

Architecture (ARCH)

Courses

ARCH 10003. 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 100H3. 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. (Typically offered: Fall)

ARCH 10103. 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 10105. 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 Summer)

ARCH 10205. 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 10105. (Typically offered: Spring and Summer)

ARCH 12102. 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 12202. 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 12102. (Typically offered: Spring and Summer)

ARCH 16000. Undergraduate Research Assistant. 0 Hours.

Undergraduate research. (Typically offered: Fall, Spring and Summer)

ARCH 20106. 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 21103 and ARCH 21302 and ARCH 22303. Prerequisite: ARCH 10205 and ARCH 12202. (Typically offered: Fall)

ARCH 20206. 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 21203 and ARCH 22403. Prerequisite: ARCH 20106 and ARCH 21103 and ARCH 21302 and ARCH 22303. (Typically offered: Spring)

ARCH 21103. 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 20106 and ARCH 21302. Prerequisite: ARCH 12102. (Typically offered: Fall)

ARCH 211H3. 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 20106 and ARCH 21302. Prerequisite: ARCH 12102. (Typically offered: Fall)

ARCH 21203. 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 20206. Prerequisite: ARCH 21103 and ARCH 21302. (Typically offered: Spring)

ARCH 212H3. 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 20206. Prerequisite: ARCH 21103, ARCH 21302 and honors candidacy. (Typically offered: Spring)

ARCH 21302. 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 20106 and ARCH 21103. Prerequisite: ARCH 12102. (Typically offered: Fall)

ARCH 213H2. 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 20106 and ARCH 21103. Prerequisite: ARCH 12102. (Typically offered: Fall)

ARCH 22303. 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 223H3. 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)

ARCH 22403. 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 22303. (Typically offered: Spring)

ARCH 224H3. 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 22303 and honors candidacy. (Typically offered: Spring)

ARCH 26000. Undergraduate Research Assistant. 0 Hours.

Undergraduate research. (Typically offered: Fall, Spring and Summer)

ARCH 29903. 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 30106. 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 44303. Prerequisite: ARCH 20206 and ARCH 21203 and ARCH 22403. (Typically offered: Fall)

ARCH 30206. 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 45203. Prerequisite: ARCH 30106 and ARCH 31403. (Typically offered: Spring)

ARCH 3030V. 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 303HV. 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 3030V.

ARCH 31403. 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 21302, ARCH 21103 and ARCH 21203. (Typically offered: Fall)

ARCH 32503. 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 30106 and ARCH 31403. (Typically offered: Spring)

ARCH 36000. Undergraduate Research Assistant. 0 Hours.

Undergraduate research. (Typically offered: Fall, Spring and Summer)

ARCH 40106. Comprehensive Studio. 6 Hours.

Emphasis on issues of typology, context and technological suitability as sources of theoretical and developmental responses. Corequisite: ARCH 41502. Prerequisite: ARCH 30206. (Typically offered: Fall)

ARCH 40203. 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 402H3. 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.

ARCH 41106. 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 30206 or ARCH 40106. (Typically offered: Fall and Spring)

ARCH 41206. 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 30206 or ARCH 40106. (Typically offered: Summer)

ARCH 41502. 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 40106. Prerequisite: ARCH 21103 and ARCH 21203 and ARCH 21302 and ARCH 31403 and ARCH 32503. (Typically offered: Fall and Spring)

ARCH 415H2. 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 40106. Prerequisite: ARCH 21103 and ARCH 21203 and ARCH 21302 and ARCH 31403 and ARCH 32503. (Typically offered: Fall and Spring)

ARCH 44303. 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 22303 and ARCH 22403 or IARD 28803. (Typically offered: Fall)

ARCH 443H3. 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 22303, ARCH 22403 and honors candidacy. (Typically offered: Fall)

ARCH 45203. 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 22303, ARCH 22403, and ARCH 44303. (Typically offered: Spring)

ARCH 452H3. 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 22303, ARCH 22403, and ARCH 44303. (Typically offered: Spring)

ARCH 46000. Undergraduate Research Assistant. 0 Hours.

Undergraduate research. (Typically offered: Fall, Spring and Summer)

ARCH 46503. 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 465H3. 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)

ARCH 46703. 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 467H3. 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)

ARCH 48403. 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 44303. (Typically offered: Irregular)

ARCH 484H3. 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: Honors standing and ARCH 44303. (Typically offered: Irregular)

ARCH 48503. 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 44303. (Typically offered: Irregular)

ARCH 485H3. 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: Honors standing and ARCH 44303. (Typically offered: Irregular)

ARCH 486H3. 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 22303 or ARCH 223H3, and ARCH 22403 or ARCH 224H3 and ARCH 44303 or ARCH 443H3. (Typically offered: Irregular)

ARCH 49303. 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 50106. 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 40106, or ARCH 41106, or ARCH 41206. (Typically offered: Fall) May be repeated for degree credit.

ARCH 50206. 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 53104. 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 40106 or ARCH 41106 or ARCH 41206. (Typically offered: Fall)

ARCH 54903. 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 22303 and ARCH 22403 and ARCH 44303. (Typically offered: Irregular)

ARCH 549H3. 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 22303 and ARCH 22403 and ARCH 44303. (Typically offered: Irregular)

ARCH 59503. 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 49403 or instructor consent. (Typically offered: Fall, Spring and Summer) May be repeated for up to 6 hours of degree credit.