Department of Architecture

Introduction

Architecture is inherently an interdisciplinary field of study, integrating knowledge from art, science, and the humanities. As a method of practice, it is a complex, collaborative, professional activity aimed at improving the quality of life for people and the planet. The discipline requires creative, critical, agile, and integrative thinking. Architecture deals with highly complex problems and aims to solve them not only competently, but in a way that ennobles society. The curriculum responds to these considerations by offering a series of overlapping sequences in professional and academic coursework.

Mission

The Department of Architecture engages in progressive knowledge generation, dissemination, and application through its core activities of teaching, scholarship, and service to enhance the quality of life for people and the planet. The department furthers this mission by offering the following degree programs:

- The Master of Architecture (a NAAB-accredited professional degree),
  - the Master of Architecture Track I (5+ year) (https://catalog.ku.edu/architecture/architecture/master-architecture-five-year/)
  - the Master of Architecture Track II (2-year) (https://catalog.ku.edu/architecture/architecture/master-architecture-three-year/)
  - the Master of Architecture Track III (3- year) (https://catalog.ku.edu/architecture/architecture/master-architecture-three-year/)
- The Bachelor of Science in Interior Architecture (https://catalog.ku.edu/architecture/architecture/bs-interior-architecture-design/), and
- 2 post-professional graduate degrees,
  - the Master of Arts in Architecture (https://catalog.ku.edu/architecture/architecture/master-arts-architecture/)
  - the Ph.D. in Architecture (https://catalog.ku.edu/architecture/architecture/phd/)

Undergraduate Programs

Master of Architecture Program (Track I: 5+ year)

> "In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (http://www.naab.org/) (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards. Master's degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree."
>
> — National Architectural Accrediting Board

Prospective students who apply for admission to the accredited 5-year degree program and are accepted through the undergraduate admissions process are admitted directly into the Master of Architecture (M.Arch) Track I program. M.Arch (Track I) is a National Architectural Accrediting Board (NAAB) accredited professional degree that makes graduates eligible to sit for licensure examinations to become licensed architects. These students pay undergraduate tuition through the first 4 years and receive the **Bachelor of Arts in Architectural Studies** after completing 4 years of study, then move on to graduate student status for the final year. Students holding a baccalaureate degree apply through graduate admissions and enter a 3-plus-year program (those holding a preprofessional degree in architecture receive advanced standing and usually complete the degree in 2 years plus 1 summer).

Bachelor of Arts in Architectural Studies

The B.A. in Architectural Studies is designed to serve as a platform or foundational degree for students who plan to specialize in architecture and other disciplines that focus on the design, planning, and construction of the built environment. It is awarded to M.Arch Track I students when they complete the first 4 years of study.

Bachelor of Science in Interior Architecture

The Bachelor of Science in Interior Architecture trains students to become professional interior designers who focus on creating spaces with people in mind based on design research evidence. The Interior Architecture curriculum is compliant with CIDA (Council for Interior Design Accreditation) Professional Standards. The 4-year program has also been aligned with the School's NAAB-accredited Master of Architecture (M.Arch) degree; students have the option of getting accepted in a 2-year track of M.Arch with advanced standing upon completing the B.S. degree in Interior Architecture.

Graduate Programs

The Department of Architecture offers 3 distinct plans for graduate study:

1. A **Master of Architecture (M.Arch.)**, a 3-year professional degree for students already holding bachelor's degrees in any field (those with architecture degrees are considered for advanced placement to graduate in 2 years + one summer);
2. A **Master of Arts in Architecture (M.A.)** — Academic/Research Track for students interested in the study of architecture from an academic and scholarly perspective;
3. A **Doctor of Philosophy in Architecture (Ph.D.)** for students interested in engaging in robust, innovative inquiry that adds to the body of knowledge in architecture and its related fields.

Of these 3 degree programs, the 3-year Master of Architecture (M.Arch) is a National Architectural Accrediting Board (NAAB) accredited professional degree that makes graduates eligible to sit for licensure examinations. The other degrees are post-professional degrees that do not place the student on the path for architectural registration. Students seeking a career change into a professional curriculum should apply for admission to the 3-year M.Arch. degree.

Courses

ARCH 100. Architectural Foundations I. 4 Credits.

