Policy (4 Credits)
This course, which is specifically designed for graduate students in public policy, provides the necessary professional background for students to understand the role of the Supreme Court of the United States in the formulation of public policy. Central to the course are the due process and equal protection clauses of the 14th Amendment to the U.S. Constitution, which are the key to understanding the vast expansion of Supreme Court power since the New Deal. The course also provides a basis for the student to understand the constitutional basis for administrative regulation, as well as freedom of expression issues inherent in the 1st Amendment.

PPOL 4900 Public Sector Internship (0-10 Credits)
Students will gain hands-on experience with policy issues in a variety of settings.

PPOL 4991 Independent Study (1-4 Credits)
Students will work in collaboration with faculty from the Institute for Public Policy Studies to complete an independent study project.

PPOL 4992 Directed Study (2-4 Credits)

PPOL 4995 Independent Research (1-4 Credits)
The Policy Memorandum research project is designed to provide the MPP student with a capstone experience that will synthesize the knowledge and skills that were acquired during the 60 quarter hours of formal coursework. Included among the skills that students will apply are research, quantitative methods, economic analysis, cost-benefit analysis, budgeting and project management.

Real Estate (REAL)

Courses

REAL 4000 Business of the Built Environment (4 Credits)
The emphasis of this course is on the importance of real estate and the built environment and its impacts and influences on how we live, work, and play. The course employs a full life cycle sustainable model that links the various phases, functions, and professions of real estate, project delivery, and asset/facility management to create holistic, value generating solutions for society. Professional practices/skillsets associated with the many career options that engage the built environment are explored.

REAL 4002 The Business of Real Estate (2 Credits)
This is an introduction to home ownership, real estate industry and its markets; legal aspects of home ownership from consumer's point of view, including property rights, title, concepts, deeds, and purchase contracts. Listing contracts, law of agency, types of mortgages, basics of home loan finance, appraisal, investment and tax benefits are also covered in this class. Partially satisfies Colorado Real Estate sales licensing requirements.

REAL 4007 Real Estate Financial Analysis (4 Credits)
Alternative analysis formats that can be applied to a wide array of real estate analysis issues; simulates working/decision-making environment; structured overview of analysis tools focused on specific facets of multidimensional real estate decision-making environment; applications in investment analysis, feasibility analysis, valuation, market analysis, and report writing and presentation. Prerequisite: REAL 4407.

REAL 4010 Real Estate Capital Markets (4 Credits)
This course exposes students to the commercial real estate capital markets; including real estate investment trusts (REITs) and commercial mortgage-backed securities (CMBS), plus institutional investors. The complexities of capital market products are discussed, students receive a greater understanding of the alternatives that are available. The class includes lectures, guest speakers, readings, class discussions, a major REIT analysis project, and case studies. Cross listed with REAL 3010. Prerequisite: REAL 4007.

REAL 4110 Advanced Issues in Real Estate & Construction Management (4 Credits)
This course concentrates on five advanced real estate and construction management topics; the design build environment, negotiation skills in real estate and construction management, real estate capital markets, the entitlement process – urban planning, zoning, PUDs and underutilized tax advantages in real estate. Cross listed with REAL 3110. Prerequisite: REAL 4407.

REAL 4140 Global Perspectives in Real Estate (4 Credits)
This course focuses on inbound U.S. and outbound U.S. real estate transactions and the cultural issues that impact these transactions. This can also be taken as a Burns Global Delegation travel course. Cross listed with REAL 3140, XRCM 4140.

REAL 4210 Planning, Entitlements, and Public Finance (4 Credits)
Real estate development, place making, and community building require the combined efforts of the public, for-profit, and non-profit sectors. Participants in the real estate development process need to understand and appreciate the sometimes competing and sometimes collaborative interests of governments, agencies, and the private developer. This course is designed to familiarize students with the overall context of urban planning and land use. Students discover the variety of participants in the development process and also become familiar with the project entitlement process, zoning, and land use regulation. Students also examine public/private financing structures such as public-private-partnerships (P3s) and become familiar with detailed calculations relating to Tax Incremental Financing (TIF) and Metropolitan Districts.

REAL 4337 RE Securities/Syn/Entrep (4 Credits)
Introduction to real estate securities; emphasis on private offerings; determining whether a contemplated transaction involves a security, and what happens if it does; exemptions from registration (Reg D); registration requirements; investor suitability, how to syndicate, acquisition of property, marketing or the property, tax structure and formation of syndication, compensation to syndicators, real estate tax considerations. Cross listed with REAL 3337, XRCM 4337.
REAL 4347 Mgmt of Income Properties (4 Credits)
Explore the complexities of managing apartments, condominiums, office buildings, industrial property and shopping centers. This course covers rental markets, development of rental schedules, leasing techniques and negotiations, repairs and maintenance, tenant relations, merchandising, selection and training of personnel, accounting, and owner relations. Cross listed with REAL 3347.

REAL 4357 Corporate Real Estate & Management (4 Credits)
This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. Over the ten week period we will address the diverse but critical components that together account for Facility Management. These shall include: Building Life Cycles and sustainability, facility management as part of the enterprise model within a corporate structure, regulatory agencies, professional relationships and the impact of the build environment on the bottom line, contracting and budget management, move-add-change (MAC) / operations, and general administrative services.

REAL 4369 Real Estate Taxation (4 Credits)
Tax factors affecting investments and operations in real estate; special attention is given to legal forms of ownership, depreciation, tax basis, tax impacts of exchanges, syndications, real estate securities, and other federal tax laws affecting real estate. Cross listed with REAL 3369.

REAL 4400 Real Estate Principles and Practices (4 Credits)
Principles of real estate, real estate industry and its markets; legal aspects of home ownership from consumer's point of view, including property rights, title concepts, deeds, purchase contracts, listing contracts, law of agency, environmental issues and disclosures, types of mortgages, basics of home loan financing, appraisal investment and tax benefits. Partially satisfies Colorado real estate broker licensing requirements. Cross listed with REAL 1777.

REAL 4407 Income Property Finance (4 Credits)
This course explores conventional and alternative financing, mortgage banking, law and markets, loan underwriting analysis and the impact of monetary and fiscal policies on the real estate and mortgage markets, with emphasis on decision making from the equity investors point of view. Specific topics include an overview and history of real estate finance, the taxation and legal aspects of real estate finance, compounding and discounting, functions of interest and real estate capital markets and securities. Specific areas of focus are residential property finance, income property finance, and construction and development financing. Cross listed with REAL 3307.

REAL 4417 Income Property Valuation and Appraisal (4 Credits)
Residential/Commercial appraising, including market cost and income approaches to value, gross rent multiplier analysis, neighborhood and site analysis, valuation of income properties including market cost and income approaches to value, capitalization theory and techniques, mortgage-equity analysis, and investment value concepts. Prerequisite: REAL 4407.

REAL 4450 Argus Financial Analysis (4 Credits)
This course concentrates on practical applications of the Argus (TM) Real Estate Financial Software through interactive examples and case studies. Participants will be exposed to the software's capabilities, fundamentals, and unique nuances. Cross listed with REAL 4500, XRCM 4702. Prerequisite: REAL 4007.

REAL 4701 Topics in Real Estate (1-5 Credits)

REAL 4800 NAIOP Challenge (2-4 Credits)
A unique non-traditional course, where the students will work on a complex real estate problem culminating in an internal competition and external competition which includes a written report and an oral presentation. Cross listed with CMGT 3800, CMGT 4800, REAL 3800.

REAL 4890 Internship (0-10 Credits)

REAL 4980 Adv Valuation/Report Writing (1-10 Credits)
Advanced cutting-edge techniques not yet institutionalized nor commonly practiced in the field. Includes writing skills workshops appropriate to specialized nature of appraisal reports, and composition of a complex field problem report to prepare student for writing "demonstration" report required for MAI professional designation. Prerequisite: REAL 4417.

REAL 4991 Independent Study (1-10 Credits)
REAL 4992 Directed Study (1-10 Credits)
REAL 4995 Independent Research (1-10 Credits)

Religion (RLGN)
Courses

RLGN 4000 Theories and Methods in the Study of Religion (4 Credits)
This course begins with a brief overview of the history of the study of religion in the west, from antiquity to the modern period. When we reach the modern period, the course shifts to considering 'representative' theories of religion, broken down roughly along ideological and/or disciplinary lines.

RLGN 4101 Ph.D. Colloquium in Biblical Interpretation (2 Credits)
Discussion of selected topics in the field of biblical studies, e.g., northwest Semitic inscriptions, Hebrew poetry, Judges, Acts of Andrew, literature of rabbinic Judaism, American biblical studies.

RLGN 4102 Hebrew Bible Seminar: Language and Text (4 Credits)
This seminar focuses on the Biblia Hebraica Stuttgartensia; Hebrew grammar and syntax; and text critical methodology.

RLGN 4103 New Testament Seminar: Language and Text (2-4 Credits)
This seminar focuses on advanced Greek grammar, reading and vocabulary building; textual criticism; and reference tools.

RLGN 4104 Hebrew Bible Environments (4 Credits)
An exploration of the Hebrew Bible in its historical contexts.

RLGN 4105 Empire and the Rise of Christianity (4 Credits)
This course covers approximately the first five centuries of Christian history with a view toward understanding the role empire played in the rise of Christianity, both in terms of the confluence between Christianity and the Roman Empire as well as its role in the development of Christian beliefs, practices, production of discourse, institutions, and strategies of social control.

RLGN 4106 Second Century Life & Thought (4 Credits)
An attempt to understand Christian life and thought in the Roman Empire in the Second-century by analyzing primary sources.

RLGN 4107 Women in Early Christianity (4 Credits)
An exploration of the role women played in early Christianity, with attention given to the social and literary constructions of women in Greco-Roman antiquity.

RLGN 4108 Jewish and Christian Non-Canonical Literature (4 Credits)
This seminar examines Jewish and Hellenistic backgrounds; the social scientific study of early Christianity; and the New Testament in its literary environment.

RLGN 4109 Formation of the Bible (4 Credits)
This course focuses on the development of the Christian Bible. Some attention, however, will be given to the emergence of the Jewish canon, primarily as it relates to and impacts the Christian canon. The chronological expanse of the course ranges from the Hellenistic through the late Roman period. The approach of the course is necessarily literary and historical, but theoretical issues about what constitutes scripture and canon will also be given attention.

RLGN 4110 Hebrew Reading (2 Credits)
Advanced work in biblical languages or a selected issue in a language study.

RLGN 4111 Greek Reading (2 Credits)
Selected readings from the New Testament and other early Christian literature. Greek I, II and Exegesis are prerequisites. Offered each year. May be repeated for credit.

RLGN 4112 Language Seminar (2-4 Credits)
Advanced work in biblical languages or a selected issue in a language study.

RLGN 4113 The Bible and Its Afterlives: Jonah (4 Credits)
This course invites students to place the biblical book of Jonah in conversation with works of literature, art, and theology that interpret Jonah or explore themes in the book, including the nature of God, prophecy, election, death, and transformation. The course will introduce students to the history of interpretation (or reception history) by considering Jonah’s afterlives in a variety of Jewish, Christian, and Islamic texts, artistic programs, and manuscript illuminations.

RLGN 4115 Hebrew Bible Literature: Genesis (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4116 Hebrew Bible Literature: Exodus (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4117 Hebrew Bible Literature: Leviticus (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4118 Hebrew Bible Literature: Numbers (4 Credits)
RLGN 4119 Hebrew Bible Literature: Deuteronomy (4 Credits)
The book of Deuteronomy for centuries has been viewed as laying out a political view of Israel's life together. Josephus, for example, described Deuteronomy as Israel's politiea or "form of government." Government certainly is an issue in the book, particularly as it involves the conduct of self and others. More recently, Deuteronomy is understood to play a foundational role in the books of the Former Prophets within the theory of the Deuteronomistic History. This course examines these and other critical issues in the study of Deuteronomy.
RLGN 4125 Hebrew Bible Lit-Job (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4128 Hebrew Bible Literature: Jeremiah (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4129 Hebrew Bible Literature: Jonah (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4130 Hebrew Bible Literature: Prophetic Literature (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4131 Hebrew Bible Literature: Wisdom Literature (4 Credits)
Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4135 Poetry in the Hebrew Bible (4 Credits)
In this course, we will analyze poems primarily from the books of Job, Lamentations, Psalms, 2 Isaiah, and Jeremiah. Class sessions will be divided between studying some aspect of Hebrew prosody (e.g., metaphor, parallelism, lineation) and looking at the ways in which various poets use these particular devices. We will be particularly interested in identifying how poets bring their messages to life, engage their audiences, challenge (or uphold) the status quo, and revitalize the community's imagination and, in turn, its faith in YHWH. Each week, we will read about a particular aspect of poetry and prepare specific poems with the readings in mind; the readings will provide us with a language that we might discuss specifically how the poets impart and encode their messages.

RLGN 4141 New Testament Literature: Mark (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4143 New Testament Literature: John (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4145 New Testament Literature: Romans (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4146 New Testament Literature: Corinthians (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4147 New Testament Literature: Galatians (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4148 New Testament Literature: Hebrews (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4150 New Testament Literature: Revelation (4 Credits)
Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

RLGN 4151 Studies in Early Christianity (4 Credits)
A critical study of themes and selected movements within early Christianity and other religions of the Greco-Roman world. May be repeated for credit.

RLGN 4152 Identity in the Hebrew Bible (4 Credits)
This course explores diverse constructions of selfhood in the Hebrew Bible in conversation with theories of identity and the self from a range of disciplines, including anthropology, philosophy, sociology, and psychology. In this class, we will consider how the biblical texts present different models of selfhood through discourse, practice, and ritual. Each class session will focus on a different aspect of identity: gender, social class, ethnicity, nationality, colonialism, the body, and kindship and family. Throughout the course, we will discuss the implications of these constructs of identity for ethics, agency, and theology.

RLGN 4153 War, Politics, & Society in the Hebrew Bible (4 Credits)
This course examines the interrelationship between war, politics, and society in the Hebrew Bible and their interplay both in the texts and in larger historical, social, and cultural contexts.

RLGN 4154 Migration and the Bible (4 Credits)
Migration and people on the move pervades the Bible, from Adam and Eve to Jesus. This course examines migration in the Bible and the resources it offers for responding to the current realities of migration, immigration, exile, deportation, and other aspects of migration in the world today. A range of perspectives on migration and the Bible are considered, including denominational resources, international aid agencies, and theoretical viewpoints.

RLGN 4160 Teaching the Bible (4 Credits)
Designed to integrate faith development theory, biblical interpretation and confluent education. Education instructional models for the purpose of assisting students to develop professional self-understanding and functional skills as interpreters and teachers; experience in teaching adults in a local setting.
RLGN 4201 Seminar on Pastoral Psychology (1-4 Credits)

RLGN 4202 Theological Themes in Pastoral Care (4 Credits)
Theological bases of pastoral care. Contributions of contemporary pastoral care to doctrinal theology.

RLGN 4203 Theodicy and Tragedy (4 Credits)
Study of tragic and theological literature for pastoral care in tragic circumstances.

RLGN 4204 Multi-Cultural Pastoral Care & Counseling (4 Credits)
Examines multicultural issues in pastoral care and counseling and explores the dynamics and complexities of culture, race and other socializing factors in pastoral care conversations.

RLGN 4205 Process Theology and Pastoral Care (4 Credits)
This course creates a conversation between process theology and spiritual care. Utilizing an aesthetic approach, we develop a constructive framework of care from themes found in process theology.

RLGN 4206 Post Traumatic Stress Disorder: Pastoral Psychological and Theological Responses (4 Credits)
Students are paired with veterans and provide time-limited supervised spiritual care over the course of 8 weeks. Using a case study format, students review and reflect upon the spiritual care they are providing using theological and psychological perspectives.

RLGN 4207 Moral Stress, Resilience & Spiritual Integration (4 Credits)
Moral stress arises from shame/guilt/fear of causing harm involving conflicts in values. Moral injury arises from traumatic stress that is more shame than fear based, and has been researched extensively among military personnel. Spiritual integration of moral stress and injury uses spiritual practices and theological meaning-making to compassionately identify life-limiting embedded shame-based values, beliefs, and ways of coping with moral stress and injury (lived theologies) in order to compassionately understand the origins of moral stress and injury. Relational resilience is the outcome of spiritual integration based on spiritual practices fostering compassion and more complex theological ways of understanding moral conflicts, stress and injury.

RLGN 4208 Erik Erikson: Resource for Pastoral Care (4 Credits)
This course explores Erik H. Erikson's life cycle theory as a resource for the pastoral care of children, adolescents, young adults, adults, and older adults. Attention is given to Erikson's psychoanalytic orientation and the development of his life cycle theory over the course of his career. The course encourages the use of developmental theory to deepen the student's introspective reflection and vocational orientation. By focusing on the work of a single author, this course is meant to illustrate how a pastoral theology student may use the work of a prominent psychologist in the development of a dissertation topic.

RLGN 4209 Spiritual Care in Pluralistic Contexts (4 Credits)
This course helps students learn emergent pastoral theologies of spiritual care in a pluralistic context and use them to reflect on case studies written by experienced practitioners. In this course, students will identify their personal values, attitudes, and beliefs and examine their own social identities to better understand how these dimensions of self can guide and challenge them in reflecting on spiritual care with those who are different from them.

RLGN 4301 Colloquium in Comparative Study of Religion (0-4 Credits)
Critical analysis of the literature concerning (a) methods, (b) primary problems and (c) perspectives in the comparative study of religions. Examination of historical, anthropological, psychological and phenomenological approaches to the study of religions.

RLGN 4302 Buddhist Philosophy (4 Credits)
An introduction to the Buddhist philosophical tradition that covers both the different philosophical movements within Buddhism as schools of thoughts and major philosophical issues, such as the theory of karma and determinism, the nature of mind, proofs for past and future lives, theories of knowledge, ethics, the doctrine of emptiness and the nature of enlightenment.

RLGN 4303 Sacred Space and Place in Comparative Perspective (4 Credits)
This course examines sacred spaces and sacred places from a comparative perspective. Through close reading and discussion of primary and secondary sources, students are challenged to think critically and theoretically about sacred spaces and places.

RLGN 4304 Material Divinity (4 Credits)
This course explores how religion happens in material culture - broadly defined as images, devotional and liturgical objects, architecture and sacred space, works of art, and mass-produced artifacts.

RLGN 4305 Pilgrimage in Comparative Perspective (4 Credits)
This is a comparative course that examines the dynamics of pilgrimage from a number of different angles - theoretical, doctrinal, ritual, social - and which utilizes a variety of sources - including classical, ethnographic studies of actual pilgrimages, and focused studies of particular pilgrimage places - with the goal of gaining a thorough understanding of the phenomena of pilgrimage in all of its complexity.

RLGN 4320 Sufism (4 Credits)
This course examines the assortment of attitudes, rituals, and orientations that fall under the umbrella of tasawwuf known in the West as “Sufism.” Special attention will be placed on pilgrimage (ziyarat) and its mediation between believer, saint, and Allah.

RLGN 4321 Islam, Gender, and Sexuality (4 Credits)
This course examines issues surrounding gender and sexuality in Islam. Through a close reading of religious texts, critiques of patriarchy, and historical studies, students are challenged to think critically about the construction of gender roles and the regulation of sexual practices in Islam. By the conclusion of the class, students gain insight and understanding regarding the ways modernity has radically altered norms surrounding gender and sexual preference in Muslim-majority societies.
RELGN 4401 Race, Gender, Class: Historical & Social Analysis of Racism in the Modern World (4 Credits)
An historical survey of the role of racism, sexism and classism in shaping the oppressive institutional structures of the existing world order and of how sociological analysis of these structures can help justice and peace activists direct effective action toward the elimination of race, gender and class oppression.

RELGN 4402 American Indian Cultures and Religious Traditions (4 Credits)
A survey of the worldviews of Native American people, as these pertain to both inter-tribal beliefs and Native American ceremonial life, with an attempt to show how Native American practice proceeds from their worldview.

RELGN 4403 Sects, Cults & New Religions (4 Credits)
An exploration of non-mainstream religious groups. Topics include innovation and recruitment; "cult" controversies; sectarian Christianity, gender and sexuality; UFO religions; and religion and marginalized racial projects.

RELGN 4404 Race and Religion in the United States (4 Credits)
An exploration of the different ways in which race is understood religiously in the United States and how race impacts both white and racial minority religious institutions. Specific topics include the black church, the Nation of Islam, Native American theology, the Christian far right, Asian American religions, Latino/a religions, and multiracial congregations.

RELGN 4405 Social Construction & Selfhood (4 Credits)
This course invites us into a collection of investigations into the intersections of social structures and individual identity or selfhood. While reading in a variety of disciplines and genres, we are drawn together around the questions of how one understands the possibilities for individual or communal agency in light of the formative, systemic power of social structures and institutions. Beyond conceptual understanding of this relationship, we ask questions of how to encourage coherent religious, educational, and other forms of practice in light of the realities of social construction. These reflections are particularly important for persons who are interested in social change and the very real barriers to its generation.

RELGN 4406 Education and Social Change (4 Credits)
This course investigates the role of education in maintaining and transforming social structures, identity, and commitments. We examine how educational practices can contribute towards social change in both religious and public settings.

RELGN 4407 Ritual Studies (4 Credits)
By reading some of the most important "classic" and recent theorists of ritual, and by learning to observe and understand ritual behavior, this class will examine the important role of ritual in defining religious groups, creating religious identity, forming religious beliefs, and structuring how we view the world. Prerequisite: Masters students need permission of instructor.

RELGN 4408 Science & the Christian Right (4 Credits)
An examination of the American Christian Right's challenges to mainstream scientific theories and practices. Specific topics include Intelligent Design movement, reparative therapy of homosexuality, denial of human-driven climate change, and opposition to stem cell research.

RELGN 4409 Social Movements from Liberationist Perspectives (4 Credits)
Liberationist thought has greatly impacted how social movements, and the theological and ethical perspective which inform them, has been implemented to bring about social and political change since the mid-twentieth century. But with the state of the new millennium, many have proclaimed the death of liberation theology, dismissing its significance as a passing fad. The purpose of this course is to explore the roots, development, and history of liberationist thought as it first manifested itself within a Latin American context then expanding to other continents and faith traditions, and how that thought has been utilized to inform social movements.

RELGN 4410 American Christianity and Indian Genocide (4 Credits)
A collaborative research seminar exploring different aspects of the history of the relationship between American Christianity and genocidal campaigns against native peoples, including the colonial period through the 20th century. Students will research particular personalities and historical events related to this topic, including the campaigns of the military on the 18th century Western frontier, sites of massacres including Sand Creek in Colorado, and other events normally obscured by accounts of US history. Students will learn the relationships of ideology and worldview to the narration of history, as well as skills in identifying and working with primary historical sources.

RELGN 4411 Contemporary Sociology of Religion (4 Credits)
This course examines contemporary theoretical and empirical issues in the sociological study of religion. Principal topics include secularization and religious revival, rational choice, politics, ethnography, and religion and racial/ethnic diversity in the United States.

RELGN 4412 Health & Healing, Death & Dying: Technologies of Inspiration and Expiration (4 Credits)
Through this course, students will encounter a variety of perspectives on the nature, morality, justices, and injustices of health, healing, and dying.

