# Architecture (ARCH)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Description</th>
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<tbody>
<tr>
<td>ARCH 10001</td>
<td>Understanding Architecture (KFA)</td>
<td>3</td>
<td>The nature of the built environment, its forms and functions are explored within the cultural contexts of ecology, technology, human behavior, symbolism, art and history.</td>
</tr>
<tr>
<td>ARCH 10011</td>
<td>Global Architectural History I (KFA)</td>
<td>3</td>
<td>Global history of architecture from Neolithic times through the 16th century.</td>
</tr>
<tr>
<td>ARCH 10012</td>
<td>Global Architectural History II (KFA)</td>
<td>3</td>
<td>Global history of architecture from the 17th century to 2000.</td>
</tr>
<tr>
<td>ARCH 10093</td>
<td>Workshop: Variable Title</td>
<td>1-3</td>
<td>(Repeatable for credit) Topics vary per workshop offering.</td>
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<tr>
<td>ARCH 20101</td>
<td>First Year Design Studio I</td>
<td>3</td>
<td>Introduction to the fundamental principles of visual organization, structural organization, graphic communications, historical precedence and current directions in architecture. Graphic techniques include free hand drawing and technical orthographics, axonometrics and perspectives.</td>
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<tr>
<td>ARCH 20112</td>
<td>Second Year Design Studio I</td>
<td>3</td>
<td>History of architecture from pre-history through the Gothic period.</td>
</tr>
<tr>
<td>ARCH 20113</td>
<td>History of Architecture III</td>
<td>3</td>
<td>A history of architecture in the 20th century.</td>
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<tr>
<td>ARCH 20201</td>
<td>Beyond Western Architecture</td>
<td>3</td>
<td>Course introduces students to the broad realm of contributions to world architecture made by cultures and civilizations that were not in the traditional sphere of Western/European influence.</td>
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</tbody>
</table>
ARCH 20601  COMPUTER APPLICATIONS IN ARCHITECTURE I  1-3
Credit Hours
Course provides a basic understanding of two-dimensional CAD
operations, parametric building design and building information modeling
(BIM).
Prerequisite: Architecture major or Architectural Studies major or Interior
Design major.
Schedule Type: Studio
Contact Hours: 15-45 other
Grade Mode: Standard Letter

ARCH 20602  COMPUTER APPLICATIONS IN ARCHITECTURE II  1-3
Credit Hours
Principles and practices of three-dimension digital modeling and
rendering, including production of geometric surfaces and forms using
polygon construction, texturing, lighting and rendering.
Prerequisite: ARCH 20601; and Architecture major or Architectural
Studies major or Interior Design major.
Schedule Type: Studio
Contact Hours: 15-45 other
Grade Mode: Standard Letter

ARCH 20693  WORKSHOP: COMPUTER APPLICATIONS  1-3 Credit
Hours
(Repeatable for credit) Course provides an exposure to various
fundamental computer topics and their application to architectural
studies. Topics include file management, network applications,
spreadsheets, raster image manipulations, two- and three-dimensional
CAD and computer-aided visualization.
Prerequisite: Architecture major or Interior Design majors.
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

ARCH 30001  SITE DESIGN (WIC)  1 Credit Hour
Research component addressing technical, cultural and contextual
concerns, influences and directions in site design.
Prerequisite: Architecture major; and approved admission to advanced
study (third year).
Corequisite: ARCH 30101.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

ARCH 30002  URBAN DESIGN  1 Credit Hour
(Equivalent to ARCH 30012) Lecture component conducted concurrently
with ARCH 30102. Course addresses design of form and space in cities
through study of precedents, traditions and current directions in urban
form-making.
Prerequisite: ARCH 30001 and ARCH 30101.
Corequisite: ARCH 30102.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

ARCH 30012  URBAN DESIGN, FLORENCE, ITALY  1 Credit Hour
(Equivalent to ARCH 30002) Lecture component conducted concurrently
with ARCH 30112. Course addresses design of form and space in cities
through study of precedents, traditions and current directions in urban
form-making.
Prerequisite: ARCH 30101.
Corequisite: ARCH 30112.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