An introductory design studio directed toward the development of spatial thinking and the skill necessary for the analysis and design of architectural space and form. This course is based on a series of exercises that include demonstrating observational and analytical skills through freehand drawing, full-scale studies in the making of objects that explore the relationship between 2D and 3D through mapping and extruding, and the design of a sequence of architectural spaces that explores path-space relationships and threshold. Students are introduced to different descriptive and analytical media and techniques of representation to aid in the development of critical thought, including orthographic projection, paraline drawing, exploded views, and measured perspective. Open only to students in Architectural Engineering. Prerequisite: Approval from the Dean of the School of Architecture and Design.

ARCH 101. Architectural Foundations II. 4 Credits.
A continuation of ARCH 100, with major emphasis on the design relationships between architectural space, human experience, and the environment. This course focuses on the basic design of a small architectural work on a real site, beginning with site analysis, the construction of a 3-dimensional site model, the learning of organizational principles, and the understanding of how the use of precedent can inform design. The design process itself is highly iterative, from 2- and 3-dimensional parti diagramming to generate ideas, to 3D investigations at different architectural scales. In design development, students learn the impact of internal programmatic forces and external site forces on design, including the seasonal and diurnal variations in natural lighting through sun path diagrams. By the end of the semester, students will have worked through the fundamental processes of building design towards the synthesis and presentation of a final scheme. Prerequisite: ARCH 100. Open only to students in Architectural Engineering.

ARCH 103. Introduction to Architecture. 3 Credits.
An introduction to the study and practice of architecture. This course aims at orienting the student to the various disciplinary facets which make up the total architectural curriculum as well as to the various professional roles which architects can be expected to perform. Architectural study is seen as both an art and a science, and architectural practice is seen as a complex, interdisciplinary professional activity. Students taking this course must bring a lap top computer to class.

ARCH 104. Principles of Modern Architecture. 3 Credits.
A lecture course covering the emergence of technological, theoretical and aesthetic principles of modern design beginning with the socio-cultural impact of industrialization and the crisis in architecture at the end of the 19th century. Attention is given to functionalist theory, mechanical analogies and the so-called machine aesthetic of 1910-1930 and to the precedents of important design principles of modern architecture, including modular coordination, the open plan, interlocking universal space, unadorned geometry, structural integrity, programmatic and tectonic expression, efficiency and transparency and briefly explores their development in post-war and late 20th century examples.

ARCH 108. Architectural Foundations I. 6 Credits.
An introductory design studio directed towards the development of spatial thinking and the skills necessary for the analysis and design of architectural space and form. This course is based on a series of exercises that include direct observation: drawing, analysis and representation of the surrounding world, and full-scale studies in the making of objects and the representation of object and space. Students are introduced to different descriptive and analytical media and techniques of representation to aid in the development of critical thought. These include but are not limited to freehand drawing, orthographic projection, para-line drawing, basic computer skills, and basic materials investigation. Students must bring a lap top computer to this class. Prerequisite: Approval from the Dean of the School of Architecture and Urban Planning.

ARCH 109. Architectural Foundations II. 6 Credits.
A continuation of the Architectural studio sequence with major emphasis on the design relationships among people, architectural space, and the environment. The course is based on a series of exercises leading to the understanding of architectural enclosure as mediating between people and the outside world. Issues of scale, light, proportion, rhythm, sequence, threshold, and enclosure are introduced in relation to the human body, as well as in relation to the human body as well as the architectural form. Students will engage in drawing, perspective projection, model building, and basic computer graphics. Students must bring a lap top computer to this class. Prerequisite: ARCH 108.

ARCH 110. Introduction to Computing. 3 Credits.
This course prepares students for design computation topics in the degree program. Topics covered in the class include computer basics, bitmap representation, vector-based graphics, 3-D modeling, scene modeling, building modeling, production of technical drawings, and other issues. These topics are covered in relation to architectural representation and involve skill development in both 2-D and 3-D modeling. The course includes projects that align with those covered in first-year design studios, presenting students with an alternative tool for the representation of two-dimensional diagrams and three-dimensional models. Requirements: Laptop computer with software that meets course specifications. Prerequisite: Must be admitted as a first-year student in the School of Architecture & Design.

ARCH 177. If These Walls Could Talk: Exploring KU Campus Architecture. 3 Credits.
A limited-enrollment, seminar course for first-time freshmen, organized around current issues in architecture. May not contribute to major requirements in architecture. First year seminar topics are coordinated and approved through the Office of First Year Experiences. Prerequisite: First-time freshman status.

