

# ARCHITECTURE

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## Degrees

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).

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

## Programs

- Architecture, BS (<http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-architecture-planning/architecture/architecture-bs/>)

(For Graduate Programs and information please refer to the [Graduate](#) 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)

ARCH 1110 - Introduction to Architecture (3 Credits)

Introduces students to the essential ways of looking at and thinking about buildings, sites and cities, exposing students to the various perspectives, positions and practices that they will encounter in both an architecture curriculum and in architectural practice. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 1710 - Architectural Drawing: Analysis and Representation (3 Credits)

This course explores the development of graphic skills emphasizing drawing as a means to analyze and represent architectural ideas throughout the design process. Using freehand and mechanical drawing methods students will learn the conventions and opportunities of the three architectural projections. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 1711 - Architectural Visualization I (3 Credits)

First in the sequence of two visual studies courses, this course introduces students to the fundamental principles of two and three-dimensional visual analysis and communication. Students are taught basic drawing and model-making conventions, both mechanical and digital, and how to use drawings and models as design and communication tools. No co-credit with ARCH 2110. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 1721 - Architectural Visualization II (3 Credits)

Second in the sequence of two visual studies courses, this course introduces students to advanced principles of two and three-dimensional visual analysis and communication. Students are introduced to advanced mechanical and digital communication techniques and the use of drawings and models as design and communication tools. Prereq: ARCH 1711. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. No co-credit with ARCH 3801. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 1711. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

ARCH 2110 - Design Studio I (3 Credits)

Introduces students to the principles of design and composition through studies of architecture's formal, spatial, and geometric systems. Students explore these using a variety of drawing techniques including diagramming and drawings that are exploratory, analytical and developmental. No co-credit with ARCH 1711. Max hours: 3 Credits.

Grading Basis: Letter Grade

ARCH 2111 - Design Studio I - Foundational (6 Credits)

First in the sequence of two foundational design studio courses, this course introduces students to the fundamental principles of three-dimensional design and composition. Students learn to translate and express ideas through willful manipulation of form and space, in a sequential series of exercises. Prereq or Coreq: ARCH 1711. No co-credit with ARCH 3110. Max hours: 6 Credits.

Grading Basis: Letter Grade

Prereq or Coreq: ARCH 1711.

**ARCH 2121 - Design Studio II - Foundational (6 Credits)**

Second in the sequence of two foundational design studio courses, this course introduces students to the formal and spatial vocabulary of Architecture and its organizational principles through a series of micro-scale architectural design exercises. Prereq: ARCH 2111 and ARCH 1711. Coreq or Prereq: ARCH 1721. No co-credit with ARCH 3120. Max hours: 6 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 2111 and ARCH 1711. Coreq or Prereq: ARCH 1721.

**ARCH 2230 - Architectural History I (3 Credits)**

Introduces architecture and urbanism from prehistory to the mid-seventeenth century by exploring the social, cultural, technical, philosophical and aesthetic ideas that shaped buildings and other architectural and urban settings in different parts of the world. Max hours: 3 Credits.

Grading Basis: Letter Grade

**ARCH 3110 - Design Studio II (6 Credits)**

Introduces students to the expressive potential of architecture's elements and systems. Students explore techniques for translating and expressing ideas in buildings through the static, dynamic and sequential manipulation of architectural form and space. Prereq: ARCH 2110. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. No co-credit with ARCH 2111. Max hours: 6 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 2110 Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning

**ARCH 3111 - Design Studio III - Elemental (6 Credits)**

First in the sequence of two foundational design studio courses, this course introduces students to the fundamental principles of three-dimensional design and composition. Students learn to translate and express ideas through willful manipulation of form and space, in a sequential series of exercises. Prereq: ARCH 2121 and ARCH 1721. No co-credit with ARCH 4110. Max hours: 6 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 2121 and ARCH 1721.

**ARCH 3120 - Design Studio III (6 Credits)**

Focuses on the design of buildings in their relationship to physical, natural and cultural contexts. Students explore non-formal concepts and translate them into architectural experiences that integrate program, site and climate. Prereq: ARCH 3110. Restriction: Must be an undergraduate Architecture student. No co-credit with ARCH 2121. Max hours: 6 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 3110 Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning

**ARCH 3121 - Design Studio IV - Elemental (6 Credits)**

Second in the sequence of two elemental design studio courses, this course focuses on the design of small-scale buildings to advance students' understanding of the role of context in design communication. Students learn to translate non-formal concepts into sequential architectural experiences in deference to program and site. Prereq: ARCH 3111. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. No co-credit with ARCH 4120. Max hours: 6 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 3111. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

**ARCH 3130 - Construction Practices: Material and Structural Systems (3 Credits)**

Provides an overview of the materials, systems, assemblies and processes that inform the design and construction of buildings, reviewing the building technologies and developing student understandings of the interrelationship between the interconnected elements and systems that define buildings and spaces. Prereq: PHYS 2010/2030 and MATH 1130 are recommended. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restrictions: Restricted to sophomore standing or higher.