ARCH 30101  THIRD-YEAR DESIGN STUDIO I  5 Credit Hours
Studio investigation of the simultaneous concerns of program, site,
context and materials of construction. Specific emphasis on the
understanding of the goals, objectives, intentions and parameters of site/
context in design, including cultural influences.
Prerequisite: Architecture major; and approved admission to advanced
study (third year).
Corequisite: ARCH 30001.
Schedule Type: Studio
Contact Hours: 5 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ARCH 30102  THIRD-YEAR DESIGN STUDIO II (ELR)  5 Credit Hours
(Equivalent to ARCH 30112) Studio investigation with specific emphasis
on the understanding of the goals, objectives, intentions and parameters
of urban design.
Prerequisite: ARCH 30101.
Corequisite: ARCH 30002.
Schedule Type: Studio
Contact Hours: 5 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ARCH 30112  THIRD-YEAR DESIGN STUDIO II, FLORENCE, ITALY (ELR)
5 Credit Hours
(Equivalent to ARCH 30102) Studio investigation with specific emphasis
on understanding of the goals, objectives, intentions and parameters of
urban design.
Prerequisite: Special approval.
Corequisite: ARCH 30112.
Schedule Type: Studio
Contact Hours: 5 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ARCH 40001  SUSTAINABLE DESIGN (WIC)  1 Credit Hour
(Slashed with ARCH 50001) Research component addressing precedents,
traditions, current directions in conservation of natural environment.
Principles and methods of ecological design in architecture and urban
design.
Prerequisite: ARCH 30102 or ARCH 30112.
Corequisite: ARCH 40101.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course
ARCH 40002 SYSTEMS DESIGN 1 Credit Hour
(Slashed with ARCH 50002) Lecture and research component addressing comprehensive integration of mechanical, electrical communications structural life safety systems and sustainable design concerns.
Prerequisite: ARCH 40101.
Corequisite: ARCH 40102.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

ARCH 40101 FOURTH-YEAR DESIGN STUDIO I 5 Credit Hours
(Slashed with ARCH 50101) Studio investigation of complex formal and spatial constructs addressing the comprehensive concerns of architecture. Special emphasis on understanding the conservation of the natural environment. Knowledge of CAD is required.
Prerequisite: ARCH 30102 or ARCH 30112.
Corequisite: ARCH 40001.
Schedule Type: Studio
Contact Hours: 5 other
Grade Mode: Standard Letter

ARCH 40102 INTEGRATED DESIGN STUDIO 5 Credit Hours
(Slashed with ARCH 50102) Studio investigation of the comprehensive concerns and understanding of building systems integration. Knowledge of CAD is required.
Prerequisite: ARCH 40101.
Corequisite: ARCH 40002.
Schedule Type: Studio
Contact Hours: 5 other
Grade Mode: Standard Letter

ARCH 40301 STRUCTURAL SYSTEMS I 3 Credit Hours
(Slashed with ARCH 50301) A continuation of building structures, statics strength of materials and systems analysis. Emphasis is on elastic materials, allowable stresses and design for wood and steel structural members and systems.
Prerequisite: ARCH 20301; and Architecture major; and approved admission to advanced study (third year).
Schedule Type: Combined Lecture and Lab
Contact Hours: 6 other
Grade Mode: Standard Letter

ARCH 40302 STRUCTURAL SYSTEMS II 3 Credit Hours
(Slashed with ARCH 50302) A continuation of building structures, statics, strength of materials and systems analysis. Emphasis is on inelastic materials, allowable stress and design for masonry and concrete structural members and systems.
Prerequisite: ARCH 40301.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

ARCH 40401 METHODS AND MATERIALS I 3 Credit Hours
(Slashed with ARCH 50401) Introduction to the origins, extraction, properties and processing of the basic materials of construction. Primary focus on wood and masonry-appropriate use and scale including code requirements, methods of construction and design consequences.
Prerequisite: Architecture major; and approved admission to advanced study (third year).
Schedule Type: Combined Lecture and Lab
Contact Hours: 6 other
Grade Mode: Standard Letter

ARCH 40402 METHODS AND MATERIALS II 3 Credit Hours
(Slashed with ARCH 50402) Continued investigation of the origins, extraction, properties and processing of the basic materials of construction. Primary focus on concrete and steel-appropriate use and scale, including allied systems and building materials. Introduction to construction contract documents.
Prerequisite: ARCH 40401.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

ARCH 40501 ENVIRONMENTAL TECHNOLOGY I 3 Credit Hours
(Slashed with ARCH 50501) Basic principles of ecological design and architecture environmental systems including lighting, sonic and thermal systems.
Prerequisite: PHY 13012; and Architecture major; and approved admission to advanced study (third year); or Interior Design major with special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 4.5 other
Grade Mode: Standard Letter

ARCH 40502 ENVIRONMENTAL TECHNOLOGY II 3 Credit Hours
(Slashed with ARCH 50502) Ecological design of large buildings. Investigation and analysis of lighting, thermal, water, electrical and waste systems in urban settings.
Prerequisite: ARCH 40501.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

ARCH 44611 PORTFOLIO 1 Credit Hour
Architectural drawings and other allied work of the student reproduced and assembled in a professional portfolio suitable for job and graduate application.
Prerequisite: ARCH 40101.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