RELGN 4413 Theology and the Construction of Race (4 Credits)
Several important books have recently been published making the case that religion, and more specifically, Christian theology, have played a constitutive role in creating the ideas of race and racial hierarchies. This course is an extended argument (with which students are free to agree or disagree in part or in whole—in any case they will become familiar with the relevant literature and concepts) that 1. In significant ways religion and race are modern, not universal or permanent, constructions; that 2. Religion and race are two of the very few fundamental conceptual building blocks of the modern world, such that, no matter what one thinks of religion and race, one is unable to think or operate in the modern world without them; and that 3. Religion and race are mutually imbricated in such a way that, even when race is not explicitly a topic of discussion or observation, modern religion is always already racialized.
RLGN 4414 Atheists, Secularists & Nones (4 Credits)
An examination of non-religious and/or non-affiliated populations, with a primary focus on the United States. We will explore: 1) the variety of beliefs among those not affiliated with religious institutions; 2) different social expressions of atheism; 3) the implications of recent religious trends for debates about secularization in the modern West.

RLGN 4501 Holy Spirit: History and Traditions (4 Credits)
What have Christians believed and written about the Holy Spirit through the centuries? Why does Pentecost show up in such different ways across the pages of Christian theology and literature? In the midst of the European Enlightenment, why did John Wesley hold such special reverence for the role of experience in Christian thought and education? Why has the Pentecostal legacy functioned simultaneously as a subversive trope for critiquing dominant church paradigms while also sparking creative, re-interpretations of Christian tradition among so many reformers? These are just a few of the questions explored in this class as we discuss historical and theological works by contemporary scholars in pneumatology and church history.

RLGN 4502 Historiography (4 Credits)
This course surveys the various theories and methods developed by historians since the emergence of the historical profession from the roots of historicism and philosophy of history in the mid-1800s; and examine the relationship of history to theology, cultural theory and literary studies.

RLGN 4503 Women in Medieval Europe (4 Credits)
This class focuses on the role of medieval women, who struggled to find a voice in the political, religious, social and literary arenas of medieval Europe from about 1100 to 1600. Through primary and secondary source readings we look at everyday women’s lives in this period. The class also includes the lives and careers of some of the most famous women writers and leaders of the period, such as Hildegard of Bingen, Eleanor of Aquitaine, Marie de France, Margery Kempe, Julian of Norwich, Queen Isabel of Castile, Teresa of Ávila, and Queen Elizabeth I of England.

RLGN 4504 Muslims, Jews and Christians in Medieval Spain (4 Credits)
An exploration of the “Golden Age” of cross-cultural encounters that occurred in Medieval Spain from the Muslim conquest in 711 to the fall of Granada and the expulsion of Jews in 1492. This course offers an overview of the historical and ecumenical dimensions of Jewish, Christian, and Islamic coexistence, known as “La Convivencia,” and critical reflection on the relevant lessons this era still holds in the post 9/11 period.

RLGN 4505 Spanish Mystics and Reformers (4 Credits)
Early modern Spain witnessed the emergence of Catholic and Protestant individuals whose timeless works and popular appeal in subsequent centuries rested largely upon the practice of “contemplation in action.” This course examines the historical context and works of such mystics and reformers as Teresa of Ávila, John of the Cross, Ignatius of Loyola, Juan de Valdés, Constantino Ponce de la Fuente Cipriano de Valera, Casiodoro de Reina, Antonio del Corro, and others. It also explores the influence of Islam and Judaism on these sixteenth century religious movements, as well as modern Spain’s subsequent rejection of this pluralistic legacy as it sought to define the young nation-state sought to define its new national identity and consolidate power across Europe and its vast colonial territories in the Western Hemisphere.

RLGN 4506 The Pursuit of Happiness: A History (4 Credits)
This course provides a historical examination of key concepts, major questions, and practices about humanity’s search for happiness from the Hellenistic-Roman period of Antiquity through the Early Christian and Medieval periods. The content centers on the role of Classical moral philosophy and Christian theology in the formulation of eudemonic theories about the problem of happiness in relation to metaphysical and religious influences as well as to socio-cultural, political, and institutional norms and practices that shaped Christian notions of human purpose and potential. The legacies of these ancient ideas on the development of modern assumptions about happiness and human flourishing are also discussed towards the end of the course.

RLGN 4507 Violence & Tolerance in Medieval Europe (4 Credits)
This course examines a wide range of texts and events from the 11th to the 16th centuries dealing with various forms of violence across the medieval European world and contrasts these with medieval European notions of tolerance in theological, literary, and political discourse. Among the topics to be covered will be the Peace of God and the Truce of God, feudal warfare and its legacy, the Crusades and their impact upon the Latin West as well as the on Arab East, anti-Semitism in the Latin West, the Inquisition, persecution of heretics and witches, Church and State struggles, and the various dialogues of mutual, theocentric edification among Islamic, Jewish, and Christian authors.

RLGN 4508 Judaism, Gender, and Religion (4 Credits)
Germans refer to the period of roughly 1770-1850 as the Sattelzeit, or “Saddle Era”—the time between the end of the early modern world and Europe and the modern world. During this era basic assumptions that we continue to make about what religion is and what gender is are constructed. This is also the era when we think of a Judaism is re-shaped in major ways. Through a close reading of primary texts by Jewish women we will examine the intersection of gender, Judaism, and religion and examine the modern construction of these categories.

RLGN 4509 Jewish Christian Relations 50-500 C.E. (4 Credits)
This course considers the “parting of the ways” between Judaism and Christianity beginning with the tumultuous first century (the Jewish War and the beginnings of the Jesus tradition) and continuing through the synthesis of Christianity and Empire in late antiquity. Along the way, we will consider how Christianity and Judaism emerged from a common matrix, influenced and co-created each other, and Othered each other in their processes of self-definition. We will attend especially to the problems with the “World Religions” model, ancient identity formation, the origins of Christian anti-Semitism, the effects of empire and diaspora, and modern attempts to explain the “parting.”
RLGN 4612 African Theology and Post-Colonial Discourse (4 Credits)
This course attempts to examine the relationship between the emergence of African Theology and the historical conditions which characterize Africa’s encounter with the European/American will to power. The initial hypothesis to be tested is the claim that the will to power provides the locus classicus for formulating the identity of African theological reflection. This makes the latter a part of a much larger discourse on Africentricity. The course takes the student through a close reading of basic texts produced by African theologians themselves. All the major issues characteristic of the discourse of African Theology is dealt with.
RLGN 4613 Augustine and His Influence: 400 C.E. to 1000 C.E. (4 Credits)
Theological contribution of the great North African Bishop; his major writings, such as Confessions, City of God and The Trinity; and his anti-Pelagian, anti-Donatist, and anti-Manichaean writings.

RLGN 4614 Liberation Theologies (4 Credits)
Consideration of contemporary liberation movements with focus on feminist, black and Third World theologies. Special concern is with what the various perspectives of sex, race and class analysis suggest for one another and for theology and social ethics generally.

RLGN 4615 Being Human in the Modern World (4 Credits)
What does it mean to be human? After a brief survey of traditional Christian answers to this question, we focus on the theological anthropology that has become the de facto theory of human nature since the emergence of the modern western world in the early 19th century. Theological anthropology can be the driver of other doctrines in a systematic theology; it also underpins work not necessarily seen as theological, such as ethics, development, and human rights. A rich understanding of this anthropology is necessary for theological reflection in our current context.

RLGN 4616 Sin and Evil (0-4 Credits)
This course is a critical and interdisciplinary exploration of the ideas of sin and evil. Most religious traditions have some account of human brokenness, pain and suffering. Christians have traditionally used the language of sin and evil to describe these phenomena. These ideas implicate a wide range of issues such as human nature, God, the environment, ethics, the law, and society itself. In this course we examine the historical, theological, and philosophical content of the ideas of sin and evil within various strands of Christianity, and in relation to other religious traditions. The course will also critically engage secular descriptions of and reactions to sin and evil.

RLGN 4617 Forgiveness (4 Credits)
In the histories of philosophy and religions, 'forgiveness' emerges as a grounding concept for thinking about God, self, and community. This course examines core texts and contexts within a range of religious, philosophical, and theological discourses on forgiveness, 'loving the enemy', and reconciliation. The course explores a variety of spaces of forgiveness as well as the possibility that the 'impossibility of forgiveness' must be allowed to emerge as a valued theological, ethical, and civic principle of personal and communal identity.

RLGN 4618 Christian Theology and Disability (4 Credits)
Using the category of "disability" as a starting point, this seminar examines constructive theologies in which attention to human vulnerability, limitation, and interdependence is fundamental to religious thought and practice. It presents "ableism" as a form of social injustice, emphasizing its intersections with other forms of oppression. It names Christianity's past and present complicity in ableism, while also highlighting the tradition's resources for effective opposition. Consideration expands beyond persons with disabilities to include common phases of life like infancy and frail old age. The course's primary aim is to equip students to articulate theologies that affirm that which ableism devalues.

RLGN 4619 Kierkegaard and Existential Theology (4 Credits)
Kierkegaard and the origins of existentialism; twentieth-century forms of existentialism and recent developments; the decline of neo-orthodoxy and resurgence of phenomenology.

RLGN 4620 Schleiermacher as Resource (4 Credits)
Consideration of the theology of Friedrich Schleiermacher. Analysis of the philosophical and theological predecessors of Schleiermacher as well as the tradition of theological liberalism that followed him.

RLGN 4621 Theology of Paul Tillich (4 Credits)
This course provides an introduction to the systematic theology of Paul Johannes Tillich (1886-1965). It explores the content and form of Tillich's theological method and his unique contribution as a Christian existentialist. Key considerations of Tillich throughout the course include 1) his personal theological formation 2) the content and form of Tillich's theology and method as shaped within the historical, religious, and cultural context of Nazi Germany to the McCarthyism, and 3) the relevance of Tillich as a conversation partner for thinking theologically about the contemporary intersections of theology and culture.

RLGN 4622 Doing Christian Ethics from the Margins (4 Credits)
Many of us have been taught religion through the eyes of white, middle-class males. How then do we do ethics from the perspective of the disenfranchised? The aim of this course is to enable students to: construct ethical responses to case studies from the perspectives of those suffering from race, class and gender oppression; to investigate Biblical protest narratives as to the resistance and struggle against race, class and gender domination and oppression; and to examine various liberationist ethical interpretations as a source for overcoming dominant religious power structures.

RLGN 4623 Formative Figures in Christian Ethics: The 20th Century White Male Canon (4 Credits)
This course on formative white male figures in Christian Ethics examines the ethical canon from a historical perspective. Special attention is given to texts and traditions as living changing heritages.
RLGN 4642 Theology and the Rise of the Historical Consciousness (4 Credits)
Theological work today is done in the context of the rise of the historical consciousness, a phenomenon with its roots in the late 18th and early 19th centuries. We inherit a fundamentally different worldview from the worldviews of the ancient and medieval worlds that gave rise to many of the classical Christian practices and beliefs, and different from contemporary non-western worldviews. The historical consciousness leads to a particular set of assumptions about Biblical authority, identity and subjectivity, epistemology, the relationship of individuals to communities, etc. This class examines important texts in the development of the historical consciousness, analyzes issues raised for Christian theology, and points to some of the theological resources developed in its wake.

RLGN 4643 Women and Christian Theologies from the Global South: A Postcolonial Feminist Approach (4 Credits)
This course is a critical study of the challenges and contributions of Christian feminist theologies from the global south to theological studies in North America, particularly, Christian feminist theologies. Framed in postcolonial discourses, this course will study works of representative figures in Christian feminist theologies from Africa, Latin America, and Asia. Topics will include the impact of globalization, postcolonial discourse, religion and culture, sexuality and spirituality, and ecological concerns.

RLGN 4644 Environmental Ethics and Global Hunger (4 Credits)
The course seeks to develop a constructive conversation on the causes of global hunger by examining significant issues surrounding the present-day distribution of food and its negative impact on the environment. Furthermore, the course will examine what type of praxis can be employed to bring about social and political change.

RLGN 4701 Topics in the Study of Religion (0-4 Credits)
RLGN 4702 Topics in Biblical Studies (0-4 Credits)
RLGN 4703 Topics in Theological Studies (0-4 Credits)
RLGN 4761 Social Ethical Issues (4 Credits)
Examination of the scope of Christian social ethics and the relationship of the analytic and diagnostic task to normative and prescriptive endeavor. May be repeated.

RLGN 4762 Justice & Peace Struggles (2, 4 Credits)

RLGN 4991 Independent Study (1-4 Credits)
RLGN 5000 Pedagogy and the Teaching of Religion (4 Credits)
This course looks at pedagogical methods as they relate to the teaching of religion. Students design syllabi and materials appropriate for the teaching of religion in at least two different contexts. In addition, the course covers theoretical issues related to the teaching and learning process.

RLGN 5010 Lived Religion Colloquium (4 Credits)
This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on religion as it is lived by persons and communities. The specific theme of the colloquium changes each time it is taught.

RLGN 5020 Conceptual Approaches to Religion Colloquium (4 Credits)
This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on conceptual approaches to the study of Religion. The literature may focus on specific issues, concepts, and/or social and cultural phenomena. The specific theme of the colloquium changes each time it is taught.

RLGN 5030 Religion in Text, Image, and Artifact Colloquium (4 Credits)
This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on texts, images, and/or artifacts through which religion, culture and worldview can be studied. The specific theme of the colloquium changes each time it is taught.

RLGN 5101 Methods for Interpreting Biblical Texts (4 Credits)
This seminar addresses critical study of biblical texts, the history of interpretations and hermeneutics.

RLGN 5102 Religious Identity in Antiquity (4 Credits)
An exploration of the way individuals and communities understood their religious beliefs and behaviors during the Hellenistic and Roman periods. The focus is on varieties of Jews and Christians (including how they formed their identities in relation to each other), but consideration is also given to the Greco-Roman religious context.

RLGN 5103 Coptic I (2 Credits)
The course is dedicated to introducing students to Coptic, the last phase of the Ancient Egyptian language and the only one to be recorded in an alphabetic script showing vowels. This portion of the process is designed to introduce the most frequent vocabulary as well as the acquisition of key skills for the understanding of the Coptic language and for the interpretation and understanding of Coptic texts.

RLGN 5104 Coptic II (2 Credits)
The course is dedicated to introducing students to Coptic, the last phase of the Ancient Egyptian language and the only one to be recorded in an alphabetic script showing vowels. This part of the module is designed to promote the acquisition of key skills for the understanding of the Coptic language and for the interpretation and understanding of Coptic texts. The last half of the class requires the student to demonstrate proficiency at reading Coptic.
RLGN 5105 Coptic Readings (2 Credits)
Selected readings from Coptic texts drawn from ancient canonical and noncanonical sources, including discoveries at Nag Hammadi. It includes
advanced vocabulary building and advanced grammatical and syntactical constructions. May be repeated for credit.

RLGN 5201 Ph.D. Colloquium in Religion and Psychological Studies (1-4 Credits)
A review of contemporary developments in psychology and theology offered during the winter quarter each year for doctoral students in the religion
and psychological studies concentration.

RLGN 5401 Colloquium: Post-Colonial Discourse and Other Myths: A Theological Critique of Dominance (4 Credits)
Selected topics in religion and social change, approached from the disciplines and perspectives of history, ethics, sociology, international studies and
social transformation. Offered annually.

RLGN 5402 Religion and Social Change Colloquium: Selected Topics (1-4 Credits)
This is a topics course for the Religion and Social Change concentration colloquia.

RLGN 5750 Professional Development (0 Credits)
This course provides the "nuts and bolts" on not only surviving, but also thriving within the academy. Assuming that the student’s goal is an eventual
tenure-track position, the course demystifies the PhD route so that the student, through a working knowledge of the academy, can better position
her/himself to succeed. Besides providing professional development, the course attempts to raise the level of involvement of PhD candidates in the
profession, from presenting papers to publishing articles.

RLGN 5751 Experiential Learning (0 Credits)
This 0-credit course enables international students to acquire valuable teaching experience as teaching assistants or instructors of record, on
or off campus. It will normally only be taken after completing RLGN 5000 Pedagogy & Teaching Religion. Students should consult the Office
of Internationalization about their visa status and requirements. Students should work with the JDP Program Manager at least one quarter before they
plan to register in order to get this course in the class schedule when it will be needed.

RLGN 5991 Independent Study (1-10 Credits)
RLGN 5992 Directed Study (1-5 Credits)

RLGN 6000 Dissertation Proposal Seminar (4 Credits)
This seminar focuses upon the range of research topics and methods in religious and theological studies by examining dissertations and dissertation
proposals related to the Joint Ph.D. Program at Iliff and the University of Denver. Bibliographic and research methods and matters of style and format
receives particular emphasis. Students present their own dissertation proposals for discussion.

RLGN 6010 Comprehensive Review I: Perspectives in the Study of Religion (4 Credits)
Students meet weekly for review and discussion of the bibliography for theories and methods in the study of religion. The bibliography is available on
line and students are encouraged to read in advance of the course. The final exam is the comprehensive exam in theories and methods in the study of
religion. This course is taken in the fall quarter of the student's third year.

RLGN 6020 Comprehensive Review II: Area Theories and Methods (4 Credits)
Students meet weekly for review and discussion of the bibliography for theories and methods in one of the current areas of JDP program strength:
1) Bible, ancient Judaism and early Christianity 2) Religion, Race and Ethnicity 3) Media, Art and Religion 4) Religion and its Publics 5) Religion and
Human Experience or 6) Theories of Religion. Bibliographies are available on line and students are encouraged to read in advance of the course. The
final exam is the comprehensive exam in the area. This review course and exam is taken in the fall quarter of the student's third year.

RLGN 6030 Comprehensive Review III: Knowledge in a Professional Field (4 Credits)
Students work individually or in small groups with their dissertation advisor and committee members or other faculty in the students' chosen field of
specialization. The purpose is to synthesize coursework, fill in gaps, and expand knowledge needed as a professional in the specific field. The final
exam is the comprehensive exam in the major field. This review course and exam is taken in the winter quarter of the student's third year. It must be
coordinated with Comp Review IV, and between these two reviews the student must have at least 3 different faculty examiners.

RLGN 6040 Comprehensive Review IV: Knowledge in Minor Areas or Subfields (4 Credits)
Students work individually or in small groups with faculty in the students’ chosen subfield or minor area of study, or with the dissertation advisor on a
deeper area of specialization within the professional field. The final exam is the comprehensive exam in the subfield or minor area. This review course
and exam is taken in the winter quarter of the student's third year. It must be coordinated with Comp Review III and between these two reviews the
student must have at least 3 different faculty examiners.

RLGN 6991 Independent Study (1-10 Credits)
RLGN 6992 Directed Study (1-5 Credits)

RLGN 6995 Dissertation Research (0-10 Credits)
Joint Doctoral Program students use these credits as they work on their dissertations, beginning upon completion of comprehensive exams. Normally
8 credits are completed by each student.

Religious Studies (RLGS)
Courses

RLGS 3001 Judaism (4 Credits)
A literary and historical journey through Judaism. This course examines the "Jewish story" from its roots to its modern-day manifestations, focusing on select, classic Jewish texts in their historical contexts. From them, students explore Jewish tradition and practice and actively engage with and in the vivid interpretive imagination of the authors of Judaism throughout the ages. Cross listed with JUST 3001.

RLGS 3002 Creation & Humanity (4 Credits)
Why am I here and what is my place in the world? In this class, students engage a wide-variety of answers to this timeless question. We focus on primary texts regarding the creation of the world and humanity's role within the world from multiple religious traditions, from ancient Near Eastern mythologies to modern spiritualities and film. Themes of the course include humanity's relation to the divine, nature, and one another; we also discuss issues of inequality and sustainability. Students also learn to perform fruitful cross-cultural comparison.

RLGS 3003 The Moses Traditions: Jewish, Christian, and Muslim Traditions about Moses from Past to Present (4 Credits)
The "Abrahamic Traditions" (Judaism, Christianity & Islam) are described as such because each tradition situates its origin in the figure of Abraham, yet there is another foundational figure who looms even larger in all three traditions — Moses. The Moses Traditions traces Jewish, Christian, and Islamic traditions about Moses from the Hebrew Bible through modern America, and in so doing brings into the foreground the religious and interreligious importance of this beloved figure. Drawing from over 2,500 years of texts and traditions, students come away with a deeper understanding of: 1) how the figure of Moses is shaped and reshaped throughout history and across the globe, 2) how religious traditions portray and redescribe foundational figures to suit the ever-changing needs of their communities, and 3) how to engage a multi-faceted, culturally-embedded, and millennia-long collection of traditions in a way that yields fruitful insight into the inner workings of the religious imagination. This course is cross-listed with JUST 3003.

RLGS 3023 Great Thinkers: Maimonides (4 Credits)
Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with PHIL 3023 and JUST 3023. Prerequisite: junior standing or instructor's permission.

RLGS 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)
Using the "Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides' core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Aviceanna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is "metaphysics"?; God's unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God's ways as well as "negative theology"—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity vs. emanation; philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and PHIL 3024. Prerequisite: Junior standing or instructor's permission.

RLGS 3086 The Emergence of Monotheism (4 Credits)
This course is cross-listed with JUST 3086. Monotheism, the belief in a singular deity, did not arise out of nothing. Rather, the emergence of monotheism was a multi-stage process spanning several millennia and involving numerous religious traditions, primarily Judaism, Christianity, and Islam. This process was marked by internal and external conflict, as individuals and communities struggled to distinguish themselves from their non-monotheistic predecessors and neighbors, while often attempting to convince others to do the same. In this class, we begin with the ancient Near Eastern religious environment in which the idea of monotheism first appeared, then turn our attention to how the movement toward monotheism shapes the texts of the Hebrew Bible, New Testament, and Quran. We also look to archaeological sites and case studies in material culture to fill out our understanding of the lived experiences at play in the emergence of monotheism.

RLGS 3102 Early Judaism (4 Credits)
This course traces the development of Judaism in history and literature from the Babylonian Exile and the end of the biblical period through the origins of Rabbinic Judaism and the completion of the Babylonian Talmud (c. 650 CE). However, special emphasis is placed on Jewish culture in the late Second Temple period (c. 200 BCE to 100 CE) and its impact on the early Christian movement, including Jewish literature from the time of Jesus, lost texts of the Bible, new evidence from the Dead Sea Scrolls, and the few surviving historical sources of the Second Temple Period. In addition, students analyze how the Bible came to be and understand how sacred texts and their interpretations eventually became the new center of both Judaism and Christianity. Cross listed with JUST 3102.

RLGS 3150 The Bible & Dead Sea Scrolls (4 Credits)
This course includes an advanced study of the Dead Sea Scrolls with a particular focus on the Bible as it appears in the Qumran library. We will discuss the variant versions of the Bible, some of which were previously unknown before the discovery of the Scrolls, and how the findings of the Scrolls may question the very idea of "Bible" itself in the context of the late Second Temple Judaism. Further, we will place particular emphasis on studying the way biblical texts were engaged, interpreted and even written by the authors of the Dead Sea Scrolls. In this way, we shall explore the origins of biblical interpretation and how the notion of the Bible came to be. Cross listed with JUST 3150. Prerequisites: One year of Hebrew language or equivalent or by special permission of the instructor.
**RLGS 3151 Dead Sea Scrolls (4 Credits)**
The Dead Sea Scrolls represent one of the greatest manuscript finds of the twentieth century and have been said to be the most important discovery in biblical archaeology. These scrolls offer a rare window into early Judaism and Christianity and offer us the earliest and most important witnesses to the (Hebrew) Bible. This course covers the Dead Sea Scrolls in their historical, literary and religious context in English translation, together with relevant scholarly research. Cross listed with JUST 3151.

