ARCHITECTURE (ARCH)

ARCH 10001 UNDERSTANDING ARCHITECTURE (KFA) 3 Credit Hours

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.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Attributes: Kent Core Fine Arts, Transfer Module Fine Arts

ARCH 10011 GLOBAL ARCHITECTURAL HISTORY I (KFA) 3 Credit Hours

Global history of architecture from Neolithic times through the 16th century.

Prerequisite: None. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Kent Core Fine Arts

ARCH 10012 GLOBAL ARCHITECTURAL HISTORY II (KFA) 3 Credit Hours

Global history of architecture from the 17th century to 2000. **Prerequisite:** ARCH 10011 or ARTH 22007.

Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Kent Core Fine Arts

ARCH 10093 WORKSHOP: VARIABLE TITLE 1-3 Credit Hours

(Repeatable for credit) Topics vary per workshop offering. **Prerequisite:** Special approval. **Schedule Type:** Workshop **Contact Hours:** 1-3 other **Grade Mode:** Satisfactory/Unsatisfactory

ARCH 10101 FIRST YEAR DESIGN STUDIO I 3 Credit Hours

Introduction to ways of understanding, designing, and representing architecture. Through design exercises, students learn the strategies, principles, theories, and tools that architects use to organize, shape, and interpret the built environment. Emphasis is placed on the analysis and construction of interrelated objects, images, and ideas.

Prerequisite: Architecture Major.

Schedule Type: Studio Contact Hours: 6 other Grade Mode: Standard Letter

ARCH 10102 FIRST-YEAR DESIGN STUDIO II 3 Credit Hours

A continued exploration into ways of understanding, designing, and representing architecture. Through design exercises, students learn the strategies, principles, theories, and tools that architects use to organize, shape, and interpret the built environment. Emphasis is placed on material, enclosure, and architectural scale.

Prerequisite: ARCH 10101 and Architecture Major.

Schedule Type: Studio

Contact Hours: 6 other Grade Mode: Standard Letter ARCH 20101 SECOND-YEAR DESIGN STUDIO I 3 Credit Hours

The introduction of a building design process that emphasizes the integration of program requirements with specific form topologies using line and plane as the primary elements to provide shape and space. **Prerequisite:** ARCH 10102.

Schedule Type: Studio Contact Hours: 3 other Grade Mode: Standard Letter

ARCH 20102 SECOND-YEAR DESIGN STUDIO II 5 Credit Hours The development of design methodologies and architectural form through processes of analysis, synthesis, and translation. Conceptual frameworks are used to further develop program, assembly systems, surface articulation, site/context within cultural /social systems and their impact on architectural form.

Prerequisite: ARCH 20101. Schedule Type: Studio

Contact Hours: 10 other

Grade Mode: Standard Letter

ARCH 20301 INTRODUCTION TO BUILDING STRUCTURES 3 Credit Hours

An introduction to building structures, statics, strength of materials, analysis for shear-moment-displacement and loads. Includes dead-livewind-earthquake and building code requirements for structural safety. **Prerequisite:** MATH 12002 or (MATH 12011 and MATH 12012); and

Architecture major. Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

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. Schedule Type: Studio Contact Hours: 2-6 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.

Schedule Type: Studio

Contact Hours: 2-6 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 30031 ARCHITECTURAL DISCOURSES (WIC) 3 Credit Hours A writing-intensive course introducing fundamental disciplinary discourses in architecture and developing a critical awareness of the range of architectural ideas. Writing, revising, and verbal skills are developed and exercised in a discipline-specific context focused on architectural systems of organization and their broader historical, technological, social, and cultural contexts. Class discussions and writing assignments are based on readings and lectures about relevant architectural positions and various interpretations of buildings that shape the built environment. Written, verbal, and visual skills are developed to frame design work and ideas within the spectrum of architectural discourses.

Prerequisite: ARCH 10012. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Writing Intensive Course

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).

Schedule Type: Studio Contact Hours: 10 other Grade Mode: Standard Letter

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. Schedule Type: Studio Contact Hours: 10 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.

Schedule Type: Studio

Contact Hours: 10 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.

Schedule Type: Studio

Contact Hours: 10 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 and ARCH 40301 and ARCH 40402 and ARCH 40502.

Schedule Type: Studio

Contact Hours: 10 other

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).

