

ARCHITECTURE

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Overview

The College of Architecture and Planning offers a pre-professional Bachelor of Science in Architecture (BSArch) degree and the professional Master of Architecture (MArch) degree which is fully accredited by the National Architectural Accrediting Board (NAAB).

Architecture, MArch

The Master of Architecture is offered to students who have completed a pre-professional architecture degree, as well as to students who have completed an unrelated undergraduate or graduate degree. Students holding a pre-professional degree will be evaluated individually for advanced standing in the MArch program, commensurate with their previous educational experiences.

Our program prepares students for entry into the architecture profession and licensure. Our mission is to lead in the discovery, communication and application of knowledge in the discipline of architecture by integrating theory and practice. In this collaborative educational model, environmental, economic, social, cultural, aesthetic and ethical concerns are fundamental.

The curriculum responds to and aligns with the evolving nature of professional practice including collaborative work environments, critical thinkers, problem-solving team players, builders and leaders with excellent communication skills. Recognizing that the practice of architecture is global, we provide students with international perspectives and experiences giving them a competitive edge when they enter the profession.

Students whose undergraduate degree was not a design related degree will take a minimum of three years to complete the Master of Architecture. Students who have an undergraduate design related degree may receive credit for courses previously taken and can typically complete the program in two years depending on advanced standing given. The program provides the skills and bodies of knowledge nationally specified for graduate study in architecture and is fully accredited by the National Architectural Accrediting Board (NAAB).

(For Undergraduate Programs and information please refer to the [Undergraduate](#) catalog.)

Programs

- Architecture, MArch (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/architecture/architecture-march/>)

(For Undergraduate Programs and information please refer to the [Undergraduate](#) catalog.)

Faculty

Professors:

Amir Ameri, PhD, Cornell University
Julee Herdt, MArch, Southern California Institute of Architecture
Michael K. Jenson, PhD, University of Edinburgh

Laurence K. Loftin III, MArch, University of Virginia
Marc Swackhamer, MArch, Rice University
Ekaterini Vlahos, MArch, University of Colorado Denver

Associate Professors:

Osman Attmann, PhD, Georgia Institute of Technology
Christopher Koziol, PhD, University of Colorado Denver

Assistant Professors:

Erik Sommerfeld, MArch, University of Colorado Denver
Kevin Hirth, MArch, Harvard Graduate School of Design
Matthew Shea, MArch, University of Colorado Denver

Assistant Professors (Clinical Teaching Track):

Barbara Ambach, MArch, Southern California Institute of Architecture

Visiting Assistant Professors:

Annicia Streete, MArch, University of Colorado Denver

Instructors:

Matt Gines, MArch, University of North Carolina Charlotte
Jo Vanenburg, MArch, University of Colorado Denver

Visiting Instructors:

Mira Woodson, MFA, University of New Mexico

Visiting Teaching Fellow:

Will Koning, MArch, University of Colorado, Denver

Additional information about faculty in this department is available on the college website. (<https://architectureandplanning.ucdenver.edu/>)

Architecture (ARCH) Courses

ARCH 5000 - Math and Physics for Architects (3 Credits)

Provides the review of mathematics and physics. This is a prerequisite for the graduate technology courses. Does not count toward the required credits for the MARCH degree. Restriction: Restricted to graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Pass/Fail Only

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

Typically Offered: Summer.