**RLGS 3192 Christian Classics (4 Credits)**
Reading and discussion of influential historic books pertaining to Christian life and devotion.

**RLGS 3203 Christianity (4 Credits)**
This is an introductory course about the Christian religion, with a substantial component devoted to experiential learning. The primary goal of the course is to acquaint students with the richness, dynamism and diversity of one of the world's largest and most influential religious traditions. Even those students who have some general knowledge of Christianity benefit from the disciplined approach of the academic study of religion.

**RLGS 3204 Christianity in the British Isles (4 Credits)**
It is the contention of this course that Christianity in the British Isles constitutes a singular chapter in the history of the religion and must be approached and appreciated as such. The circumstances surrounding Christianity's introduction to Britain--as documented by the Venerable Bede in his Ecclesiastical History of the English People--presaged a destiny for the English Church that would be “peculiar.” With decidedly Roman sympathies, Bede's reforming agenda is presented as historical fait accompli. The narrative nevertheless bears witness to the vibrant and resilient character of Celtic spirituality. Although Henry VIII officially brought the Protestant Reformation to England from the Continent in the 1530s when he severed the English Church from the Papacy, the extent to which the Reformation in England was ever as theologically "Protestant" as it was in Europe is open to debate. The Oxford movement--at once reforming and catholicizing--would otherwise seem incongruous were that not the case. Indeed, as we shall see, the notion of semper reformanda ecclesia is, perhaps, most suited to this geographical context. Not surprisingly, playwrights, novelists, and filmmakers have found no little inspiration in Anglican reform's concomitant turmoil and intrigue.

Using a variety of critical methods, this course explores the social, political, and religious influences that shaped the New Testament as it was written, copied, edited, canonized, and translated into its current forms. Students will perform a variety of exercises in class to illustrate the complicated process by which the New Testament was formed.

**RLGS 3300 Psychology of Religion (4 Credits)**
Beliefs, feelings and actions representing human religious response of experience; function of religion in individual life.

**RLGS 3302 Islamic Fundamentalism (4 Credits)**
This writing-intensive course introduces students to the history and scope of fundamentalist movements in the Muslim world, focusing on the Middle East. Beginning with a look at the internal traditions of renewal and reform built around the idea of a return to the fundament or origins of Islam, the course examines the rise of major movements from the 1700s to the present. Students will engage with key questions, including the following: What distinguishes fundamentalism from radicalism? How do Sunni and Shii fundamentalisms differ? What roles have these movements played in politics and society, and how might these evolve in the future? How might policy makers and others best approach fundamentalist groups? A basic knowledge of Islam is assumed; students wishing to enroll without this background knowledge will be provided supplementary readings.

**RLGS 3315 Religion & Moral Psychology (4 Credits)**
Philosophical foundations and research strategies of psychological studies of moral thought; Aristotelian, Kantian and utilitarian thought included, as well as religious dimensions of morality.

**RLGS 3318 Jesus on the Silver Screen (4 Credits)**
First and foremost, this is a course in religious studies. It is a course about Jesus, a religious reformer of late ancient Judaism whose movement, by the end of the first century of the Common Era, gave rise to an identifiably separate tradition. It is a course about New Testament portrayals of Jesus in the Gospels. It is a course about contemporary, historical research on the figure of Jesus. It is also a course about film and cinematography, about reading film critically as a "text," and, in this context, the way in which film "translates" or "transforms" Jesus into another medium. Finally, it is a course about how Jesus films serve to convey modern cultural assumptions.

**RLGS 3350 Culture, Psyche, and Religion (4 Credits)**
Readings, discussion, and papers help students learn about the life, intellectual and social environment, and clinical and theoretical work of Sigmund Freud. Attention is given to the influence of Freud's work on the understanding of religion at the beginning of the 21st century.

**RLGS 3381 Religion & Psychobiography (4 Credits)**
Use of different psychological theories to understand life and religious experience of individuals known through historical records.

**RLGS 3400 Philosophy of Religion (4 Credits)**
Inquiries into nature of religion, religious experience, language, methods of thinking.

**RLGS 3452 Political Theology (4 Credits)**
A general inquiry, focusing on the modern and postmodern eras, into various forms of philosophical reflection on the relationship between religion and political theory. Survey of the seminal ideas of such major thinkers as Kant, Hegel, Schmidt, Strauss, Derrida, Agamben, Asad, and Zizek.
RLGS 3454 Capitalism, Religion, Democracy (4 Credits)
The course explores the historical and contemporary relationship between capitalism, religion, and democracy at a theoretical level. Focus will be on the question of what exactly is capitalism as understood by key political philosophers and social theorists in relationship to the religious world views and values that authorize it. At the same time, the course will examine in what measure these world views and values also promote liberal democracy, or work against it, while offering a genealogical account of such phenomena as slavery, colonialism, gender and class domination, along with present day iterations of ethno-nationalism and neoliberal hegemony.

RLGS 3455 Phenomenology and Theology: Husserl to Marion (4 Credits)
The implications of phenomenology for theology and the issue of theology in relation to phenomenology. The course starts with a reading of Husserl and 19th-century efforts to chart a “phenomenology of religion” in the work of Otto. It also explores the ideas of later figures such as Heidegger, Merleau-Ponty, Henry, Nancy, and Marion. Junior standing required or permission of the instructor. Cross listed with PHIL 3450.

RLGS 3460 Nietzsche & the Death of God (4 Credits)
This course will involve an intensive reading and discussion of Friedrich Nietzsche’s ‘Thus Spake Zarathustra,’ together with relevant associated materials, especially ‘The Gay Science.’ Cross listed with PHIL 3460.

RLGS 3465 Derrida and Postmodernism (4 Credits)
Cross listed with PHIL 3465.

RLGS 3475 Deleuze and Semiotics (4 Credits)
Examines the development of the thought of the famous French postmodern thinker Gilles Deleuze with special attention to his cultural and semiotic theory to the degree that it is relevant to the philosophy of religion. The course also investigates how Deleuze’s work has shaped, and is beginning to push in new directions, contemporary postmodern philosophy. Prerequisites: must be at least junior standing and have completed at least two undergraduate courses in philosophy.

RLGS 3500 Islam (4 Credits)
Introduction to the history, faith, practice, culture(s), and politics of Islam, starting with the Judeo-Christian Near Eastern context in which it emerged and tracing its theological development and geographic spread around the world. Proceeding thematically along a broad historical frame, the course ends with an examination of the numerous, often competing, trends in contemporary Muslim communities.

RLGS 3501 Pilgrimage in Islam (4 Credits)
Introduction to the ideas and practices of pilgrimage in Islam, focusing on the hajj as Islam’s paradigmatic form of pilgrimage and the one to which all others are compared, but also considering other local or “lesser” pilgrimages, often known as ziyarat or visits. The course excavates the history of the practice of pilgrimage, situating it within the social, political, economic and cultural contexts that have helped frame Muslims’ understandings of the spiritual and social meanings of various kinds of pilgrimages at different times and places across the Muslim world. The course includes consideration of the hajj experiences of non-Arab Muslims through documentary and news programs, investigates contemporary re-thinkings of the meaning of “hajj”, and reflects on the key geo-political and religio-political issues that may surround Muslim pilgrimage in the 21st century.

RLGS 3502 Contemporary Islam (4 Credits)
This course introduces students to contemporary Islam. After a historical overview, the course looks thematically at different spheres of Muslim life. It considers changes that relate to political systems and forms of governance, styles of education, labor and professional work, changes in daily life habits such as timing and organization, changes in gender relations, and changes in religious authority. It also pays attention to the ways in which faith and practice are articulated through cultural practices like pop music and film.

RLGS 3503 Quran and Hadith (4 Credits)
This writing-intensive course introduces students to the key texts of Islam—the Qur’an and hadith—including their origins and meaning as well as how they have been interpreted by Muslims over time, and focusing as well on case studies that highlight issues of crucial relevance for today and the future.

RLGS 3504 Islam and Gender (4 Credits)
This upper-level course introduces students to key debates, historical developments, and thematic issues in the study of Islam and gender. It grounds this study in theoretical texts but takes a lived religions approach, focusing primarily on the production of “modern” gender norms in the colonial and post-colonial era. It proceeds thematically, with class sessions on sexualities, dress, reproduction, family roles, masculinities, pious self-construction, and the gendering of pilgrimage, and concludes with a look at contemporary and likely future debates.

RLGS 3505 Gender and Politics in Muslim Pop Cultures (4 Credits)
This undergraduate/graduate course introduces students to contemporary Muslim popular cultures, in the United States and around the world. It uses gender and politics as thematic lenses, taking a lived religions approach to phenomena that range from pious television programming to online efforts to spread Islamophobia.

RLGS 3570 Religion and Morality in the American Public Square (4 Credits)
Close focus on one or two moral issues in which religion is drawn into public debate in the contemporary U.S. Observation of the debate first hand at demonstrations, town meetings, and discussion groups, etc. Analysis of these observations is facilitated by readings on the subject and class discussion.
RLGS 3601 Religion and Culture in Vienna (4 Credits)
This course focuses on the cultural, religious and intellectual history of the city of Vienna as the hub of culture for Central Europe during the 19th and 20th centuries with special attention to the arts, philosophy, psychoanalysis, and the critique of Christianity. This course examines how religious past, particularly the influence of Judaism, shaped its rich cultural heritage and the birth of modernism. A special segment of the course is devoted to the Nazi period and the Holocaust, including a study of the resistance of religious groups. The course concludes with a history of the post-Nazi period with attention to the development of Vienna as the center of internation diplomacy and theories of globalization. The class combines lectures and online discussions with site visits to major cultural and historical sites as well as research centers around the city. The first week of the course is online.

RLGS 3604 Faith & Ethics-Religion Biography (4 Credits)
Modes of reconciling private (faith) and public (ethics) in thought and careers of selected modern individuals.

RLGS 3641 Religion and Race in America (4 Credits)
Explores the relationship between racism and religious activism by focusing on the biographies of activists.

RLGS 3680 American Religious Experience (4 Credits)

RLGS 3693 Religion and the Media (4 Credits)
Interactions between religion and all forms of communications media in American life.

RLGS 3701 Topics in Religious Studies (1-4 Credits)
An exploration of various topics and issues related to the academic study of religion. The subject matter of the course varies and may be taught by the regular faculty of the department or a visiting scholar. Some offerings may include a travel component.

RLGS 3707 Religion and Film (4 Credits)
Understanding religion requires us to take culture seriously. In doing so, we must consider products of culture, including popular culture. This course engages both classic and more recent films as "texts" to be analyzed, not as mere entertainments or diversions. We focus not only on those films that identify themselves explicitly as "religious" or reflect a particular religious tradition, but also moved that render the subject more obliquely, which reveal – via image and sound – religion as a complex human activity.

RLGS 3740 Bodies and Souls (4 Credits)
This course examines the unique place of the body in biblical religion. We ask how the Bible and its interpreters have shaped current views on sex and the gendered body in Western society. How has the Bible been (mis)used in relation to current understandings of the physical body? Is the saying that a "human" does not have a body, but is a body as true for the Hebrew Bible as the Christian New Testament? How have Judaism and Christianity (de)valued sexuality, procreation, and celibacy? How do the biblical traditions shape our modern opinions about the ideal physical body and body modifications? How can we understand "out-of-body" experiences and notions of death and afterlife in Western religion? Students are encouraged to interpret the Bible and their own beliefs from a uniquely embodied perspective. Cross listed with GWST 3740, JUST 3740.

RLGS 3760 Globalization and Religion: Theory and Methods (4 Credits)
This course explores how religious movements around the world both affect, and are affected by, the process of globalization. A major segment of the course is devoted to various theories of globalization and how they account for the increasingly important role of religion. Focus is largely on the relationship between Christianity, Judaism, and Islam.

RLGS 3813 Ritual (4 Credits)
Classical and contemporary theories about the meaning, functions, and processes of ritual, and its relationship to "religion."

RLGS 3814 Modern Hinduism (4 Credits)
Doctrines, practices and history of South Asian Hinduism; conceptions of Gods and gods; image worship and temples; and the influences of caste and gender on the experience of Hinduism. Cross listed with RLGS 3814.

RLGS 3816 Hinduism Through Texts (4 Credits)
History of ancient and medieval Hinduism, viewed through the lens of religious texts. Cross listed with ASIA 2706.

RLGS 3820 Buddhism (4 Credits)
Buddhist life and thought from origins to present in India, Tibet, Japan and China. Cross listed with ASIA 2704.

RLGS 3830 Buddhist Lives (4 Credits)
This course explores the literary canon of Buddhist life stories across time, traditions and cultures. Cross-listed with ASIA 3830.

RLGS 3832 Religious Lives: The Dalai Lamas (4 Credits)
This course explores the many lives of the Dalai Lamas and the transformation of a reincarnated religious teacher into the political leader of Tibet and, eventually, a worldwide religious personality. In order to understand that transformation, the course investigates the institution of the Dalai Lamas from historical, doctrinal, and ritual perspectives. We will look at the role of the Dalai Lama as an embodiment of the bodhisattva of compassion at the center of a tapestry of religious ceremony and ritual performances. The course will also consider the religious, ethical, and political thought of several of the most prominent Dalai Lamas, with significant attention given to the writings and work of the current, fourteenth, Dalai Lama. Cross listed with ASIA 3732.
RLGS 3890 Religion and Diaspora (4 Credits)
When forced to leave a homeland, displaced communities frequently turn to religion to maintain identity and adapt to—or resist—new surrounding culture(s). This course examines the role of religion and identity in three Jewish and Christian communities living in diaspora and poses questions such as the following: What is the relationship between religion and (home)land? How have the biblical themes of exodus, diaspora, promise and restoration been applied to contemporary experiences? And how have our American stories been interpreted through the lens of the Bible? As part of the service learning component, students have the opportunity to work with religious and immigrant aid organizations in the Denver community. Cross listed with JUST 3890.

RLGS 3891 Justice: A Biblical Perspective (4 Credits)
This is a service learning course designed for religious studies undergraduate majors, though non-majors are welcome to enroll. Cross listed with JUST 3891.

RLGS 3892 Grant Writing as Research and Community Engagement (4 Credits)
This service learning / community engagement course introduces student to non-profit work and to scholarship on non-profit activities. It connects students with community partners, continuing the department’s commitment to experiential learning and to engagement with living faith communities. Students spend course time discussing scholarly research on grant writing and non-profit grant support and discussing logistical and other issues related to their service learning placements. This course is intended to help provide M.A. students with arenas for future research, including possible thesis topics, while also offering a unique practical opportunity for professional development. Experience in forming a 501(c)3 corporation and writing grant proposals will be an asset for students planning to work in non-profits as well as for those continuing on to doctoral work.

RLGS 3991 Independent Study (1-10 Credits)

RLGS 3992 Directed Study (1-10 Credits)

RLGS 3995 Independent Research (1-10 Credits)

RLGS 4000 Theory and Methods in the Study of Religion (4 Credits)
This course begins with a brief overview of the history of the study of religion in the west, from antiquity to the modern period. When it reaches the modern period, the course shifts to considering “representative” theories of religion, broken down roughly along ideological and/or disciplinary lines.

RLGS 4050 History of Islam (4 Credits)

RLGS 4100 Hebrew Bible Backgrounds: Seminar in Ancient Israelite Religion (4 Credits)
This course is designed to train the student in the method and means of engaging in archeo-historical study of the Hebrew Bible. The content of this course focuses on ancient Israelite religion in Iron Age Palestine, particularly on emergent ideas about God (‘El) and the development and evolution of the priesthood. Cross listed with JUST 4100.

RLGS 4105 Understanding the Bible: Old Testament (4 Credits)

RLGS 4119 Ph.D. Colloquium: Biblical Interpretations (4 Credits)

RLGS 4122 Augustine on Genesis (4 Credits)

RLGS 4130 Prophets of Israel (4 Credits)

RLGS 4150 Biblical Aramaic (4 Credits)
Reading seminar in Biblical Aramaic. This course focuses on the vocabulary, syntax and expression of Aramaic in the Bible as well as in some related post-biblical texts (Targums, Dead Sea Scrolls, etc.).

RLGS 4191 Early Christian Old Testament Interpretations (4 Credits)

RLGS 4400 Theory and Methods in the Study of Religion (4 Credits)

RLGS 4400 PhD Tutorial (1-4 Credits)

RLGS 4500 Intersections of Faith and Media (4 Credits)
Using Islam and Muslim communities as case studies, this course examines the intersections between faith communities and media in the 20th and 21st centuries, looking at religious approaches to and use of print, radio, recorded voice and music, television, film, and the Internet.

RLGS 4676 Latino Religious Cultures: Methods and Theories (4 Credits)
A survey of the freshest texts, methods, and theories for the study of religiosity among Latinos in the United States.

RLGS 4980 Internship (1-4 Credits)
Designed to provide masters students with valuable experience in non-profit, educational, faith-based, governmental, and related organizations. It helps students translate the knowledge and analytical skills learned in Religious Studies courses into a professional context, while exploring potential career paths and professional opportunities. Students interested in pursuing an internship must meet with the Undergraduate Advisor at the start of the previous quarter to discuss internship goals and identify potential placements. Students meet weekly with a faculty supervisor to monitor their internship experience, and complete the internship by writing a reflective essay. For MA students only.
RLGS 4981 Internship in Religious Community (1-4 Credits)
RLGS 4982 Internship in Religious Community (1-4 Credits)
RLGS 4983 Internship in Religious Community (1-4 Credits)
RLGS 4991 Independent Study (1-10 Credits)
RLGS 4992 Directed Study (1-10 Credits)
RLGS 4995 Independent Research (1-10 Credits)
RLGS 5101 Ph.D. Colloquium: Biblical Interpretations (4 Credits)
RLGS 5110 Hebrew Bible Seminar I (4 Credits)
RLGS 5111 Hebrew Bible Seminar II (4 Credits)
RLGS 5112 Hebrew Bible Seminar III (4 Credits)
RLGS 5113 New Testament Seminar I (4 Credits)
RLGS 5114 New Testament Seminar II (4 Credits)
RLGS 5115 New Testament Seminar III (4 Credits)
RLGS 5301 Colloquium: Religion and Psychological Study (4 Credits)
The course serves two main functions: (1) to gather the students and faculty of the Religion and Psychological Studies concentration of the Joint Ph.D. Program to share research and examine trends in the field and (2) to study a topic of importance to the field, be it historical, contemporary, related to a cognate field, or oriented toward a sub-specialty. Students must be in a doctoral program in order to register.
RLGS 5601 Ph.D. Colloquium: Religion & Social Change (1 Credit)
RLGS 5980 Internship (1-4 Credits)
Designed to provide doctoral students with valuable experience in non-profit, educational, faith-based, governmental, and related organizations. It helps students translate the knowledge and analytical skills learned in Religious Studies courses into a professional context, while exploring potential career paths and professional opportunities. Students interested in pursuing an internship must meet with the Undergraduate Advisor at the start of the previous quarter to discuss internship goals and identify potential placements. Students meet weekly with a faculty supervisor to monitor their internship experience, and complete the internship by writing a reflective essay. For PhD students only.
RLGS 5991 Independent Study (1-10 Credits)
RLGS 5995 Independent Research (1-10 Credits)

Research Methods and Stats (RMS)

Courses
RMS 4900 Education Research and Measurement (4 Credits)
This course is intended for Master’s degree students in the College of Education. Quantitative research designs, empirical methods of data collection and interpretation, and measurement issues in research are examined.
RMS 4910 Introductory Statistics (5 Credits)
This beginning statistics course examines use and interpretation of statistics in educational and human services research, including descriptive and inferential techniques. Cross listed with SOWK 5930.
RMS 4911 Correlation and Regression (4 Credits)
This course focuses on the study of correlation and multiple regression research designs and their application to educational and social science programs. Cross listed with SOWK 5202. Prerequisite: RMS 4910.
RMS 4912 Analysis of Variance (5 Credits)
Conceptual and applied analyses of one-way through factorial nested analysis of variance designs and multivariate analysis of variance are presented. Prerequisite: RMS 4910.
RMS 4913 Multivariate Analysis (5 Credits)
Conceptual and applied analyses of common multivariate statistical techniques used in research in social sciences are presented as are assumptions and limitations of techniques and interpretation of results. Cross listed with SOWK 5950. Prerequisite: RMS 4911 or RMS 4912.
RMS 4914 Structural Equation Modeling (5 Credits)
This course covers major applications of and issues related to covariance structure modeling, specifically confirmatory factor analysis and latent variable path modeling; types of research applications for which covariance structure modeling analyses are appropriate. Prerequisite: RMS 4913.
RMS 4915 Hierarchical Linear Modeling (4 Credits)
This course introduces models that extend multiple regression to analysis of nested data structures common in education and other social sciences. Application of those methods to various forms of multilevel data, including repeated measure (growth trajectory) data is emphasized. Prerequisite: RMS 4911.
RMS 4916 Latent Growth Curve Modeling (4 Credits)
This course covers advanced issues in longitudinal data analysis using structural equation modeling and hierarchical linear modeling with latent variables. It involves both conceptual development and practical implementation of longitudinal data analysis. This course is intended to be a hands-on approach to working with data and addressing research questions that can be best answered by longitudinal data. Prerequisite: RMS 4914.

RMS 4917 Computer Applications in Social Science Research (3 Credits)
This course focuses on use of statistical software and other appropriate software programs in the analysis of quantitative data. Prerequisite: RMS 4910.

RMS 4918 Propensity Score Analysis (3 Credits)
Propensity score analysis provides a conceptual understanding of the rationale and importance of controlling for biases that might emerge during the selection process in experimental research. The common procedures of fitting a propensity score model and estimating the effect of the treatment after correction for biases are demonstrated.

RMS 4919 Topics in Statistics (1-5 Credits)
Topics vary by quarter but may include log-linear analysis, factor analysis, or missing data analysis.

RMS 4920 Educational Measurement (3 Credits)
This course examines the meaning, characteristics, and processes of educational measurement and evaluation. Development and interpretation of both standardized and informal tests are considered.

RMS 4921 Psychometric Theory (3 Credits)
This course examines major psychometric theories (e.g., classical, item response) as related to reliability, generalizability, validity, and item analysis methods. Prerequisite: RMS 4910.

RMS 4922 Item Response Theory (3 Credits)
Theory and methods for the educational and psychological measurement of latent variables using item response theory are covered in this course. Prerequisite: RMS 4910, RMS 4921.

RMS 4924 Factor Analysis in the Social Sciences (4 Credits)
This course instructs students in both exploratory and confirmatory factor analysis as those methodologies are employed in the social sciences.

RMS 4929 Topics in Psychometrics (1-3 Credits)
Topics vary, but include: large scale testing, computer applications of item response theory, affective measure construction, generalizability theory, additive conjoint measurement, and standing testing. Prerequisite: RMS 4921 or instructor permission.

RMS 4930 Empirical Research Methods (3 Credits)
This course provides in depth study of empirical research methods involved in experimental, quasi-experimental, correlational, and single-subject designs.

RMS 4931 Survey and Design Analysis (3 Credits)
Survey techniques, needs assessment, item construction, sampling, maximizing response rates and data analysis; survey construction and data analysis are required. Prerequisite: RMS 4910.

RMS 4932 Meta-Analysis Social Science Research (3 Credits)
This course examines meta analytic techniques in the social sciences. Included are discussions of review of critical data bases, coverage of all major methods of data collection and analysis, and coverage of how best to present meta analytic findings for publication. Prerequisite: RMS 4911, RMS 4930, and preferred RMS 4912.

