Architecture (ARCH)

Courses

ARCH 1003. Basic Course in the Arts: Architecture Lecture. 3 Hours.
A general introduction to architecture, exploring the designed environment, including cities and buildings and their histories, technologies and users, in a holistic manner. May not be presented towards satisfaction of major requirements in either the B.Arch or B.A. in architectural studies degrees.

ARCH 1003H. Honors Basic Course in the Arts: Architecture Lecture. 3 Hours.
A general introduction to architecture, exploring the designed environment, including cities and buildings and their histories, technologies, and users, in a holistic manner. May not be presented towards satisfaction of major requirements in either the B.Arch or B.A. in architectural studies degrees. Prerequisite: Honors candidacy. This course is equivalent to ARCH 1003.

ARCH 1013. Diversity and Design. 3 Hours.
Explores the reciprocal relationship between diversity and design in America, investigating how race, gender, religion, ability, age, class, and location affect and are affected by the design of media, products, architecture, and cities/regions. Positive and negative effects of diversity and design are discussed. Prerequisite: Honors candidacy. This course is equivalent to ARCH 1013.

ARCH 1015. Fundamental Design Skills. 5 Hours.
Fundamental design skills; development of visual and verbal communication skills including observation skills, design technologies, analysis and representation in both 2-dimensions and 3-dimensions through analog and digital tools; creative and critical thinking skills.

ARCH 1025. Fundamental Design Methodology. 5 Hours.
Fundamental design skills; use of precedents for understanding principles of design and natural and formal ordering systems; design development using both iterative and alternative methods of exploration in both 2-dimensions and 3-dimensions using analog and digital tools; continued development of visual and verbal communication skills. Prerequisite: ARCH 1015.

ARCH 1212. Design Thinking I: Foundations in Technology. 2 Hours.
This course will raise pertinent questions about the role of architectural technology in design through studying the important theories about technology from Vitruvius to contemporary practice and understanding how they have been manifested in built form.

ARCH 1222. Design Thinking II: Foundations in History. 2 Hours.
Explores the role of architectural history in design thinking, introducing divergent canons and traditions in a global context and emphasizing understanding of the relationships among buildings, spaces and places and the social, political and technological circumstances in which the work was theorized, produced, and lived. Prerequisite: ARCH 1212.

ARCH 1600. Undergraduate Research Assistant. 0 Hours.
Undergraduate research.

ARCH 2016. Architectural Design III. 6 Hours.
Introduction of formal principles and strategies used in space making, focusing on the development of plans and sections. Precedents and the understanding of them through analysis and syntheses are used as a means of examining the past and the present while providing a framework from which personal design sensibilities can evolve. Corequisite: ARCH 2113 and ARCH 2132 and ARCH 2233. Prerequisite: ARCH 1025 and ARCH 1222.

ARCH 2026. Architectural Design IV. 6 Hours.
An elaboration of space-making, addressing three-dimensional aspects of form-making, including the influence of structural systems, articulation of the vertical section, and exterior expression; the role of site as a generator of form; and the overarching importance of technics, including the materiality of space, structure, and light. Corequisite: ARCH 2123 and ARCH 2243. Prerequisite: ARCH 2016 and ARCH 2113 and ARCH 2132 and ARCH 2233.

ARCH 2113. Architectural Structures I. 3 Hours.
Introduction to statics and strength of materials. Building loads are examined as to their effect on the elements of architectural projects. Simple post and beam structures are the focus of this course. Bending, axial, and shear stress are examined in beams and columns. Materials studied include wood, steel, and concrete. Corequisite: ARCH 2016 and ARCH 2132. Prerequisite: ARCH 1212.

ARCH 2113H. Honors Architectural Structures I. 3 Hours.
Introduction to statics and strength of materials. Building loads are examined as to their effect on the elements of architectural projects. Simple post and beam structures are the focus of this course. Bending, axial, and shear stress are examined in beams and columns. Materials studied include wood, steel, and concrete. Corequisite: ARCH 2016 and ARCH 2132. Prerequisite: ARCH 1212. This course is equivalent to ARCH 2113.

ARCH 2123. Architectural Structures II. 3 Hours.
Introduction to the basic theories of structures, structural behavior, and the design of simple structural systems capable of resisting gravity and lateral forces. Provides a basic understanding of structural behavior, organization of framing systems and location of lateral force resisting elements for building structures and other technical systems. Corequisite: ARCH 2026. Prerequisite: ARCH 2113 and ARCH 2132.

