REAL ESTATE & THE BUILT ENVIRONMENT

Office: Daniels College of Business, Room 380 Mail Code: 2101 S. University Blvd. Denver, CO 80208

Phone: 303-871-3432

Web Site: http://daniels.du.edu/burns (http://daniels.du.edu/burns/)

The Franklin L. Burns School of Real Estate and Construction Management at the Daniels College of Business provides a one-of-a-kind education. With an emphasis on the business of the built environment, The Burns School programs are designed to equip you with the skills necessary to succeed. Our degrees provide students with an understanding of the full life cycle of the built environment while acquiring expertise in three concentrations of their choice in Real Estate Finance and Investments, Real Estate Development and Construction Management. This is an advantage as courses are taught from a managerial point of view, as opposed to the strictly technical programs often found in schools of architecture, engineering or technology. Finance, marketing, accounting, management and sustainability are integrated into your degree to provide an even greater competitive edge. Students in the Burns School have the opportunity to see classroom theory come alive in the city of Denver, a wonderful urban laboratory for applications, research and internships.

The placement record for Burns School graduates has traditionally been very strong. Most of these jobs are a result of professor-industry contacts. Careers for students interested in Real Estate include acquisitions, real estate finance/underwriting, real estate development, investment fund/asset managers, property management, real estate appraisers, real estate asset management, real estate leasing, and transactions/brokerage. On the Construction Management side, careers include project management, corporate real estate, facilities management, and cost estimators.

Bachelor of Science in Business Administration Major

Major Requirements

(185 credits required for the degree (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/))

Complete the following Core Requirements then select one of the following Concentrations for a total of 44 credit hours.

Real Estate and the Built Environment Core Requirements:

Code	Title	Credits
Required Courses		
REAL 1700	Fundamentals of Real Estate and the Built Environment	4
REAL 3307	Real Estate Finance	4
CMGT 2170	Construction Building Systems	4
CMGT 2300	Introduction to Architecture and Design Management	4
REAL 3007	Real Estate Financial Analysis	4
REAL 3357	Corporate Real Estate and Management	4
REAL 3438	Legal Aspects of Real Estate and the Built Environment	4
Concentration Requirements		
Concentration		16
Total Credits		44

Construction Management Concentration

Construction Management Concentration

Code	Title	Credits	
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Select any four courses below:

CMGT 3100	Construction Estimating	
CMGT 3120	Construction Scheduling	
CMGT 3155	Sustainable Development	
CMGT 3480	Construction Project Management	
REAL 3140	Global Immersion ¹	
Total		16

Code Title Credits

Elective (Real Estate & the Built Environment students are able to substitute one concentration requirement with four credits from one of the following courses)

CMGT 3700 Topics in Construction Mgmt 0-4

REAL 3701

REAL 3980

REAL 3980

CMGT 3980	Construction Management Internship ²	0-5
REAL 3701	Topics in Real Estate	0-4
REAL 3980	Real Estate Internship ²	0-5

Can count toward international experience requirement

Real Estate Development Concentration

Real Estate Development Concentration

Code	Title	Credits
Select any four courses below		
CMGT 3155	Sustainable Development	
CMGT 3190	Residential Development	
REAL 3140	Global Immersion ¹	
REAL 3210	Planning, Entitlements, and Public Finance	
REAL 3367	Development and Feasibility	
REAL 3377	Real Estate Investment Seminar	
Total		16
Code	Title	Credits
Code	ritte	Credits
Elective (Real Estate & the Built Env	ironment students are able to substitute one concentration requirement with four credits from one of the	
following courses)		
CMGT 3700	Topics in Construction Mgmt	0-4
CMGT 3980	Construction Management Internship ²	0-5