RMS 4939 Topics in Quantitative Research Methods (1-5 Credits)
Topics vary, but include minimization as an alternative to randomization, propensity score modeling as an alternative to experimental control, and analysis of data from single-subject designs. Prerequisite: RMS 4930.

RMS 4940 Structural Foundations of Research in Social Sciences (3 Credits)
This introductory course on epistemology and research includes discussion of identification and development of problems for research; introduction to basic quantitative and qualitative methods of conducting research in social science settings, ethnographic, and criticism methods.

RMS 4941 Introduction to Qualitative Research (4 Credits)
This course is designed to provide students with more in-depth understanding of naturalistic, qualitative research methods. It is assumed that students enrolling in this course have already completed an introductory research methods course in either education or another discipline. Purposes and questions posed in their course include: Why should a researcher choose to conduct a qualitative study? How are data collection strategies carried out in a qualitative research design? What are some of the ethical concerns that impact qualitative research?

RMS 4942 Qualitative Data Collection and Analysis (4 Credits)
In this intermediate level qualitative research course students learn about design, purposeful sampling, field work, observational approaches, and interviews, with special attention directed to the skills and competencies needed to gather and analyze high quality data. Prerequisite: RMS 4941 or instructor permission.

RMS 4943 Computer Applications in Qualitative Research (3 Credits)
Review of assumptions of qualitative designs, types of qualitative approaches and current data-analysis techniques; computer software to analyze qualitative data.
RMS 4944 Action Research (3 Credits)
Definition of action research, whether it improves classroom practice, methods of conducting, strengths and weaknesses; use to improve specific aspects of educational practice, to become more reflective practitioners.

RMS 4945 Community-Based Research (4 Credits)
This class introduces the emerging philosophical and methodological issues that arise when university faculty students collaborate on research with community-based organizations. Prerequisites: RMS 4942 and RMS 4946.

RMS 4946 Advanced Qualitative Research (4 Credits)
This course introduces exemplary qualitative studies and consideration of implications for education and the social sciences, and considers the types of questions asked by qualitative researchers and methods they use, particularly observation and interviewing. Students undertake their own qualitative study to consider application of theory, techniques, and practice to their dissertation research. Prerequisite: RMS 4941 and RMS 4942 or permission of instructor.

RMS 4947 Arts-Based Research (3 Credits)
In this course students explore the ground upon which arts-based research is built and become acquainted with salient issues regarding this kind of research. We practice interviewing, observations and a few arts-based practices. Prerequisites: RMS 4942 and RMS 4946 or permission of instructor.

RMS 4948 Criticism and Connoisseurship: Qualitative research and the enhancement of practice (3 Credits)
Qualitative inquiry in educational settings takes many forms: ethnography, grounded theory, case-study research, and more. What these methods have in common is a framework built upon social science. Criticism and connoisseurship, however, draws its conceptual underpinnings from the arts and humanities. What does it mean to have a conceptual framework dependent upon the arts? How are the methods of educational criticism different from other research methods? This class teaches students how to conduct research using this method and it provides responses to these types of questions in order that students can defend this type of research as well as others that depend on the arts and humanities as their basis. Prerequisite: RMS 4941.

RMS 4949 Topics in Qualitative Research (1-5 Credits)
This seminar builds on the content of other qualitative research courses offered in the RMS program and meets the students where they are on their dissertation journey; thus learning opportunities are tailored to individual needs as far as possible. Assignments focus on the issues pertinent to the design of dissertation proposals and writing, including ethical issues and IRB preparation, theoretical/conceptual framework, literature review, methodology, data collection and analysis strategies, and various forms of representation.

RMS 4950 Qualitative Research Methodologies (3 Credits)
Each year this course examines three qualitative research methods. The methods that might be covered in any given year include: phenomenology, grounded theory, narrative, case study, and ethnography. For each method, the following is addressed: philosophical and historical foundations, various ways the method has been utilized, and practical recommendations for conducting research utilizing this method.

RMS 4951 Mixed Method Research Design (4 Credits)
This course is designed as a fundamental exploration of mixed model and mixed method approaches. Students design mixed model and mixed method research studies with a particular emphasis on multi-site and longitudinal designs that are especially suited to educational issues. Students learn analysis approaches that incorporate previously learned quantitative and qualitative skills, and apply these in practice problem examples. Prerequisites: RMS 4911, RMS 4930 and RMS 4942.

RMS 4952 Research Ethics (3 Credits)
This course introduces ethical theory and a selection of current issues in research ethics.

RMS 4953 Topics in Data Management (1-3 Credits)
This is a preparatory course emphasizing the manipulation and analysis of data in electronic form.

RMS 4954 Grant Writing (3 Credits)
This course provides a focused overview of grant writing for educators. It examines the development of reference tools (paper, electronic, and online), websites, structuring, and writing funding requests, community collaboration and partnerships, project budgeting, management, evaluation, sustainability, and reporting activities.

RMS 4959 Topics in Research Design (1-5 Credits)
Topics vary, but include single subject design issues, minimization as an alternative to randomization, advances in quasi-experimental design. Prerequisite: RMS 4930.

RMS 4960 Program Evaluation Theory (3,4 Credits)
This course reviews theories of program evaluation and current trends in evaluation.

RMS 4961 Program Development & Evaluation (3 Credits)
This course focuses on the practice of program development and evaluation in school, business, or community agency settings. Both qualitative and quantitative methods of program evaluation are discussed. Students have the opportunity to focus on evaluation of a specific program.

RMS 4962 Program Development and Assessment (3 Credits)
This course focuses on how student affairs administrators conduct student outcomes assessment, evaluate program development, and monitor program and division budgets.
RMS 4969 Topics in Program Evaluation (1-5 Credits)
Topics vary, but include advocacy and policy change, assessment in higher education, multi-level evaluation, cost effectiveness analysis, data visualization and reporting, assessment in distance education, and evaluation in the arts and culture. Prerequisite: RMS 4960.

RMS 4978 Practicum in Qualitative Research (1-4 Credits)
Students may complete the Practicum in Qualitative Research with an individual professor or with a community partner. The goal of this practicum is to provide further experiences in thinking about, conceptualizing, designing, conducting, and/or presenting qualitative research. Prerequisites: RMS 4941, RMS 4942, and at least two of the following classes RMS 4945, RMS 4946, RMS 4947, RMS 4948.

RMS 4980 Practicum in Research (1-5 Credits)
This course provides a supervised experience in design and implementation of an empirical research or evaluation study. Organization of research proposals, completion of human subjects applications, collection, and analysis of data are emphasized. Students are expected to prepare a written report of their project which is suitable for professional presentation or publication.

RMS 4981 Community-Based Research Practicum (1-5 Credits)
Students provide community-based research assistance to a community partner (non-profit, school, community based organization, etc). Student researchers are supervised by DU faculty. This course is an excellent opportunity to match the student’s research expertise with the real needs of community partners. Prerequisite: RMS 4945.

RMS 4991 Independent Study (1-10 Credits)
This course allows Masters students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

RMS 4992 Directed Study (1-10 Credits)

RMS 4995 Independent Research (1-10 Credits)
This course is for Masters students in RMS whose program requires completion of a Master’s thesis.

RMS 5991 Independent Study (1-10 Credits)
This course allows Ph.D. students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

RMS 5992 Directed Study (1-10 Credits)

RMS 5995 Independent Research (1-18 Credits)
This course is for Ph.D. students in RMS who are engaged in completing their doctoral dissertation.

Security Management (SMGT)

Courses

SMGT 4050 Security Concepts Overview (4 Credits)
This course provides an introduction to the main principles and issues in business and organizational security management. Topics include protection of, and assessing the loss potential of, personnel, facilities, and information, and continuity of operations. The course makes extensive use of case studies and analyses, field exercises and research.

SMGT 4100 Business Function of Security (4 Credits)
This course covers the role of security in an organization or business context. Topics include budgets, contracts, financial analyses, how the security functions support the overall mission of the organization, and the relationship of security to other essential business functions. Students will also learn how to defend the costs of the security systems and security operations to high-level executives.

SMGT 4150 Risk Management (4 Credits)
Students will learn to identify and manage risks, crises and disasters, and to prepare emergency and contingency plans. Students will learn how to prevent losses, mitigate losses and accelerate recovery from security events or natural disasters. This will be accomplished through case studies and practical exercises.

SMGT 4200 Integrated Security Systems (4 Credits)
This course covers the integration of physical, personnel, and information security, including the use of information technology to enhance physical and personnel security. Students will learn the essential elements of system design, development of procedures, testing and maintenance of integrated security systems. This will be accomplished through case studies and practical exercises.

SMGT 4210 Critical Incident Management (4 Credits)
All communities are vulnerable to a variety of hazards. Emergency management provides a structure for anticipating and dealing with emergency incidents. Emergency management involves participants at all governmental levels and in the private sector. Activities are geared according to phases before, during, and after emergency events. The effectiveness of emergency management rests on a network of relationships among partners in the system. The goal of this course is to introduce students to the fundamentals of emergency management as an integrated system, surveying how the resources and capabilities of all functions at all levels can be networked together in all phases for all hazards. Included is an in-depth look at the four phases of comprehensive emergency management: mitigation, preparedness, response, and recovery.
SMGT 4220 Hazardous and Radiological Material Preparedness (4 Credits)
Hazardous materials plan development is a difficult and challenging job that requires a high level of skill and knowledge from planners charged with these responsibilities. Due to local funding shortages and frequent staff turnover at the state and local levels in the planning arena, and because of the complexity of hazardous materials planning requirements, there continues to exist a significant performance problem and training requirement for hazardous materials planning. This course provides students the assistance and confidence needed to effectively plan for and respond to hazardous materials incidents, through sound emergency planning and with the highest level of safety for response personnel within the student’s jurisdiction. This course also addresses the fundamental principles of radiation as well as the nuclear threat.

SMGT 4230 Mitigation for Emergency Managers (4 Credits)
As the costs of disasters continue to rise, governments and ordinary citizens must find ways to reduce hazard risks to our communities and ourselves. Efforts made to reduce hazard risks are easily made compatible with other community goals; safer communities are more attractive to employers as well as residents. As communities plan for new development and improvements to existing infrastructure, mitigation can and should be an important component of the planning effort.

SMGT 4250 IS: Threats in Security (4 Credits)
This course explores emerging protection concepts for the information age. Students will identify threats to security systems, discover vulnerabilities, and suggest and design protection systems. Topics include management of information security and data processing facilities, data theft, misuses of information technologies, computer viruses and hacking, and network protection. The course also covers information technology laws, privacy issues, and information security planning.

SMGT 4300 Security Administration (4 Credits)
Students apply principles of management to security administration. Topics include personnel management, security planning, organizational leadership and communication, and recruitment and training.

SMGT 4350 Business Assets Protection (4 Credits)
Students examine the application of security knowledge and techniques to the protection of business assets. The security planning process is examined by the study of risk analysis, security surveys, and financial planning and decision making for development of security programs and countermeasures.

SMGT 4400 Emergency Planning (4 Credits)
Students discuss the role of the security manager in the identification, analysis, and response to a variety of human and natural crises. They examine threats resulting from riots, demonstrations, product tampering, work stoppage activities, terrorism, and natural disasters.

SMGT 4450 Legal & Ethical Issues in Security Management (4 Credits)
This course is an overview of important legal and ethical issues with which the business and organizational security management professional must deal. Students examine such issues as personnel law and obligations; negotiations; contract management; constitutional rights of individuals; legal liability of security professionals and organizations; legal compliance; and ethical standards.

SMGT 4500 Human Factors in Security (4 Credits)
This course focuses on historical and contemporary perspectives of human behavior. Theories of behavior in the context of threat-producing activities are discussed. Contemporary issues such as substance abuse, violence, ideologies, and similar themes are examined.

SMGT 4701 Topics in Security Management (1-6 Credits)
The content of this course varies each time it is offered. The topics may include time-sensitive issues from the film industry, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

SMGT 4901 Capstone Project (4 Credits)
The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required to pass.
SMGT 4902 Capstone Seminar (4 Credits)
The purpose of this Capstone Seminar is to develop and apply transferable professional skills to persuade decision makers. This is accomplished through the following: investigate questions and issues found within a discipline-specific area of interest. To do this, a clear question/issue will be researched in order to create (a) several different arguments for (b) several different audiences in (c) several different professional contexts. Peer-to-peer conversations will support the development of the questions/issues, and throughout the process, peer-to-peer critiques will take place to foster a developed sense of community where peers rely on one another for what is working, what is not working, and possible ways forward. Part of this process will also include intentional moments spent reflecting upon the process and the knowledge gained by it. Thus, through reflection and meaningful dialogues and conversations, students learn how to be active agents of change where they can successfully contribute to any professional exchange. In sum, the Capstone Seminar focuses on how to investigate problem(s) found within professional settings, how to analyze and critique those problems, and ultimately, how to generate effective arguments for the various stakeholders involved throughout this process. The knowledge gained within this course should transfer forward informing a current or future job.

SMGT 4904 Interdisciplinary Capstone Seminar (4 Credits)
The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

SMGT 4910 Research Practices and Applications (4 Credits)
This course develops competency in principles of research and measurement for use in the professional setting. As an initial course in the program of study, students will learn research methods to apply to program and systems design and evaluation to achieve successful measurement of outcomes and goals. Students will become critical consumers of pertinent literature to provide background and support for the choice and application of proper qualitative and quantitative research methods and data analysis for professional application. Critical thinking through comparing and contrasting cause and effect is used to build logic models. Research, design, and evaluation processes that address issues of implementation, feasibility, and sustainability are emphasized. At the conclusion of this course students will be prepared to apply and clearly communicate the practice of scientific research principles in the professional environment to ensure that the question being asked can be answered through rigorous research and the design and formative assessment of the program or system. Completion of Institutional Review Board (IRB) training via CITI Program is required as a basis for discussion of research ethics and IRB procedures. Competencies gained in this course, including practices of inquiry, self-analysis, and evaluation, will be applied and integrated throughout the course of study and demonstrated in the culminating capstone work of the master's degree. This course is required of all degree-seeking students and should be taken in the first three quarters of enrollment.

SMGT 4980 Internship (1-4 Credits)
The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

SMGT 4991 Independent Study (1-8 Credits)
This is an advanced course for students wishing to pursue an independent study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent study is offered only on a for-credit basis.

SMGT 4992 Directed Study (1-5 Credits)
This is an advanced course for students wishing to pursue a directed course of study, which is based on an existing course. However, the existing course is not offered in a reasonable time frame to accommodate the student. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the directed study. Directed study is offered only on a for-credit basis.

Social Sciences (SS)

Courses
SS 3890 Pathways to the Public Good Independent Study (1-4 Credits)
The Public Good Pathways Independent Study provides academic credit for reflection, integration, and synthesis of a student's current and previous work that contributes to the University of Denver's public good vision. This work is directed by a faculty member and overseen by the Center for Community Engagement & Service Learning (CCESL) and may be completed in collaboration with one or more community partner(s). Public Good Pathways Independent Study opportunities are individually designed as experiences for students who have completed at least one community-engaged class, and they require approval from the Director of CCESL.

SS 3982 Social Science Internship (1-4 Credits)
Social Work (SOWK)

Courses

SOWK 4000 Professional Development Seminar (1 Credit)
The Professional Development Seminar prepares students to develop a reflective practice and to make connections between applicable lived experience and the learning process, emphasizing professional social work identity. The course provides a supplement to the foundation curriculum and an opportunity for students to discuss their professional growth as social workers. The seminar provides opportunities to reflect on social work values and ethics, populations served, and the many fields and career pathways of social work practice. In conjunction with the foundation curriculum, key ethical issues and requirements are discussed so that students can deepen their understanding of ethics in practice with consideration of local, national, and global contexts. The course also gives an opportunity to reflect on their learning styles, participation in group work and the developmental process of practice. The ideas of conscious use of self and self-care concepts will be explored through a variety of learning modalities.

SOWK 4001 Clinical Social Work Skills (3 Credits)
This foundation course focuses on basic skills for micro social work practice with individuals and small groups. The framework of intentional interviewing teaches students to think critically about applying the skills for engagement, assessment and intervention. Attention focuses on use of these skills with clients from multiple social identities (e.g. ethnic, racial, sexual orientation, gender affiliation) and the pitfalls of practitioner micro-aggressions. An active learning approach requires students to participate in role-play exercises both in and outside of class. Students digitally record some of those exercises and share them with the class and instructor.

SOWK 4003 Clinical Social Work Theory and Practice (3 Credits)
This foundation course helps students develop a multi-dimensional assessment and intervention framework for clinical social work practice. This course builds upon knowledge of human behavior in the social environment and adds a focus on theories of change - at the individual and family level. The course is grounded in empirical information about the importance of relationship skills, across a variety of classic and modern approaches to intervention. We use a social work lens to emphasize the importance of context in client lives, including their socioeconomic status, cultural history, and experiences of oppression. Since no single theory captures the totality of human experiences, we integrate a variety of intervention techniques from multiple human behavior theories and ground them in a social work framework for ethical and effective clinical practice.

SOWK 4006 Human Behavior and the Social Environment: Theory and Practice (3 Credits)
This foundation course provides an overview of theoretical frameworks for understanding human behavior from a social work perspective. Theories reviewed include the developmental stages across the life cycle in terms of psychological, cognitive, moral, spiritual, identity and social development. Students apply a biopsychosocial assessment across the life span. The course emphasizes a social work perspective and key frameworks for social work, with an emphasis on the person in environment and systems theory as they describe diverse individual behavior in relation to social class, race and ethnicity, age, gender orientation, sexual orientation, and other multicultural backgrounds. The course aims to develop students’ foundational understanding of how theories are used to promote relationship development with diverse individuals and to guide interventions across all system levels. Students may test out of this course and substitute an advanced course in human development, with advisor approval, if they have already successfully completed an equivalent course in human development.

SOWK 4007 Community and Macro Social Work Theory and Practice (4 Credits)
This foundation course provides students with a foundational level understanding of macro social work practice and roles. The course builds upon knowledge of human behavior in the social environment, and adds theories of change to understand diverse communities and social service networks and the relationship of local, national and global interventions. The course introduces students to empirically supported models and emerging interventions that address macro level social issues. Students complete community/organizational assessments and also participate in work groups to learn how to engage, assess, and intervene in communities and organizations.

SOWK 4020 Integrated Social Work Practice for Social Justice (4 Credits)
This foundation course focuses on professional development and identity for social work practice. The course emphasizes values, ethics and ethical decision making in the context of the history of the profession. Students are introduced to person-in-environment, critical theory and empowerment perspectives and apply these concepts to current field of practice and social work roles. Through integration of field placement experiences, students analyze and apply social work frameworks and generalist practice theories to current social justice challenges and diverse contexts that social workers face.

SOWK 4050 Introduction to the Graduate Internship (1 Credit)
The Introduction to the Graduate Internship seminar prepares students to enter the profession of social work at a graduate level. The course provides an overview of social work values and ethics, populations served, and issues that concern social workers. Through engagement in the course content, students will complete a readiness for field assessment, including their personal and professional motivations to join the profession and serve diverse communities. Students will be exposed to the social work profession's signature pedagogy, field education, and the stages of experiential learning. The course will also help students develop learning goals for field education and identify potential internship sites.

SOWK 4120 Social Policy Analysis, Advocacy, and Practice (3 Credits)
This foundation course analyzes contemporary societal needs and problems, as well as the historical and current context of U.S. social welfare programs and policies. It presents frameworks used to define social problems and analyze social problems, and introduces students to the policy-making process and the role of policy in service delivery with special emphasis on programs designed to aid the poor and the policies that shape them. The course is designed to help social workers advocate for policies within the social welfare system that advance social well-being and fulfill their ethical obligations to improve social conditions and promote social justice.
SOWK 4132 Power, Privilege and Oppression from a Critical Multicultural Perspective (3 Credits)
This foundation course examines the phenomena of power, privilege and oppression and their effect on individuals, families and communities in the context of the values of social and economic justice and the social work profession. The course is intended to increase awareness of the intersectionality of multiple oppressions with a focus on race/ethnicity, gender, socioeconomic status and sexual orientation. Students will gain a beginning self-awareness to identify the influence of personal biases and values that impact practice with diverse groups.

SOWK 4150 Foundation Seminar (1-2 Credits)
Required seminar format used to facilitate the integration of the foundation field practicum and the professional foundation course content; emphasis on linking classroom learning with practice in the field, integrating theory with professional practice; field practicum situations and issues used for discussion and deliberation. Co-requisite: SOWK 4950. Prerequisite: SOWK 4050.

SOWK 4201 Evidence for Practice (3 Credits)
This foundation course focuses on developing student skills in identifying, analyzing, and applying empirical evidence in order to inform their social work practice. The course introduces students to studies designed to examine the effectiveness of interventions. The course aids students in developing a familiarity with basic research concepts such as research design, internal validity and external validity, so that they may critique the utility of evidence for practice. Students also engage in critically examining available evidence for biases and relevance for the diverse array of clients, populations, and contexts with which they work.

SOWK 4232 Critical Race Theory Praxis and Social Work (3 Credits)
An advanced multicultural social work practice course, this uses the fundamentals of Critical Race Theory (CRT) as a framework for contextualizing and intervening with client systems at the micro, mezzo, and macro levels. This course is a values elective for all concentrations. CRT is used as a framework to examine, critique, and challenge the way that race and racism is unwittingly sustained and perpetuated by traditional social work approaches to the amelioration of personal and social ills. Through this course, students learn the central tenets of CRT, how to evaluate traditional social work practice using these tenets, and begin to design to design a professional social work practice that uses CRT tenets as a foundation for micro-, mezzo-, and macro-level interventions. This course is offered within the concentration curriculum as a Values for Practice course to assist in the training and preparation of social workers practicing with historical underrepresented and marginalized clients and communities of color. Students develop skills and techniques grounded in anti-oppressive culturally grounded social work practice.

SOWK 4235 Disproportionality and Disparities Across Systems: The Impact on Children and Youth (3 Credits)
This course will explore the interrelatedness of institutional racism and discrimination across major social systems within the U.S., focusing on the historical context of current racial disproportionalities and disparities in youth service systems such as child welfare, juvenile justice, mental health, education, and health. Using a critical lens, the course is designed to help students analyze how policy decisions have long-range impact on generations; specifically for children and youth of color. Students will have the opportunity to apply this critical lens to their current field placement and the youth populations they serve. As an elective course, the class is open to all GSSW students; however, students concentrating in child welfare, children and youth, and families are especially encouraged to take the course.

SOWK 4240 Intergenerational Justice (3 Credits)
This course engages students in the conversation, scholarship, and social work practice issues related to how social justice is promoted across age groups and generational cohorts (i.e., baby boomers, generation X, millennial generation). While looking at debates for how families, local communities, states, and nations link age to power, decision-making, funding, and access to resources, the course also examines what within age group issues of injustice and inequality persist. Topics include: generational equity in terms of government budgets and debt, intergenerational issues related to sustainability and ecological justice, age-based versus need-based service delivery models, interventions to address intergenerational conflicts within families, and best practices in intergenerational social service models. This course is designed as a seminar course for social work students from any concentration to explore values related to social justice as they play out across all levels of practice.