ARCH 45210 RENAISSANCE ARCHITECTURE 3 Credit Hours
(Slashed with ARCH 55210) History and theory of renaissance architecture from 1400 until 1600.
Prerequisite: ARCH 10011 and ARCH 10012; or ARCH 10111 and ARCH 20112; or ARTH 22006 and ARCH 22007.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 45211 BAROQUE ARCHITECTURE 3 Credit Hours
(Slashed with ARCH 55211) History and theory of architecture in Europe from 1600 through 1750.
Prerequisite: ARCH 10011 and ARCH 10012; or ARCH 10111 and ARCH 20112; or ARTH 22006 and ARTH 22007.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ARCH 45213  20TH CENTURY ARCHITECTURAL HISTORY  3 Credit Hours
(Slashed with ARCH 55213) History and theory of architecture during the 20th century.
Prerequisite: ARCH 10011 and ARCH 10012.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 45220  AMERICAN ARCHITECTURE: COLONIAL TO 1900  3 Credit Hours
(Slashed with ARCH 55220) History of American architecture for Spanish, French, Dutch and English colonization through the 19th century.
Prerequisite: ARCH 10011 and ARCH 10012; or ARCH 10111 and ARCH 20112; or ARTH 22006 and ARTH 22007.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 45230  FRANK LLOYD WRIGHT  3 Credit Hours
(Slashed with ARCH 55230) Examination of the life, buildings and literary works of Frank Lloyd Wright with emphasis on his contributions to American art and architecture and his place in American intellectual history.
Prerequisite: ARCH 10011 and ARCH 10012.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 45240  THE SKYSCRAPER  3 Credit Hours
(Slashed with ARCH 55240) A study of skyscrapers from the standpoint of architectural, financial, structural, psychological and technological considerations. Emphasis is placed on the early developments in Chicago and New York, the influence of the international style and the current trends in ultra-high skyscrapers built outside the United States.
Prerequisite: Minimum C grade in ARCH 10111 and ARCH 20112.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 45241  ARCHITECTURE OF WORLD’S FAIRS  3 Credit Hours
(Slashed with ARCH 55241) Students investigate world’s fairs and related expositions as a cultural phenomenon, an urban design challenge and an opportunity to advance and popularize ideas in architecture and design.
Prerequisite: ARCH 10011 and ARCH 10012.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ARCH 45291  SEMINAR: VARIABLE TOPICS IN ARCHITECTURAL HISTORY  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 55291) Content within architectural history varies per course offering.
Prerequisite: Special approval.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 45391  SEMINAR: STRUCTURES III  1-3 Credit Hours
(Repeatable for credit)(Slashed with ARCH 55391) A continuation of building structures, statics, strength of materials and systems analysis. Emphasis is on complex systems, including horizontal long span and high rise structures. Computer analysis is required.
Prerequisite: ARCH 40302.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 45491  SEMINAR: METHODS AND MATERIALS III  1-3 Credit Hours
(Repeatable for credit)(Slashed with ARCH 55491) Advanced topics in methods and complex materials systems. Computer modeling and field experiences are required.
Prerequisite: ARCH 40402.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 45591  SEMINAR: ENVIRONMENTAL TECHNOLOGY III  1-3 Credit Hours
(Repeatable for credit)(Slashed with ARCH 55591) Variable topics in environmental technology, environmental design and energy conservation, advanced lighting techniques etc.
Prerequisite: ARCH 40502.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 45601  ADVANCED COMPUTER APPLICATIONS  1-3 Credit Hours
(Slashed with ARCH 55601) Course discusses advanced visualization techniques such as raytracing, radiosity and animation. Presents a variety of presentation issues and options.
Prerequisite: Approved admission to third year; and special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 45620  INTRODUCTION TO PRESERVATION  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 55620) An overview of preservation, including building analysis, conservation, adaptive reuse, economic benefits of preservation and preservation planning as a revitalizing strategy.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 45621  CURRENT ISSUES IN HISTORIC PRESERVATION  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 55621) Practicing professionals—including architects, planners, developers and government officials—present preservation related work.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter
ARCH 45625 EXPLORING HISTORIC STRUCTURES 3 Credit Hours
Slashed with ARCH 55625) Course provides students with the skills and opportunity to document an historic structure using methods prescribed by the Historic American Buildings Survey (HABS). Covers recording, documentation and assessment of the historic structure, implementing the guidelines established by the Getty Conservation Institute, including history, purpose, means, methods and field work.
Prerequisite: Junior standing and approved admission to advanced study (third year).
Schedule Type: Laboratory, Lecture
Contact Hours: 1.2 lecture, 3.6 lab
Grade Mode: Standard Letter