ARCH 2132. Environmental Technology I. 2 Hours.
Introduces theories and concepts of the building thermal, luminous and sonic environments with focus on solar geometry-shading, climate-thermal stresses, natural ventilation, daylight, sound isolation and noise control. The application of these systems to support the design of an environmentally responsive building and its enclosure is addressed. Corequisite: ARCH 2016 and ARCH 2113. Prerequisite: ARCH 1212.

ARCH 2132H. Honors Environmental Technology I. 2 Hours.
Introduces theories and concepts of the building thermal, luminous and sonic environments with focus on solar geometry-shading, climate-thermal stresses, natural ventilation, daylight, sound isolation and noise control. The application of these systems to support the design of an environmentally responsive building and its enclosure is addressed. Corequisite: ARCH 2016 and ARCH 2113. Prerequisite: ARCH 1212. This course is equivalent to ARCH 2132.

ARCH 2233. History of Architecture I. 3 Hours.
Critical study and analysis of world architecture from ancient times through the Middle Ages, comprising the ancient Americas, Asia, Mesopotamia, and Egypt; Classical, Byzantine, and Islamic architecture and vernacular design; and the early Christian, Romanesque, and Gothic periods.
ARCH 2233H. Honors History of Architecture I. 3 Hours.
Critical study and analysis of world architecture from ancient times through the Middle Ages, comprising the ancient Americas, Asia, Mesopotamia, and Egypt; Classical, Byzantine, and Islamic architecture and vernacular design; and the early Christian, Romanesque, and Gothic periods. Prerequisite: Honors candidacy. This course is equivalent to ARCH 2233.

ARCH 2243. History of Architecture II. 3 Hours.
Critical study and analysis of world architecture from the fifteenth to the mid-nineteenth centuries. Encompasses early modern Europe (Renaissance, Baroque, and Neoclassical) as well as two or more of the following: colonial New Spain, early modern Japan, and/or early modern Islamic empires in Africa, the Middle East, and Asia. Vernacular American building is surveyed as well as architecture in the nineteenth-century, including Beaux-Arts design and the introduction of industrial materials. Prerequisite for architecture majors only: ARCH 2233.

ARCH 2243H. Honors History of Architecture II. 3 Hours.
Critical study and analysis of world architecture from the fifteenth to the mid-nineteenth centuries. Encompasses early modern Europe (Renaissance, Baroque, and Neoclassical) as well as two or more of the following: colonial New Spain, early modern Japan, and/or early modern Islamic empires in Africa, the Middle East, and Asia. Vernacular American building is surveyed as well as architecture in the nineteenth-century, including Beaux-Arts design and the introduction of industrial materials. Prerequisite: Architecture majors only. Corequisite: ARCH 2233 and honors candidacy.

This course is equivalent to ARCH 2243.

ARCH 2600. Undergraduate Research Assistant. 0 Hours.
Undergraduate research.

ARCH 2993. Art and Culture in Italy. 3 Hours.
The evolution of culture and aesthetics and their immediate relationship with the creation of Italy's masterpieces in art and architecture. Includes site visits and lectures. Offered in the Rome study abroad semester.

ARCH 3016. Architectural Design V. 6 Hours.
Emphasis on issues of design process, exploration of internal and external determinants of form and the integration of appropriate technologies in design solutions. Corequisite: ARCH 3134 and ARCH 4433. Prerequisite: ARCH 2026 and ARCH 2123 and ARCH 2243.

ARCH 3026. Architectural Design VI. 6 Hours.
Studio-based analysis and design of structural and enclosure systems for buildings with particular emphasis on systems interface and application within the context of design exercises. Investigations of the appropriate use of materials and assemblies for varied programmatic and environmental criteria. Twelve hours of studio each week. Corequisite: ARCH 4523. Prerequisite: ARCH 3016 and ARCH 3143.

ARCH 303V. Special Projects. 1-6 Hour.
Individual or group investigation in research, visual communication, history, or design concerning special interests of student or faculty. May be repeated for degree credit.

ARCH 303VH. Honors Special Projects. 1-6 Hour.
Individual or group investigation in research, visual communication, history, or design concerning special interests of student or faculty. Prerequisite: Honors candidacy. May be repeated for degree credit. This course is equivalent to ARCH 303V.

ARCH 3143. Building Materials and Assemblies. 3 Hours.
Introduction and comprehensive survey of primary building materials and methods of assembly: their history, properties, use and configuration - both traditional and contemporary, in the service of building construction; their impact on the form, expression and performance of building structures and envelopes. Prerequisite: ARCH 2132, ARCH 2113 and ARCH 2123.