SOWK 4245 Restorative Approaches in Social Work Practice (3 Credits)
This course applies the conceptual framework, strategies, and benefits of restorative approaches to social worker roles and responsibilities. This course is designed to help students develop a historical and theoretical understanding of restorative approaches, build restorative-based skills that can be used in a variety of roles, and apply restorative approaches to a variety of client population systems, settings, and needs. Ethical dilemmas, cultural competence, and decision-making in restorative approaches, and the impact this has on oppressed populations, will be discussed. This course fulfills the Values for Practice requirement, and is a general elective with relevance to all social work concentrations. Prerequisite: SOWK 4132.

SOWK 4250 Concentration Seminar (1 Credit)
This course is taken (by distance education students only) concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. This is also an evolving seminar co-created between faculty and students. Clinical issues and skill development at a more advanced clinical level is integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first year learning. Prerequisite: SOWK 4150.

SOWK 4260 Contemporary Social Work Issues in Western Colorado (3 Credits)
In this hybrid seminar course, students will learn about the disproportionate burdens of environmental injustices in communities across the Western Slope of Colorado. From a social justice and human rights perspective, students will critically explore, analyze and discuss current environmental health disparities and relevant social work interventions. Students will review environmental health and environmental justice theories and perspectives as they bear on place-based case studies from the region. Students will use contemporary media and relevant web 2.0 platforms, including social media to demonstrate understanding of applied e-advocacy social work practice while exploring such case studies.
SOWK 4299 Advanced Standing Seminar (3 Credits)
The seminar reviews knowledge, skills and values that form the basis of GSSW concentration year curricula in clinical practice, community practice and policy practice. The seminar combines content planned by instructors with individualized guided study and planning for field instruction based on student self-assessments. Prerequisite: Admission to advanced standing program.

SOWK 4301 Advanced Social Work Practice Skills (3 Credits)
This advanced social work practice skills course focuses on the importance of language and social identities and their influence on social work practice across client systems. A social justice, empowerment and reflexive framework challenges students to think critically about applying the skills for engagement, assessment, intervention, and evaluation in micro, mezzo, and macro practice settings. Attention focuses on use of these skills with individuals, groups, and communities from multiple social identities (e.g., ethnic, racial, sexual orientation, gender identity and expression, rural/urban) and the repercussions of practitioner micro-aggressions. An active learning approach requires students to: 1) participate in role-play exercises, 2) digitally record demonstration of advanced skills and share them with the class and instructor, 3) use the supervisory relationship to engage in reflexive self-assessment and practice skill adjustments based on that assessment. Prerequisite: SOWK 4001 Clinical Social Work Skills Lab or SOWK 4299 Advanced Standing Seminar.

SOWK 4305 Child Maltreatment: Causes and Developmental Consequences (3 Credits)
This course examines theory and research concerning causes and developmental consequences of child maltreatment, as well as theory and research concerning attachment and the developmental consequences of separation and loss that often follow intervention in child maltreatment.

SOWK 4315 Building Resilience: Healthy Development in Childhood and Adolescence (3 Credits)
This course provides students with knowledge of child and adolescent development with a particular focus on resilience. At each stage of development, risk factors that are deleterious to development, and protective factors that promote healthy development, will be discussed. Along with basic information about theories of resiliency, students will also gain a good working knowledge of cognitive behavior theory.

SOWK 4320 Family Systems Theories for Social Work Practices (3 Credits)
This course introduces systems theory as it is applied to family contexts which may include traditional therapeutic settings, home-based practices, parenting approaches, family religious/spiritual strength and conflict, and transgenerational family processes. Emphasis is given to the integration of theory, practice, and skill development. Students will also explore family organization and development and family subsystems, as they apply to assessment, case conceptualization, and intervention from a family systems perspective with clients, individuals, couples, families, organizations, constituencies, and communities. This course analyzes intersecting issues of power, privilege, and oppression, and requires that students examine their own personal characteristics, preferences, experiences, biases, predispositions, and affective reactions that influence the professional relationship.

SOWK 4325 Evolving Perspectives and Trends in Health and Wellness (3 Credits)
This course provides an overview of the theories that inform social work practice in the field of health and wellness. Health as a concept is examined for its understanding and meaning in multiple practice settings, communities and cultures. While addressing evolving trends and ethics in health care practice settings, a range or topics are covered including systems perspectives and thinking, the intersection of health and mental health, wellness and prevention, social ecology of health promotion, client and person centered care, care management and health care disparities.

SOWK 4330 Assessment of Mental Health and Drug Use in Adults (3 Credits)
Focuses on the assessment of psychological, social and biological contributors to mental health disorders in adults and the use of this assessment as a guide for treatment/clinical interventions. Examines the strengths and weaknesses of the DSM-IV classification system in terms of social work values and ethics. Examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category, and reviews a variety of assessment tools in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged populations.

SOWK 4334 Assessment of Mental Health in Children and Adolescents (3 Credits)
This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children and adolescents and the use of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as a guide for mental health assessment. The course examines the strengths and weaknesses of the DSM-5 classification system for children and adolescents, especially in the context of culture and social work values. It examines symptoms, theories of etiology, and prognosis within each diagnostic category and reviews diagnostic challenges in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged children and adolescents.

SOWK 4338 Assessment of Mental Health Across the Lifespan (3 Credits)
This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children, youth, adults, and older adults and the use of this assessment as a guide for treatment/clinical interventions. It examines the strengths and weaknesses of the DSM-5 classification system in the context of social work values and ethics. It examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category and reviews a variety of assessment tools in the context of gender identity and expression, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged population.

SOWK 4340 Leadership and Supervision Skills (3 Credits)
This course examines the application of leadership and supervision theories to practice settings in communities, organizations and policy contexts. A focus is placed on leadership roles and an examination of leadership styles, with an emphasis on the skills of transformational leadership and supervision. Topics covered include team leadership and supervision, one to one supervision skills, managing conflict, personnel management, and cross cultural work.
SOWK 4345 Intersections of Mental Health, Substance Use and, Trauma (3 Credits)
This course is an advanced theory for practice course with builds upon foundation courses in HUman Behavior in the Social Environment (HBSE) and clinical theories, and covers conceptualization, dynamics of, and interventions in mental health, substance use, and trauma. The course examines the independent and intersecting theory bases of mental health, trauma and substance use approaches. It also explores recent evidence about individual and environmental risks associated with these conditions and evidence about both specific therapeutic interventions and the importance of common relational factors. Social workers make up one of the largest professional groups working with clients living with mental health concerns, and bring a unique person-in-environment and strengths perspective to that work, which fits well with a recovery philosophy. Clinical frameworks and interventions common across these fields, such as harm reduction, motivational interviewing, self-determination theory, and the transtheoretical model of changes are presented, and students are introduced to integrative approaches that show promise in responding to client conditions.

SOWK 4350 Evolving Perspectives and Trends in Aging (3 Credits)
This course provides an overview of how theories of aging inform the role of social workers with older adults and their families across a range of service settings, including emerging fields of practice. The course examines multiple perspectives on the late life adult years, spanning the period from middle adulthood and on into late life, including: historical, biological, psychological, social, cross-cultural, and spiritual theories and related empirical evidence. While addressing evolving trends, the importance of difference, and ethical implications the topical issues include: work and retirement; economic status; residence and housing location; education and learning styles; interpersonal relationships with partners, families, and peers; creativity, spirituality, and religiosity; political beliefs and ideologies (including the formation, maintenance and alteration of prejudice and racism); the experience of chronic illness, disability, and death; and wisdom attained during adulthood and aging.

SOWK 4360 Social-Ecological Resilience and One Health: Connecting Human and Environmental Wellbeing (3 Credits)
Social-Ecological Resilience and One Health: Connecting Human and Environmental Wellbeing is a required theory for practice course in the Sustainable Development and Global Practice Concentration. This course builds on an innovative social ecology perspective that emphasizes coupled social-ecological systems and the integrated model of One Health as necessary theoretical frameworks for understanding the inter-connectedness of human health, wellbeing and resilience with that of other species and the natural environment. This course reviews and analyzes theoretical concepts and models for contextualizing the important social and ecological issues impacting our global environment as well as the societal implications of global environmental change. Using an integrated social science approach that highlights sustainable development as a paradigm that acknowledges the interdependence and interconnection between humans and the more-than-human world, social workers practicing in local and global communities will be prepared to implement effective, strengths-based solutions to support sustainable development and capacity-building efforts at various scales. This course will promote critical thinking and develop a knowledge base for sustainability and resilience oriented prevention and intervention strategies, environmental awareness, sense of belonging in a social-ecological community, adaptation and advocacy.

SOWK 4370 Community and Organizational Change: Theory for Practice (3 Credits)
This course presents key theoretical frameworks for students to be informed and innovative in responding to changing community, organizational and societal contexts. Theories of social change are presented that can assist social work leaders in promoting positive social change in the lives of vulnerable populations through the development of policy, community interventions and human services organizations. Students apply theories to understanding organizational change and innovation and the promotion of social and economic justice through community and policy practice.

SOWK 4375 Economic Theory and Social Work (3 Credits)
Human rights, urbanization, poverty, housing, gender inequality, care of children, poverty, indebtedness, racial and/or ethnic discrimination, and cultural conflicts are challenging the United States and nations throughout the world. This course introduces students to economic theories to develop broader conceptualization of local, national, and global social problems and possible intervention strategies. An understanding of economic theory provides a foundation for studying the emergence and maintenance of diverse social policies to address these problems. The course explores Neoclassical, Behavioral, and Microeconomic concepts of economic efficiency and the corresponding consequences to marginalized and oppressed populations.

SOWK 4401 Integrated Health Care: Models and Practice (3 Credits)
This course provides an overview of the knowledge, skills and theory of integrated health care social work practice, where physical and behavioral health services are most often provided in a primary care medical environment. Students will learn roles/functions of the behavioral health professional and their effectiveness as a member of the collaborative care team. Incorporating knowledge of evidence-based practice models of care and behavior change theory, they will increase their practice abilities to effectively work at an advanced level of skill as an integrated care behavioral health provider. Strategies and skills in patient engagement, motivational enhancement and advocacy will be taught through case studies and group activities. Cultural competency and effective care planning in an integrated healthcare environment will be emphasized.

SOWK 4410 Prevention & Treatment of Adolescent Substance Abuse (3 Credits)
This course examines causal factors and theories that seek to explain why some adolescents develop problems with alcohol and other drugs. Effective substance abuse prevention and treatment approaches are identified at the individual, family, school and community level.

SOWK 4412 Practice Elements in Interventions with Children and Youth (3 Credits)
This course offers an integrative framework of theory and research to intervene with children and adolescents in school, family, and community-based agencies. Interventions include both direct work with children and collaborative/conjoint work with parents. Techniques include common elements across empirically-supported interventions such as cognitive-behavioral therapy, behavioral treatment, client centered treatment, social skills training, and parent management training. Intervention strategies are described across four primary problem areas common among children/adolescents: anxiety, depression, disruptive behavior, and attention deficit disorder. For each of these problem areas, intervention techniques are demonstrated, practiced in class, implemented in field placements, and monitored for client progress. The use of empirically-supported interventions is discussed from a multidimensional perspective with consideration for cultural context and adaptations necessary for particular client groups.
SOWK 4416 Foster Care and Permanency Planning (3 Credits)
This course presents strategies for culturally competent assessment and intervention with children who are in foster care, adoption, or with their families. It focuses on permanency planning, involving extended families in making case decisions and caring for children, family reunification, relinquishment of children for adoption, termination of parental rights, preparing children and parents for adoption or guardianship, working with young adults nearing emancipation, and providing post-adoption/guardianship services. Prerequisites: SOWK 4305 and SOWK 4600 or permission of the instructor.

SOWK 4418 Child Welfare Practice: Assessment & Intervention (3 Credits)
This course provides an overview of the continuum of care of child welfare practice from entry to exit. The course uses an evidence-based approach taking a comprehensive look at child welfare services through a culturally responsive and multi-systemic lens. It presents strategies for culturally competent assessment and intervention with children, youth, and families involved with the child welfare system focusing on engaging families in assessment, service, and permanency planning. The course is required for students in the child welfare track. The prerequisites are SOWK 4305 (Child Maltreatment: Causes and Developmental Consequences) and SOWK 4600 (Child Welfare Policy and Services, or permission from the instructor).

SOWK 4420 Multisystemic Social Work Practice and Advocacy with Families (3 Credits)
This course facilitates the development of family systems practice skills with clients, individuals, couples, families, organizations, constituencies, and communities. This course focuses on the development of multisystemic strategies and techniques utilizing family systems theory as part of the ongoing process of engagement, assessment, and preliminary interventions. It emphasizes the integration of research, theory, and practice through experiential learning and skill building. Students will learn strategies and techniques through role play demonstrations practicing intake/assessment/goal setting, preliminary intervention development, and professional documentation. Students will be asked to discuss their own “use of self” development throughout the class and reflect on personal bias, cultural bias, assumptions, values and affective reactions that may influence the relationship with client systems or constituencies. Prerequisite: SOWK 4320.

SOWK 4425 Positive and Community Youth Development (3 Credits)
This course provides an overview of the “community and positive youth development” approach to providing social services to children and adolescents. Many services for young people focus on negative outcomes such as behavior problems, pregnancy, violence, drug abuse, and truancy. These services are supposed to “fix” the small minority of kids who are “broken” in some way. The community and positive youth development perspective stresses that all youth need a variety of supports and opportunities to develop into healthy, contributing adults. This course considers how such an approach to social service delivery can be applied across different organizational settings (e.g., schools, government agencies, and nonprofits) to promote the well-being of American youth from diverse cultural backgrounds.

SOWK 4430 Substance Use Interventions (3 Credits)
There is widespread recognition that substance use is one of America’s most pressing social problems. Social workers increasingly find themselves attempting to help individuals and families resolve substance use problems, as well as directly or indirectly related issues. This course introduces students to current and emerging substance use treatment approaches so they can conduct their practices from an informed perspective.

SOWK 4435 Grassroots Organizing for Social Justice (3 Credits)
This course examines grassroots approaches to community organizing and social change for social justice. Topics include: power and empowerment theory, insider/outside considerations, development of critical consciousness and popular education techniques for organizing, history and genealogy of community organizing and social movements related to social work, direct action tactics and strategies, arts-based organizing, campaign development, and ethics and skills for working with diverse communities.

SOWK 4445 Social Work Assessment and Intervention in Aging (3 Credits)
This course focuses on biological, neurological, psychological, social, spiritual, and environmental aspects of late life as a foundation for the delivery of assessments and interventions to older adults. This course presents information on demographic projections, population trends, and theoretical perspectives that inform gerontological social work practice. This class additionally focuses on the unique nature of social work with this diverse population including a continuum of care services for older adults, interdisciplinary nature of helping services, dynamic nature of aging for multiple vulnerable older adults such as those facing institutionalized oppression, and specific attention to elder wellness.

SOWK 4454 Child and Adolescent Trauma (3 Credits)
This course introduces students to the common concepts (general theory and foundational knowledge), components (intervention and treatment elements) and skills (practitioner skills) underlying evidence-based treatment for children and adolescents who have experienced trauma. Trauma is broadly defined, and includes children and adolescents exposed to traumatic events including, but not limited to natural disasters, war, abuse and neglect, medical trauma, witnessing interpersonal crime (e.g. intimate partner violence), and other traumatic events. The course highlights the role of development, culture, and empirical evidence in trauma-specific interventions with children, adolescents, and their families. It addresses the level of functioning of primary care giving environments and assesses the capacity of the community to facilitate restorative processes. The course focuses on assessment and intervention as a foundation for subsequent learning about treatment. This course incorporates the new National Child Traumatic Stress Network (NCTSN) core curriculum on child trauma (CCCT). The course conveys the crucial evidence-based concepts, components, and skills designed by NCTSN to strengthen competency in assessment, referral, and treatment.
SOWK 465 Human Security: Intervention Strategies for Economic & Social Development (3 Credits)

Human security is a new paradigm for understanding complex global vulnerabilities. Human security goes way beyond traditional notions of national security and highlights the security of the individual rather than that of the nation state. Human security uses a person, entitlement and human rights centered view of security. It is essential for national, regional and global stability and sustainability. In defining human security, the United Nations stressed "the right of all people to live in freedom and dignity, free from poverty and despair," and recognized that "all individuals, in particular vulnerable people, are entitled to freedom from fear and freedom from want, with an equal opportunity to enjoy all their rights and fully develop their human potential" (A/RES/60/1). "Human security aims at ensuring the survival, livelihood and dignity of people in response to current and emerging threats - threats that are widespread and cross cutting. Such threats are not limited to those living in absolute poverty or conflict" (UN-OCHA). Today, the impacts of natural disasters, climate change and other forms of environmental change, and global economic crises, among others, are considered to threaten human security in developing as well as developed countries. The increasing numbers of internal violent conflicts, forced migration, natural disasters and environmental degradation have resulted in national and international security failings that reflect the challenges of the post-Cold War security environment. The failure of mainstream development models to generate growth, particularly in Least Developed Countries (LDCs), or to deal with the consequences of complex new threats (e.g., HIV/AIDS, climate change, social and economic inequality) reinforced the sense that international institutions and states are not organized to address such problems in an integrated way. Social workers focusing on human, social and economic issues in global settings will use various human development strategies and other capacity-building approaches in practice. This course develops students' skills in human and social development strategies, sustainable livelihood and conflict management strategies, and other capacity-building community strategies, and fosters a solid understanding of the programmatic and practical requirements for human security in a global context.

SOWK 4500 Mental Health Interventions with Children (3 Credits)

This course offers an integrative framework of theory and research to understand and intervene in the major mental health problems experienced by children. Interventions include both direct work with children and collaborative/conjoint work with parents. Techniques include play therapy, cognitive-behavioral interventions, psychopharmacology, and crisis intervention for suicide. Children's development is considered from a multidimensional perspective, including cultural context, risk and protective factors, and the development of psychopathology.

SOWK 4501 Wellness Promotion and Intervention Across the Lifespan (3 Credits)

This course prepares students to critically analyze the determinants of wellness across the life span, across socio-economic boundaries and across cultures in order to promote wellness in the everyday lives we lead both personally and as social workers in a community. An emphasis will be placed on the research and application of knowledge and skills to increase social worker awareness of the distinctions between health and wellness and to promote wellness in the quality of life in a community. This course builds students’ skills and strategies to enhance wellness needs within a community. Strategies include using developmental models, researching current policies, and implementing wellness assessment tools in order to create interventions for communities.

SOWK 4505 Relationship Therapy (3 Credits)

This course focuses on assessment, problem/solution path identification, intervention strategies and outcome evaluation in counseling heterosexual, gay and lesbian couples. Identifies common relationship patterns and explores intervention strategies including behavioral, strategic, structural, narrative, transpersonal and feminist. Also covered are issues such as conflict management, relationship enhancement, intimacy, power and control, domestic abuse, infidelity and divorce. Students will analyze the intersecting issues of oppression: sexism, racism, classism, heterosexism and ageism.

SOWK 4520 Advanced Clinical Social Work Practice with Families (3 Credits)

This course is an advanced skill-based course that extends students’ knowledge and application of family systems therapy. The course engages the activate participation of students in role-play scenarios and the discussion and deconstruction of actual cases enhancing their developing skills as family therapists-in-training. In this course, students have the opportunity to plan and implement an entire course of treatment for a family. This allows the development of a conceptual understanding of family therapy practice, treatment skills and interventions, and utilization of self-as-therapist that influences the therapeutic system. Students have multiple opportunities to practice family interventions and receive feedback from both classmates and the instructor through the use of the clinical family therapy methods of 'live supervision' and 'reflecting teams'. Students will experience the connection between theory and practice and learn to integrate multiple theories. Issues related to transference, culture based countertransference, resistance, and working with involuntary clients are discussed. Advanced Clinical Social Work Skills with Families builds on the family systems theory and practice applications learned in the required family systems concentration courses and expands students’ opportunity to apply theory to cases in diverse practice and client situations. An emphasis is placed on the development of personal theory, professional development, and therapeutic change/outcome as it relates to common factors in family therapy. This course also builds upon SOWK 4505: Relationship Therapy and aspects unique to couple’s therapy. Required prerequisites: SOWK 4320 and SOWK 4420.

SOWK 4521 Advanced Skills for Working with Military Families (3 Credits)

The class is designed to give students an understanding of the issues military families face and how to apply that understanding to clinical interventions with military families. It also investigates individual service member concerns, spousal/partner relationships, and family dynamics surrounding deployment, active duty, and returning home permanently or between deployments.

SOWK 4523 Care Management Skills and Resources to Promote Community Living (3 Credits)

Many individuals and their families of all ages cope with physical and mental health conditions that impede their ability to live in the community. A vast array of formal and informal resources, public programs, and privately funded services can promote community living. Social workers often provide care management to enhance access, coordinate care, and ensure equality of these long-term services and supports. This course will develop students’ skill at care management and knowledge of resources, including resources for persons with developmental disabilities, chronic mental health conditions, physical disabilities, and age-related functional impairments.
SOWK 4525 Administration and Management Practice and Skills (3 Credits)
This course examines the application of leadership and supervision theories to practice settings in communities, organizations and policy contexts. A focus is placed on leadership roles and an examination of leadership styles, with an emphasis on the skills of transformational leadership and supervision. Topics covered include team leadership and supervision, one to one supervision skills, managing conflict, personnel management, and cross cultural work.

SOWK 4530 Poverty and Community Economic Development (3 Credits)
This is an advanced community practice class focused on poverty, low-income neighborhoods and local economic development. The class begins with a thorough review of the scholarly literature related to poverty, sustainability, and the concentration of poverty in low-income neighborhoods. Then, public and private responses to poverty are examined. The class focuses on both governmental policies and programs supported by the private sector. Next, the class turns to local responses to the concentration of poverty in low-income neighborhoods. The class focuses on the interdisciplinary nature of programs and interventions aimed at community economic development in low-income neighborhoods.

SOWK 4535 Planning and Program Development (3 Credits)
This course prepares students to engage in strategic planning and program development roles and practice within a social work community, organizational, or policy practice setting. Students in this course gain knowledge in the principles of planning, social enterprise, the engagement of stakeholders in planning processes, community collaboration and the elements of designing and implementing programs. Students have the opportunity to put this knowledge base into practice by developing a comprehensive program proposal applying the skills of strategic thinking, planning, critically evaluating research informed practice and practice informed research. In addition, students engage in communicating professional judgment in both written and oral formats.

SOWK 4540 Advanced Skills for Working with Military Families (3 Credits)
This course is designed to give students an understanding of the issues military families face and how to apply that understanding to clinical interventions with military families. It also investigates individual service member concerns, spousal/partner relationships, and family dynamics surrounding deployment, active duty, and returning home permanently or between deployments.

SOWK 4545 Social Work Practice with LGBTQIA Communities (3 Credits)
This values course will facilitate students' exploration of their own perceptions, biases, and belief systems with regards to the broad topic of LGBTQIA identities and communities. A values perspective encourages students to reflect on their personal, professional, cultural and political perceptions of these identities. This course will explore the social construction of sexual orientation and gender identity, examine the idea of binaries, engage in historical analysis of LGBTQIA histories, and will familiarize students with legal and societal barriers and challenges facing members of the LGBTQIA community. Students will learn definitions around these identities, learn more about the spectrum of sexual orientation and gender, and utilize critical theoretical perspectives. Students will engage in critical dialogue around the representation of LGBTQIA people in our culture and media. Utilizing a person-in-environment perspective, students will look at the Social Work Code of Ethics as it relates to LGBTQIA individuals, explore various facets of self-determination, social justice, dignity and worth of a person, the role of family, friends and community, and how power, privilege and oppression may impact the lives of LGBTQIA people. Lastly, students will synthesize this information to envision how their social work practice will be inclusive of LGBTQIA individuals and communities, including those who hold other marginalized identities. Prerequisite: SOWK 4132.