ARCH 45627 PRESERVATION TECHNOLOGY 3 Credit Hours
Slashed with ARCH 55627) Study of historic building materials with an emphasis on causes of degradation, strategies for conservation and standards for restoration.
Prerequisite: Junior or senior standing; and Architecture major.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 45630 INTRODUCTION TO LANDSCAPE ARCHITECTURE 1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Slashed with ARCH 55630) Introduction to landscape design with emphasis upon the relationship between landscape and buildings.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 45631 SITE ANALYSIS AND DESIGN 1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Slashed with ARCH 55631) Analysis of environmental factors as a basis for site selection and site planning.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 45640 DEVELOPING ENVIRONMENTS FOR OLDER ADULTS 1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Slashed with ARCH 55640) Research of existing built environments and an investigation of the planning design process for the elderly.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 45701 URBAN DESIGN STUDIO I 3-6 Credit Hours
(Repeatable for maximum 6 credit hours) Introduction to urban design and its relationship to other design disciplines through analysis of neighborhoods and definition of comprehensive area improvement programs.
Prerequisite: Special approval.
Schedule Type: Studio
Contact Hours: 3-6 other
Grade Mode: Standard Letter

ARCH 45703 THEORIES AND PRINCIPLES OF URBAN DESIGN I 1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Course on the nature and utility of theory in urban design, examining the relationship between design ideologies and the theories of the environment on which they are based.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 45704 THEORIES AND PRINCIPLES OF URBAN DESIGN II 1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Focuses on the relationship between design ideologies or theories and the realities of existing spatial relationships or precedents.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 45793 WORKSHOP IN URBAN DESIGN AND PLANNING 1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Slashed with ARCH 45793) Course provides an introduction to the scope of planning and design in the making of quality urban neighborhoods, with a particular emphasis on the role of urban design, architecture and landscape design.
Prerequisite: None.
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

ARCH 46991 SEMINAR: VARIABLE TOPIC 1-3 Credit Hours
(Repeatable for credit) Slashed with ARCH 56991) Variable topic seminar.
Prerequisite: approved admission to advanced study (third year).
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 46992 FIELD STUDY (ELR) 1-3 Credit Hours
(Repeatable for credit) Slashed with ARCH 56992) Variable topic field experience.
Prerequisite: Approved admission to advanced study (third year).
Schedule Type: Field Experience
Contact Hours: 1-3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ARCH 46993 WORKSHOP: VARIABLE TOPIC 1-3 Credit Hours
(Repeatable for credit) Slashed with ARCH 56993) Variable topic workshop.
Prerequisite: Approved admission to advanced study (third year).
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

ARCH 46995 SPECIAL TOPICS IN ARCHITECTURE 1-3 Credit Hours
(Repeatable for credit) Slashed with ARCH 56995) Special topics in architecture.
Prerequisite: Approved admission to advanced study (third year).
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter-IP
ARCH 46996 INDIVIDUAL INVESTIGATION 1-3 Credit Hours
(Repeatable for credit) Student-initiated experience to pursue an area of interest not covered by a regular course offering, with the guidance of a Kent State faculty member.
Prerequisite: Special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 50001 SUSTAINABLE DESIGN 1 Credit Hour
(Slashed with ARCH 40001) Research component addressing precedents, traditions, current directions in conservation of natural environment. Principles and methods of ecological design in architecture and urban design.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

ARCH 50002 SYSTEMS DESIGN 1 Credit Hour
(Slashed with ARCH 40002) Lecture and research component addressing comprehensive integration of mechanical, electrical communications structural life safety systems and sustainable design concerns.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

ARCH 50093 VARIABLE TITLE WORKSHOP IN ARCHITECTURE 1-6 Credit Hours
(Repeatable for credit) Workshop topic varies per course offering.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

ARCH 50101 FOURTH-YEAR DESIGN STUDIO I 5 Credit Hours
(Slashed with ARCH 40101) Studio investigation of complex formal and spatial constructs addressing the comprehensive concerns of architecture. Special emphasis on understanding the conservation of the natural environment. Knowledge of CAD is required.
Prerequisite: ARCH 30102 or ARCH 30112; and Graduate standing.
Corequisite: ARCH 50001.
Schedule Type: Studio
Contact Hours: 5 other
Grade Mode: Standard Letter

ARCH 50102 INTEGRATED DESIGN STUDIO 5 Credit Hours
(Slashed with ARCH 40102) Studio investigation of the comprehensive concerns and understanding of building systems integration. Knowledge of CAD is required.
Prerequisite: Graduate standing.
Corequisite: ARCH 50002.
Schedule Type: Studio
Contact Hours: 5 other
Grade Mode: Standard Letter

ARCH 50301 STRUCTURAL SYSTEMS I 3 Credit Hours
(Slashed with ARCH 40301) A continuation of building structures, statics strength of materials and systems analysis. Emphasis is on elastic materials, allowable stresses and design for wood and steel structural members and systems.
Prerequisite: ARCH 20301; and Architecture major; and graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 6 other
Grade Mode: Standard Letter