ARCH 3253. Environmental Technology II. 3 Hours.
Covers theoretical foundations and applications of building environmental systems: HVAC with duct layout and controls, indoor air quality, electric lighting, power, acoustics, fire safety and egress, and water and waste. The important role of such systems in the design of buildings is examined through a series of small projects assignments. Prerequisite: ARCH 3016 and ARCH 3143.

ARCH 3253H. Honors Environmental Technology II. 3 Hours.
Covers theoretical foundations and applications of building environmental systems: HVAC with duct layout and controls, indoor air quality, electric lighting, power, acoustics, fire safety and egress, and water and waste. The important role of such systems in the design of buildings is examined through a series of small projects assignments. Prerequisite: ARCH 2016 and ARCH 3143. This course is equivalent to ARCH 3253.

ARCH 3600. Undergraduate Research Assistant. 0 Hours.
Undergraduate research.

ARCH 3743. Furniture Design. 3 Hours.
Design concepts and techniques to acquaint the student with the design of furniture; analysis of function, development of design and construction of small pieces of furniture.

ARCH 4016. Comprehensive Studio. 6 Hours.
Emphasis on issues of typology, context and technological suitability as sources of theoretical and developmental responses. Corequisite: ARCH 4152. Prerequisite: ARCH 3026.

ARCH 4023. Advanced Architectural Studies. 3 Hours.
Advanced seminars in subjects to special interest to students and faculty. May be repeated for degree credit.

ARCH 4023H. Honors Advanced Architectural Studies. 3 Hours.
Advanced seminars in subjects to special interest to students and faculty. Prerequisite: Honors candidacy. May be repeated for degree credit. This course is equivalent to ARCH 4023.

ARCH 4026. Comprehensive Studio. 6 Hours.
Continuation of Architectural Design VII. Corequisite: ARCH 4154. Prerequisite: ARCH 4016 or ARCH 4116 or ARCH 4126.

ARCH 4116. Architectural Design - Rome. 6 Hours.
Investigation of complex design problems in the context of the city of Rome, utilizing advanced issues in architectural design and planning. Prerequisite: ARCH 3026 or ARCH 4016.

ARCH 4126. Architectural Design Latin America. 6 Hours.
Introduces a complex social and physical urban condition through a process of formal analysis and design executed in a designated country augmented by an intense graphic investigation of urban form encountered through related field trips to the distinct cultural and geographic regions. Prerequisite: ARCH 3026 or ARCH 4016 or ARCH 4026.

ARCH 4152. Building Systems Integration. 2 Hours.
Promotes the synthesis of building technologies, systems selection and integration in the resolution of a building design. Specifically, the student demonstrates knowledge in the ability to generate digital and analog graphic resolutions highlighting the design response of material, structural and environmental systems in a building. Corequisite: ARCH 4016 or ARCH 4026. Prerequisite: ARCH 2113 and ARCH 2123 and ARCH 2132 and ARCH 3143 and ARCH 3253.
ARCH 4152H. Honors Building Systems Integration. 2 Hours.
Promotes the synthesis of building technologies, systems selection and integration in the resolution of a building design. Specifically, the student demonstrates knowledge in the ability to generate digital and analog graphic resolutions highlighting the design response of material, structural and environmental systems in a building. Corequisite: ARCH 4016 or ARCH 4026. Prerequisite: ARCH 2113 and ARCH 2123 and ARCH 2132 and ARCH 3143 and ARCH 3253.
This course is equivalent to ARCH 4152.

ARCH 4433. History of Architecture III. 3 Hours.
Critical study and analysis of the history and theories of modern architecture from the mid-nineteenth century to the present. Prerequisite: ARCH 2233 and ARCH 2243 or IDES 2883.

ARCH 4433H. Honors History of Architecture III. 3 Hours.
Critical study and analysis of the history and theories of modern architecture from the mid-nineteenth century to the present. Prerequisite: ARCH 2233, ARCH 2243 and honors candidacy.
This course is equivalent to ARCH 4433.

ARCH 4483. Architecture of the Americas. 3 Hours.
Study of the development of architecture in the Americas from the Pre-Columbian cultures to the present day. Lecture and slides 3 hours per week.