ARCH 208. Form and Function. 6 Credits.
A continuation of the Architectural Studio sequence with major emphasis on introducing students to the basic form determinants of architecture-from limited scope exercises to complete building designs. Using diagrams and sketches, plans, sections, elevations and models, students explore the spatial ordering of human activity, site and landscape analysis, light and air modulation, simple environmental controls and energy conservation, basic framing systems, volumetric organization and the materials of building skins and envelopes. Students must bring a laptop computer to this class. Prerequisite: ARCH 109.

ARCH 209. Sustainability, Site, and Context. 6 Credits.
A continuation of the Architectural Studio sequence with major emphasis on the synthesis of basic form determinants of medium-sized, multi-story public building in the urban environment. Students will demonstrate competence in basic architectural design, and preparedness for the third-year focus on materials and methods of building construction. Students are required to bring a laptop computer to this class. Prerequisite: ARCH 208.

ARCH 215. Professional Communications. 3 Credits.
This course is an introduction to visual and oral communication skills. It will build practical skills to design and communicate ideas to a variety of audiences. This practice-based approach will introduce the students to two major fundamentals of communications. Oral competency, through presentations and writing; and visual communications through color theory, layout design, and branding. The students will have an opportunity to present their work through one on one discussions, small and large group presentations. The course is intended to equip students with the

practice-based tools to communicate and demonstrate their design ideas in relation to different fields and to a variety of audiences in practical situations. Prerequisite: ARCH 109.

ARCH 281. Design Workshop II: Design Thinking. 3 Credits.
This course aims to enhance student's abilities to apply concepts and methods associated with design thinking with an emphasis on ill-structured problem-solving and human-centered design. Students will gain exposure to design thinking processes including forecasting, scenario planning and various forms of analysis all of which help shape a robust problem statement that forward design innovation. This material will be covered through class discussions, readings, and a number of assignments and projects. Students will have the opportunity to develop their design-thinking competence through their final project which may be at the level of models, product, spatial, building and/or community designs.

ARCH 359. Special Problems. 1-3 Credits.
Special problems in architecture. The study of a particular problem in architecture involving individual research and presentation. Conferences and reports. (May be taken for Credit/No Credit.) Prerequisite: Student must submit to his or her faculty advisor, in advance, a statement of the problem he or she wishes to pursue, the methodology he or she plans to use in the program, and the objectives of the special problems. He or she must also be in agreement with the faculty member he or she proposes as instructor for the course.

ARCH 380. Design Workshop: Ideas and Methods in Planning and Design. 3 Credits.
This course focuses on design methods, ideas and approaches at the city, neighborhood and community levels. The course will introduce approaches to urban design and planning which are responsive to social, environmental and ecological issues. The goal is to develop core competencies in design thinking such as analyzing specific problems and developing possible design interventions by understanding relevant theories and analyzing case studies. Students will critically analyze past and current urban trends through case studies to inform design ideas for more equitable and sustainable communities. This material will be covered through class discussions, readings, and a number of design-oriented team projects and assignments.

ARCH 400. Interior Architecture Studio I. 6 Credits.
This course is an introduction to the basic principles and elements used in spatial organization, innovative design solutions and the practice of interior architecture, from predesign through final presentations. Prerequisite: Must be admitted to the Bachelor of Arts in Architecture Studies with an emphasis in Environmental Design.

ARCH 401. Interior Architecture Studio II. 6 Credits.
This course is an introduction to materials resources, specifications and sustainability; and helps students further their understanding of the design process by creating innovative design solutions and spatial organization for interior architecture. Prerequisite: Must be admitted to the Bachelor of Arts in Architecture Studies with an emphasis in Environmental Design.

ARCH 501. Architectural Foundations I. 6 Credits.
An introductory design studio directed towards the development of spatial thinking and the skills necessary for the analysis and design of architectural space and form. This course is based on a series of exercises that include direct observation: drawing, analysis and representation of the surrounding world and full-scale studies in the making of objects and the representation of object and space. Students are introduced to different descriptive and analytical media and techniques of representation to aid in the development of critical thought. These include but are not limited to freehand drawing, orthographic projection, para-line drawing, basic computer skills and basic materials investigation. Students must bring a lap top to class. Prerequisite: Admission to M.Arch. III program and/or permission of the Chair of Architecture.