ARCH 50302 STRUCTURAL SYSTEMS II 3 Credit Hours
(Slashed with ARCH 40302) A continuation of building structures, statics, strength of materials and systems analysis. Emphasis is on inelastic materials, allowable stress, and design for masonry and concrete structural members and systems.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

ARCH 50401 METHODS AND MATERIALS I 3 Credit Hours
(Slashed with ARCH 40401) Introduction to the origins, extraction, properties and processing of the basic materials of construction. Primary focus on wood and masonry-appropriate use and scale including code requirements, methods of construction and design consequences.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 6 other
Grade Mode: Standard Letter

ARCH 50402 METHODS AND MATERIALS II 3 Credit Hours
(Slashed with ARCH 40402) Continued investigation of the origins, extraction, properties and processing of the basic materials of construction. Primary focus on concrete and steel-appropriate use and scale, including allied systems and building materials. Introduction to construction contract documents.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

ARCH 50501 ENVIRONMENTAL TECHNOLOGY I 3 Credit Hours
(Slashed with ARCH 40501) Basic principles of ecological design and architecture environmental systems including lighting, sonic and thermal systems.
Prerequisite: PHY 13012; and Architecture major; and approved admission to advanced study (third year); and graduating standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 4.5 other
Grade Mode: Standard Letter

ARCH 50502 ENVIRONMENTAL TECHNOLOGY II 3 Credit Hours
(Slashed with ARCH 40502) Ecological design of large buildings. Investigation and analysis of lighting, thermal, water, electrical and waste systems in urban settings.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter
ARCH 55101  FIFTH-YEAR DESIGN STUDIO I  6 Credit Hours
Students investigate a new scale of environmental issues that integrate both architectural and urban planning. Included are site visits, data collection, design of a master plan and an architectural form response to a segment of the total conceptual plan.
Prerequisite: Graduate standing.
Schedule Type: Studio
Contact Hours: 6 other
Grade Mode: Standard Letter

ARCH 55102  FIFTH-YEAR DESIGN STUDIO II  3-6 Credit Hours
(Repeatable for maximum 6 credit hours) Advanced design studio emphasizing comprehensive and independent investigation. Explores and manifests ideas through architecture using competition and hypothetical or real projects as vehicles of expression.
Prerequisite: Graduate standing.
Schedule Type: Studio
Contact Hours: 3-6 other
Grade Mode: Standard Letter

ARCH 55210  RENAISSANCE ARCHITECTURE  3 Credit Hours
(Repeatable with ARCH 45210) History and theory of Renaissance architecture from 1400 until 1600.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 55211  BAROQUE ARCHITECTURE  3 Credit Hours
(Repeatable with ARCH 45211) History and theory of architecture in Europe from 1600 through 1750.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 55213  20TH CENTURY ARCHITECTURAL HISTORY  3 Credit Hours
(Repeatable with ARCH 45213) History and theory of architecture during the 20th century.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 55220  AMERICAN ARCHITECTURE: COLONIAL TO 1900  3 Credit Hours
(Repeatable with ARCH 45220) History of American architecture for Spanish, French, Dutch and English colonization through the 19th century.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 55230  FRANK LLOYD WRIGHT  3 Credit Hours
(Repeatable with ARCH 45230) Examination of the life, buildings and literary works of Frank Lloyd Wright with emphasis on his contributions to American art and architecture and his place in American intellectual history.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 55240  THE SKYSCRAPER  3 Credit Hours
(Repeatable with ARCH 45240) A study of skyscrapers from the standpoint of architectural, financial, structural, psychological and technological considerations. Emphasis is placed on the early developments in Chicago and New York, the influence of the international style and the current trends in ultra-high skyscrapers built outside the United States.
Prerequisite: Minimum C grade in ARCH 10111 and ARCH 20112; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 55241  ARCHITECTURE OF WORLD'S FAIRS  3 Credit Hours
(Repeatable with ARCH 45241) Students investigate world's fairs and related expositions as a cultural phenomenon, an urban design challenge and an opportunity to advance and popularize ideas in architecture and design.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 55291  SEMINAR: VARIABLE TOPICS IN ARCHITECTURAL HISTORY  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 45291) A continuation of building structures, statics, strength of materials and systems analysis. Emphasis is on complex systems, including horizontal long span and high rise structures. Computer analysis is required.
Prerequisite: Graduate standing and special approval.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 55391  SEMINAR: STRUCTURES III  1-3 Credit Hours
(Repeatable for credit)(Slashed with ARCH 45391) A continuation of building structures, statics, strength of materials and systems analysis. Emphasis is on complex systems, including horizontal long span and high rise structures. Computer analysis is required.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 55491  SEMINAR: METHODS AND MATERIALS III  1-3 Credit Hours
(Repeatable for credit)(Slashed with ARCH 45491) Advanced topics in methods and complex materials systems. Computer modeling and field experiences are required.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 55591  SEMINAR: ENVIRONMENTAL TECHNOLOGY III  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 45591) Variable topics in environmental technology, environmental design and energy conservation, advanced lighting techniques, etc.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter
ARCH 55601  ADVANCED COMPUTER APPLICATIONS  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 45601)
Course discusses advanced visualization techniques such as raytracing, radiosity and animation. Presents a variety of presentation issues and options.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 55620  INTRODUCTION TO PRESERVATION  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 45620)
An overview of preservation, including building analysis, conservation, adaptive reuse, economic benefits of preservation and preservation planning as a revitalizing strategy.
Prerequisite: Graduate and special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 55621  CURRENT ISSUES IN HISTORIC PRESERVATION  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 45621)
Practicing professionals—including architects, planners, developers and government officials—present preservation related work.
Prerequisite: Graduate and special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 55625  EXPLORING HISTORIC STRUCTURES  3 Credit Hours
(Slashed with ARCH 45625) Course provides students with the skills and opportunity to document an historic structure using methods prescribed by the Historic American Buildings Survey (HABS). Covers recording, documentation and assessment of the historic structure, implementing the guidelines established by the Getty Conservation Institute, including history, purpose, means, methods and field work.
Prerequisite: Major in the College of Architecture and Environmental Design; and graduate standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 1.2 lecture, 3.6 lab
Grade Mode: Standard Letter