SOWK 4555 Spirituality and Social Work (3 Credits)
The purpose of this course is to provide students with a nondiscriminatory framework of knowledge to respond competently and ethically to populations with diverse spiritual perspectives and religious cultures in social work practice. This social justice-informed course underlines and respects the diversity of all spiritualities with special attention to spiritual populations historically marginalized and neglected by Eurocentric assumptions common to social work. This course builds on the generalist approach of our foundation curriculum and integrates theories of multicultrualism, human development, and identity development while exploring how individuals view spirituality and religion as they move through the life cycle. Drawing on the work of Edward Canda, Ken Pargament and Froma Walsh, the course will explore definitions of spirituality and religion, survey methods of approaching spiritually sensitive bio-psycho-social assessments, and examine culturally and spiritually sensitive social work interventions. Class activities will emphasize dialogue, reflection, exploration and experiential learning in order to develop a balanced framework for navigating spirituality and religion in practice settings with individuals, groups, families, communities and organizations. In this course, students will gain self-awareness and learn how their own cultural and spiritual perspectives have shaped their worldview and professional sense of self. It is assumed that students enrolling in this course will bring an interest in learning about the many facets of spirituality. As such, students will be asked to explore their own ideology of spirituality as it relates to their professional identity and practice effectiveness. Prerequisite: SOWK 4132.

SOWK 4565 Social and Environmental Impact Assessments (3 Credits)
Social and environmental impact assessments are important tools for analyzing and managing both the intended and unintended consequences of development projects on human and ecological systems in order to bring about a more equitable and sustainable social ecological system. This class incorporates an understanding of the history and concepts of the three levels of impact assessments (micro, mezzo, and macro) into the research process that is the core of social impact assessments. Students prepare and evaluate social ecological impact assessments through learning to identify and define problems, select theoretical frameworks appropriate to the problem, identify research questions, design a study appropriate for the identified questions, gather and analyze data, and write the final assessment. Particular attention is paid to assessing the effects of interventions on vulnerable populations. Other topics will focus on the practical aspects of project team selection and management, timelines, and the communication of findings to stakeholders.
**SOWK 4600 Child Welfare Policies and Services (3 Credits)**
This course examines contemporary U.S. child welfare policies in historical perspective, focusing on prevention, report and investigation of child abuse and neglect, as well as family preservation, out-of-home care, adoption and services for troubled adolescents. Also evaluated are the impact of policies and proposals for change in policies, considering empirical evidence, values and ethics. Provides a framework to analyze policy choices and encourages students to advocate for needed policy changes. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4605 Poverty: Policies and Services (3 Credits)**
The United States poverty rate declined steadily from the 1950s through the 1970s, decreasing from 22% of the population in the late 1950s to 12% in the late 1970s. Poverty rates have fluctuated since then with current rates standing at approximately 15% or 46 million people. More than 16 million children, 22% of all children, live in families with incomes below the federal poverty line. The course begins by considering the federal poverty measure and competing definitions of poverty. Key programs and policies meant to alleviate poverty, such as government transfer programs (including cash and noncash welfare, earnings supplements, and social insurance programs), education and training programs, and support services are examined. Course content is applied to practice scenarios to enhance student knowledge of poverty programs, eligibility criteria and application processes. Critical discussions of these programs will inform analysis of alternative approaches to poverty reduction and economic self-sufficiency.

**SOWK 4610 Policies and Programs for Children and Youth (3 Credits)**
This course examines the history and evolution of social policies and programs targeting high-risk youth. Students will seek to critically analyze the effects of current and recent policies in the context of youth offending and other adolescent problem behaviors. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4630 Family Policies and Services (3 Credits)**
Identifies challenges contemporary American families are experiencing and presents strategies for developing policies and services to meet these challenges. Examines specific policies and services that most affect families, as well as broader questions concerning power and its distribution, allocation of resources and the role of government in promoting individual and family well-being. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4635 Immigration Policies and Services (3 Credits)**
This course identifies challenges for immigrants and presents strategies for developing policies and services to meet these challenges. It not only examines specific policies and services that most affect immigrants but also considers broader questions concerning power and its distribution, allocation of resources, and the role of government in promoting individual and family well-being. This is a concentration policy course for all concentrations.

**SOWK 4640 Mental Health and Substance Use Policies (3 Credits)**
This course provides a comprehensive understanding of policies related to mental health and/or substance use, their historical antecedents, and the socio-political forces that influence their development. This course also introduces students to emerging controversies concerning these policies.

**SOWK 4645 Health Care Policy (3 Credits)**
This policy course provides an overview of health care policy as it is relevant to social work practice in multiple health and behavioral care settings. With the advent of health care reform and the implementation and operationalization of the Patient Protection and Affordable Care Act (PPACA), there are rapidly changing policy issues related to this innovative integration and delivery of health care services. Students in this course critically analyze the practice of policy in this new and quickly evolving service arena. This course explores key health policy strategies to foster integrated delivery system development and sustainability in line with health policy goals to reduce cost of care, improve population health and improve quality of integrated care services, with special emphasis on the integration of primary care, behavioral health services and wellness/health promotion initiatives. Strategies for students to influence policies and promote change in the interest of the individual/family/community, agency/organization and the communities they serve are presented. Critical thinking skills in developing and analyzing proposals to improve integrated health policy are encouraged. The course builds on policy content offered in the professional foundation year and links policy to practice and research skills.

**SOWK 4650 Aging Policy (3 Credits)**
This course provides an overview of social policy and service delivery issues in gerontology. It includes a critical review of rapidly developing policy issues, as well as an overview of U.S. health care and social service delivery systems serving older adults. The course encourages students to participate in critical analysis of issues and to develop and analyze innovative proposals to improve policy and programs for older adults. This course fulfills the policy requirement for the Aging Services and Policy concentration.

**SOWK 4655 Mental Health and Health Care Policy (3 Credits)**
This course provides an overview of social policy and service delivery issues in mental health and health care, with emphasis on achieving quality and addressing disparities. It includes a critical review of United States’ historic and developing policy issues, as well as mental health and health care financing and delivery systems and other key issues in the field. Students will participate in critical analysis of issues and will examine various proposals to improve mental health and health care policy and programs. Prerequisite: SOWK 4120 Social Policy Analysis, Advocacy and Practice, or SOWK 4299 Advanced Standing Seminar.

**SOWK 4660 Social Policy Advocacy (3 Credits)**
Facilitates student learning within policy-making arenas. Students are paired with health and social service agencies and coalitions to assist in agenda-setting, legislative research, and issue-advocacy development and implementation in the state legislature and bureaucracy.
SOWK 4665 Global Policies and Programs for Sustainable Development (3 Credits)
In the 21st century, more international cooperation will be required to confront transnational problems, many of which arise from globalization. From infectious diseases to civil conflicts that spill across borders, from global financial crises to protecting the world’s natural systems and resources, there are many modern issues that require enhanced global cooperation and collective solutions. Global Policies and Programs for Sustainable Development considers transnational problems that cannot be solved by national governments alone, and examines policy systems (or “regimes”) and global governance approaches that have emerged to manage global issues, such as: finance, trade, human rights, migration, health, environmental change, national and human security, and disaster reduction and response. Overall, this course focuses on understanding and connecting global policy trends, and examines their inter-relatedness with globalization and their impact on human and social development. Global Policies and Programs for Sustainable Development gives students the opportunity to study, analyze, and understand specific global policy initiatives, their development, and implementation. Devising effective strategies to address global problems is necessary because these problems can impede social and economic development, tear at the fabric of societies, and even undermine regional and international stability. The goal of this course is to train students to understand the essential components of global policies in both the public and private sectors and to prepare them to initiate policy reforms to accomplish innovative and effective outcomes. This course also will address the development of policy in the context of social work values and ethics. Global policy regimes will be analyzed from multiple viewpoints. Readings, case studies, and discussion will address policies within international organizations (e.g., United Nations, World Bank, International Monetary Fund, and specialized agencies such as the World Health Organization) with applications for developed, transitional, and developing countries. The course will emphasize an analytical approach for understanding the impact of global policies on programs, services, and development at large.

SOWK 4670 Policy Development & Analysis (3 Credits)
Focuses on the development and analysis of social welfare policy. Reviews the structure of the policy-making and implementation process, and examines perspectives on the definition of social problems and approaches to the development and analysis of social welfare policies. Students apply the perspectives and frameworks as they analyze a specific social problem and policy directed toward it, identify needed change in policy, select place and strategy for change in policy, and communicate knowledge to central actors in the policy-making and implementation process. Prerequisite: SOWK 4120 or SOWK 4299.

SOWK 4680 Native Peoples Practice: History and Policy (3 Credits)
This course is designed as the background to practice with Native Peoples. It will explore the relationship between theory and practice, socio-economic, political, and health issues, and the dynamics of changes in reservation and urban Native communities. Historical trauma, federal policies, impacting Native people, and laws and regulations that impact social service delivery will be reviewed. Social services delivery systems will be analyzed with the uniqueness of the cultural parameters of tribal communities. Guest lecturers from tribal communities may partner with faculty to teach the course. Prerequisites: SOWK 4299 and SOWK 4132.

SOWK 4700 Solution Focused Brief Therapy (3 Credits)
This course is a methods/skills course that provides students with the opportunity to gain knowledge and skills in the contextual stance and core interventions of the evidence-based approach, Solution-Focused Brief Therapy (SFBT). Students gain an understanding of how this approach works, and the ability to use this approach in a variety of settings including with clients struggling with chronic mental illness, trauma, and substance misuse, as well as with children and adolescents, couples and families, in community development, and supervision. This course addresses competencies and practice behaviors in advanced clinical settings including Families, Child Welfare, Children and Youth, Mental Health and Health.

SOWK 4705 Forensic Orientation in Social Work Practice: Assessment and Interventions with High-Risk Offenders (3 Credits)
Presents and applies a framework for assessing and intervening with offender populations. This risk and containment framework takes a community safety and victim-centered perspective and focuses on assessing and intervening with multiple systems surrounding offenders. The framework is then applied to specific interventions with domestic violence abuse offenders and with adult and adolescent sexual offenders.

SOWK 4710 Domestic Violence (3 Credits)
This is a concentration year practice elective focusing on understanding, assessing, and intervening with domestic violence, understood as violence occurring in the context of intimate relationships. The purpose of this course is to provide students with the theoretical understanding and practice skills necessary to establish a beginning competence in assessing and intervening with domestic violence and in developing community, systemic, and policy responses.

SOWK 4712 Law of Family and Child (3 Credits)
Examines legal principles and procedures relevant to social work practice with families and children: structure and operation of the American legal system, principles to follow in conducting legal research, basic principles of constitutional law and law related to juvenile delinquency, child protection, child adoption, education and domestic relations. Covers legal aspects of social work practice including licensing, confidentiality and professional liability.

SOWK 4713 Preventing Behavioral Health Problems in Children and Youth (3 Credits)
Behavioral health problems in childhood and adolescence take a heavy toll on millions of lives. These problems range widely – from anxiety and depression to alcohol, tobacco, and drug abuse; delinquent and violent behavior; dropping out of school; and risky sexual activity and unwanted pregnancies. SOWK 4713 presents an overview of practices and policies aimed at preventing behavioral health problems in young people. Emphasis is placed on developing the practice and policy skills that are necessary to deliver preventive interventions and programs in schools, families, and communities. Students will select an effective program, learn the skills necessary to deliver the program, and then implement the program in a classroom setting. Class content will emphasize the importance of increasing the role of social work practitioners and social work values in the interdisciplinary field of prevention practice.
SOWK 4715 School Social Work Interventions (3 Credits)
Designed to give students the ability to identify, understand and apply the varied roles of school social worker. Examines politics of education, the educational organizational structure, special education law and process, collaborative teamwork with school and community professionals and inter-system case coordination. Emphasis placed on meeting the needs of special education populations through assessment, intervention and evaluation and on preventive programs for children and youth at risk for school failure, truancy and dropping out.

SOWK 4718 School Social Work Assessment and Realities (3 Credits)
This concentration course is the third in the School Social Work Certification. Both SOWK 4715 (School Social Work Interventions) and SOWK 4712 (Social Work and the Law) are prerequisites for this class. The class provides advanced skills in assessment pertinent to the school ecosystem. It also juxtaposes these skills with field trips to several schools to interact with School Social Workers in a variety of settings and work roles to understand how these assessments are used in the school setting. The course emphasizes the written tasks and social work skills that School Social Workers need to perform on a regular basis, as well as how these skills are used to help the student, family, and school environment. Prerequisites: SOWK 4712 and SOWK 4715.

SOWK 4720 Prevention and Treatment of Juvenile Delinquency and Youth Violence (3 Credits)
Examines causal factors and theories that seek to explain why some adolescents engage in delinquent conduct and/or violent behavior. Effective delinquency and violence prevention and treatment approaches are identified at the individual, family, school and community levels.

SOWK 4721 Existential Social Work Practice (3 Credits)
The problems facing people can be understood in the context of situations and meanings they give to them. This course seeks to identify useful ways to clarify and validate the client's unique "world view", bypassing the many dangers and misuses of diagnostic categorization and empowering clients in relation to themselves and problem definition.

SOWK 4723 Social Work Practice in Health Care (3 Credits)
This course is designed to explore and develop advanced social work knowledge and skills in order to practice social work in diverse health care settings. It includes examination of the social work role on interdisciplinary teams, health care terminology, setting-specific assessment and interventions and comprehensive social work services for acute and chronically ill patients. It emphasizes social work values and ethics in relation to health care practice.

SOWK 4725 Mind-Body Connections and Social Work Practice (3 Credits)
This course teaches skills for implementing mind-body techniques, models for wellness assessments, and evidence-based mind-body strategies for intervention in client and community problems. An evidence-based approach creates a foundation for: 1) understanding the mind-body connection that influences an individual's and community's physical, emotional, and social well-being and 2) the most efficacious methods for mind-body social work practice skills. Research evidence demonstrates that mind-body strategies are helpful for an array of concerns such as, military personnel with PTSD, adults with emotional regulation issues, academic concerns of stressed-urban youth, community mobilization, and emancipatory practice.

SOWK 4726 Experiential Therapy (3 Credits)
This course provides students with knowledge and skills to facilitate experiential-based therapy with children, youth, families and couples with a focus on environmentally sound practices. This is considered a service learning class since we are partnering with nature. Please wear comfortable clothes and comfortable closed toed shoes for all classes and bring a water bottle.

SOWK 4727 Experiential Therapy in Nature (3 Credits)
SOWK 4727 is a methods/skills course which provides students with knowledge and skills to facilitate experiential therapy with groups with a focus on environmentally sound practices in the outdoors.

SOWK 4730 Cognitive Behavioral Therapies (3 Credits)
This course examines major cognitive behavioral therapies (CBT) suggesting methods focusing on clients' problem-solving abilities, building on client strengths, targeting specific thought patterns that impede clients from reaching goals, and assessing outcomes in terms of changes in thinking and behavior. Theory is applied to individuals, dyads, families, and groups. Additionally, this course examines relevant research suggesting both indication and counter-indications of approaches.

SOWK 4732 Disrupting Privilege through Anti-Oppressive Practice (3 Credits)
This course, building on the theoretical foundation in SOWK 4132 Multicultural Social Work Practice, examines the barriers to the professional use of self as an ally to historically disenfranchised groups, both in the context of day-to-day relationships with clients as well as in the context of community and macro-level interventions. The course is intended to assist in understanding the personal, situational, structural, and cultural influences that impede justice-oriented social work practice. The course supports students in developing strategies, skills, and approaches to anti-oppressive practice. Anti-oppressive social work practice is a range of practice approaches that adopt a critical and structural perspective on issues of social inequality, oppression, power, privilege, and domination. It encompasses approaches such as feminist, anti-racist, Afrocentric, disability practice, and critical social work frameworks to name a few (Campbell, 2003). It attends to both process and outcome (Dominelli, 1998), and links the provision of individual assistance to people from marginalized groups with involvement in social movements corresponding to the marginalization (Carniol, 2000). "The [anti-oppressive] framework enables links to be made between individual action and social structures. It informs practice by enabling the worker to evaluate differences that exist at an individual level and within society and how these impact on each other. It provides the means of making accurate assessments by taking into account the inequalities that texture the lives of those denied access to society's resources because of their defined social status and the exclusionary practices of the dominant system. It demands that we consistently engage in the process of critical self examination, which in turn enables us to engage in the process of change." (Dalrymple and Burke, 1995, p. 18).
SOWK 4735 Interpersonal Approaches to Counseling (3 Credits)
This course is an elective course which utilizes the interpersonal models of psychotherapy and neurobiology, drawing upon psychodynamic theories and techniques. The course examines traditional and contemporary psychotherapy theories and techniques. Interpersonal interventions are grounded within the values, ethics and standards of practice for clinical social work.

SOWK 4737 Asmnt & Interven w/Adolescent (3 Credits)
Examines adolescence as a major developmental life cycle stage and the reciprocal relationships between gender, race, ethnicity, family development, peer group, neighborhood and the adolescent's physical, intellectual, social and sexual development, as they contribute to identity formation. Presents individual, group, family and program-based intervention approaches, ranging from least to most intensive and restrictive. Prerequisite: completion of foundation year course work or permission of adviser and instructor.

SOWK 4741 Grief and Loss Across the Lifespan (3 Credits)
This course is designed to prepare students to understand social work roles and practice (engagement, assessment, intervention and evaluation) in working with those experiencing loss across the life span. Whether the loss is related to health or functioning, family system, developmental stage or an actual death, this course prepares students to be culturally responsive to diverse perspectives and bereavement needs. Students will learn theoretical models of grief and loss and how to effectively evaluate the needs of grieving individuals, families, communities and their support systems.

SOWK 4742 Disability Studies (3 Credits)
This values course will facilitate students' exploration of their own perceptions, biases, and belief systems with regards to the broad topic of disability. A values perspective encourages students to reflect on their personal, professional, cultural and political perceptions of the epistemology of the notion of disability. This course will explore the social construction of concepts of ableism and identity, engage in historical analysis of disability (both domestically and internationally), and familiarize students with pertinent legislation/policies that impact persons with disability (PWD). Students will learn definitions of disability, come to know more about the spectrum of disability and utilize critical theoretical perspectives. The study of disability includes persons with disability (PWD), including the broad range of categorizations related to mental health, physical health, and cognitive ability. Students will engage in critical dialogue around the representation of PWD in our culture. Utilizing a person-in-environment perspective, students will look at the Social Work Code of Ethics as it relates to PWD and explore various facets of self-determination, independent living, relationships and sexuality, and the role of family, power and privilege in the lives of persons with disabilities. Prerequisite: SOWK 4132.

SOWK 4749 Culturally Responsive Practice with Latinx (3 Credits)
Addresses immigration issues, as well as intervention and theoretical approaches for Latinx populations. Covers the selection of interventions and strategies for cross-cultural use in adequately addressing the needs of Latinx. A required course for the Latinx Social Work Certificate.

SOWK 4750 Critical Perspectives on the Latinx Context (3 Credits)
This course provides a framework for culturally relevant social work services designed to meet the needs of the Latinx community. This is a social work content course taught in Spanish. Students acquire core principles grounded in an understanding of social justice, privilege, and oppression including the intersection between human and civil rights, globalization, immigration and poverty. Students will expand their oral and written Spanish expression as they learn about cultural, social and political theory. Students learn aspects of Mexican culture, community development, historical patterns of oppression, spirituality, and the role of indigenous movements. As a result of this course, students understand how to advocate for nondiscriminatory cultural, social and economic practices within a Latinx context and experience. It is designed for students in all concentrations who have an interest in understanding issues facing the Latinx community. Prerequisite: Initial placement is based on minimum language proficiency test results at the intermediate-advanced level. Further placement determination will consist of a comprehensive evaluation to ascertain oral and written proficiency. Enrollment in this course may be limited to Latinx Certificate students.

SOWK 4751 Global Relations and Poverty in Mexico (3 Credits)
Provides a mixture of experiential and academic learning based on the community-learning model of Paulo Friere. Taught in Cuernavaca, Mexico, the course covers Mexican culture, community development, historical patterns of oppression, spirituality and liberation theology, global economics and policy, and the role of indigenous movements. Includes discussion on the relationship between poverty in Mexico and the US, and implication for social workers. A required course for the Social Work with Latinxs/ as Certificate.

SOWK 4752 Trauma Informed Assessment and Interventions (3 Credits)
This course provides an overview of multi-system level definitions of traumatic experience—historical, individual, interpersonal, family, organizational, and community. The emphasis is on social work practice that is culturally responsive, growth-oriented, and strengths based, in which the study of trauma is approached from a theoretical base that perceives the trauma response as a "response" rather than a "disorder." Trauma informed assessment and interventions are examined, incorporating a social justice perspective on historical trauma, poverty, and interpersonal violence. This course promotes the unique contribution social workers offer through the lenses of strength, resililiency, and coping as well as commitments to multicultural and systems factors. Students will identify how secondary trauma impacts social workers and the importance of professional accountability to self-care and ongoing growth and development.

SOWK 4753 Social Development in Latin America (3 Credits)
Covers social development in South and Central America, with special emphasis on Mexico. Practice-oriented, it is geared towards a knowledge of policy-making in Latin America and on the skills required for local social development. A required course for the Social Work with Latinxs/ as Certificate.

SOWK 4754 Trauma and Recovery in Social Work Practice (3 Credits)
Provides an overview of multi-system level definitions of trauma experience - historical, individual, interpersonal, family, organizational, community, and global. Also examines various approaches to trauma response theory. Promotes the unique contribution social workers have to offer through lenses of strength, resiliency, and coping as well as commitments to multicultural and systems factors.
SOWK 4755 Interventions for Responses to Trauma (3 Credits)
This course is designed from a strengths perspective, in which the study of trauma is approached from a theoretical base that perceives psychological adjustments after trauma as primarily a "response" rather than a "disorder." Includes information on the integration of cognitive, emotional, and somatic approaches to trauma treatment, as well as consideration of when to use a trauma-informed versus a trauma-focused paradigm. At the community level, the course also includes an introduction to mental health reactions and responses to disaster. Prerequisite: SOWK 4754.

SOWK 4756 Social Work from a Chinese Perspective (3 Credits)
This course provides students with a unique opportunity to learn first in the classroom the social, cultural, historical, political, and economic characteristics of China and how these characteristics shape social work in China. Then students learn by experiencing social work in China. In Beijing, students participate in lectures given by faculty at China Youth University, discussions with social work students, visits to social work organizations, visits to important cultural landmarks and nightly synthesis of new knowledge and experiences. An elective course.

SOWK 4757 Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course (3 Credits)
This required course for the Social Work with Latinos/as certificate combines academic classroom instruction and experiential and conversational learning. The goal of the course is to enhance the student's Spanish communication and cultural responsively skills through dialogue practice and service in Latin America. Country location for this study abroad course is determined based on yearly certificate objectives and travel advisories. Based on the student's individual skills and interests, and the needs of local field agencies and communities, students become involved in volunteer and service learning opportunities preparing them for their concentration field placement back in the United States where they are expected to demonstrate competency in Spanish. Students will learn to identify cultural differences and similarities in attitudes towards community organizing and mental health care, and social service delivery in order to better address these cultural differences and similarities in the United States. This experience also allows students to learn Spanish within a cultural and professional context. This course is conducted entirely in Spanish.