ARCH 502. Architectural Foundations II. 6 Credits.
A continuation of the Architectural studio sequence with major emphasis on the design relationships among people, architectural space, and the environment. The course is based on a series of exercises leading to the understanding of architectural enclosure as mediating between people and the outside world. Issues of scale, light, proportion, rhythm, sequence, threshold, and enclosure are introduced in relation to the human body, as well as in relation to the human body as well as the architectural form. Students will engage in drawing, perspective projection, model building, and basic computer graphics. Students must bring a lap top computer to this class. Prerequisite: ARCH 501 studio and admission to M.Arch 3-yr program and permission of the Chair of Architecture.

ARCH 503. Form and Function. 6 Credits.
A continuation of the Architectural Studio sequence with major emphasis on introducing students to the basic form determinants of architecture-from limited scope exercises to complete building designs. Using diagrams and sketches, plans, sections, elevations and models, students explore the spatial ordering of human activity, site and landscape analysis, light and air modulation, simple environmental controls and energy conservation, basic framing systems, volumetric organization and the materials of building skins and envelopes. Students must bring a laptop computer to this class. Prerequisite: ARCH 502 and/or permission of the Chair of Architecture.

ARCH 504. Sustainability and Context. 6 Credits.
A continuation of the Architectural Studio sequence with major emphasis on the synthesis of basic form determinants of medium-sized, multi-story public building in the urban environment. Students will demonstrate competence in basic architectural design, and preparedness for the third-year focus on materials and methods of building construction. Students are required to bring a laptop computer to this class. Prerequisite: ARCH 503 studio or permission of the Chair of Architecture.

ARCH 508. Material and Tectonics. 6 Credits.
A continuation of the Architectural Studio sequence with major emphasis on studies in urban spaces and design development of building envelopes as related to urban public-life, structural and mechanical systems, and principles of sustainability. Students shall work individually on an advanced building design. Work will focus on medium scale, multi-story, urban-infill, buildings developed to an appropriate level of technical resolution as evidenced in clear schematic wall sections and structural proposals. Students shall demonstrate an understanding of formal ordering and building-concept development as related to the tectonic form determinants. Students are required to bring a laptop computer to this studio class. Prerequisite: ARCH 209.

ARCH 509. Designbuild. 6 Credits.
A continuation of the Architectural Studio sequence with major emphasis on materiality and construction of built assemblies through hands-on activities. Development of craft, process, collaboration and technical documentation skills will be primary objective of the course. Students are required to bring a laptop computer to this studio class. Prerequisite: ARCH 209 and must be current student in the 3.5 or 5 year M.Arch degree or Arch Studies degree.

ARCH 510. Architectural Detailing. 3 Credits.
Architectural detailing during design and construction phases is a fundamental skillset for architectural practice. This course will focus on technical drawing skills and professional drawing standards and conventions, including construction documentation, shop drawings, and

analytical drawing techniques aimed at exploration and communication of the technical aspects of architectural design. Prerequisite: ARCH 209.

ARCH 515. Building Information Modeling. 3 Credits.
This course will expose students to building information modeling: a digital representation of the building process that facilitates exchange and interoperability of information in digital format. The focus will be on the software's potential for reducing the information loss that occurs during each handoff of the project during the traditional delivery method. Possibilities for integrated practice including lifecycle costing and knowledge management are discussed.

ARCH 516. Portfolio Development. 3 Credits.
The aim of the course is to teach practical presentation skills using computer software, in addition to graphic design theories and strategies. This course will provide an opportunity for students to design and produce a design portfolio appropriate for internship and/or graduate school applications. Prerequisite: ARCH 208.

ARCH 520. Architectural Acoustics. 3 Credits.
An introduction to the physics of sound. Objective and subjective evaluation and control of sound as applied to architectural spaces. Room shaping, mechanical and electrical system noise and vibration control, and electro-acoustic sound reinforcement. Prerequisite: PHSX 114 and ARCH 626 or equivalent, or consent of instructor.

ARCH 521. Electro-Acoustical Systems. 3 Credits.
A study of electro-acoustic sound reinforcement and reproduction systems for buildings. Prerequisite: PHSX 212, or consent of instructor.

ARCH 524. Structures I. 3 Credits.
The fundamental principles of structural behavior including stress and deformation in structural components and systems. Open to architecture students only. Prerequisite: PHSX 114.

ARCH 529. Problems in Architectural Acoustics. 1.5 Credits.
This course has the objective to introduce the students to practical problem-solving in architectural acoustics. Precedents will be introduced to frame discussions on how proper acoustical conditions can be realized within the functional parameters of a particular architectural space. Student will develop the understanding of how sound behaves in an enclosed architectural space. The course will include several visits to existing architectural spaces that have specific acoustical requirements and interesting acoustical characteristics.