0-4

0-5

0-5

Topics in Real Estate

Real Estate Internship ²

Real Estate Finance and Investments Concentration

Real Estate Finance and Investme	nts Concentration	
Code	Title	Credits
Select any four courses below		
REAL 3010	Real Estate Capital Markets	
REAL 3140	Global Immersion ¹	
REAL 3317	Real Estate Valuation and Appraisal	
REAL 3367	Development and Feasibility	
REAL 3369	Real Estate Taxation	
or REAL 3337	Securities, Syndications and Entrepreneurship	
REAL 3377	Real Estate Investment Seminar	
Total		16
Code	Title	Credits
Elective (Real Estate & the Built Envi following courses)	ronment students are able to substitute one concentration requirement with four credits from one of the	
CMGT 3700	Topics in Construction Mgmt	0-4
CMGT 3980	Construction Management Internship ²	0-5
REAL 3701	Topics in Real Estate	0-4

Can count toward the international experience requirement

Real Estate Internship ²

Students must adhere to Real Estate & the Built Environment internship guidelines

Can count toward the international experience requirement

Students must adhere to Real Estate and the Built Environment internship guidelines

Students must adhere to Real Estate and the Built Environment internship guidelines

Minors

Construction Management Minor Requirements

20 credits as follows:

Code	Title	Credits
CMGT 2170	Construction Building Systems	4
CMGT 2300	Introduction to Architecture and Design Management	4
CMGT 3100	Construction Estimating	4
CMGT 3120	Construction Scheduling	4
CMGT 3480	Construction Project Management	4
Total Credits		20

Real Estate Development Minor Requirements

20 credits as follows:

Code	Title	Credits
REAL 1700	Fundamentals of Real Estate and the Built Environment	4
REAL 3307	Real Estate Finance	4
REAL 3007	Real Estate Financial Analysis	4
REAL 3210	Planning, Entitlements, and Public Finance	4
CMGT 2170	Construction Building Systems	4
Total Credits		20

Real Estate Finance and Investments Minor

20 credits as follows:

Code	Title	Credits
Required Courses		
REAL 1700	Fundamentals of Real Estate and the Built Environment	4
or REAL 3438	Legal Aspects of Real Estate and the Built Environment	
REAL 3307	Real Estate Finance	4
REAL 3007	Real Estate Financial Analysis	4
Electives		8
Select 2 courses from the following:		
REAL 3010	Real Estate Capital Markets	
REAL 3317	Real Estate Valuation and Appraisal	
REAL 3337	Securities, Syndications and Entrepreneurship	
REAL 3367	Development and Feasibility	
REAL 3369	Real Estate Taxation	
REAL 3377	Real Estate Investment Seminar	
Total Credite		20

Requirements for Distinction in the Major in Real Estate and the Built Environment

Upon reaching 90 credit hours completed, students with a 3.50 cumulative GPA or higher, and a 3.85 Daniels GPA or higher, are invited to either create a portfolio of in-depth business experiences or to write a thesis to earn Distinction. See Daniels Undergraduate Programs or faculty in the department for more information.

Real Estate and the Built Environment

This course plan is a sample schedule only. Individual course plans will vary based on incoming transfer credit, prerequisites, restrictions (e.g., the requirement that students have sophomore-level standing/have earned 45 credits to enroll), availability of courses, minors, and other scheduling

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factors. You must meet with your Real Estate and the Built Environment academic advisor in year 2 to develop an individual graduation plan for your specific needs.

First Year					
Fall	Credits	Winter	Credits	Spring	Credits
FSEM 1111		4 WRIT 1122		4 WRIT 1133	4
MATH 1200 or 1951 ¹		4 Common Curriculum course ²		4 Common Curriculum course ²	4
Language sequence or SI Natural sequence I ³		4 Language sequence or SI Natural sequence II ³		4 Language sequence or SI Natural sequence III ³	4
Business Course ⁶		4 Business Course ⁶		4 Business Course ⁶	4
		BUS 1099 (Complete prior to end of year one.)		0	
	1	16	1	6	16
Second Year					
Fall	Credits	Winter	Credits	Spring	Credits
Language sequence or SI Natural sequence I ³		4 Language sequence or SI Natural sequence II ³		4 Language sequence or SI Natural sequence III ³	4
INTZ 2501 ⁴		2 Common Curriculum course ²		4 Common Curriculum course ²	4
Business Course ⁷		4 Business Course ⁷		4 Business Course ⁷	4
Business Course ⁷		4 General Elective/optional minor course		4 CMGT 2300	4
REAL 1700		4		BUS 2099 (Must complete prior to MGMT 3000 & BUS 3099)	0
	1	8	1	6	16
Third Year					
Fall	Credits	Winter	Credits	Spring	Credits
Study Abroad (16 cr hrs) ⁵		REAL 3307		4 CMGT 2170	4
Or International Course and the following:		4 REAL 3438		4 REAL 3007	4
REBE Core/Concentration, Elective or Minor course		4 Business Course ⁸		4 REAL 3357	4
REBE Core/Concentration, Elective or Minor course		4 Business Course ⁸		4 Business Course ⁸	4
REBE Core/Concentration, Elective or Minor course		4			
	1	6	1	6	16