ARCH 5110 - Design Studio I (6 Credits)

The first of two elemental design studios focused on on the language of design, organizational and spatial systems and principles as well as on analog and digital methods of visualizing architectural ideas and forms. Restriction: Restricted to Graduate Architecture students within the College of Architecture and Planning. Max hours: 6 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5120 - Design Studio II (6 Credits)

The second of two elemental design studios focused on translating organizational and spatial systems, principles and concepts into architectural systems. Through a number of small scaled design exercises students learn how organizational and spatial systems can be leveraged in the design of their buildings. Prereq: ARCH 5110 and ARCH 5510. Max hours: 6 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5130 - Design Studio III (6 Credits)

The first of the two analytical design studios addresses how design ideas are formed through the analysis of the program in terms of action and perception and how to transform those ideas into formal strategies and specific architectural experiences. Prereq: ARCH 5120. Max hours: 6 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5140 - Design Studio IV (6 Credits)

The second of the two analytical studios will build upon ideas developed in the previous studio concerning how the analysis of the program in terms of action and perception inform the formal strategies and the design of specific architectural experiences. Prereq: ARCH 5130. Max hours: 6 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5210 - Introduction to Architecture (3 Credits)

Introduces important ways of looking at architecture and acquaints students with the various perspectives that they will later find in the rest of the curriculum. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5220 - History and Theory Architecture I (3 Credits)

Introduces world architecture and urbanism from prehistory to the Italian Renaissance. The course helps students understand the various cultural, technological, philosophical, and aesthetic ideas that helped shape buildings through history. Buildings and settlements on all continents and in all of the major world cultures are discussed. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5230 - History and Theory Architecture II (3 Credits)

Examines world architecture and urbanism from the Italian Renaissance to the present. Helps students understand the various cultural, technological, philosophical and aesthetic ideas that helped shape buildings through history. Buildings and settlements on all continents and in all of the major world cultures are discussed. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5310 - Building Construction I (3 Credits)

The first of a two-course sequence that provides an overview of the structure, systems, assemblies and processes that make a building. Provides a broad view of building technology and an understanding of the interrelationship of all the parts. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5320 - Building Construction II (3 Credits)

This course focuses on principles and processes of building construction, and introduces major constructional systems. It stresses the relationship between architectural concepts and building technology and assemblies.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5330 - Sustainable Systems I (3 Credits)

The first course in the sustainable systems sequence introduces concepts and design methods of energy-efficient environmental control in buildings including thermal and moisture loads, heating, ventilation and air conditioning equipment and systems, and active and passive thermal strategies. Restricted to graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to graduate students within the College of Architecture and Planning

ARCH 5340 - Sustainable Systems II (3 Credits)

The second course in the sustainable systems sequence introduces concepts and design methods of plumbing, power distribution, renewable electricity, artificial illumination, daylighting, acoustics, vertical transportation, fire protection, and telecommunication systems in buildings with a focus on energy and resource efficiency. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 5350 - Structures I (3 Credits)

The first course in the structures sequence introduces the analysis and design of structural elements and focuses on the principles of statics and the strength of materials. Topics include stress determination, deflection and the behaviors of tension, compression and shear in various structural elements. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5360 - Structures II (3 Credits)

Focuses on the relationship between architectural concepts and the selection of structural systems. Addresses the qualitative and quantitative analysis of reinforced concrete, steel and wood structural systems and members. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5410 - Professional Practice (3 Credits)

Introduces the essential elements of professional practice through topics such as internship, licensing, services, modes of practice, fees, marketing, documents, specification and production procedures. Examines traditional and emerging forms of practice. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5420 - BIM: Principles & Practices (3 Credits)

Introduces basic aspects of building information modeling (BIM) concepts, software, development, management and delivery for architectural projects. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5430 - Social Context of Design (3 Credits)

Focuses on the ethical, social, cultural and psychological principles, which people bring to the perception and design of the built environment. Its major topics include: ethical values; cultural patterns and values; social, cultural and personal ritual; and pre-design and programming. Prereq: Graduate ARCH students only. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5450 - Sustainable Design Practices (3 Credits)

This course explores sustainable principles and practices as it relates to the design, construction of both the building and its site. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 5510 - Architectural Graphics (3 Credits)

This course explores the development of graphic skills emphasizing drawing as a means to design. It includes investigation of drawing types and methods; diagramming of ideas and systems; informative, exploratory and developmental sketching. Restriction: Restricted to Graduate Architecture students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6150 - Design Studio V (6 Credits)