ARCH 530. Environmental Systems I. 3 Credits.
This introductory course addresses human needs and comfort in relation to the natural and man-made environments. Specific topics include: climate and weather, environmental health, indoor air quality, thermal comfort, passive and active systems and design strategies for heating, ventilating, and air-conditioning, building acoustics, mechanical noise control, and building management systems. Prerequisite: PHSX 114.

ARCH 531. Environmental Systems II. 3 Credits.
This course addresses human needs and comfort in relation to the natural and man-made environments. Specific topics include: daylighting, electrical lighting systems, electrical power distribution systems, alternative energy sources, communication systems, plumbing, transportation, and life safety systems. Prerequisite: ARCH 530.

ARCH 539. Global History of Construction and Materials. 3 Credits.

This course offers a survey of the global history of structural systems, construction techniques, and building materials from pre-history to contemporary times. The course will emphasize that historical evolution of construction system has not only been informed by technical and mathematical innovations, but has also been determined by the cultural practices of a region. Examples will be taken from across the globe to show that structure and construction have been historically associated with diverse cultural values and had profound influence on the evolution of architecture and the spatial practices of society.

ARCH 540. Global History of Architecture I: Origins to Industrial Revolution (3500 BCE-1700 CE). 3 Credits.
The first unit of the two-part survey history course explores the historical changes of architecture in relation to civilizational change, techno-spatial experiments and town-building efforts, from the earliest evidence of human dwelling to the beginning of the industrial revolution. Emphasis is on the architecture as an integrated development of commercial, technological, and ideological transferences among different regions, nascent religious groups and evolving political enterprises. In regard to the geographical and geopolitical regions, the course includes South and Central America, Europe, Classical Greece and Italy, Asia Minor, North Africa and Asia.

ARCH 541. Global History of Architecture II: From Industrial Revolution to Present (1700 CE-Present). 3 Credits.
The second unit of study of the two-part survey history course offers a global perspective of the development of modern architecture from the industrial revolution to contemporary times. This course traces the genealogy of modern architecture to its multiple roots in European enlightenment, global dissemination of industrial knowledge, invention of new building materials and techniques, and development of architectural theory. Emphasis is on the historical context of how the diverse approaches of architects from different regions create variations of formal expressions, spatial program and theoretical underpinning, and thus create multiple meanings and images of modern architecture. Prerequisite: ARCH 340 or ARCH 540 or ARCH 640 or consent of instructor.

ARCH 552. Ethics and Leadership in Professional Practice. 3 Credits.
This course takes the perspective that architectural design is inherently an ethical act. Through this lens, students will learn the essentials of office practices, the many definitions of client and their roles in the design process, the legal responsibilities of the profession, the importance of continuous professional development and the obligation the profession has to provide civic leadership in regard to the built and natural environment.

ARCH 560. Site Design. 3 Credits.
This course introduces concepts of architectural context and site through a combination of lectures and field studies. Natural, social and built systems are presented using a range of perspectives, including holistic ones. Students will develop visual and written skills of analysis through specific site analytic and design techniques. Application exercises and ongoing analysis assignments are required. Restricted to 3.5 and 5 year Master of Architecture students. Prerequisite: ARCH 208 for undergraduate students.

ARCH 600. Special Topics in Architecture: _____. 3 Credits.
This course is for the study of architectural topics on a one time or experimental basis in response to changing needs and/or resources in the Program. It may be offered concurrently by different instructors under different subtitles as announced in the Timetable. May be repeated for credit. Prerequisite: Varies by topic.

ARCH 601. Design Research. 3 Credits.
This course will examine issues in architectural research. It will provide an overview of graduate level studies with regard to definitions, methods, skills, and techniques. The course will consist of lectures, seminars, readings and guest presentations. The class will enable students to make informed judgments about matters of quality and quantity on architectural

issues. Students will be expected to formulate sensible systems of classification for their chose material. Students will be expected to formulate sensible systems of classification for their chosen material. Students will be expected to produce papers and essays, make sample research proposals, and other research based assignments. Limited to students in M. Arch Program with Undergraduate status. Prerequisite: ARCH 608.

ARCH 602. Accelerated Design IV. 6 Credits.
Graduate studio emphasizing urban context and design theories and architectural tectonics. Students will undertake developing a detailed wall assembly, represented through drawings and/or models. Prerequisite: ARCH 508 and 509 (see studio grading policy) or permission of the Chair of Architecture.