Total Credits: 146

MATH 1200 or MATH 1951 fulfill requirements for Analytical Inquiry: The Natural and Physical World.

Complete Analytical Inquiry: Society & Culture and Scientific Inquiry: Society & Culture requirements. ECON 1020 is required for all Business majors, and this course fulfills half the requirements for Scientific Inquiry: Society and Culture.

Common Curriculum Requirements (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/degreesanddegreerequirements/): Students are encouraged to complete Language or Scientific Inquiry: The Natural and Physical World sequences earlier in their studies; choose one for year 1 and the other for year 2.

INTZ 2501 is required for any student who studies abroad and may be taken in any quarter within the year prior to studying abroad.

If you're not an international student and you're not studying abroad, please work with your advisor to select a course to fulfill the Student International Experience Requirement (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/). REAL 3140 can satisfy this requirement as well as fulfill one of your four REBE Concentration elective courses.

In year 1, distribute 12 credits of Business-related coursework across the entire year, selected from these options (check for prerequisites, corequisites, and restrictions): BUS 1440, MGMT 2100 (Leadership Studies minor students fulfill this Business Core requirement by completing both LDRS 2017 and LDRS 2019), ECON 1020, BUS 1099 (0 credits), INFO 1010 & INFO 1011. Students who are ahead in credits can work ahead in Common Curriculum requirements, General Elective/optional minor requirements, and Business requirements from year 2.

In year 2, distribute 16 credits of Business-related coursework across the entire year, selected from these options (check for prerequisites, corequisites, and restrictions): Any Business courses not completed in year 1, INFO 1020 & INFO 1021, INFO 2020, LGST 2000, ACTG 2200, MKTG 2800, BUS 3000, BUS 2099 (0 credits).

In year 3, distribute 12 credits of Business-related coursework across the entire year, selected from these options (check for prerequisites, corequisites, and restrictions): Any Business courses not completed in year 2 or ACTG 2300, FIN 2800.

Fourth Year - Real Estate & the Built Environment Concentration Options (Select 1 of the following):

Concentration Option 1: Real Estate Finance & Investments (REFI)

You now have the opportunity to select 16 cr hrs from the following REFI Concentration electives: REAL 3010, REAL 3317, REAL 3367, REAL 3369, REAL 3377, REAL 3337, REAL 3337, REAL/CMGT 3980 or CMGT 3700. Please note you may have additional requirements remaining for Common/Business Core, Minors, Electives, Secondary Majors, International Experience.

Fourth Year			
Fall	Credits Winter	Credits Spring	Credits
Advanced Seminar (ASEM)	4 REFI Concentration 3 of 4	4 BUS 3800	4
MGMT 3000	4 General Elective/optional minor course	4 REFI Concentration 4 of 4	4
BUS 3099 (Must complete prior to BUS 3800)	0 General Elective/optional minor course	4 General Elective/optional minor course	4
REFI Concentration 1 of 4	4		
REFI Concentration 2 of 4	4		
	16	12	12

Total Credits: 40

Concentration Option 2: Real Estate Development (RED)

You now have the opportunity to select 16 cr hrs from the following RED Concentration electives: REAL 3210, REAL 3367, REAL 3377, CMGT 3155, CMGT 3190, REAL 3140, REAL/CMGT 3980 or CMGT 3700. Please note you may have additional requirements remaining for Common/Business Core, Minors, Electives, Secondary Majors, International Experience.