The first of two reflective studios will assume reflective/critical stance towards programmatic issues or rather cultural presuppositions and critically explore the ways in which architecture can play a critical as well as an affirmative role within the broader cultural context. Prereq: ARCH 5140. Coreq: ARCH 6151. Max hours: 6 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6170 - Design Studio VI (6 Credits)

This is the second of two reflective studios, which focuses on the comprehensive design of an architectural project including considerations of structural systems, environmental systems, life safety concerns, regulatory considerations, wall sections, building assemblies and significant detail. Prereq: ARCH 6150. Coreq: ARCH 6171. Repeatable. Max Hours: 12 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 12.

Coreq: ARCH 6171 Restriction: Restricted to ARCH graduate students within the College of Architecture and Planning

ARCH 6171 - Integration Seminar (3 Credits)

In this seminar students will develop and document the technical aspects of their Design Studio VI design projects including, life safety, mechanical, electrical, plumbing, conveyance, accessibility systems and material assemblies. Prereq: ARCH 6150, ARCH 6151. Coreq: ARCH 6170. Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

Coreq: ARCH 6170 Restriction: Restricted to ARCH graduate students within the College of Architecture and Planning

ARCH 6180 - Furniture Design (3 Credits)

Students learn how to design and build furniture in the College's woodshop. Topics include ergonomics, properties of materials, principles and techniques of joinery and techniques of hand and machine tools. Cross-listed with ARCH 3709. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6185 - Digital Design & Fabrication (3 Credits)

An introductory class to Computer Aided Design (CAD) and Computer aided manufacturing (CAM). Students explore how these technologies apply to the field of architecture with a focus is on parametric/algorithmic design approaches and mass customization manufacturing techniques.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6190 - Special Topics in Design Studies (3 Credits)

Various topics in design, according to current faculty and student interests. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6195 - Aspen Summer Workshop (3 Credits)

Three weeks with three world class architecture firms in Roaring Fork Valley. The firms lead students through a unique design project that develops and challenges their observational, conceptual, and visualization abilities. Drawing as a means of seeing, understanding and creating dominates the process/ethic of the course. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6205 - Urban Housing (3 Credits)

This course examines housing trends and patterns; supply and demand factors; housing policies; housing challenges (e.g., inequitable distribution, special needs, segregation/discrimination, and homelessness); sociological, demographic, and economic considerations; and the roles of planners and the public and private sectors. Cross-listed with LDAR 6755 and URPL 6405. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 6210 - A History of American Architecture (3 Credits)

This course traces the history of architecture in North America from the early colonial settlements in the late 17th century to the corporate architecture of the late 20th century. The various formal languages and theories that have shaped the history of American architecture will each be discussed through the close examination of a select group of buildings within their specific cultural, social, political, and economic contexts. Prereq: ARCH 5220 and ARCH 5230. Cross-listed with ARCH 4610. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 5220 and ARCH 5230.

ARCH 6212 - A History of Modern Architecture (3 Credits)

This course traces the various theoretical and formal developments in European and American Architecture from the end of the 19th century through the 20th century. The works of a select group of architects will be examined and discussed in relation to the diverse body of goals and objectives, ideas and ideals that constituted the Modern movements in architecture. Prereq: 5230. Cross-listed with ARCH 4612. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 5230.

ARCH 6220 - A History of Theoretical Discourse on Architecture (3 Credits)

This course traces the history of theoretical discourse on architecture from the Renaissance to the present. It explore the genealogy of current theoretical stances and critical methodologies in the discipline of Architecture through the close reading of a select group of historic and contemporary texts. Prereq: ARCH 5230. Cross-listed with ARCH 4220. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 5230.