ARCH 605. Visualizing Site and Natural Environmental Systems. 3 Credits.
This course advances empirical understanding and abilities to visualize natural forces as they both shape and affect siting and designing buildings that shape human experience. Students will develop abilities to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region and the tools used for performance assessment. In-class and applied studies will help students learn about site characteristics, soils, topography, solar systems, ecology, climate, building orientation, active and passive heating and cooling, solar geometry, day-lighting and natural ventilation. Prerequisite: ARCH 109 or equivalent.

ARCH 608. Urban Dwelling. 6 Credits.
A continuation of the Architectural Studio sequence with major emphasis on program analysis and design of urban building(s) and urban spaces with culture, context and precedent as major form determinants. Students are required to bring a laptop computer to this studio class. Prerequisite: ARCH 508 and ARCH 509; or ARCH 602.

ARCH 609. Integrated Design. 6-9 Credits.
An advanced architectural design studio with major emphasis on an architectural design project that uses previously learned skills through synthesizing user requirements, regulatory requirements, site conditions, accessible design, and consideration of environmental impacts. Students should also demonstrate the ability to make design decisions while integrating previously learned building envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and building performance. The project design process and final product should be documented to demonstrate above abilities by using technical drawings and well-researched written documentation in addition to other means of visual representation. Prerequisite: ARCH 608.

ARCH 610. Integrated Design Documentation. 3 Credits.
Integrated design documentation, including drawings and specifications, is fundamental to the development a professional architectural project. This course is designed to complement and support ARCH 609 Integrated Design Studio in the technical documentation of the studio project and to shed light on professional expectations for design documentation. Prerequisite: ARCH 510. Corequisite: ARCH 609 Integrated Design Studio.

ARCH 614. Freehand Drawing. 3 Credits.
Open to all SADP non-graduating students interested in enhancing current freehand drawing sills, generally in the architectural realm. While a broad range of expression and graphic materials is explored, emphasis is on drawing as a notational skill, the instrument of creative expression for professional purposes as well as for lifelong artistic fulfillment. Prerequisite: Consent of instructor.

ARCH 615. Integrated Systems. 3 Credits.
This course provides a holistic understanding of building systems and active sustainable strategies. Students will examine the appropriate selection, development, and integration of environmental and structural systems covered in previous architecture courses. An emphasis is placed on the interconnectiedness of these systems to building form, function, and performance. Use of simulation programs are expanded upon to quantify building performance. Prerequisite: Must be admitted to M.Arch I, II or III or Bachelor of Arts in Architectural Studies degrees.

ARCH 620. Theory of Urban Design. 3 Credits.
An examination of the relationship between architecture and urban design through contemporary interpretations of future urban form and the determinants of the location, spatial structure, growth and decline of cities. Foundations for an interdisciplinary synthesis are examined in an attempt to bridge the hiatus between large-scale architectural design and incremental adjustments to urban dynamics. Prerequisite: Must have completed ARCH 208 and be enrolled in ARCH 209 during the spring semester this course is offered.

ARCH 622. Material Investigations. 3 Credits.
This course will provide opportunities for students to learn about research methods in the realm of architectural materials. The course will have two concurrent phases: the first phase will consist of a series of field trips and lectures. The purpose of the first phase is to understand how materials are developed and made, the research involved in their development, and what are their characteristics and potential applications. The second phase will consist of a self-directed research project based on the students' natural curiosity about a particular material or process. The project will have three components: 1) a research agenda, rigorously developed and executed; and 2) a "built" component, with actual materials, executed by the students' own hands and financial resources; and 3) final documentation of the research project.

ARCH 623. Building Practicum. 3 Credits.
The building technology practicum is offered as a course that will afford students a "real world" experience outside of the academic setting. Students can bring their own project proposals to the practicum committee or faculty members on the committee can suggest local preservation efforts, including planning and administration, or actual physical implementation of such projects. It could also be in the interest of some students to develop skills in a specific area, i.e. model building, architectural photography, historic reconstruction, or technical documentation. Those interested in specific areas will need to work closely with the practicum committee to develop a working list of goals and objectives. Students can elect to work individually or in teams, can work outside of the semester schedule with grades assigned at the completion of the project, and will be bound by a contract approved by the practicum committee.