SOWK 4758 Social Work in Kenya: Context, Conservation, Empowerment, Sustainability (3 Credits)
This course is designed to introduce students to the social, cultural and conservation issues of Kenya and East Africa. This course is field-based with strong emphasis on service learning and direct experiences. Course readings, lectures, classroom discussions, service learning projects and field work in rural Kenya provide participants firsthand experience in the social, cultural, historical, political, environmental, ecological and economic realities that exist in Kenya. This course is open to qualified concentration and advanced standing Graduate School of Social Work students. The course meets on campus for four sessions before traveling to Nairobi, Voi, and Kasiigau, Kenya. Due to the intensive nature, remote travel logistics and costs for this course, direct communication with the professors is required. Qualifications include: willingness to sign International Travel Agreement, willingness to receive required medical authorization and immunization, academic good standing, and readiness for the physical and emotional demands of traveling in rural and remote Africa.

SOWK 4759 Global Cultural Perspectives: Consensus and Conundrums (3 Credits)
Social workers increasingly practice in global communities both nationally and internationally. Changes in practice environments demand that social work practitioners are informed citizens of comparative cultures and societies. This course examines the values and ethics of social work practice in a global context of power, privilege and oppression. Course materials and educational experiences are used to challenge students to examine ethical and value-based conundrums when practicing in global settings and to develop practice skills to enhance the health, well-being and sustainability of communities. Through the use of case studies, critical thinking, cultural inventories and reflexivity the course supports and challenges students' personal growth and professional practice.

SOWK 4760 Resource Development and Fundraising (3 Credits)
This course examines strategies and tactics around skill building in fundraising, resource-development strategies, grant-proposal writing, budgeting, and fiscal processes common to not-for-profit or governmental organizations. Topics include resource development and acquisition (fundraising) and discussions on the budget process required resource management for nonprofit organizations.

SOWK 4762 Bosnia in Transition: The Social Work Response (3 Credits)
This course provides students with the unique opportunity to learn firsthand about the social work response in post-war Bosnia through a social justice lens. The social, cultural, historical, political, economic, religious, legal and ethnic characteristics of the former Yugoslavia will be explored as context for studying the genocide that occurred in the I990s. Learning will occur in the classroom at GSSW, followed by travel to Bosnia. Students will be exposed firsthand to the local, national and international efforts toward rebuilding and healing, through lectures provided by faculty at the University of Sarajevo School of Social Work, interaction with Bosnian social work students, visits to NGOs focused on the post-war efforts, visits to sites important during the war, visits to war tribunal sites, and exposure to current legal, economic and human service processes.

SOWK 4763 Social Work and Social Justice in South Africa (3 Credits)
This three-credit course will be conducted in partnership with Educo Africa in Cape Town, South Africa. The course will provide experiential and service learning social work experiences. Course activities will encourage cross cultural learning experiences and increase knowledge pertinent to South Africa’s social, cultural, environmental, political and historical reality. It will expose students to Community Development challenges as well as environmental and social justice issues in a South African context. The goal of the course is to increase personal, community and global leadership potential of social work and social development professionals. This course in partnership to Educo Africa will use a community-based context to increase the effectiveness and expertise of students and will support student’s engagement in program development and building international networks and partnerships.
SOWK 4764 Historical Trauma and Healing (3 Credits)
This course is designed to provide students with a context for practice with communities experiencing historical trauma. We learn about the conceptualization of historical trauma, its impact on communities as well as community responses to it. We also discuss the importance of cultural protective factors, strengths, and culturally relevant models of healing around multigenerational, collective experiences of trauma. A number of practice approaches found useful with communities experiencing historical trauma are presented and discussed. Class format includes presentations, small group discussions, films, poetry, movement, and experiential learning in the community. This course is built upon the concepts of empowerment practice, indigenous models of social work, and narrative theory and practice. We use these perspectives as we explore work around historical trauma in communities. This class provides social work direct practice skills on individual, family, community and policy levels.

SOWK 4765 International Social Development (3 Credits)
Social development is a process of planned instructional change to bring about a better correspondence between human needs and social policies and programs. This class focuses primarily on the developing work with particular emphasis on transitional economies. Practice-oriented, the class is geared toward a knowledge of policy-making for human security and the skills required for local social development.

SOWK 4775 Social Work with Adult Groups (3 Credits)
The course teaches students advanced clinical group work methods and skills with vulnerable and resilient adult clients who are experiencing an array of bio-psycho-social-spiritual problems, and who are seen in mental health, health, and gerontology practice settings. The purpose of group work is to meet the socio-emotional needs of members through mutual aid and support, education, therapy, growth, and socialization. The impact of gender, age, race/ethnicity, sexual orientation, social class, ability/disability, and spirituality on group formation and dynamics is addressed. Evidence of practice effectiveness of group methods is examined. Ethical conflicts and dilemmas involved in group work are considered within the framework of social work values and ethics.

SOWK 4780 Conflict Resolution in Social Work Practice (3 Credits)
Covers methods of conflict resolution including negotiation, bargaining and mediation. Applies social work role of mediator to families, divorces and child custody, elder care issues, groups and organizations. Examines frameworks and helps students build skills for conflict resolution in practice. An elective course.

SOWK 4782 Feminisms in Social Work Practice (3 Credits)
This course engages students in the conversation of scholarship and social work practice issues related to social justice and the oppression of women. The course is designed to expand the knowledge of theory, research, policy and practice for working with diverse groups of women in multiple settings. Feminist social work perspectives for social work practice at micro, meso and macro practice levels will be critically examined. Topics include feminist theories, or feminisms, including eco-feminism and womanism, clinical and community feminist practice models, globalization and women, and the value of feminist research. These topics will be informed by knowledge and awareness of intersectionality, oppression and privilege. Prerequisite: SOWK 4132.

SOWK 4784 Suicide Assessments and Interventions (3 Credits)
This course builds students’ competencies in assessing suicide risk, planning for safety, and providing counseling to individuals who are thinking about suicide or have made a suicide attempt. This class examines theories of suicide causation, methods of suicide risk assessment, and models of techniques for intervention. Students will learn practices for eliciting sensitive information about troubling thoughts, assessing and documenting a client’s level of suicide risk, and using cognitive-behavioral and other methods to help reduce suicide risk.

SOWK 4786 Human Trafficking: Prevention, Intervention, and Support of Its Victims (3 Credits)
This course meets the values for practice requirement and is relevant for students who are interested in trauma, human rights, international issues, prevention of child abuse, intervention with victims of violence, interventions with child abuse, interventions with high-risk youth, and PTSD. This class investigates human trafficking from a social work perspective: prevention, intervention, and support of victims. Additionally, this course investigates regional differences in both labor and sex trafficking. The class also studies how prevention, intervention, and giving support to victims change from different regional (Asian, African, European, and Latin American) perspectives. The course also investigates human trafficking in the US, both with domestic and international victims. Prerequisite: SOWK 4132.

SOWK 4790 Human Sexuality (3 Credits)
Integrates human sexuality in the thinking and practice of social workers. By viewing sexual behavior from the social work perspective, the student is prepared to assume a significant role in helping clients deal with issues of human sexuality. Focuses on clients experiencing sexual dysfunction and on sexually oppressed client groups including the elderly, the homosexually or bisexualy oriented, the physically or developmentally challenged and the sexually abused. An elective course.

SOWK 4795 Integration of Animals Into Therapeutic Settings (3 Credits)
Explores the human-animal bond and potential for therapeutic intervention with the animal as teacher, therapist, facilitator and companion in a number of therapeutic settings. Focuses on core skills for social workers seeking to integrate this clinical approach into their practice. A required course for the Animal-Assisted Social Work Certificate.

SOWK 4796 Animal Assisted Social Work Practice (3 Credits)
This course provides a comprehensive examination of approaches to Animal Assisted Social Work (AASW) and emphasizes clinical application skills utilized with a broad array of persons and in a number of therapeutic settings. Students will learn to design, implement and analyze the efficacy of AASW approaches within their chosen area of specialization, providing an opportunity to practice these approaches in their field internships. Students will learn to clearly articulate, assess, and intervene in "link" violence as it relates to social work practices and AASW implications. A required course for the Animal-Assisted Social Work Certificate. Prerequisite: SOWK 4795 or permission of instructor.
SOWK 4797 Issues for Evidence-Supported Animal Assisted Social Work (3 Credits)
This course is designed to take students into an evidence-supported exploration and understanding of methods for incorporating specific animals and animal assisted interventions in the context of current social work practice. The course examines the capacities of different species for work with diverse goals and populations in animal interactions and introduces components critical to animals’ well-being. Emphasis is placed on case formulation and experiential learning methods that link goal-specific human-animal interactions that impact measureable client behavioral changes. The course focuses on the explicit identification of how the animal will move clients toward goals and identifying outcomes and indicators of such change. Special attention is given to the development of animal selection, handling, evaluation, and management skills necessary for development as a social worker with competency in the incorporation of animals in evidence-based practice. Prerequisite: SOWK 4795.

SOWK 4890 Contemporary Global Issues (1-3 Credits)
The complexities of sustainable development and global practice require an understanding of current developments and events at a global scale. This course is designed to support student learning by providing a dynamic review and exploration of contemporary global issues with a focus on approaches and competencies for global social work practice. This course encourages students to understand the myriad geo-cultural, political, socio-economic, and environmental dimensions involved in current global developments and events. Examining issues of governance, local and regional laws, as well as human rights and social justice issues to include those of race, religion and ethnic influence can expand understanding of the unique considerations of various countries and world regions. Particular emphasis is laid on human security, poverty alleviation and humanitarian concerns, conflict/post conflict response, human rights, human and social development, migration and refugee activity, civil society and environmental sustainability. In this course, efforts are made to incorporate historical understanding, research-driven knowledge, expert experience-based insight, and field-tested skills and resources to examine possible solutions, policy, and response. Social workers focusing on human, social, economic and ecological issues in global settings must be equipped to evaluate, analyze and respond to current global issues with a coherent understanding of major value and policy frameworks such as the new Sustainable Development Goals (SDGs). This course develops students’ global reach and readiness as global citizens and social workers by engaging students in a year-long in-depth exploration of current events shaping issues and unfolding events globally.

SOWK 4900 Methods for Evaluating Practice and Programs (1-3 Credits)
Provides students with strategies for evaluating social work practice at multiple system levels. Prerequisite: SOWK 4201 or admission to advanced standing program.

SOWK 4901 Applied Practice Evaluation Research (3 Credits)
Provides students with the opportunity to conduct a practice evaluation project in their field setting. Prerequisite: SOWK 4900.

SOWK 4950 Foundation Field Internship (1-15 Credits)
This required practicum provides foundation students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels. Prerequisite or Corequisites: SOWK 4020, SOWK 4001, SOWK 4132.

SOWK 4960 Concentration Field Internship: Clinical (1-18 Credits)
Concentration students participate in planned clinical practice experience that integrates classroom theory, the learning of practice skills and the continued development of social work attitudes, ethics and values in the clinical practice setting. Prerequisite: completion of foundation year course work and field practicum.

SOWK 4961 Concentration Field Internship: Community (1-18 Credits)
Concentration students participate in planned community practice experience that integrates classroom theory, the learning of practice skills and the continued development of social work attitudes, ethics and values in the community practice setting. Prerequisite: completion of foundation year course work and field practicum.

SOWK 4965 International Field Practicum (0-18 Credits)
This international course fulfills partial requirement for a student’s concentration year practicum. In an international social work setting, the practicum provides students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels.

SOWK 4970 Concentration Field Internship (0-18 Credits)
Concentration students participate in planned practice experience that integrates classroom theory, the learning of practice skills and the continued development of social work attitudes, ethics, and values. Prerequisite for 2-year students: successful completion of foundation-year course work and field internship. Prerequisite for students with advanced standing: successful completion of advanced standing prerequisite courses and BSW-year internship. Field must be taken concurrently with concentration-year course work, or after core concentration course work. Concentration-year field requires a minimum of 20 hours a week experience at the assigned field agency. Any deviation from this standard requirement must be approved by the Director of Field Education. Prerequisite: SOWK 4950.

SOWK 4971 Experimental Class (3 Credits)
Experimental courses allow GSSW to provide a wide variety of course offerings that respond to current issues and themes in the profession as they arise, as well as providing specialized courses that relate to the interests and areas of expertise of our faculty. All experimental courses are offered as electives open to all students. Prerequisite: determined by each instructor.
SOWK 4990 Topics in Social Work (1-4 Credits)
This topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard MSW curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year that have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to social work practice, theory, or research. Topics vary from term to term and may be limited by program administrators, faculty, or by student interest.

SOWK 4992 Directed Study (1-10 Credits)
A permanent catalog course delivered on an individual basis when the course is not offered that term. Directed studies are approved under extenuating circumstances to provide an opportunity to complete a required course. Prerequisite: approval of instructor and MSW Director. Credit hours vary according to the catalog course taken.

SOWK 4999 Capstone (0-1 Credits)
This course is a 0-1 credit (Pass-Fail) required course in which students document their work through the development of an individual portfolio. Students are asked to upload artifacts (papers, presentations and field accomplishments) from both classroom and field internship that demonstrate how they have met the CSWE foundation and concentration specific EPAS competencies and practice behaviors. Students complete a reflection statement on their learning as it relates to the EPAS competencies.

SOWK 5000 Seminar in Professional Social Work Issues (2 Credits)
Examines the dilemmas and challenges confronting the social work profession and social work education. Examines the nature of professional education, the nature of the profession itself and the forces internal and external to the profession that have an impact upon practice and education. Required.

SOWK 5101 Social Welfare Policy Analysis and Development (3 Credits)
Applies analytical techniques to development of social welfare policy stressing the ability to formulate a policy hypothesis (i.e., a statement, in testable form, of a basic premise undergirding a policy position) and to reach conclusions based on analysis of empirical evidence related to the policy hypothesis. Required.

SOWK 5110 Introduction to Advanced Quantitative Research Methods (3 Credits)
This required doctoral course introduces students to quantitative approaches to conducting social research. The course includes material related to measurement, sampling, research design, data collection, and data analysis. While each of these topics encompasses technical issues to be mastered by doctoral students, the logic and underlying rationale of these research methods is of prime importance in this course. A second component of the course requires students to define and begin to develop a substantive area of intended study and research during their enrollment in the doctoral program. Elements of articulating a substantive research area and steps toward defining key research questions in a topical area are reviewed.
Aspects of conducting literature reviews leading to the articulation of a substantive research area are discussed in class sessions.

SOWK 5111 Quantitative Methods for Assessing Social Interventions (3 Credits)
Social work researchers are in a unique position to contribute to knowledge about the causes of individual and societal problems and to test interventions that seek to prevent or ameliorate such problems. A variety of qualitative and quantitative research methods are used to advance knowledge about etiological factors contributing to individual and social problems and to assess the outcomes of specific social policies and practice strategies. This course presents a detailed examination of quantitative methods and designs that are useful in assessing the effects of social interventions. Measurement, sampling and design issues in generating and testing research questions and hypothesis are explored. Experimental, quasi-experimental, and survey research designs are assessed and applied to practice and policy issues and problems. Special emphasis is placed on developing skills necessary to conduct intervention research. Cognate students may be permitted on a case by case basis, space permitting.

SOWK 5120 Introduction to Advanced Qualitative Research Methods (3 Credits)
This course provides a substantive doctoral-level review of content on qualitative research methods and strategies. It is developed for students from social science disciplines. The content includes the nature of the method, the epistemological implications and assumptions, and appropriate applications. Student learning and evaluation includes the experience of developing a research proposal based on qualitative methodology and conducting data collection for a mini-research project. This class a prerequisite for SOWK 5121, Qualitative Data Analysis. This course is required for social work doctoral students. Students from other departments may register with permission from the professor.

SOWK 5121 Qualitative Data Analysis (3 Credits)
The focus of this course is on data analysis and interpretation, demonstration of the science of the analysis, and presentation of findings in oral and written forms. Students are expected to conduct qualitative analyses on textual data they collected as part of SOWK 5120 or as a result of some other qualitative data collection experience. Over the course of the term students learn to code and analyze their data, interpret findings, orally present those findings, and write a final paper in which they demonstrate a rigorous engagement with qualitative data analysis and the literature relevant to their topic. This course is for SOWK PhD students only. Cognate students may be permitted on a case by case basis, space permitting.

SOWK 5130 Mixed Methods Research in Social Work (3 Credits)
This course introduces doctoral students to mixed methods research in social work and the social sciences. Students explore mixed methods as a third research paradigm that strategically combines both quantitative and qualitative methods within a single inquiry. The course encourages students to actively reflect on previous quantitative and qualitative research training. Specific topics for the course include: history and language of mixed methods research; relevant paradigms and epistemological debates; mixed methods design and research questions; and analysis and dissemination consideration. SOWK PhD students only. Cognate Students will be allowed to register on a case by case basis, space permitting.
SOWK 5201 Statistical Methods (5 Credits)
Examines the use and interpretation of statistics in educational and human services research, including descriptive and inferential statistics. Required.

SOWK 5202 Correlation and Regression (4 Credits)
Examines correlational and multiple regression research designs and their application to social work and social science problems. This course is for SOWK PhD students only. Cross-listed with RMS 4911, SOWK 5952. Prerequisite: SWOK 5201.

SOWK 5203 Multivariate Analysis (5 Credits)
Provides a conceptual understanding of common multivariate statistical techniques as applied to research in social work and the social sciences. Prerequisite: SOWK 5201.

SOWK 5300 Social Science Theory and the Philosophy of Science (3 Credits)
This foundation doctoral level course introduces traditional issues and recent developments in the philosophy of science, and provides an overview of social science theory and theoretical frameworks. It examines philosophical questions on scientific inquiry and the consequences modern science imposes on our basic understanding of knowledge and nature. The course analyzes and critiques the social-and-behavioral-science foundations that undergird the social work knowledge base and current social work theories. There are no prerequisites for this course. This course is required for social work doctoral students.

SOWK 5301 Social Work Theory in Research and Practice (3 Credits)
This course builds on SOWK 5300, Philosophy of Science and Social Work Theory, to examine how theories, conceptual frameworks, perspectives, and models are used specifically within social work research, education, and practice. This course explores how theories are used in research and in social work interventions on individual, family, group, organizational, community, and policy levels. The course analyzes and critiques the social work knowledge base and the current state of social work theories. This course is required for social work doctoral students. Prerequisite: SOWK 5300.

SOWK 5401 Quantitative Research Methods (4 Credits)
Focuses on basic elements of quantitative social research methods: measurement, sampling, research designs, data collection and data analysis. Emphasizes logic and underlying rationale, as well as technical issues. Prior understanding of computer-based statistical analysis is helpful. Required.

SOWK 5403 Advanced Social Welfare Policy Analysis (3 Credits)
Applies analytical techniques to development of social welfare policy stressing the ability to formulate a policy hypothesis (i.e., a statement, in testable form, of a basic premise undergirding a policy position) and to reach conclusions based on analysis of empirical evidence related to the policy hypothesis. This course is for SOWK PhD students only.

SOWK 5404 Qualitative Data Analysis (4 Credits)
Provides an understanding of analysis methods used to draw meaning from qualitative data, methods that must be practical, applicable and understandable to other observers. Prepares students to use a systematic, scientific process of analysis that captures the meaning of data while avoiding research self-delusion and unreliable or invalid conclusions. Topics include data collection, data reduction, data display, and conclusion drawing and verification. Methods include application of computer software. Prerequisite: SOWK 5402. Required.

SOWK 5450 Social Work Knowledge Integration and Publication (3 Credits)
This required doctoral course introduces students to integrating knowledge for social work scholarship through the use of tolls that support academic argumentation and exposition. It provides students with the skills, expertise, and readiness necessary to compose a number of scholarly documents, including academic publications and the dissertation proposal. The course focuses on the preparation and writing of the comprehensive examination proposal as an example of such documents. The major product of the class is a paper designed to meet the requirements of the comprehensive examination proposal. Advisors and mentors participate in class presentations and critiques as a part of preparing the student for their ongoing scholarship.

SOWK 5500 Pedagogy in Social Work Education (3 Credits)
This foundation course examines philosophies, theories, and pedagogical models that are utilized in social work education. It explores how various perspectives shape the approaches and techniques used and how these in turn impact classroom effectiveness and issues of classroom management. The course incorporates concepts and develops skills based on evidence-based teaching. This course is a required course for social work students and has no prerequisite. This course is for SOWK PhD students only.

SOWK 5700 Teaching Practicum (3 Credits)
This 3-hour required course provides classroom instruction and teaching opportunities designed to prepare doctoral students for faculty positions in undergraduate and graduate level social work education. Students work with a faculty mentor to pursue practicum placements that match their substantive interests. Students are expected to devote approximately 8 hours to the practicum per week. Restricted to Ph.D. students only.

SOWK 5950 Multivariate Analysis (5 Credits)
This course is designed to provide students with an introduction to common multivariate statistical analyses. Provides a conceptual understanding of common multivariate statistical techniques as applied to research in education and the social sciences. Cross listed with RMS 4913. Prerequisite: SOWK 5930.

SOWK 5952 Correlation and Regression (4 Credits)
Examines correlation and multiple regression research designs and their application to educational and social science problems. Cross listed with RMS 4911. Prerequisite: SOWK 5930. Required.
SOWK 5990 Special Topics (1-3 Credits)
This special topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard PhD curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year which have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to advanced social work theory, pedagogy, or research. Topics vary from term to term and may be initiated by program administrators, faculty, or by student interest.

SOWK 5991 Independent Study (1-10 Credits)
This is an opportunity for students to undertake special study in a defined area of interest with faculty consultation.

SOWK 5995 Independent Research-Thesis (1-10 Credits)
Students undertake special study in a defined area of interest with faculty consultation. By arrangement.

SOWK 6991 Independent Study (1-10 Credits)
The formal mechanism for undertaking the dissertation, providing for faculty support through the appointment of a dissertation committee. By arrangement.

Statistics (STAT)

Courses

STAT 3920 Strategic Management of Operations (4 Credits)
The operations function is the unit of the organization that produces the products and/or delivers the service for which the company earns revenue. It is the largest unit of the organization with which all other units interact. Therefore, efficient management of this function is a critical success factor for any company. This course focuses on an organization’s management (planning, organizing, staffing, directing, and controlling) when converting inputs into products and services. Companies today must remain competitive in the global marketplace, and careful consideration of various options regarding cost containment and use of technology are required. This course will explore how operations managers meet these challenges in the manufacturing and services firms in response to changes in economic conditions. Students will be exposed to a number of quantitative tools as well as becoming familiar with new systems and methods in the operations management field. When appropriate, optimization software such as Microsoft Solver will be utilized to conduct analysis. Prerequisite: STAT 3900.

STAT 4040 Basic Math-Graduate Students (2 Credits)

STAT 4045 Basic Math-Evening MBA Stdnt (1 Credit)

STAT 4050 Basic Statistics-Grad Students (2 Credits)

STAT 4100 Quantitative Methods I (4 Credits)
An introduction to the methods of quantitative analysis commonly used in business, with an emphasis on finance applications. Topics include descriptive statistics, probability, probability distributions, fundamentals of statistical inference, correlation, and simple and multiple regression analysis.