**ARCH 3230 - Architectural History II (3 Credits)**

Introduces architecture and urbanism from the mid-seventeenth century to the present, exploring the forces that shaped buildings and other architectural and urban settings in different parts of the world. Prereq: ARCH 2230. Restriction: Open to all undergraduate majors. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 2230 Restriction: Open to all undergraduate majors.

**ARCH 3330 - Building Systems I (3 Credits)**

Introduces the concepts of thermal behavior of buildings, climate as a determinant of building design, energy use in buildings, natural and mechanical means of environmental control, plumbing, electrical, communication systems, water supply and sanitation systems. Recommended Prereq: MATH 1130 OR MATH 1110 & 1120; PHYS 2010/2030 OR PHYS 2311/2321. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

**ARCH 3340 - Theory of Structures I (3 Credits)**

Introduction to 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. Recommended Prereq: MATH 1130 OR MATH 1110 & 1120; PHYS 2010/2030 OR PHYS 2311/2321. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

**ARCH 3430 - Construction Practices: Building Envelope (3 Credits)**

Discusses the principles and processes of building construction and introduces the major systems and assemblies that inform construction practices. Stresses the relationship between architectural concepts and emerging building technologies, teaching students how to select appropriate materials, systems and assemblies. Prereq: ARCH 3130. Restricted to sophomore standing or higher. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 3130. Restricted to sophomore standing or higher.

**ARCH 3600 - Special Topics Cultural (3 Credits)**

Special topics in architecture studies related to cultural inquiries including theory, cultural diversity, and/or cross cultural thinking. Repeatable. Max hours: 24 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 24.

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3602 - Architecture Photography (3 Credits)**

Architecture elective in photography of space, interior, and exterior with an emphasis on design composition of architecture. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3690 - Cultural Research Abroad (3 Credits)**

Topics in architecture studies related to cultural inquiries including theory, cultural diversity, and/or cross cultural thinking in other cultures. Work shall include preparation in culture, history and language skills in other countries. Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

Restrictions: Restricted to Junior standing or higher.

**ARCH 3691 - Cultural Design Abroad (3 Credits)**

Design topics in architecture studies related to cultural inquiries including design, cultural implications of design, and/or cross cultural application of design. Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

Restrictions: Restricted to Junior standing or higher.

**ARCH 3692 - International: Project Delivery (3 Credits)**

This course is the delivery of the design solution developed in ARCH 3703. Critical thinking skills will be honed as students respond to construction material and technology limitations during the 10 day build in a South American cultural setting. Prereq ARCH 3703. Restriction: Restricted to undergraduates with a Junior standing or higher. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq ARCH 3703. Restricted to undergraduates with a Junior standing or higher.

**ARCH 3693 - 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 3694 Restricted to undergraduate BS-ARCH students with Junior standing or higher. Cross-listed with ARCH 6755. Max hours: 3 Credits.

Grading Basis: Letter Grade

Coreq: ARCH 3694. Restriction: Restricted to undergraduate BS-ARCH students with Junior standing or higher.

**ARCH 3694 - 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 3693. Restricted to undergraduate BS-ARCH students with Junior standing or higher. Cross-listed with ARCH 6760. Max hours: 3 Credits.

Grading Basis: Letter Grade

Coreq: ARCH 3693. Restriction: Restricted to undergraduate BS-ARCH students with Junior standing or higher.

**ARCH 3700 - Special Topics Design (3 Credits)**

Special topics in architecture studies related to design inquiries including theory, design skills, and/or analytical thinking. Repeatable. Max hours: 24 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 24.

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3701 - Survival Sketching (3 Credits)**

The focus of this course will be the sketchbook and the keeping of a sketchbook. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning with sophomore standing or higher. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3702 - Design Thinking (3 Credits)**

Students will be introduced to tools that will enable them to reframe design dilemmas in favor of productive resolutions. Course content will include examples and specific techniques of design thinking, including empathy, abductive reasoning, testing, plussing and diagramming. Prereq: sophomore standing or higher. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restrictions: Restricted to sophomore standing or higher.

**ARCH 3703 - International: Design in Context (3 Credits)**

The course is a project-based design seminar. In collaboration with a small community in Central America, students have the opportunity to engage in the context of another culture, environment, construction limitations and economic constraints. The course integrates architecture, engineering, and business. Restriction: Restricted to ARCH-BS majors with Junior standing. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with Junior standing.

**ARCH 3704 - 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 6357. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3705 - Human Centered Design, Innovation and Prototyping (3 Credits)**

Introduces techniques for collaborative design by interdisciplinary teams: design thinking, problem solving, and rapid prototyping. Teams of students design and implement increasingly complex projects while acquiring essential innovation and problem-solving skills. The course will culminate in a final project chosen by each team. Cross-listed with IWKS 2100. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3706 - 3D Design, Computation, and Prototyping (3 Credits)**

Introduces the design and computer-controlled fabrication of three-dimensional objects using both additive (3D printing) and subtractive (laser cutter, CNC router/mill) processes. Various commercial and open-source software tools for 3D design (CAD), manufacturing (CAM) and visualization will be explored. Increasingly complex projects throughout the semester will be used to illustrate fabrication techniques. The course will culminate in a final project. Restriction: Restricted to ARCH-BS majors with sophomore standing. Cross-listed with IWKS 3100 and 5170. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3707 - Color Theory + Application (3 Credits)**

This course will explore Color perception and theory; media/medium technique/application and landscape/built-environment drawing preparation, composition and presentation. The objective is to develop your understanding of color interaction and interrelationship especially, as it pertains to the use of color in the design and implementation of the built environment. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max Hours: 3 Credits  
Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3708 - Introduction to the Essentials of Biomimicry (3 Credits)**

Biomimicry is the conscious emulation of nature's genius that can be applied to the fields of design, engineering, medicine, transportation, and social interaction. This class will be geared towards designers and will give an overview of the discipline, the (3) Essential Elements, the human-nature connection, The Biomimicry Thinking Methodology, and Life's Principles. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max Hours: 3 Credits  
Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3709 - 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 6180. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max Hours: 3 Credits.  
Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3800 - Special Topics - Technical (3 Credits)**

Special topics elective will include coursework in either Digital Media In Design courses, Design-Build site Construction, or the Science and Art of Engineering Buildings. Additional topics will be developed in conjunction with the required undergraduate technical electives. Restriction: Must be an undergraduate Architecture student with sophomore standing or higher. Repeatable. Max hours: 24 Credits.  
Grading Basis: Letter Grade

Repeatable. Max Credits: 24.

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3801 - Introduction to Digital Media (3 Credits)**

Introduces Building Information Modeling (BIM) systems as a means to integrate and optimize design processes and building systems in the professional practice of architecture. Topics include creation of simulated, complex, three-dimensional environments in support of the architectural design studio sequence. No co-credit with ARCH 1721. Max hours: 3 Credits.  
Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3802 - Arch Project Presentation (3 Credits)**

Architecture elective in digital and analog methods of presentation and composition for various audiences and formats. Max hours: 3 Credits.  
Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3804 - 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. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher. Coreq: ARCH 3806. Cross-listed with ARCH 6375. Max hours: 3 Credits.  
Grading Basis: Letter Grade

Coreq: ARCH 3806 Restriction: Restricted to ARCH-BS majors with sophomore standing or higher

**ARCH 3805 - Beginning Revit (3 Credits)**

Introduction to Building Information Modeling through Autodesk's Revit Architecture software. The course explores fundamental architectural concepts as they are developed and expressed in Revit. Appropriate program use and team learning experiences are emphasized. Prereq: ARCH 3110 and 3130. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max hours: 3 Credits.  
Grading Basis: Letter Grade

Prereq: ARCH 3110 and 3130 Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3806 - Green Tech Eco-Furniture Fabrication II (3 Credits)**

Green Tech II is the second 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. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher. Coreq: ARCH 3804. Cross-listed with ARCH 6376. Max hours: 3 Credits.  
Grading Basis: Letter Grade

Coreq: ARCH 3804 Restriction: Restricted to ARCH-BS majors with sophomore standing or higher

**ARCH 3807 - Small Eco Home Design & Fabrication (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-BS majors with sophomore standing. Cross-listed with ARCH 6377. Max hours: 3 Credits.  
Grading Basis: Letter Grade

Restriction: Restricted to ARCH-BS majors with sophomore standing

**ARCH 3808 - Architectural Design and Fabrication (3 Credits)**

This course explores architectural production using advanced 3D-modeling, fabrication, and construction documentation techniques. The course connects contemporary design practice with material experimentation and architectural production. Prereq: ARCH 3801. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max hours: 3 Credits.  
Grading Basis: Letter Grade

Prereq: ARCH 3801. Restriction: Restricted to ARCH-BS majors with sophomore standing.

**ARCH 3809 - Architectural Design and Graphics (3 Credits)**

This course explores the varied mediums of graphic representation in architecture. Using advanced tutorials in 3D-modeling, computer-generated rendering, and workflows through multiple software platforms, students will create work that is reflective of contemporary architecture culture. Prereq: ARCH 3801. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max hours: 3 Credits.  
Grading Basis: Letter Grade

Prereq: ARCH 3801. Restriction: Restricted to ARCH-BS majors with sophomore standing.

**ARCH 3949 - Internship I (1-3 Credits)**

Experiential learning student internships sponsored by faculty in a field related to architecture. Minimum of 45 work hours per credit. Prereq: Permission of instructor, advisor and acceptance in BS Architecture program. Must also have sophomore standing. Minimum 15 credit hours with 2.75 GPA. Repeatable. Max Hours: 3 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 3.

**ARCH 4110 - Design Studio IV (6 Credits)**

Design Studio IV. Introduces students to analysis and design as complementary processes. Students learn how to form design intentions based on analytical research and close study of the relationship between architecture, precedent and culture, and to consider buildings as settings that address issues of culture, society, economy and ecol. Prereq: ARCH 3120. No co-credit with ARCH 3111. Max hours: 6 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 3120 Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning

**ARCH 4111 - Design Studio V - Analytical (6 Credits)**

First in the sequence of two analytical design studio courses, this course introduces students to analysis and design as complementary processes. Students learn how to form design intentions based on analytical study of the relationship between architecture and culture.

Focused on the design of small-scale buildings, students learn to incorporate structure, light, and material as expressive elements of an architectural composition. Prereq: ARCH 3121. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. Max hours: 6 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 3121. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

**ARCH 4120 - Design Studio V (6 Credits)**

Explores the place and role of architecture as an instrument of critical social engagement and cultural change, the role of history and precedent in the design process, and the role of detail through projects that demonstrate student's proficiency as designers. Prereq: ARCH 4110. No co-credit with ARCH 3121. Max hours: 6 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 4110 Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning

**ARCH 4121 - Design Studio VI - Analytical (6 Credits)**

Second in the sequence of two analytical design studio courses, this course advances students' understanding of the relationship between architecture and culture and their ability to design intermediate scale buildings as effective settings for cultural rituals. Students explore the role of history and precedent in the design process along with the role of detail in architectural compositions. Prereq: ARCH 4111. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. Max hours: 6 credits.

Grading Basis: Letter Grade

Prereq: ARCH 4111. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

**ARCH 4220 - 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 3230. Cross-listed with ARCH 6220. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 6220

**ARCH 4340 - Theory of 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. Prereq: ARCH 3340. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 3340 Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning

**ARCH 4440 - Building Systems II (3 Credits)**

Focuses on the environmental systems in commercial and other nonresidential buildings. Discusses natural and artificial lighting, HVAC systems, acoustics, vertical transportation and fire protection.

Recommended Prereq: MATH 1130 OR MATH 1110 & 1120;

PHYS 2010/2030 OR PHYS 2311/2321. Restriction: Restricted to undergrad ARCH students within the College of Architecture and Planning. Max hours: 3 Credits.

Grading Basis: Letter Grade

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

**ARCH 4610 - A History of American Architecture (3 Credits)**

This course investigates the history of architecture in the United States as a chronological survey of buildings, architects, landscapes, and urban forms and as an exploration of the social, political, economic, technological, and similar issues that inform this built environment.

Prereq: ARCH 2230 and 3230. Cross-listed with ARCH 6210. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 2230 and ARCH 3230.

**ARCH 4612 - 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: ARCH 2230. Restriction: Restricted to Sophomore standing or higher. Cross-listed with ARCH 6212. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: ARCH 2230 Restriction: Restricted to Sophomore standing or higher

**ARCH 4840 - 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: Restricted to undergraduate ARCH students within the College of Architecture and Planning with sophomore standing or higher.

Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 4949 - Internship II (1-3 Credits)

Experiential learning student internships sponsored by faculty in a field related to architecture. Minimum of 45 work hours per credit. Permission of instructor, advisor and acceptance in BS Architecture program. Must also have sophomore standing. Minimum 15 credit hours with 2.75 GPA. Repeatable. Max Hours: 3 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 3.