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab Contact Hours: 1.5 lecture, 3 lab

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 30102 or ARCH 30112. 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 ARTH 22006 and ARTH 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 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 ARCHITECTURE IN THE UNITED STATES 3 Credit Hours

(Slashed with ARCH 55220) History of American architecture for Indigenous and colonial settlements up through the 1980s. **Prerequisite:** ARCH 10011 and ARCH 10012; 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

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. **Prereguisite:** ARCH 10011 and ARCH 10012.

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 45295 SPECIAL TOPICS IN ARCHITECTURAL HISTORY 1-3 Credit Hours

(Repeatable for credit)(Slashed with ARCH 55295) Topics within architectural history varies per course offering. **Prerequisite:** ARCH 10011 and ARCH 10012. **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 (Slashed with ARCH 55620)(Repeatable for credit) An overview of preservation, including building analysis, conservation, adaptive reuse, economic benefits of preservation and preservation planning as a revitalizing strategy.

Prerequisite: ARCH 10011 and ARCH 10012.

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

(Slashed with ARCH 55630)(Repeatable for credit) Introduction to landscape design with emphasis upon the relationship between landscape and buildings.

Prerequisite: Approved admission to advanced study (third year). **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 45703 THEORIES AND PRINCIPLES OF URBAN DESIGN 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.

structural me safety systems and sustainable design concern

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. **Prereguisite:** 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

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: Graduate standing. Schedule Type: Laboratory, Lecture, Combined Lecture and Lab Contact Hours: 1.5 lecture, 3 lab 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

(Slashed 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

(Slashed 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

(Slashed 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 ARCHITECTURE IN THE UNITED STATES 3 Credit Hours

(Slashed with ARCH 45220) History of American architecture for Indigenous and colonial settlements up through the 1980s. **Prerequisite:** Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ARCH 55230 FRANK LLOYD WRIGHT 3 Credit Hours

(Slashed 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

ARCH 55240 THE SKYSCRAPER 3 Credit Hours

(Slashed 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. **Prereguisite:** ARCH 10011 and ARCH 10012; or ARCH 60111 and

ARCH 60112; and graduate standing.

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Schedule Type: Lecture Contact Hours: 3 lecture

Grade Mode: Standard Letter

ARCH 55241 ARCHITECTURE OF WORLD'S FAIRS 3 Credit Hours

(Slashed 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. **Prereguisite:** Graduate standing.

Schedule Type: Seminar Contact Hours: 3 lecture Grade Mode: Standard Letter

ARCH 55295 SPECIAL TOPICS TOPICS IN ARCHITECTURAL HISTORY 1-3 Credit Hours

(Repeatable for credit)(Slashed with ARCH 45295) Topics within architectural history varies per course offering. **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 credit) (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 (Slashed with ARCH 45620)(Repeatable for credit) An overview of preservation, including building analysis, conservation, adaptive reuse, economic benefits of preservation and preservation planning as a revitalizing strategy.

Prerequisite: Graduate standing; 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

(Slashed with ARCH 45630)(Repeatable for credit) 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

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 55793 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: Graduate standing.

Schedule Type: Workshop Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

ARCH 56991 SEMINAR: VARIABLE TOPIC 1-3 Credit Hours

(Repeatable for credit) (Slashed with ARCH 46991) Variable topic seminar.

Prerequisite: Graduate standing and special approval. Schedule Type: Seminar Contact Hours: 1-3 other Grade Mode: Standard Letter

ARCH 56992 FIELD STUDY 1-3 Credit Hours

(Repeatable for maximum 3 credit hours)(Slashed with ARCH 46992) Field experience.

Prerequisite: Graduate standing and special approval.

Schedule Type: Field Experience Contact Hours: 1-3 other

Grade Mode: Standard Letter

ARCH 56993 WORKSHOP. VARIABLE TOPIC 1-3 Credit Hours

(Repeatable for credit)(Slashed with ARCH 46993) 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 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 build 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

ARCH 60199 GRADUATE DESIGN STUDIO III 4-8 Credit Hours

Capstone studio 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: Accelerated Track concentration; and graduate standing. **Schedule Type:** Project or Capstone, Studio

Contact Hours: 8-16 other

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

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:** Graduate standing; and special approval. **Schedule Type:** Practical Experience **Contact Hours:** 1-3 other **Grade Mode:** Standard Letter

ARCH 66991 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:** 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