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. (Typically offered: Fall and Spring)

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
and B.A. in architectural studies degrees. Prerequisite: Honors candidacy. (Typically offered: Fall)
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. (Typically offered: Summer)

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. (Typically offered: Fall and Spring)

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. (Typically offered: Spring and Summer)

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. (Typically offered: Fall and Summer)

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. (Typically offered: Spring and Summer)

ARCH 1600. Undergraduate Research Assistant. 0 Hours.
Undergraduate research. (Typically offered: Fall, Spring and Summer)

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. (Typically offered: Fall)

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. (Typically offered: Spring)

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.
(Typically offered: Fall)

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.
(Typically offered: Fall)
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.
(Typically offered: Spring)

ARCH 2123H. Honors 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, ARCH 2132 and
honors candidacy. (Typically offered: Spring)
This course is equivalent to ARCH 2123.

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. (Typically offered: Fall)

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. (Typically offered: Fall)
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. (Typically offered: Fall)
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. (Typically offered: Fall)
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. (Typically offered: Spring)
This course is equivalent to ARCH 2243.

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. (Typically offered: Spring)
This course is equivalent to ARCH 2243.

ARCH 2600. Undergraduate Research Assistant. 0 Hours.
Undergraduate research. (Typically offered: Fall, Spring and Summer)

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. (Typically offered: Fall and Spring)

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 4433. Prerequisite: ARCH 2026 and ARCH 2123 and ARCH 2243. (Typically offered: Fall)

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. (Typically offered: Spring)

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. (Typically offered: Irregular) 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. (Typically offered: Irregular) 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. (Typically offered: Fall)

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. (Typically offered: Spring)

ARCH 3600. Undergraduate Research Assistant. 0 Hours.
Undergraduate research. (Typically offered: Fall, Spring and Summer)

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. (Typically offered: Fall)

ARCH 4023. Advanced Architectural Studies. 3 Hours.
Advanced seminars in subjects to special interest to students and faculty. (Typically offered: Fall and Spring) 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. (Typically offered: Fall and Spring) May be repeated for degree credit.
This course is equivalent to ARCH 4023.

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. (Typically offered: Fall and Spring)

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. (Typically offered: Summer)

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. Prerequisite: ARCH 2113 and ARCH 2123 and ARCH 2132 and ARCH 3143 and ARCH 3253. (Typically offered: Fall and Spring)

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. Prerequisite: ARCH 2113 and ARCH 2123 and ARCH 2132 and ARCH 3143 and ARCH 3253. (Typically offered: Fall and Spring)
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 IARD 2883. (Typically offered: Fall)
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. (Typically offered: Fall)
This course is equivalent to ARCH 4433.

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. (Typically offered: Spring)

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. (Typically offered: Spring)
This course is equivalent to ARCH 4523.

ARCH 4600. Undergraduate Research Assistant. 0 Hours.
Undergraduate research. (Typically offered: Fall, Spring and Summer)

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. (Typically offered: Fall and Spring)

ARCH 4653H. Honors 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. Prerequisite: Honors standing. (Typically offered: Fall and Spring)
This course is equivalent to ARCH 4653.

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. (Typically offered: Fall and Spring)

ARCH 4673H. Honors 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. Prerequisite: Honors standing. (Typically offered: Fall and Spring)
This course is equivalent to ARCH 4673.

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. (Typically offered: Irregular)
This course is equivalent to ARHS 4753.

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 renowned artworks including the Sistine ceiling. Prerequisite: ARCH 2233 or ARCH 2233H, and ARCH 2243 or ARCH 2243H and ARCH 4433 or ARCH 4433H. (Typically offered: Irregular)
This course is equivalent to 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. (Typically offered: Fall and Spring)

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 4116, or ARCH 4126. (Typically offered: Fall) May be repeated for degree credit.

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. (Typically offered: Spring) May be repeated for degree credit.

ARCH 5314. Architectural Professional Practice. 4 Hours.
Study of role and responsibility of the architect, owner, and contractor relationships; professional ethics; organization of the architect's office; contracts and other documents; risk management strategies; and the preparation of the technical specifications and bidding documents of the Project Manual. Prerequisite: ARCH 4016 or ARCH 4116 or ARCH 4126. (Typically offered: Fall)

ARCH 5493. History of Urban Form. 3 Hours.
The study of pre-industrial urban and architectural design strategies in cities from the Classical through the Baroque eras and their rediscovery in the late 20th century, providing the student with a designer's understanding of a broad range of exemplary urban spaces and the buildings that shape them. Prerequisite: ARCH 2233 and ARCH 2243 and ARCH 4433. (Typically offered: Irregular)

ARCH 5493H. Honors History of Urban Form. 3 Hours.
The study of pre-industrial urban and architectural design strategies in cities from the Classical through the Baroque eras and their rediscovery in the late 20th century, providing the student with a designer's understanding of a broad range of exemplary urban spaces and the buildings that shape them. Prerequisite: ARCH 2233 and ARCH 2243 and ARCH 4433. (Typically offered: Irregular)
This course is equivalent to ARCH 5493.

ARCH 5953. Preservation Practice Field Trip. 3 Hours.
Intensive field study of a domestic or foreign site of significant or precedent-setting preservation activity, through a field trip and a course of pre-travel lectures. (Intersessions) Prerequisite: ARCH 4943 or instructor consent. (Typically offered: Fall, Spring and Summer) May be repeated for up to 6 hours of degree credit.