Fourth Year				
Fall	Credits Winter	Credits	Spring	Credits
Advanced Seminar (ASEM)	4 RED Concentration 3 of 4	4	4 BUS 3800	4
MGMT 3000	4 General Elective/optional minor course	4	4 RED Concentration 4 of 4	4
BUS 3099	0 General Elective/optional minor course	4	4 General Elective/optional minor course	4
RED Concentration 1 of 4	4			
RED Concentration 2 or 4	4			
	16	12	2	12

Total Credits: 40

Concentration Option 3: Construction Management (CM)

You now have the opportunity to select 16 cr hrs from the following CM Concentration electives: CMGT 3100, CMGT 3120, CMGT 3155, CMGT 3480, REAL 3140, REAL/CMGT 3980 or CMGT 3700. Please note you may have additional requirements remaining for Common/Business Core, Minors, Electives, Secondary Majors, International Experience.

Fourth Year				
Fall	Credits Winter	Credits	Spring	Credits
Advanced Seminar (ASEM)	4 CM Concentration 2 of 4		4 BUS 3800	4
MGMT 3000	4 CM Concentration 3 or 4		4 CM Concentration 4 of 4	4
BUS 3099	0 General Elective/optional minor course		4 General Elective/optional minor course	4
CM Concentration 1 of 4	4			
General Elective/optional minor course	4			
	16	1	2	12

Total Credits: 39

Construction Management (CMGT)

CMGT 2170 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 2300 Introduction to Architecture 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 are 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 are introduced to design thinking theory and application. Students learn to read and interpret the various graphical and written construction documents, know how they are developed and what information they contain. Coverage of architectural, structural, mechanical, electrical, plumbing, and civil drawings and specifications. The business model for design services is explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction. Experiential learning lab is associated with this course.

CMGT 3100 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. Prerequisites: CMGT 2300 and CMGT 2170. This course also has a required lab.

CMGT 3120 Construction 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. Pre/Corequisites: CMGT 3100.

CMGT 3155 Sustainable Development (4 Credits)

The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis will be placed on how LEED project certification influences the overall construction project. Topics will include LEED certification techniques for sustainable sites, water efficiency, energy & atmosphere, materials & resources, indoor environmental quality, innovation and design. The following topics will be covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student will study and analyze how management and LEED techniques are applied to current construction projects. Prerequisites: REAL 1700, CMGT 2170, CMGT 2300, and REAL 3438.

CMGT 3190 Residential Development (4 Credits)

A course sequence designed to emphasize the practical application of the theories and concepts of residential development. The course provides 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 in a case format. Students will apply accounting, finance, marketing, real estate and construction management techniques in the planning for a residential development. The application of green building materials and methods is emphasized. Prerequisites: REAL 1700, CMGT 2170, CMGT 2300, and REAL 3438.

CMGT 3480 Construction Project Management (4 Credits)

This course offers a study of Construction Project Management including different scheduling techniques, use of estimation against scheduling, contracting, construction law, and software use for scheduling. Students obtain the needs for thought process of construction management including scheduling, bidding, proposals, communications, contracts, project planning and initialization, scheduling, estimating, resource planning, organizing, and project control. Use of software is critical and programs are chosen based on independent needs of students. Prerequisites: CMGT 2170 & CMGT 2300.

CMGT 3700 4 (0-4 Credits)

Exploration of various topics and issues related to construction management.

CMGT 3980 Construction Management Internship (0-5 Credits)

Practical experience (field study) - Please review REBE Internship Guidelines: o.

CMGT 3991 Independent Study (0-4 Credits)

Individual research/study; requires written report. Prerequisite: Junior standing, School Advisor and Director permission.

Real Estate (REAL)

REAL 1700 Fundamentals of Real Estate and the Built Environment (4 Credits)

An exploration of the importance of real estate and the built environment through triple bottom line analysis of its social, environmental, and economic impacts. The course considers a "cradle to cradle" sustainability 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/skill sets associated with the many career options that engage the built environment are demonstrated. Also covered are the 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 finance, appraisal investment and tax benefits. Partially satisfies Colorado real estate broker licensing requirements.