STAT 4200 Quantitative Methods II (4 Credits)

STAT 4300 Production & Operation Mgmt (3 Credits)

STAT 4350 Statistical Computing (4 Credits)
Introduction to and training in the use of modern statistical software packages. Exposure to several of SAS, STATISTICA, S-PLUS, and SPSS with focus on one to best fit student needs. Data acquisition, management, graphs, analyses, reports, customizing and programming. Cross listed with STAT 3350.

STAT 4400 Risky Business (4 Credits)
An interterm travel course to Las Vegas that deals with the theory, practice, and business of gambling.

STAT 4500 Prob Thry Math Gamb (4 Credits)
This course covers the theory of probability and the formal study of mathematics underlying gambling and games of chance. Topics include probability concepts, probability rules, expectation, permutations and combinations, the law of large numbers, the law of “averages,” history of gambling, house advantage, fallacies and betting systems, volatility and operations, game odds and price setting, games of pure chance, games with a skill component. Prerequisite: a previous course in statistics or permission of instructor. Cross listed with STAT 3500.

STAT 4510 Applied Decision Theory (4 Credits)
Application of classical and Bayesian decision theory and game theory to practical problems. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.
**STAT 4610 Business Statistics (4 Credits)**
This course introduces students to basic analytical tools in statistics and operations management, and provides theoretical concepts and skills that are building blocks for future courses. The approach is to present students with a "corporate" view of how statistical tools are used to analyze data and facilitate business decision-making. Students will familiarize themselves with all of the statistical techniques and models presented in the course and will demonstrate knowledge in applying the appropriate techniques and models to various data sets and interpreting the results of the analysis. The Microsoft Excel Data Analysis and Solver Toolkits will be used to conduct statistical analyses, allowing students to become more proficient overall in using Microsoft Excel and to place their emphasis on applications to core business disciplines, statistical reasoning, and proper interpretation of results. A rich variety of such problems and settings will be discussed in class.

**STAT 4640 Regression/Correlation Analysis (4 Credits)**
Simple linear regression analysis, methods of estimation, multivariate multiple regression and correlation, tests of reliability and significance, simultaneous equations model and applications. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4650 Applied Multivariate Analysis (4 Credits)**
The introduction and application of multivariate analytical techniques and model building for problem solving in business and other settings. Cross listed with STAT 3650. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4680 Sampling Theory & Application (4 Credits)**
Simple and stratified random sampling; multistage, cluster, and sequential sampling; optimum allocation and economic efficiency; ratio estimation methods; design of sample studies of various human and physical populations; financial auditing by probability sampling. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4687 Advanced Statistics (4 Credits)**

**STAT 4700 Intro Computer Simulation (4 Credits)**
Deterministic and probabilistic model structures, planning models, heuristics and artificial intelligence, Monte Carlo methods, simulation programming languages, model design, experimentation, and verification. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4704 Topics in Statistics (1-5 Credits)**
Various topics including travel courses.

**STAT 4709 Computer Simulation Methods for Business (4 Credits)**
Large-scale simulation in business and economics, deterministic and probabilistic model structures, corporate planning models, heuristics and artificial intelligence; Monte Carlo methods, model design, experimentation and verification, tactical problems in total systems simulation. Cross listed with STAT 3709.

**STAT 4710 Statistical Quality Control (4 Credits)**
Applies the basic concepts of statistics to quality improvement in the business environment. Topics include a summary of Total Quality Management (TQM) and where Statistical Quality Control fits in, the tools of Statistical Process Control, Deming's Continuous Improvement Cycle, as well as the evaluation of Process Capability and Sampling. Cross listed with STAT 3710. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4780 Design & Analysis Exp & Survey (4 Credits)**

**STAT 4783 Forecasting-Financial Envirn (4 Credits)**
Cross listed with FIN 3610, STAT 3620.

**STAT 4793 Sem: Statistical Methods (1-5 Credits)**

**STAT 4794 Sem: Operations Research (1-5 Credits)**

**STAT 4795 Grad Research Sem-Statistics (1-5 Credits)**

**STAT 4800 Design & Analysis Exp & Survey (4 Credits)**
Designing experiments, analysis of results of experiments, nonparametric and parametric tests, randomization, factorial and nonfactorial designs, Latin squares, survey methodology, survey techniques for field investigations. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4810 Nonparametric Statistics (4 Credits)**
Statistical procedures applicable in many situations where standard normal theory methods are not. Especially useful when data are of categorical or rank type or when sampled population is excessively skewed. Emphasis will be on applications, making use of the laws of probability. Cross listed with STAT 3110. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4830 Stats-Econ & Bus Forecasting (4 Credits)**
Methods to explain, discover, and predict business and economic forces, bases for evaluating such methods. Prerequisite: STAT 4100 or equivalent. Cross-listed with FIN 4620.

**STAT 4840 Decision Sciences (4 Credits)**
Decision-making techniques, processes, and support systems; basic decision models dealing with certainty, uncertainty, and static and dynamic time frames; emphasis on viewing all decision problems from perspective of a generalized decision-making structure; introduction to computerized decision support systems. Prerequisites: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4850 Operations Research I (4 Credits)**
Linear programming, including transportation, warehousing, assignment models, and sensitivity analysis, integer programming and game theory. Permission of instructor required.
STAT 4860 Operations Research II (4 Credits)
Non-linear models and optimization, Kuhn Tucker conditions, quadratic and dynamic programming, inventory and queuing models, simulation. Permission of instructor required.

STAT 4870 Advanced Statistics (4 Credits)
Discrete and continuous probability distributions, sampling distributions, estimation methods, moment generating functions, analysis of variance, test of reliability, and significance by parametric and non-parametric methods. Prerequisites: MBA 4111, MBA 4112, or permission of instructor.

STAT 4930 Sem: Statistical Methods (1-5 Credits)
STAT 4940 Sem: Operations Research (1-5 Credits)
STAT 4950 Grad Research Sem-Statistics (1-5 Credits)
STAT 4960 Intern/Case Study: Statistics (1-5 Credits)
STAT 4970 Intern/Case Study: Ops Res (1-10 Credits)
STAT 4980 Intern/Case Study: Statistics (0-10 Credits)
Hours and times arranged by student.

STAT 4981 Intern/Case Study: Ops Res (4 Credits)
STAT 4991 Independent Study (1-4 Credits)
Individual research and report. Hours and times arranged by student.

STAT 4992 Directed Study (1-10 Credits)
STAT 4995 Independent Research (1-10 Credits)

Taxation (TAX)

Courses
TAX 4010 Tax Principles, Research and Writing (2 Credits)
Research sources, techniques, and practice; in-depth research of selected areas. Emphasis on argument and communication of conclusions; evaluation of legislative history and administrative authorities.

TAX 4020 Individual Tax Problems (4 Credits)
Using the Internal Revenue Code and the Federal Income Tax Regulations as a basis, substantive issues relating to individual taxation are covered. Areas included are general concepts of gross income, individual employee benefits and deductions, charitable deductions, alternative minimum tax, deductibility and classes of interest, office in home and vacation homes, and a general overview of the interrelationships of various statutory and non-statutory principles. Cross listed with LAWS 4292.

TAX 4100 Tax Accounting (4 Credits)
Adoption of and change in accounting periods; income recognition and deduction allowance under the cash and accrual methods; prepaid and contested income and expenses; long-term contracts; capitalization and expensing; interest, original issue discount, and the time value of money; deferred payment transactions; income and deduction reversals; accounting method and practice changes.

TAX 4110 Property Transactions (4 Credits)
Basis of property; expenditures and current expense comparison; depreciable status; amortization of intangible property; depreciation methods; property casualties and losses; profit or loss computation and characterization for taxable property dispositions; limitations on passive losses; lessor and lessee reporting; tax-deferred dispositions.

TAX 4120 Qualified Pension and Profit Sharing Plans (4 Credits)
An in-depth study of ERISA, labor department rules, and Internal Revenue Code provisions relating to qualified deferred compensation. The course is geared toward an understanding of all the pension and profit sharing rules required for plan qualification, with emphasis on qualified plan planning for both incorporated and unincorporated forms of business.

TAX 4200 Corporate Taxation I (4 Credits)
The federal income taxation of corporations and their shareholders with emphasis on the creation of the corporation, establishment of its capital structure, operational alternatives, distributions to shareholders, stock dividends and redemptions, personal holding companies, and accumulated earnings tax.

TAX 4210 Estate & Gift Taxation (4 Credits)
Taxation of gratuitous transfers under the federal estate and gift tax codes, including taxable inter vivos gifts, annual exclusion, gift-splitting, gift tax charitable deduction, gift tax on powers of appointment, estate tax on owned interests, property transferred inter vivos with retained interests and powers, property subject to powers of appointment or transferred in contemplation of death, jointly owned property, life insurance proceeds, annuities and employee death benefits, marital deduction, charitable deduction, estate tax credits, estate tax deductions, valuation problems.
TAX 4220 Fiduciary Income Taxation (4 Credits)
Federal income taxation of estates and trusts. Included is a discussion of the concept of an estate or trust; trust accounting income for a simple and complex trust; calculation of taxable income, including special rules on the calculation of distributable net income, capital gains, personal exemptions, and charitable contributions; the separate share rule and trapping distributions; income in respect of a decedent; the grantor trust rules under Sections 671-678; and the calculation of the alternative minimum tax.

TAX 4230 Estate Planning (3 Credits)
Estate analysis, including fact gathering and the analysis of data; the psychological aspects of "role playing" in estate planning; the members of the team (the attorney, the CPA, the life underwriter, the trust officer); life insurance in an estate and business planning context; planning with trusts. including revocable, short-term, and irreversible; the transfer of a closely held business interest from one generation to the next, including full and partial stock redemptions, cross purchase agreements, private annuity, installment sale, retirement, recapitalization, qualified and nonqualified plans of deferred compensation; special estate planning considerations for the professional corporation, the highly paid executive, and the farmer and rancher; specific cases analyzed. Prerequisite: TAX 4210.

TAX 4240 Tax and Financial Planning (3 Credits)
This is an introductory, integrated course focusing on personal financial planning. Topics covered include cash flow projections and budgeting, annual and multiple period income tax planning, an introduction to taxation of investments, an insurance and liability coverage survey, retirement planning, and estate and succession planning.

TAX 4250 Ethics in Tax Practice (3 Credits)
An examination of the ethical rules and considerations affecting lawyers and accountants in tax practice, including transactional, compliance and controversy matters.

TAX 4300 Corporate Taxation II (4 Credits)
A continuation of Corporate Taxation I with emphasis on corporate reorganizations, operation, liquidation of subsidiary corporations and corporate division, and carryover of tax attributes. Prerequisite: TAX 4200.

TAX 4310 Civil & Criminal Tax Procedure (4 Credits)
Statute of limitations on assessment/collection of deficiencies, definition of deficiency, restrictions on assessment and collection; statute of limitations on overpayments, claims and suits for refund, and limitations for criminal prosecutions; regulations and rulings-- retroactive revocation; administrative settlements, closing agreements and compromises; civil penalties; tax return preparer penalties; civil litigation--injunctions, jurisdiction of Tax Court, District Court and Court of Claims, small claims procedure, authority to increase deficiencies, choice of forum; jeopardy assessments and termination of taxable years; criminal tax investigations-- administrative summons, document production (taxpayer and third party), constitutional protections, common law privileges, strategies; professional responsibilities and ethics for the tax practitioner.

TAX 4315 Low Income Taxpayer Clinic (2-4 Credits)
TAX 4320 Partnership Taxation (4 Credits)
Tax treatment of partnerships and partners; aggregate and entity principles; problems associated with the formation, operation, and dissolution of partnerships; transactions between partnerships and partners; compensation of service partners; sales of partnership interests; withdrawal and retirement of partners; basis adjustments; treatment of unrealized receivables and substantially appreciated inventory.

TAX 4330 Corporate Taxation III (4 Credits)
Advanced corporate taxation problems with emphasis on liquidations; detailed study of sections 305, 306, 307; loss carryovers and Subchapter S corporations. Prerequisite: TAX 4300.

TAX 4386 Graduate Tax Program Externship (2-4 Credits)
The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Externships are supervised by faculty and GLS department who interact with the eligible student and the employer or organization that provides the externship. The externship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the externship will result in a passing grade for the externship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP externs.

TAX 4410 Taxation-Natural Resources (3 Credits)
Tax problems encountered in the acquisition, operation, and disposition of natural resource properties; pre-production expenditures, depletion, depreciation, and ad valorem taxes; emphasis on overall tax planning for natural resource ventures.

TAX 4420 International Taxation (4 Credits)
Introduction to U.S. international taxation with an equal emphasis on inbound and outbound transactions. Resident and nonresident alien taxation, withholding taxes, effectively connected (business) income, foreign investment in U.S. real estate, tax treaties, branch taxes, earnings stripping, conduit financing rules, foreign earned income exclusion, foreign tax credit, controlled foreign corporations, passive foreign investment companies, export transactions, Subpart F manufacturing rules, outbound property transfers, and transfer pricing. Cross listed with LAWS 4344.

TAX 4430 Exempt Organizations (3 Credits)
An examination of the statutory exemptions for "charities," social welfare organizations, social clubs, homeowners' associations, fraternal orders, employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, property title companies, federally organized or chartered organizations, political organizations, and other exempt organizations; rules on electioneering and lobbying activities; taxation of private foundations; prohibited transaction rules; the tax on unrelated business income, including debt-financed income, excise tax exemptions; administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions.
TAX 4470 Employment Tax (2 Credits)
Explore existing employment tax risks, recognize employment tax planning opportunities through appropriate compensation and entity structuring techniques, analyze proper worker classification, and highlight preventative techniques to avoid personal liability.

TAX 4490 State & Local Taxation (3 Credits)
Taxable incidents, privilege tax, discrimination, and multiple taxation under the Commerce Clause of the United States Constitution; taxation based on class legislation and the Equal Protection Clause; nexus or jurisdictional due process; allocation and apportionment formulas; business versus nonbusiness income; multi-state tax compact; unitary concept; residence definitions; nonresident income sources; tax credits and short period returns for individual income taxpayers; sales of tangible personal property; retail and wholesale sales; taxable and nontaxable leases; contractors rule, exemptions, and resale certificates under sales and use tax statutes; valuation techniques for real personal property; and administrative and judicial appeal of property tax valuations and assessments.

TAX 4500 Consolidated Returns (3 Credits)
Methods used by related corporations to report income and losses; affiliation and consolidation; computation of consolidated taxable income; allocation of consolidated tax liability; deferred intercompany transactions; treatment of investments in affiliates; earnings and profits; impact of corporate combination and separation.

TAX 4600 Seminar: Selected Topics (2-4 Credits)
Recognition of tax problems and opportunities for a broad range of transactions encountered by individuals. Areas include family income splitting and other tax reduction and avoidance techniques; portfolio transactions, including short sales, puts and calls, and commodity futures; structuring agreements in contemplation of marriage or arising out of separation or divorce; personal insurance; charitable contributions; net operating losses; alternative minimum tax; various year-end planning techniques.

TAX 4620 Accounting for Income Taxes (ASC 740) (2 Credits)
Examines the financial accounting and reporting of income taxes under Statement of Financial Accounting Standards Codification Topic 740 (FASB ASC 740), formerly known as FAS 109, and related accounting literature. Topics include the calculation of current and deferred income taxes, an overview of book-tax differences, the calculation of interim period tax provisions and the presentation and disclosure of income taxes in financial statements. Students will learn the basics of accounting for income taxes related to advanced topics such as stock compensation expense, foreign operations, state income taxes, accounting for uncertain tax positions (formerly known as FIN 48), business combinations, inter-company transactions and valuation allowances.

TAX 4980 Internship (0 Credits)
The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Internships are supervised by faculty who interact with the eligible student and the employer or organization that provides the internship. The internship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the internship results in a passing grade for the internship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP interns. Students must obtain approval from the GTP Director or a full-time GTP faculty member.

TAX 4991 Independent Study (1-4 Credits)
Opportunity to study and write in any area agreed upon between the student and a member of the faculty. The student is required to produce a written work of publishable quality to receive a final grade for the course. The 4 quarter-hour maximum may be applied toward graduation requirements with no more than 2 quarter hours in any one quarter. Must obtain pre-approval from the Graduate Tax Program.

Teacher Ed Prep (TEP)

Courses

TEP 4010 Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities (2-4 Credits)
This course serves as the foundation for understanding children with disabilities and dis/abilities, as well as the philosophies, laws and policies that support the students. To be responsive to the diverse strengths, needs, and experiences children bring to the classroom, educators need a foundational knowledge of special education and opportunities that can influence student learning. We emphasize a strengths-based perspective and provide pedagogy for supporting all learners. We introduce the classroom teacher’s role in understanding the Individual Education Program (IEP) process, designing lesson plans and inclusive practices based on differentiated and universal design learning instructional strategies and working collaboratively with families and interdisciplinary teams. In addition, we introduce potential commonalities of students with high-incidence disabilities, the history and legal aspects of Special Education and the Response to Intervention Model (RtI)/Multi-Tiered System of Supports (MTSS).

TEP 4520 Art Methods K-12 (3-4 Credits)
Throughout this course, Apprentice Teachers will analyze the following essential questions about teaching and learning in the visual arts field: 1) What type of visual arts classroom environment best supports student learning and skill development in a 21st century classroom?, 2) How do the Colorado Academic Standards guide arts instruction?, 3) What is the role of descriptive feedback in the reflective practice of teaching and learning?, 4) How can visual arts instruction enhance positive-identity development for diverse learners?, and 5) How can visual arts educators use arts assessment in curriculum planning and to gauge student learning?
TEP 4561 Elementary Curriculum I (4-6 Credits)
Focuses on teaching and learning in the K-6 classroom and prepares teachers to design and implement effective classroom instruction. Frequently covered topics include: standards-based instruction, approaches to assessment, effective teaching strategies, sound lesson/unit planning, interdisciplinary instruction, individualizing instruction, technology, multicultural curriculum. Prerequisite: enrollment in the Teacher Education Program.

TEP 4562 Elementary Curriculum II (4-6 Credits)
Continuation of TEP 4561. Both must be completed for students planning to teach in elementary schools. Prerequisite: enrollment in the Teacher Education Program.

TEP 4572 Art Methods for K-12 (4 Credits)
In this course, Apprentice Teachers will gain an understanding of how the Colorado Academic Standards for Visual Arts and the Backward Design process are used in the development of curriculum for the arts. The course will culminate with a portfolio presentation consisting of the Apprentice Teacher's philosophy of teaching, a lesson plan and artifact, and a teaching presentation to peers.

TEP 4581 Elementary Music Methods (3-6 Credits)
Prepares K-12 music teachers to design and implement effective instruction in the elementary school music classroom. Course introduces full array of sound teaching and assessment strategies for all aspects of music. Prerequisite: enrollment in the Teacher Education Program.

TEP 4582 Secondary Music Methods (3-4 Credits)
Prepares K-12 music teachers to design and implement effective instruction in the secondary school music classroom. Course introduces full array of sound teaching and assessment strategies for all aspects of music instruction. Prerequisite: enrollment in the Teacher Education Program.

TEP 4590 Literacy Instruction I (3-4 Credits)
Introduces developmental continuum for literacy. Prepares to assess students' abilities, to select appropriate instructional strategies and to design effective instructional programs leading to increased listening, speaking, reading and writing competencies for all children. At the elementary level, focuses on balanced approach to literacy instruction. At the secondary level, emphasizes reading and writing in the content areas and assistance of the struggling reader/writer. Prerequisite: enrollment in the Teacher Education Program.

TEP 4591 Literacy Instruction II (3-4 Credits)
Introduces developmental continuum for literacy. Prepares to assess students' abilities, to select appropriate instructional strategies and to design effective instructional programs leading to increased listening, speaking, reading and writing competencies for all children. At the elementary level, focuses on balanced approach to literacy instruction. At the secondary level, emphasizes reading and writing in the content areas and assistance of the struggling reader/writer. Prerequisite: enrollment in the Teacher Education Program.

TEP 4600 Introduction to Secondary Methods (3-6 Credits)
Provides general introduction to principles of effective secondary instruction curriculum design and assessment. Frequently covered topics include: design of classroom environments, comparison of different instructional practices, purposes for and approaches to assessment, comparison of middle and high school philosophies, introduction to instructional unit plan development, and theories of instructional approach and design. Course lays a foundation for more specialized subject-matter methods courses. Prerequisite: enrollment in the Teacher Education Program.

TEP 4610 English in Secondary School (3-5 Credits)
Trends and developments in teaching English Language Arts. Frequently covered topics include: standards-based instruction, technology, subject-matter specific approaches to assessment, instruction and curriculum design. Course builds upon foundation laid in Introduction to Secondary Methods. Prerequisite: enrollment in Teacher Education Program.

TEP 4620 Social Science in Secondary School (3-5 Credits)
Trends and developments in teaching Social Science. Frequently covered topics include: standards-based instruction, technology, subject-matter specific approaches to assessment, instruction and curriculum design. Course builds upon foundation laid in Introduction to Secondary Methods. Prerequisite: enrollment in Teacher Education Program.

TEP 4630 Science in Secondary School (3-5 Credits)
Trends and developments in teaching science. Frequently covered topics include: standards-based instruction, technology, subject-matter specific approaches to assessment, instruction and curriculum design. Course builds upon foundation laid in Introduction to Secondary Methods. Prerequisite: enrollment in Teacher Education Program.

TEP 4640 Math in Secondary School (3-5 Credits)
Trends and developments in teaching math. Frequently covered topics include: standards-based instruction, technology, subject-matter specific approaches to assessment, instruction and curriculum design. Course builds upon foundation laid in Introduction to Secondary Methods. Prerequisite: enrollment in the Teacher Education Program.

TEP 4650 Foreign Language Methods in K-12 Schools (3-5 Credits)
Trends and developments in teaching foreign languages in K-12. Course content includes methods and materials of standards-based instruction, classroom and instructional management, assessment strategies, designing lessons using multiple intelligence and differentiated instruction, using technology in instruction, and integration of other content areas in teaching foreign language. Prerequisite: enrollment in Teacher Education Program.

TEP 4690 Field Experience (1-12 Credits)
Involves field experiences, including full-day teaching for 12 weeks in elementary or secondary school classroom and regularly scheduled seminar discussions with supervisor. Prerequisite: enrollment in the Teacher Education Program.
TEP 4691 Field Experience I (1 Credit)
This is the first quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4540 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

TEP 4692 Field Experience II (1 Credit)
This is the second quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4541 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

TEP 4693 Field Experience III (1 Credit)
This is the final quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4542 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

TEP 4781 Elementary Art Methods (3-6 Credits)
Prepares K-12 art teachers to design and implement effective instruction in elementary school classrooms. Course introduces full array of sound teaching and assessment strategies for all aspects of art. Prerequisite: enrollment in the Teacher Education Program.

TEP 4782 Secondary Art Methods (3-4 Credits)
Prepares K-12 art teachers to design and implement effective instruction in secondary school classrooms. Course introduces full array of sound teaching and assessment strategies for all aspects of art. Prerequisite: enrollment in the Teacher Education Program.

TEP 4991 Independent Study (1-10 Credits)

TEP 4992 Directed Study (1-10 Credits)

TEP 4995 Independent Research (1-10 Credits)

Theatre (THEA)

Courses

THEA 4991 Independent Study (1-10 Credits)

THEA 4992 Independent Research (1-10 Credits)

THEA 4995 Dissertation Research (1-10 Credits)