ARCH 55627  PRESERVATION TECHNOLOGY  3 Credit Hours
(Slashed with ARCH 45627) Study of historic building materials with an emphasis on causes of degradation, strategies for conservation and standards for restoration.
Prerequisite: Minimum C grade in ARCH 40401 and ARCH 40402; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 55630  INTRODUCTION TO LANDSCAPE ARCHITECTURE  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 45630)
Introduction to landscape design with emphasis upon the relationship between landscape and buildings.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 55631  SITE ANALYSIS AND DESIGN  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 45631)
Analysis of environmental factors as a basis for site selection and site planning.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 55640  DEVELOPING ENVIRONMENTS FOR OLDER ADULTS  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 45640)
Research of existing built environments and an investigation of the planning design process for the elderly.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 55650  VISUALIZATION IN DESIGN  1-3 Credit Hours
(Repeatable for maximum 3 credit hours)(Slashed with ARCH 45650)
Course discusses advanced visualization techniques such as raytracing, radiosity and animation. Presents a variety of presentation issues and options.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

ARCH 55707  REPRESENTATION IN DESIGN  1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Course on the nature of communication in design and the representational tools the designer uses to give form to abstract ideas and converse with clients and colleagues.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

ARCH 55793  WORKSHOP IN URBAN DESIGN AND PLANNING  1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Course provides an introduction to the scope of planning and design in the making of quality urban neighborhoods, with a particular emphasis on the role of urban design, architecture and landscape design.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

ARCH 55795  SEMINAR: VARIABLE TOPIC  1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Variable topic seminar.
Prerequisite: Graduate standing and special approval.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 55800  FIELD STUDY  1-3 Credit Hours
(Repeatable for maximum 3 credit hours) Field experience.
Prerequisite: Graduate standing and special approval.
Schedule Type: Field Experience
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 55803  WORKSHOP: VARIABLE TOPIC  1-3 Credit Hours
(Repeatable for credit) Field experience.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory
ARCH 56995  SPECIAL TOPICS IN ARCHITECTURE  1-3 Credit Hours  
(Repeatable for credit)(Slashed with ARCH 46995) Special topics in architecture.  
**Prerequisite:** Graduate standing and special approval.  
**Schedule Type:** Lecture  
**Contact Hours:** 1-3 lecture  
**Grade Mode:** Standard Letter-IP  

ARCH 60101  GRADUATE DESIGN STUDIO I  3-6 Credit Hours  
Architectural studies related to buildings. Emphasis on spatial, aesthetic, environmental and functional factors in design.  
**Prerequisite:** Graduate standing.  
**Schedule Type:** Studio  
**Contact Hours:** 3-6 other  
**Grade Mode:** Standard Letter  

ARCH 60102  GRADUATE DESIGN STUDIO II  3-6 Credit Hours  
Independent design project, completed under the direction of an individual adviser selected from the graduate faculty.  
**Prerequisite:** ARCH 60101 and ARCH 60301; and graduate standing.  
**Corequisite:** ARCH 60922.  
**Schedule Type:** Studio  
**Contact Hours:** 3-6 other  
**Grade Mode:** Standard Letter  