ARCH 4483H. Honors Architecture of the Americas. 3 Hours.
Study of the development of architecture in the Americas from the Pre-Columbian cultures to the present day. Lecture and slides 3 hours per week. Prerequisite: Honors candidacy.
This course is equivalent to ARCH 4483.

ARCH 4523. Architectural Theory. 3 Hours.
Introduction to the lexicon of architecture and the ideas and ideologies that provide the conceptual and critical infrastructure for the discipline. Reading and discussion of representative theory texts. Emphasis on twentieth century modernism and postmodernism, including contemporary speculations on possible and emerging forms of practice after theory. Prerequisite: ARCH 2233, ARCH 2243, and ARCH 4433.

ARCH 4523H. Honors Architectural Theory. 3 Hours.
Introduction to architectural theories and their relationship to modern historiography. Case studies are employed for the critical evaluation of significant texts and the discernment of concepts embedded in textual structures. Reading theory through established historical categories establishes critical insight to the original deployment, negation and resurfacing of architectural theories. Prerequisite: ARCH 2233, ARCH 2243, and ARCH 4433.
This course is equivalent to ARCH 4523.

ARCH 4553. Modern Architecture in Mexico. 3 Hours.
Overview of the emergence, growth and trends that define the ongoing evolution of modern architecture in Mexico from the first decades of the 20th century to contemporary practice. Offered in the Mexico study abroad semester.

ARCH 4553H. Honors Modern Architecture in Mexico. 3 Hours.
Overview of the emergence, growth and trends that define the ongoing evolution of modern architecture in Mexico from the first decades of the 20th century to contemporary practice. Offered in the Mexico study abroad semester.
This course is equivalent to ARCH 4553.

ARCH 4600. Undergraduate Research Assistant. 0 Hours.
Undergraduate research.

ARCH 4610. Architecture Cooperative Education I. 0 Hours.
A practicum which introduces and engages the student in the practice and application of the profession. Prerequisite: completion of all third year program requirements, 2.5 minimum GPA and permission of the faculty.

ARCH 4643. Principles of Sustainable Design. 3 Hours.
In collaboration with the Green Building Council Italia. Provides a basic understanding of key aspects of sustainable design in architecture with particular reference to the experiences and methods developed in Italy and Europe.

ARCH 4653. Architecture of the City. 3 Hours.
Analysis of Rome's urban form and historical and theoretical information in support of the students' experience. Includes site visits and lectures. Offered in the Rome study abroad semester.

ARCH 4673. Modern and Contemporary Rome. 3 Hours.
Explores different local conditions that determine main architectural changes that have taken place in Rome during the last century of its urban history. Important works, leading figures and major concepts in contemporary European architecture will be described to introduce examples of modern and contemporary architecture in Rome.

ARCH 4723. Architectural Research Methods. 3 Hours.
Investigation into the practical, theoretical, and methodological strategies necessary for embarking upon architectural inquiry and discourse at a sophisticated level, for instance, in the form of a year-long thesis or independent project. Practical issues of method, such as research skills, literature review, and argument analysis are examined. The classic range of tools for interpreting architecture are surveyed from single-cause explanations (e.g., formalism) to more recent multi-causal theories (e.g., Semiotics, Deconstruction, Post-colonial theory, etc.) for architectural design. Prerequisite: ARCH 2233, ARCH 2243, and ARCH 4433.

ARCH 4843. Medieval Architecture. 3 Hours.
This course traces the history of architecture in Western Europe from c. 300 - 1400. Sites studied include: the early Christian basilicas in Rome, the towered churches of Carolingian emperors, synagogues and mosques of Al-Andalus (Spain), Romanesque monasteries, and Gothic cathedrals. Prerequisite: ARCH 4433.
This course is cross-listed with ARHS 4743.

ARCH 4843H. Honors Medieval Architecture. 3 Hours.
This course traces the history of architecture in Western Europe from c. 300 - 1400. Sites studied include: the early Christian basilicas in Rome, the towered churches of Carolingian emperors, synagogues and mosques of Al-Andalus (Spain), Romanesque monasteries, and Gothic cathedrals. Prerequisite: ARCH 4433.
This course is cross-listed with ARHS 4743, ARCH 4843.

ARCH 4853. Renaissance and Baroque Architecture. 3 Hours.
Study of Renaissance and Baroque architecture in Europe and the New World from 1400 to 1700. With reference to an array of texts, drawings, and the edifices themselves, this course charts the evolution of a commanding Western architectural tradition. Renaissance and Baroque -- with close attention to the social, humanistic, and religious contexts that produced it. Prerequisite: ARCH 4433.
This course is cross-listed with ARHS 4753, ARCH 4853.