ARCH 624. Structures II. 3 Credits.
A continuation of ARCH 524, with focus on applying learned principles to basic contemporary structural systems such as concrete, steel, and wood framing systems. Open to architecture students only. Prerequisite: ARCH 524 or ARCH 620 and ARCH 621.

ARCH 626. Building Technology I: Construction Systems and Assemblies. 3 Credits.
This course is an introduction to the materials, processes and craft of construction. Along with presenting the information required for understanding the basic principles and appropriate application and performance of construction systems and assemblies, the course also provides a conceptual framework to bridge between the physical conditions of construction and the more abstract processes of design. Teaching method includes modeling and hands-on building experiences.

Prerequisite: ARCH 200 or ARCH 209 or Corequisite: ARCH 408 or ARCH 409 or ARCH 503.

ARCH 627. Building Technology II: Culture of Building Technology. 3 Credits.
A continuation of ARCH 626. Introduction to industrialized production. A consideration of the detailed sub-systems and cultural practices that comprise the built environment, and the factors responsible for their design and installation. Includes discussion of building codes, mechanisms of failure, and materials selection. Lectures and demonstrations by the instructors and visitors, films, slide projections, quizzes and written examinations. A student should demonstrate an understanding of elementary systems of construction and be able to relate this understanding to the design process. Prerequisite: ARCH 626.

ARCH 629. Acoustic Studio. 3 Credits.
This course has the objectives of introducing the art and science of "listening" to architectural spaces; exploring, from both historical and current viewpoints, how proper acoustical conditions have and can be realized within the aesthetic and functional parameters of the particular architectural space; understanding the importance of building acoustics in architectural design; obtaining the ability to discuss building acoustics with the proper use of acoustical terms and descriptions; and understanding the basics of how sound behaves in an enclosed architectural space. The course will include several visits to existing architectural spaces that have specific acoustical requirements and interesting acoustical characteristics.

ARCH 630. Theory of Architecture. 3 Credits.
An examination of architectural theories that understand the designed environment as a cultural medium and product of a sociocultural process that expresses values and ideas. Understanding of these theories will be enhanced through the analysis of paradigmatic buildings, urban form and ideologies that have influenced architectural culture.

ARCH 635. Visualizing Airflow In and Around Buildings. 3 Credits.

It is often difficult to predict the way certain environmental design features will perform if not built and tested which can be costly and time consuming. This course will analyze the performance of such designs in an efficient and cost effective manner within a visual medium using computational fluid dynamics (CFD). CFD will provide a visual understanding of airflow behavior in and around buildings. In addition, thermal comfort and air quality will be investigated in this animated environment. The culmination of the course will be an analysis of a portion of one's studio design project. Prerequisite: ARCH 530.

ARCH 637. Architecture and Cosmos. 3 Credits.
Ideas of symmetry, harmony, proportion, and ideal form have long been used by architectural theorists and practitioners as a way of translating a traditional knowledge of the world into architectural form. Such traditional knowledge is embedded in the mathematics of Pythagoras, the philosophy of Plato, and the four part study of the cosmos (known in Western thought as "the quadrivium"--arithmetic, geometry, music, and astronomy). This course will entail the study of selected readings in this intellectual tradition as well as the analysis of buildings as they relate to the concepts learned through this study. Prerequisite: ARCH 641, History of Architecture II: Renaissance, or consent of instructor.

ARCH 639. Current/Historical Directions in Architecture. 3 Credits.

A study of contemporary or historical trends in architecture which relate to the development of individual or broad philosophies of architecture.

ARCH 646. American Architectural History. 3 Credits.
This course surveys the history of architecture in the USA from the beginning of European settlements to mid-20th century. It is organized based on place types that include, among others, townships, housing, commercial developments, civic structures, agricultural and rural buildings and settlements, and religious buildings and communities. It also covers a range of topics such as architectural styles, typologies, building tectonics, patterns of diffusion, and socio-economic factors that influenced the development of these historic place types.

ARCH 647. Historic Preservation Theory. 3 Credits.
This course presents the historical development and contemporary status of the theories and philosophies of historic preservation. It particularly covers the concepts and approaches developed by UNESCO for the management of tangible and intangible cultural heritage resources worldwide and the related international charters, conventions, operational guidelines, and institutions. Using international case studies, it illustrates a range of theoretical, philosophical, ethical, and practical issues and debates in historic preservation in a global context.