ARCH 60103  GRADUATE DESIGN STUDIO III  6-9 Credit Hours  
Capstone studio (or master's project) aimed at further investigating building design issues both at a greater depth of complexity and by focusing on particular design aspects or areas of concentration.  
**Prerequisite:** ARCH 60102 and ARCH 60150 and ARCH 60922; and graduate standing.  
**Schedule Type:** Studio  
**Contact Hours:** 6-9 other  
**Grade Mode:** Standard Letter-IP  

ARCH 60111  GRADUATE DESIGN FOUNDATIONS STUDIO  3-6 Credit Hours  
Graduate-level introduction to the organizational principles and tools designers use to interpret and shape the built environment.  
**Prerequisite:** Graduate Standing.  
**Schedule Type:** Studio  
**Contact Hours:** 3-6 other  
**Grade Mode:** Standard Letter  

ARCH 60112  GRADUATE DESIGN ARCHITECTURE STUDIO  3-6 Credit Hours  
The introduction of a building design process that emphasizes the integration of program requirements with specific form typologies using architectural elements as the primary components to design shape, space, and form.  
**Prerequisite:** Graduate Standing.  
**Schedule Type:** Studio  
**Contact Hours:** 3-6 other  
**Grade Mode:** Standard Letter  

ARCH 60113  GRADUATE DESIGN CONTEXT STUDIO  3-6 Credit Hours  
Studio investigation that includes consideration of program, site, context, materiality and tectonics. Specific emphasis on understanding the influences of site, context and urban design, including the role of social and cultural influences on the built environment.  
**Prerequisite:** Graduate standing.  
**Schedule Type:** Studio  
**Contact Hours:** 3-6 other  
**Grade Mode:** Standard Letter  

ARCH 60114  GRADUATE DESIGN SYSTEMS STUDIO  3-6 Credit Hours  
Studio investigation of comprehensive design concerns, including the integration of building systems and implementation of sustainable strategies.  
**Prerequisite:** Graduate standing.  
**Schedule Type:** Studio  
**Contact Hours:** 3-6 other  
**Grade Mode:** Standard Letter  

ARCH 60150  PROJECT PROGRAMMING  2-3 Credit Hours  
Study and discussion of the notion of program in architecture and the principles of project programming. Case study analysis and preparation of a comprehensive program for an architectural project.  
**Prerequisite:** ARCH 60101 and ARCH 60301; and graduate standing.  
**Schedule Type:** Lecture  
**Contact Hours:** 2-3 lecture  
**Grade Mode:** Standard Letter  

ARCH 60211  GRADUATE GLOBAL HISTORY OF ARCHITECTURE I  3 Credit Hours  
Global history of architecture from Neolithic times through the 16th Century.  
**Prerequisite:** Graduate standing.  
**Schedule Type:** Lecture  
**Contact Hours:** 3 lecture  
**Grade Mode:** Standard Letter  

ARCH 60212  GRADUATE GLOBAL HISTORY OF ARCHITECTURE II  3 Credit Hours  
Global history of architecture from the 17th century to the early 21st century.  
**Prerequisite:** ARCH 60211; and graduate standing.  
**Schedule Type:** Lecture  
**Contact Hours:** 3 lecture  
**Grade Mode:** Standard Letter  

ARCH 60301  THEORIES OF ARCHITECTURE  1-3 Credit Hours  
(Repeatable for maximum 3 credit hours) In-depth analysis and discussion of contemporary architectural theories. Critical evaluation of major authors and architectural projects.  
**Prerequisite:** Graduate standing.  
**Schedule Type:** Lecture  
**Contact Hours:** 1-3 lecture  
**Grade Mode:** Standard Letter  

ARCH 60601  TOOLS OF REPRESENTATION  3 Credit Hours  
Introduction to the software used in the digital environment for modeling and representing architectural schemes. Course covers software interface, x,y,z coordinates and navigation, Nurbs modeling and mesh modeling. Enables students to design in three-dimension and represent massing studies, building details and develop architectural elements and site context.  
**Prerequisite:** Graduate standing.  
**Schedule Type:** Combined Lecture and Lab  
**Contact Hours:** 3 other  
**Grade Mode:** Standard Letter
ARCH 60602  TOOLS OF FABRICATION   3 Credit Hours
Course covers advanced three-dimensional modeling tools and the different methods for outputting digital models into the physical environment. Includes three-dimension printing, laser cutting, CNC milling and vacuum forming.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

ARCH 60603  TOOLS OF SIMULATION   3 Credit Hours
Course covers two-dimensional and three-dimensional simulation platforms and the theory behind the tools to generate and simulate architectural ideas and environments. Animation techniques and robotic integration operate as the bridge between the digital and the physical environment.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