ARCH 6222 - Contested Terrains (3 Credits)

Explores the different processes, factors and forces and determines and influences occupation, land use and built form through the phenomena of conflict and contestation. Design is inherently located within the disputes and discourses involving landscape as location and resource. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 6230 - Preservation Theory and Practice (3 Credits)

The practice of historic preservation has evolved in a specific policy context. This introductory course introduces basic American institutions and laws associated with preservation as well as standards, definitions, and practices associated with these. Cross-listed with HIPR 6010. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6231 - Regionalisms & the Vernacular (3 Credits)

This class explores the history of the built environment from the perspective of evolutionary change; peoples attempting to meet utilitarian needs, respond to environmental forces, societal expectations, and aesthetic aspirations through design. The course looks closely at vernacular structures in a global context. Cross-listed with HIPR 6110.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6232 - Reading the City (3 Credits)

Design and planning professionals, including preservationists, must learn to work in environments with which they have had little previous knowledge. This course emphasizes gaining understanding of a novel environment and translating that knowledge into a well researched and media savvy professional presentation. Prereq: HIPR 6410 is recommended. Cross-listed with HIPR 6610. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 6233 - Historic Buildings in Context (3 Credits)

This course covers the concept of "historic significance" and develops skills in understanding and professionally utilizing this concept. Procedures and skills are introduced. Prereq: HIPR 6010 or permission of instructor. Cross-listed with HIPR 6210. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 6240 - History Of The City (3 Credits)

Introduces students to the history of global cities through selected typologies. Explores similarities and differences among cities considered against the larger cultural, political and socio-economic envelope of which they are part. Provides awareness of origins, growth and evolution of urban form. Cross-listed with URBN 6640. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6241 - Studies in Tectonics (3 Credits)

This research seminar focuses on tectonics - the logic of structure & material combinations (wood, metal, stone, masonry etc.). Through case studies, the relationship between function, aesthetics, detail, and tectonics are explored in relation to contemporary architectural concerns. Prereq: HIST I & II. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 6254 - Architecture, In Theory (3 Credits)

Explores theories and texts that have influenced the analysis and the production of architectural form. The focus is on the expressive potential of architectural forms and the modalities of the realization of this potential. Cross-listed with DSPL 7016. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6255 - Cultural Institutions (3 Credits)

Selected types of cultural institutions including art museums, libraries, cultural centers, theaters, etc. are studied in this research seminar. Through case studies and readings, their ongoing cultural, architectural and corporate values are examined. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6256 - Community Development (3 Credits)

This course introduces community development, examining planners' and other stakeholders' roles in the field; key theories and practices; community dynamics; community-based organizations; asset-based development; social equity; and the influence of local physical and economic factors on community development. Cross-listed with URPL 6400. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6257 - Community Engaged Design Practice (3 Credits)

Obtain real-world pre-design and conceptual design experience in complex urban environments focusing on evolving trends in sustainability. Using digital trans-disciplinary learning students will develop comprehensive sustainable strategies that draw from their own sustainable philosophy developed during this class. Cross-listed with LDAR 6635 and LDAR 4435. Restriction: Restricted to graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to graduate students within the College of Architecture and Planning

ARCH 6258 - Social Justice in Planning (3 Credits)

This course investigates various social justice issues encountered in planning, including conflict resolution; advocacy; environmental justice; social equity; culture and diversity; disadvantaged populations; public engagement techniques; affordability; equal access; and policy impacts. Cross-listed with URPL 6410 and LDAR 6637. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6259 - The Art of Traditional Design (3 Credits)

Introduction to Philosophy, History and Design Methods of Traditional Design derived from Greek precedents developed through the Renaissance and later the Beaux Arts. The course will emphasize this influence on the Architecture of the United States. Restriction: Restricted to graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to graduate students within the College of Architecture and Planning

ARCH 6260 - Architectural Precedents (3 Credits)

Explores a number of traditional answers to recurring design issues, such as how to approach and enter a building or how to design a facade. In a seminar setting, students examine traditional ideas for their underlying principles and design new architectural compositions based on those principles. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6261 - Urban Design Economics and Equity (3 Credits)