REAL 3007 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. Prerequisites: REAL 3307.

REAL 3010 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 1980's to a mix of private and public including commercial mortgage backed securities (CMBS) and real estate investment trusts (REITs) in the 1990's. 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. Prerequisite: REAL 3307.

REAL 3140 Global Immersion (0-4 Credits)

Inbound U.S. and outbound U.S. real estate topics, with a mix of cultural issues that impact real estate transactions. Application of sustainability concepts is important in this course dealing with international real estate. This course will require on campus preparation for projects followed by 1-2 weeks of travel which will include working with host universities, students and industry partners. Prerequisites: REAL 1700 or REAL 3438, Junior Standing or higher. There is an additional travel fee for this course.

REAL 3210 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 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. Prerequisite: REAL 1700 or REAL 3438.

REAL 3307 Real Estate Finance (4 Credits)

Sources of financing including institutions and individuals, primary and secondary mortgage markets, mortgage banking, impact of monetary and fiscal policies on financing, underwriting analysis, traditional and alternative or creative financing techniques. Prereq. MATH 1200 or MATH 1951.

REAL 3317 Real Estate Valuation and Appraisal (4 Credits)

Appraisal principles, including market, cost and income approaches to value, highest and best use, neighborhood and site analysis; valuation of income properties applying market, cost and income approaches to value; capitalization theory and techniques, mortgage-equity analysis, and investment value concepts. Prerequisites: REAL 3307.

REAL 3337 Real Estate Securities and Syndications (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. Application of sustainability concepts is important in this class dealing with real estate securities issues. Prerequisites: Junior or Senior Standing.

REAL 3357 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. Prereq. REAL 1700 or REAL 3438.

REAL 3367 Development and Feasibility (4 Credits)

This course is designed to give students a hands on approach of the steps necessary in performing market feasibility analysis to emphasize market research in the development process and understand site selection factors for commercial (office, industrial, retail, apartment, hotel) real estate. The physical and financial development process is covered in a real world project chosen by the student. Prerequisite: REAL 3307.

REAL 3369 Real Estate Taxation (4 Credits)

Tax factors affecting real estate investments; legal forms of ownership, capital gain and loss; deductions, credits, depreciation, tax basis, tax impacts on exchanges, syndications, real estate securities, and other federal tax laws affecting real estate. Application of sustainability concepts are important in this course dealing with real estate tax issues. Prerequisite: Junior or Senior Standing.

REAL 3377 Real Estate Investment Seminar (4 Credits)

Case method applied to real property development and real estate investment analysis for decision making; computer software for discounted cash flow, risk and simulation analysis; growth, sustainability and environmental issues, portfolio strategy and analysis. Prerequisite: REAL 3307.

REAL 3438 Legal Aspects of Real Estate and the Built Environment (4 Credits)

General contract and real estate law, tax law, landlord-tenant law, and various areas of liability for real estate practitioners. Construction contract preparation, bonding and insurance requirements, indemnity agreements, rights and remedies of property owners, contractors and subcontractors, emphasis on administration of a complete contract package for procurement and construction.

REAL 3701 Topics in Real Estate (0-4 Credits)

REAL 3980 Real Estate Internship (0-5 Credits)

Daniels College of Business's undergraduate 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. Please review REBE Internship Guidelines: o Internships must be requested via PCO at least two weeks in advance of the quarter in which the work will commence. Final PCO approval is the Burns School Director. o Undergraduate students must be Junior (90 hrs+) or Senior level o No internships will be approved once the quarter begins. o Internships in arrears will not be approved. o Students may use a maximum of 4 Internship credits towards their REBE major degree with up to 6 additional credits to be used towards general electives, if interested. o Students have the option to obtain these 4 REBE internship credits by completing one or multiple internships combined for a maximum of 4 credit hours. o For students working full time at a company, they cannot seek internship in the same company they are working for and receive credit (in advance or arrears). o Not allowed for those seeking a REBE minor.

REAL 3991 Independent Study (0-4 Credits)

Independent study/research; requires written report. Prerequisite: Approval of School Director.