ARCH 60604  TOOLS OF CODING   3 Credit Hours
Course covers visual parametric software and coding languages to generate and develop architectural ideas. Integrates the tools and theory of coding and parametric software and their evolution in the architecture field.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

ARCH 60922  METHODS OF INQUIRY IN ARCHITECTURAL STUDIES   2 Credit Hours
(Cross-listed with AED 60922 and LARC 60922) Provides a comprehensive coverage of architectural inquiry techniques, including qualitative and quantitative research methods and critical-thinking skills to help students better conduct and understand research.
Prerequisite: ARCH 60101 and ARCH 60301; and graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

ARCH 65001  PROFESSIONAL PRACTICE: REAL ESTATE AND DEVELOPMENT   2-4 Credit Hours
Introduction to the economic, social, ethical and legal impact on/ of development projects in both the public and the private sectors. Computer applications and case-studies analysis are required.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2-4 lecture
Grade Mode: Standard Letter

ARCH 65002  PROFESSIONAL PRACTICE: CONTRACT AND PLANNING LAW   2 Credit Hours
Course surveys laws relating to the practice of architecture and to dispute resolution, with emphasis on contract laws contrasted with laws of negligence and the standard of care in the profession. The planning law component surveys land use control mechanisms as seen through zoning, variances and practical applications.
Prerequisite: Architecture major and graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

ARCH 65003  PROFESSIONAL PRACTICE: LEADERSHIP, ETHICS AND OFFICE MANAGEMENT   2-3 Credit Hours
Course discusses issues of professional leadership and examines architectural office structures. Management approaches, professional registration and practice, use of consulting engineers and financial management of an office in the context of the profession as business.
Prerequisite: ARCH 65002; and Architecture major; and graduate standing.
Schedule Type: Lecture
Contact Hours: 2-3 lecture
Grade Mode: Standard Letter

ARCH 66199  THESIS I   2-6 Credit Hours
(Repeatable for credit) Thesis students must register for a total of 6 hours.
Prerequisite: Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

ARCH 66299  THESIS II   2 Credit Hours
(Repeatable for credit) Following completion of 6 credit hours of Thesis I all graduate students must continuously register for Thesis II for all subsequent academic terms (including summer) until all degree requirements are met.
Prerequisite: 6 credit hours of ARCH 66199; graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

ARCH 66892  PRACTICUM   1-3 Credit Hours
(Repeatable for credit) Practicum in the field.
Prerequisite: Special approval.
Schedule Type: Practical Experience
Contact Hours: 1-3 other
Grade Mode: Standard Letter

ARCH 66911  SEMINAR:VARIABLE TOPIC   1-4 Credit Hours
(Repeatable for credit) Seminar on a variable topic per course offering.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1-4 other
Grade Mode: Standard Letter

ARCH 66992  FIELD STUDY   1-3 Credit Hours
(Repeatable for credit) Field study in architecture.
Prerequisite: Graduate standing.
Schedule Type: Field Experience
Contact Hours: 1-3 other
Grade Mode: Standard Letter/IP

ARCH 66993  WORKSHOP: VARIABLE TOPIC   1-3 Credit Hours
(Repeatable for credit) Variable topic workshop in architecture.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

ARCH 66995  SPECIAL TOPICS IN ARCHITECTURE   1-4 Credit Hours
(Repeatable for credit) Special topics in architecture.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-4 lecture
Grade Mode: Standard Letter
ARCH 66996  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) Individual investigation in architecture.
Prerequisite: Graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

ARCH 66998  RESEARCH  2-6 Credit Hours
(Repeatable for credit) Research in architecture.
Prerequisite: Graduate standing.
Schedule Type: Research
Contact Hours: 2-6 other
Grade Mode: Standard Letter

ARCH 67510  SUSTAINABLE BUILDING CONSTRUCTION I  3 Credit Hours
First course of a two-course sequence. Provides an in-depth survey of design, pre- and post-construction activities pertinent to green building and sustainable design of the built environment. Reviews fundamental concepts and principles of sustainable building design and construction with special emphasis on construction site issues. Provides a comprehensive review of impact of site on construction and building design on the site and its resources. Focus is on understanding the role building design and construction play on resources efficiency and minimizing the impact of construction activities on the environment.
Prerequisite: ENGR 67000; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARCH 67511  SUSTAINABLE BUILDING CONSTRUCTION II  3 Credit Hours
Second course of a two-course sequence. Provides an in-depth survey of design, pre- and post-construction activities pertinent to green building and sustainable design of the built environment. Reviews fundamental concepts and principles of sustainable building design and construction with special emphasis on building systems. Provides a comprehensive review of impact of building component, materials and systems on design and construction of High-performance buildings. Focus is on understanding the role building design and construction play on resources efficiency and minimizing the impact of construction activities on the environment.
Prerequisite: ARCH 67510; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter