

ARCHITECTURE (ARCH)

ARCH 201 Principles of Architecture (5 Credits)

Architecture shapes how we experience and interact with the built environment. In this course, students explore essential concepts of spatial organization, proportion, and hierarchy through analysis of architectural precedent. By examining key architectural elements and their relationships, students develop critical design thinking skills and a vocabulary for creating intentional, meaningful spaces. Prerequisites(s): None.

Prerequisite(s): Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 250 Introduction to Building Systems (5 Credits)

Buildings are complex organisms where mechanical, electrical, plumbing, and structural systems work in concert to create functional spaces. This course provides essential knowledge in building systems, equipping students to make informed decisions that enhance both the user experience and the building's overall architectural design.

Prerequisite(s): DSGN 100 or FOUN 110; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 310 Human Experience in the Built Environment (5 Credits)

Design can shape meaningful human experiences within the built environment. This studio focuses on human-centered design principles, exploring how physical, cognitive, and emotional needs inform architectural decisions. Through projects, observation, and diverse exercises, students learn to create functional, inclusive environments that prioritize universal design, accessibility, and spatial adaptability.

Prerequisite(s): FOUN 113; FOUN 240 and FOUN 245 and (ARCH 101 or ARCH 201); Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 319 Structures: General Structure (5 Credits)

Basic principles of strength of materials, applied mechanics and structural theory are used for design and analysis of simple frames and simple beams for wood and steel building structures.

Prerequisite(s): MATH 201 and PHYS 201; Liability waiver is required.

ARCH 320 Placemaking in the Built Environment (5 Credits)

What is placemaking? This course explores the relationship between architecture and its context, emphasizing the creation of spaces that foster identity and connection. Through site analysis, cultural research, and environmental studies, students create context-sensitive solutions that reflect the character of their environment.

Prerequisite(s): ARCH 301; ARCH 300 or ARCH 310; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 330 Narratives in the Built Environment (5 Credits)

Architecture comes to life at the intersection of storytelling and spatial experience. Students develop architectural proposals that evoke emotion, memory, and imagination through narrative-driven design. Projects emphasize how form, materiality, and spatial sequencing contribute to intentionally designed environments.

Prerequisite(s): ARCH 302 or ARCH 320; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 350 Advanced Building Systems (5 Credits)

Advanced Building Systems expands upon the essential knowledge established in Introduction to Building Systems. Through lectures and exercises, students will develop an applied understanding of high-performance systems, advanced lighting and electrical strategies, water conservation techniques, acoustics, and smart building technologies.

Prerequisite(s): ARCH 241 or ARCH 250; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 410 Collaboration in Architectural Design (5 Credits)

Collaboration is at the heart of architectural design. This course emphasizes the collaborative nature of architectural practice, modeled after real-world interdisciplinary teamwork. Students engage in design processes focused on functionality, sustainability, and community engagement within the built environment.

Prerequisite(s): ARCH 303 or ARCH 330; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 414 Parametric and Generative Design Strategies for the Building Arts (5 Credits)

In this course, students explore parametric and generative modeling through associative geometry using advanced applications in building design. The course focuses on simulating behavioral and formal responses to design constraints and limits and rules as a framework for understanding their implications as applied to building form. These responses range from conceptual form-finding strategies to structure and envelope systems.

Prerequisite(s): ELDS 225.

ARCH 420 Innovations in Architectural Design (5 Credits)

Immersing students in the cutting-edge of architectural innovation, this studio is where technology, creativity, and experimentation converge to shape the future of design. Students tackle global challenges as they envision sustainable, inclusive, and future-forward architectural solutions.

Prerequisite(s): ARCH 404 or ARCH 410; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 421 Advanced Architectural Presentation (5 Credits)

In this studio course, students explore traditional and contemporary methods of advanced graphic presentations as a means of communication in architectural design.

Prerequisite(s): ARCH 101 or ARCH 201 and (SBLD 115; DRAW 115 or FOUN 240).

Attributes: Studio Elective Requirement

ARCH 430 Tectonics in Architectural Design (5 Credits)

In this culminating studio, architecture students synthesize designs into fully developed architectural proposals. Students focus on tectonic articulation, performance, and constructability, developing comprehensive design solutions that align spatial composition, technical performance, and user-centered connections. This course integrates human experience, placemaking, narrative, collaboration, and innovation into a holistic approach.

Prerequisite(s): ARCH 405 or ARCH 420; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 435 Site Plan Development (5 Credits)

This course teaches site development techniques from the conception of a project through to the final site plan. The course begins with site selection and building location and then progresses through sediment and erosion control measures, building access, parking, ADA requirements, storm water runoff and landscaping.

Prerequisite(s): ARCH 319 and (ARCH 341 or ARCH 350).

ARCH 438 Urban Issues Seminar (5 Credits)

The seminar investigates the city as a specific power to affect people, materials and the relationships between the two. Use, form and social values of the city are analyzed to decipher relationships between morphology and the logic of change. Because classical urban studies involve accurate transpositions of the city by means of either physical or socio-economic descriptions, both physical and socio-economic factors are integrated into the course.

Prerequisite(s): ARCH 101 or ARCH 201.

Attributes: Studio Elective Requirement

ARCH 465 Sustainable Design for the Built Environment (5 Credits)

Students receive an overview of critical developments in sustainable building design strategies by examining environmental problems and possible solutions through design. Readings, lectures, guest speaker presentations and class discussions introduce students to the needs and possibilities of being effective green builders and architects.

Prerequisite(s): INDS 220; PRES 320; HIPR 307; ARCH 461 or ARCH 350.

ARCH 479 Undergraduate Internship (5 Credits)

Internships offer students valuable opportunities to work in a professional environment and gain firsthand experience to help them prepare for careers. In an approved internship setting, a student typically spends one quarter working with an on-site professional supervisor and a faculty internship supervisor to achieve specific goals and objectives related to the program of study.

ARCH 490 Portfolio Preparation and Presentation (5 Credits)

This course focuses on the development and production of professional materials, from the initial contact piece to an effective portfolio. The letterhead and mailing package, business card and résumé are discussed, as are ways to make the portfolio economically feasible and reproducible for mailing and tips on personally presenting the portfolio. A series of exercises explores the available media and design possibilities of packaging, graphic documentation of a student's project and similar topics.

Prerequisite(s): ARCH 303 or ARCH 310.

Attributes: Business-focused elective; Studio Elective Requirement

ARCH 501 Applied Physics for Architecture (5 Credits)

Through a study of underlying principles and the relationship of various forces, students in this course investigate the fundamental mathematical and physics problem-solving methods required for the field of architecture. Students analyze structural mechanics, cross-sectional properties, light, sound, hydrostatics, fluid flow, thermodynamics and electricity to learn to calculate a balance between systems of equilibrium, inertia, humidity and human comfort.

ARCH 521 Advanced Construction Methods: Building Systems and Technologies (5 Credits)

The study of construction methods continues to evolve as new building codes, industry standards and programmatic requirements influence the selection of both structural and nonstructural elements in building construction systems. In this course, students investigate emerging technologies, materials, assemblies and construction detailing to better understand the relationship between drawings, specifications and the real-world construction environment.

Attributes: Studio Elective Requirement

ARCH 531 Graduate Architecture Design Fundamentals: Human-centered Design (5 Credits)

This course is designed to develop students' abilities to create meaningful architectural design solutions. The course concentrates on the ways in which basic human factors affect and inform architectural design. Through lectures and design projects, students consider behavioral aspects that affect design and the interrelationship of form, space and human experience.

Prerequisite(s): Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 577 DesignBuild (5 Credits)

DesignBuild is an interdisciplinary collaboration experience in which students use design ideation, fabrication techniques, and construction practices to develop architectural projects. DesignBuild emphasizes experiential learning and critical problem-solving, enhancing technical skills and design thinking to prepare students for professional practice in architecture.

Prerequisite(s): Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 706 Architectural Practices (5 Credits)

This course presents a study of professionalism and ethics as they relate to design professionals. Students conduct detailed analysis of professional practices, including office and corporate structure, administration, public and client relations, consultant and contractor relations, project administration and procedures, and compensation.

ARCH 714 Advanced Parametric Design and Generative Modeling Strategies for the Building Arts (5 Credits)

Students in this course explore advanced parametric design and generative modeling through associative geometry using advanced applications for building design. The course focuses on simulating behavioral and formal responses to design constraints, limits and rules as a framework for understanding their implications as applied to structural and envelope systems.

ARCH 717 Graduate Architecture Studio I: Urban Design and Development (5 Credits)

This studio course investigates sustainable strategies for the neighborhood, city and mega-city. Students consider historical patterns of urban settlement and form-making, contemporary forces impacting cities worldwide, and the legal and financial framework of urban development retrofitting the city for ecological solutions. This study includes development of strategies ranging from publicly funded infrastructure, including application of landscape, through privately funded development of public space. Student teams analyze and diagram both physical and social contexts to develop typologies and plan concepts portrayed through master plan and perspective scenarios.

Prerequisite(s): Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 719 Structures: Lateral Forces (5 Credits)

In this course, students are expected to solve complex structural problems and make informed selections from structural system alternatives. Structural problems involve steel and reinforced concrete systems in large, complex and/or multistory buildings. Special emphasis is given to designing structures to withstand lateral forces.

Prerequisite(s): Liability waiver is required.

ARCH 721 Landscape Design for Urban Design (5 Credits)

Students are introduced to the study of exterior spaces as they relate to and complement building design. Through lectures, studio problems and field trips, the course explores the historical background of landscape design, theory, site analysis, environmental issues and plant materials.

ARCH 727 Graduate Architecture Studio II: Comprehensive Design and Programming (5 Credits)

This studio course emphasizes holistic and integral architectural design to engage students in a systems thinking approach that meets the needs of both the user and the contexts in which designs are situated. Synthesizing program research and site analysis, students arrive at a theoretical design construct that responds to user and regulatory requirements, site conditions, and universal design. Students also consider the measurable environmental impacts of their design decisions as they create schematic designs.

Prerequisite(s): ARCH 717 or ARCH 707; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 735 Site Plan Design and Development (5 Credits)

This course teaches advanced site development techniques and design from the conception of a project through to the final comprehensive site plan. The course begins with site selection and building location and then progresses through the design and calculations needed for sediment and erosion control measures, building access, parking, ADA requirements, storm water runoff, and landscaping.

ARCH 736 Complex Structural Applications (5 Credits)

This course leads students into an in-depth study of a variety of structural systems and gives them tools to help them select appropriate systems for their designs. Students learn how to approximate structural member sizes and gain a broad understanding of material behavior to prepare them to make structural design decisions.

ARCH 737 Graduate Architecture Studio III: Comprehensive Detailing and Systems (5 Credits)

In this studio, students enact the imagination and innovation required to bring technical resolution to architectural design constructs developed in ARCH 727 Graduate Architecture Studio II: Comprehensive Design and Programming. Through their design decisions, students demonstrate the integration of building envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and the measurable outcomes of building performance.

Prerequisite(s): ARCH 727; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 745 Graduate Seminar in Architecture (5 Credits)

This seminar course serves as a workshop for focused thesis topic formulation and development through an investigation documented in an in-depth formal research paper. This research paper is incorporated into the thesis text.

ARCH 747 Graduate Architecture Studio IV: Interdisciplinary Focus (5 Credits)

This studio course centers on a variety of topics within or related to the School of Building Arts. The focus studio builds upon selected student electives in architectural history, digital design, design management, historic preservation, interior design, sustainability, architectural history or urban design. Possible focus areas for the studio may include architecture and topics from students' selected area of elective coursework.

Prerequisite(s): (ARCH 706 or ARCH 771) and (ARCH 719 or ARCH 753) and ELDS 727; Liability waiver is required.

Attributes: Studio Elective Requirement

ARCH 760 Sustainable Design (5 Credits)

This course provides an overview of critical developments in sustainable building design strategies by examining environmental problems and possible solutions through design. Readings, lectures, guest speaker presentations and class discussion introduce students to the needs and possibilities of being effective green builders and architects.

ARCH 765 Emerging Urban Issues (5 Credits)

This seminar examines pressing contemporary technological, cultural, theoretical and economically driven issues relevant to urban design and development. Emerging issues for the 21st century include the sociological impact and infrastructure needs attendant to vast ethnic migrations, the rapid growth and sprawl of mega cities, and the creation of new cities.

ARCH 769 Hybrid Media Presentation in Architecture (5 Credits)

This course explores advanced architecture design expression and presentation. It examines the traditional methods of architectural graphics and visual communication and the digital methods of computer aided architectural design. This course includes traditional design presentation techniques and advanced digital presentation with different media.

Attributes: Studio Elective Requirement

ARCH 770 Graduate Architecture Portfolio (5 Credits)

This course focuses on the development and production of an economically feasible and reproducible portfolio and supports graduate digital portfolio construction.

Attributes: Studio Elective Requirement

ARCH 775 Global Architectural Practice (5 Credits)

Gaining an understanding of various cultures' political, economic and professional aspirations and constraints is vital to succeeding as an architect, interior designer or historic preservationist in today's professional climate. This course prepares students to work in a global practice through the development of international marketplace and business skills, and a refinement of cultural knowledge and sensitivity.

ARCH 779F Graduate Field Internship (5 Credits)

Students in this course undertake a field assignment under the supervision of a faculty member.

ARCH 779T Graduate Teaching Internship (5 Credits)

Students in this course undertake a teaching assignment under the supervision of a faculty member.

ARCH 798 Graduate Architecture Studio: Thesis I - Developing Concept, Context and Program (5 Credits)

This studio course is the first part of the two-quarter long architectural design thesis. Students select a topic and prototype, which has been approved by the thesis committee prior to the beginning of this course. The content, scheduling and college requirements for the architecture thesis are delineated in the thesis guidelines. This course is dedicated to development of the concept, context, site, program and schematic design of the architectural design thesis. Students entering this course must have completed a research paper in support of the thesis premise and context.

Prerequisite(s): (ARCH 745 or ARCH 712) and ARCH 747 and minimum score of 6 in 'Graduate Prerequisite Test'; Liability waiver is required.

ARCH 799 Graduate Architecture Studio: Thesis II - Design Detailing and Final Exposition (5 Credits)

This studio course is the second of a two-quarter long architectural design thesis. The content, scheduling and college requirements for the architecture thesis are delineated in the thesis guidelines. Prior to the beginning of this studio, students must have developed an architectural project to the schematic design level. This studio is directed to refinement, detailed design development, presentation and exhibition of the architectural thesis design.

Prerequisite(s): ARCH 798 or ARCH 708; Liability waiver is required.