Explores the economics of urban design through its relationship with private-sector real estate development, public-sector infrastructure, and budgetary/fiscal constraints on design implementation while emphasizing the critical role of urban design in advocating for social equity, affordable housing, and related issues. Cross-listed with URBN 6625 and URPL 6395. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 6270 - City Design Fundamentals (3 Credits)

Investigates the historical roots, spatial patterns, and physical forms of cities and their evolution over time; the environmental, cultural, and economic forces influencing city design; and urban design as the nexus of the planning and design professions in contemporary city-building. Cross-listed with URPL 6350, URBN 6525, and LDAR 5530. Restriction: Restricted to graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to graduate students within the College of Architecture and Planning

ARCH 6275 - History Native Amer Arch (3 Credits)

Introduces Native American architecture from the 12th century to the present. The course helps students understand the various cultural, technological, philosophical and aesthetic ideas that helped shape these buildings throughout history. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6290 - Special Topics in Cultural Studies (3 Credits)

Various topics in cultural studies, according to current faculty and student interests. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Repeatable. Max hours: 21 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 21.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

Additional Information: AP Cultural Studies Area.

ARCH 6310 - Greenbuilding Tech (3 Credits)

This seminar will advance the student's knowledge of environmental building and construction methods through studies in material resources, innovative green systems, alternate green technology, energy efficiency, and affordability in "green architectural design." Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 3.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6313 - LEED Certification, Greenbuilding Seminar (3 Credits)

This RIGOROUS course will use the LEED Certification process to provide a framework for assessing building performance and meeting sustainability goals, following the 1st step in a two stage Professional Accreditation process, focusing on LEED GA, Green Associate Accreditation. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6314 - LEED AP Advanced Greenbuilding Seminar (3 Credits)

This advanced LEED Certification and Accreditation course builds on the first LEED GA course, providing a framework for assessing green building performance and sustainability goals, exploring advanced green building concepts and preparing the student for the LEED AP BD+C exam. Prereq: ARCH 6313 or instructor approval. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 6313 Restriction: Restricted to majors within the College of Architecture and Planning

ARCH 6351 - Building Conservation (3 Credits)

This course emphasizes the relationship between knowledge acquisition, professional judgement, and design modification. Topics include: 1) Historic Building Types & Methods, 2) Field and Lab Methods of Building Assessment, and 3) Management of Building Rehabilitation. The course takes an integrative approach to the scientific, aesthetic, managerial and legal dimensions of preservation. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6352 - Documentation, Analysis, Representation (3 Credits)

This methods course focuses on skills development in in-situ documentation of the historic environment. The course includes modules on: a) historic records, b) archaeological evidence, c) building and site measurement, d) photographic & Photometric methods, e) geo-spatial data, f) graphic representation, and g) reporting formats. Cross-listed with HIPR 6310. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 6353 - Daylighting Design (3 Credits)

Daylighting is the use of light from the sky to illuminate building interiors. The objective of this course is to introduce students to the fundamentals of daylighting design including how it is perceived and how it impacts building energy flows. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6355 - Urban Conservation: Context for Reuse (3 Credits)

Human habitats (especially cities) are dynamic. The preservationist cannot freeze cities in a static representation of the past. The course deals with philosophical and political contexts, but emphasizes the role of strategic design intervention in the shaping of evolving cities. Cross-listed with HIPR 6410. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 6356 - Adaptive Reuse: Business and Practice (3 Credits)

Existing buildings and infrastructure afford challenges and opportunities for reuse. This course explores the business, and financial aspects of adapting the built environment for contemporary uses. The course is suitable for designers, planners, historians and social scientists.

Restriction: Restricted to majors within the College of Architecture and Planning. Cross-listed with HIPR 6220. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to majors within the College of Architecture and Planning

ARCH 6357 - The Poetic Detail-Studies in Tectonics—Wood (3 Credits)

This research seminar focuses on tectonics through traditional timber frame and wood construction case studies. The relationship between function, aesthetics, detail, and tectonics are explored in relation to contemporary concerns. Learning by making. Cross-listed with ARCH 3704. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6370 - Introduction To Design Build (3 Credits)

Introduction to Design Build project delivery methods important to architects. Lecture, research on the industry and an individual student project are the methods used to introduce ethical questions, role of the architect, owner, consultant and subcontractors. Work leads to studio project or case study. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6373 - Construction in Design Build (3 Credits)

Using a single project, students fully explore the design phase, estimating, scheduling and project management skills in traditional construction. Course is concurrent with an advanced studio and builds a project on a site. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6375 - Green Tech Eco-Furniture Fabrication I (3 Credits)

Green Tech I is the first of two courses that are a "real build" course in which students advance their knowledge of environmental design through full-scale construction of architectural elements, furnishings, accessories, finishes, outdoor gear, or even clothing. Coreq: ARCH 6376. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Cross-listed with ARCH 3804. Max hours: 3 Credits.

Grading Basis: Letter Grade

Coreq: ARCH 6376 Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6376 - Green Tech Eco-Furniture Fabrication II (3 Credits)

Green Tech II is the second of two courses that is a "real build" course in which students advance their knowledge of environmental design through full-scale construction of architectural elements, furnishings, accessories, finishes, outdoor gear, or even clothing. Students must be enrolled in both Green Tech I and Green Tech II in the same semester. Coreq: ARCH 6375. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Cross-listed with ARCH 3806. Max hours: 3 Credits.

Grading Basis: Letter Grade

Coreq: ARCH 6375 Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6377 - EcoFAB: Furniture Design and Fabrication for Small-Scale Residential Architecture (3 Credits)

This unique, quick-paced seminar focuses on small-scale residential design, from tiny-homes, to prefab, and movable residences. Students learn Small Home design, methods, and techno-systems, then using green materials, they design and fabricate architectural elements and furniture for enhancing small-scale living. Restriction: Restricted to ARCH graduate students. Cross-listed with ARCH 3807. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6390 - Special Topics in Technology (3 Credits)

Various topics in technology, according to current faculty and student interests. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Repeatable. Max hours: 18 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 18.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

Additional Information: AP Technology Studies Area.

ARCH 6412 - Construction Documents (3 Credits)

Introduces the concepts and techniques of construction documents. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6413 - Construction Leadership (3 Credits)

The final course is an integrated architecture, engineering, and construction business course bringing together executives, principals, and managers to current industry topics and provide students opportunities to apply management and leadership principles from the various fields to case study projects. Crosslisted with CVEN 5238. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6420 - Integrated Practice & BIM Technology (3 Credits)

This class will be a general overview of integrated practices and technologies used in today's industry. Understanding the nature of how information is created and managed using BIM technologies will help us define a road map for how information passes downstream and bring value to a project. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6450 - Pre-Design (3 Credits)

Course lectures, readings, and case studies cover pre-design methodologies, research, documentation, facilitation and consensus building. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6463 - BIM: Emerging Prof. Practices (3 Credits)

The 21st century architect's emerging role is designing the design process. BIM (Revit) attempts to optimize the entire process, including all participants, from conceptual design, through post-building occupancy. These capabilities are explored and developed. Prereq: ARCH 5430. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6464 - BIM: Advanced Design Concepts (3 Credits)

BIM's complexity (Revit) challenges all designers. The emerging tool is very sophisticated, but its benefit are not realized from modeling alone. We address architectural design as a multifaceted optimization process: concept, form, and function. Prereq: ARCH 5430. Cross-listed with ARCH 6390. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6470 - ACE Mentoring (3 Credits)

Graduate students work with professional architects, designers, and engineers mentoring students in selected local high schools to learn problem solving, graphics and model making to produce a design project. Student mentors develop lesson plans, outcomes and keep a weekly journal. Cross-listed with LDAR 6470 and URPL 6850. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Pass/Fail Only

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6471 - Managing Quality & Risks (3 Credits)

A lecture and seminar on approaches to risk management including contracts, insurance, financial analysis, dispute resolution and client relationships. Utilizing case study approach, quality assurance will be defined and studied in the design and building phase of workings. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6472 - Architecture in a Single Source Project Delivery (3 Credits)

Directed to the practice of architecture with design build and other single source delivery systems. This course examines requirements of codes, zoning, building systems and legal questions for the architect.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6473 - Research Tools & Methods (3 Credits)

Introduces the thesis in architecture and establishes the scholarly basis for the research and construction of a Master's Thesis project. This course will provide the student with the research practices and methodologies to develop the scholarship and products required to produce a Thesis Project Proposal. Completion of this course is a prerequisite for the student to submit the Thesis Proposal for departmental approval to continue with the remaining 9 credits of thesis work. Cross-listed with LDAR 6949. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6475 - BIM/Flow of Information (3 Credits)

The course is geared toward CAP students, non-degree seeking working professionals and other students interested in the Integrated Construction, Management and Leadership (ICML) Certificate. This class will be a general overview of Virtual Design and Construction (VDC) in today's AEC industry. Restriction: Graduate students. Junior standing and above undergraduate students are eligible to take course with approval by instructor. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Graduate level students

ARCH 6490 - Special Topics in Professional Studies (3 Credits)

Various topics in professional studies according to current faculty and student interests. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Repeatable. Max Hours: 18 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 18.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

Additional Information: AP Professional Studies Area.

ARCH 6510 - Digital Applications in Design (3 Credits)

This course introduces first year design students to the Graphic Design Concepts and Digital Applications necessary to create digital, printed and physical presentations of their work. Students learn computer skills including: raster and vector based programs and digital modeling. Prereq: ARCH 5110 and ARCH 5510. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6515 - Adv. Digital Representation (3 Credits)

In this course students will learn advanced techniques of architectural representation using digital modeling, rendering engines, and post processing in the Adobe Creative Suite. Prereq: ARCH 5510 and 6510 or equivalent. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6530 - The Art of Proportion (3 Credits)

This course covers the use of proportional systems in the Classical tradition. Students complete a series of graphic exercises culminating in the construction of a Beaux-Art style ink-wash of a classical column. Cross-listed with ARCH 6290 and HIPR 6090. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6550 - Digital Portfolio Design (3 Credits)

This course introduces students to the Graphic Design Concepts and the Digital Applications used to create both Printed and Web-based Portfolios. Students must have completed ARCH 5110 and have a working knowledge of Photoshop. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6560 - Architecture Photography (3 Credits)

Emphasizes and understanding of light, composition, color and problem solving, with a particular goal of applying these skills to the photography of architectural exteriors and interiors. For students who have access to adjustable 35 mm digital cameras. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6570 - Sketching As Seeing (3 Credits)

Sketching promotes seeing, and seeing promotes thinking. This course is designed to help you think & see by the regular practice of sketching & the discipline of keeping a sketchbook. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6575 - 2D-3D & 4D Design Space (3 Credits)

The graphics language of words and art bridge intention and design. Passing ideas and mental imagery through digital technology's 2D, 3D and 4D filters is the challenge. Students develop concepts in AutoCAD, visualize in 3DStudio Max, and narrate the process in Adobe Premiere.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6580 - High-Performance Façade Design (3 Credits)

It is the intent of the course to provide graduate students with a comprehensive understanding of the technical concepts and specific skills necessary to undertake in actual practice the design, detailing, specification, and construction administration of high-performance building facades. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max Hours: 3 Credits

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6590 - Special Topics in Representational Studies (3 Credits)
Various topics in representational studies, according to current faculty and student interests. Prereq: ARCH 5510. Repeatable. Max hours: 15 Credits.

Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6710 - Architecture in Other Cultures (1-9 Credits)
Various studies of architecture and urbanism in foreign countries. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 12 Credits.

Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6715 - The Built Environment in Other Cultures I: Research Design (3 Credits)

The intent is to broaden students' perspectives by asking them to examine design within another culture. Each student prepares a proposal of study including a statement of the problem to be addressed, the type of field research to be undertaken and the nature of the report to be produced. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6755 - Rome: Architecture & Urbanism (3 Credits)

The objective of this course is to provide a broad overview of the city's major architectural sites, topography, infrastructure and systems of urban design and organization through the study of the rich palimpsest of buildings, piazzas and landscapes from antiquity to the present day. Coreq: ARCH 6760. Restriction: Restricted to ARCH graduate students. Cross-listed with ARCH 3693. Max hours: 3 Credits.

Grading Basis: Letter Grade

Coreq: ARCH 6760. Restriction: Restricted to ARCH graduate students.

ARCH 6760 - Rome: Documentation, Analysis and Design (3 Credits)

With graphic representation as the primary mode of inquiry, this course is an intensive study of a single building, piazza or landscape within the rich urban fabric of Rome. The graphical inquiry will be supported by pre-departure research and onsite observation and presentations. Coreq: ARCH 6755. Restriction: Restricted to ARCH graduate students. Cross-listed with ARCH 3694. Max hours: 3 Credits.

Grading Basis: Letter Grade

Coreq: ARCH 6755. Restriction: Restricted to ARCH graduate students.

ARCH 6775 - Bluff General Elective (3 Credits)

Provides students the opportunity to focus their attention on one of three areas: technical studies, professional studies, or cultural studies. Students will complete coursework as it relates to Design Build Bluff. Counts as a general elective. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

ARCH 6840 - Independent Study (1-3 Credits)

Studies initiated by students or faculty and sponsored by a faculty member to investigate a special topic or problem related to architecture. Prereq: Permission of instructor. Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ARCH 6910 - Teaching Assistantship (3 Credits)

Work with a faculty member in a course to help with class preparation and delivery. This is intended for students who may be considering a career in teaching architecture. Prereq: Permission of instructor.

Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

ARCH 6930 - Architecture Internship (3 Credits)

Designed to provide professional practice experience. The internship is composed of eight hours per week working in a practicing professional's office during the regular semester. Students must complete the second-year level before taking this course. Max hours: 3 Credits.

Grading Basis: Pass/Fail Only

ARCH 6931 - Architecture Internship (3 Credits)

Designed to provide professional practice experience. The internship is composed of eight hours per week working in a practicing professional's office during the regular semester. Students must complete the second-year level before taking this course. Max hours: 3 Credits.

Grading Basis: Pass/Fail Only

ARCH 6950 - Thesis Preparation (3 Credits)

In place of the final advanced design studio, students may choose to develop a specialized thesis in some topic related to architecture. The thesis will normally take three semesters, starting with the three-credit hour ARCH 6473, Research Tools & Methods in the spring semester, this course in the fall semester and finishing with a six-credit thesis class in the third semester. A thesis may culminate in a design or in a written report. A thesis is expected to advance the field in some way by offering new insights into aspects of design, technology, history or professional principles. Prereq: ARCH 6490 and completion of at least one advanced design studio (ARCH 6170 or ARCH 6171). Max hours: 3 Credits.

Grading Basis: Letter Grade with IP

Additional Information: Report as Full Time.

ARCH 6951 - Architecture Thesis (6 Credits)

Development of a master's thesis (see ARCH 6950 above). Prereq: completion of two advanced design studios ARCH 6150 and ARCH 6950. Max hours: 6 Credits.

Grading Basis: Letter Grade with IP

Additional Information: Report as Full Time.

ARCH 7840 - Independent Study (1-3 Credits)

Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to majors within the College of Architecture and Planning