ARCH 4853H. Honors Renaissance and Baroque Architecture. 3 Hours.
Study of Renaissance and Baroque architecture in Europe and the New World from 1400 to 1700. With reference to an array of texts, drawings, and the edifices themselves, this course charts the evolution of a commanding Western architectural tradition. Renaissance and Baroque -- with close attention to the social, humanistic, and religious contexts that produced it. Prerequisite: ARCH 4433.
This course is cross-listed with ARHS 4753, ARCH 4853.

ARCH 4863. Saint Peter's and the Vatican. 3 Hours.
Examines art and the architectural history of St. Peter's Basilica in Rome from antiquity to present. Emphasis on the Renaissance/Baroque church and its early Christian predecessor. Students consider the impact of devotional practices and papal politics on the church, the Vatican Palace, and its renowned artworks including the Sistine ceiling. Prerequisite: ARCH 2233 or ARCH 2233H and ARCH 2243 or ARCH 2243H and ARCH 4433 or ARCH 4433H.
This course is cross-listed with ARHS 4733.
ARCH 4863H. Honors St. Peter's and the Vatican. 3 Hours.
Examines art and architectural history of St. Peter's Basilica in Rome from antiquity to present. Emphasis on the Renaissance/Baroque church and its early Christian predecessor. Students consider the impact of devotional practices and papal politics on the church, the Vatican Palace, and its renown artworks including the Sistine ceiling. Prerequisite: ARCH 2233 or ARCH 2233H, and ARCH 2243 or ARCH 2243H and ARCH 4433 or ARCH 4433H.
This course is cross-listed with ARCH 4863, ARHS 4733.

ARCH 4933. Introduction to Historic Preservation. 3 Hours.
Introduces theoretical, methodological and practical issues of architectural preservation in Europe and, more specifically, in Italy. Addresses history and theory of restoration, basic principles of architectural preservation and methodology in the study and praxis of preservation applied to architecture and the issues posed by the preservation of modern architecture.

ARCH 4943. Perspectives on Historic Preservation. 3 Hours.
Introduction of history, theory, and praxis of preservation design, emphasizing development and implementation of preservation projects in the practices of architecture, landscape architecture and interior design. Central themes include: preservation as a form of design; principles, rationales, and ideologies associated with preservation practice; and sustainable strategies for preservation design. Prerequisite: ARCH 2233 and ARCH 2243 or LARC 3413 and LARC 4413 or IDES 2883.
This course is cross-listed with LARC 4943, IDES 4943.

ARCH 4943H. Honors Perspectives on Historic Preservation. 3 Hours.
Introduction of history, theory, and praxis of preservation design, emphasizing development and implementation of preservation projects in the practices of architecture, landscape architecture and interior design. Central themes include: preservation as a form of design; principles, rationales, and ideologies associated with preservation practice; and sustainable strategies for preservation design. Prerequisite: ARCH 2233 and ARCH 2243 or LARC 3413 and LARC 4413 or IDES 2883.
This course is cross-listed with LARC 4943, IDES 4943, ARCH 4943.

ARCH 5016. Option Studio I. 6 Hours.
Project development dependent upon the synthesis of knowledge and application of critical thinking addressing architectural issues at multiple scales. Prerequisite: ARCH 4016, or ARCH 4026, or ARCH 4116, or ARCH 4126.

ARCH 5016H. Honors Thesis Project I. 6 Hours.
Degree project development dependent upon the synthesis of knowledge and application of critical thinking addressing architectural issues at multiple scales. Prerequisite: Honors candidacy. This course is equivalent to ARCH 5016.

ARCH 5026. Option Studio II. 6 Hours.
Project resolution including demonstrated skill in generating design ideas supported by clear understanding of issues resulting in comprehensive development and presentation of architectural issues at multiple scales. Prerequisite: ARCH 5016.

ARCH 5026H. Honors Thesis Project II. 6 Hours.
Degree project resolution including demonstrated skill in generating design ideas supported by clear understanding of issues resulting in comprehensive development and presentation of architectural issues at multiple scales. Prerequisite: Honors candidacy. This course is equivalent to ARCH 5026.

ARCH 5253. Architectural Structures Seminar. 3 Hours.
Advanced discussion, investigation, design, and analysis of structural systems, forms, and materials as determinants of architectural design. May be repeated for up to 6 hours of degree credit.