ARCH 648. Historic Preservation Planning. 3 Credits.
The focus of this course is on the development of concepts and practices of retrieving, recycling, and curating the built environment from the mid-nineteenth century to the present. After a series of introductory readings and discussions, students are encouraged to investigate particular environmental, technological, social, or ideological questions of their choice, focusing on structures that demonstrate persistence over great distances and, co-existing with this persistence, ability to accommodate changes over time.

ARCH 649. Historic Preservation Technology. 3 Credits.
This course introduces students to architectural historiography and preservation technology. It covers a range of curatorial issues in preservation and adaptive reuse of historic buildings. The topics include technical documentation of historic buildings, archival research, assessment of causes of deterioration and preservation needs in historic buildings, selection of preservation strategies, and techniques of building material preservation. Also covered are the integration of sustainable technologies into historic construction and examination of the ecological advantages of adaptive reuse and preservation.

ARCH 658. Programming and Pre-Design Issues. 3 Credits.
This course will introduce the concepts, methods, techniques, and information used by the architect to establish the parameters of a project, prior to entering the formal design process. The course will introduce the student to the social, technical, leagan and economic dimensions of architectural programming,. The content will introduce the core competencies in programming, site, and environmental analysis required by the profession. Programming theory, research techniques, information analysis, evaluation of significance, and creative synthesis of the multivalent factors acting upon the pre-design process of project definition will be covered. Exercises may include programming and analysis of projects and sites assigned in the Architectural Design Studio sequence. Prerequisite: ARCH 209 or ARCH 504.

ARCH 665. History of Urban Design. 3 Credits.
An exploration of the evolution of cities through the cultural and spatial development of human settlement patterns. The role of cities in the transformations of human culture from tribal communities to post industrial society is defined in terms of the historical origins of urban institutions and functions and their transformation into spatial structure and physical form.

ARCH 690. Architecture Study Abroad. 5-6 Credits.
May be repeated up to a maximum of 18 credits. Students participate in a study abroad program approved by the Architecture Chair. Students will be evaluated upon a submitted journal, sketchbook, or equivalent assignments assigned by the instructor. Graded on a satisfactory/unsatisfactory basis.

ARCH 691. Architecture Practicum. 6 Credits.
Based upon the student's approved proposal, each student will explore the process of creating the built environment by working in a setting that is intended to provide a new perspective for that student. The range of venues may include non-profit organizations, research settings, hands -on building experiences, and other professional settings as approved by the instructor. Students evaluation will include an assessment by the supervisor in the practicum settings as well as on a final paper using appropriate graphics to illustrate key points. Graded on a satisfactory/ unsatisfactory basis.

ARCH 692. Documentation. 2-3 Credits.
Students will document their experience in ARCH 690 or another approved study abroad program. This is intended as a critical reflection upon the student's experience and is additional documentation produced beyond the work done for the study abroad credit. The final product will include a written paper, using appropriate graphics to illustrate key points.

ARCH 695. Internship Documentation. 3 Credits.
Students will document their experience in ARCH 691 or other approved internship or relevant work experience. The purpose of this course is to give students a structured opportunity to select, explore, research, and document a topic relevant to their internship experience and that goes beyond the work done for the internship credit.

ARCH 700. Directed Readings in Architecture:. 1-3 Credits.
Individual study of special topics and problems. May be repeated for credit. Prerequisite: Graduate standing.

ARCH 720. Architectural Acoustics. 3 Credits.
An introduction to the physics of sound. Objective and subjective evaluation and control of sound as applied to architectural spaces. Room shaping, mechanical and electrical system noise and vibration control, and electro-acoustic sound reinforcement. Prerequisite: PHSX 114 and ARCH 626 or equivalent, or consent of instructor.

ARCH 721. Electro-Acoustical Systems. 3 Credits.
A study of electro-acoustic sound reinforcement and reproduction systems for buildings. Prerequisite: PHSX 212, or consent of instructor.

ARCH 730. The Environmental Psychology of Health and Well-Being. 3 Credits.
This seminar examines the theories and understandings that address the health and well-being outcomes resulting from the complexity of interaction between human beings, their behavior, and designed systems or objects and how this varies across the life course. Environmental stimulation, orientation, control, restoration and their relationship to health outcomes through mediating concepts including stress, place identity and person-environment fit will be addressed. Students will engage in several research/assessment projects through the semester. Participation in class discussion will be an essential component of the class. Prerequisite: Graduate status or consent of the instructor.

ARCH 731. Architecture of Health. 3 Credits.
This is a seminar that will focus on the architectural dimensions of health and wellness. The course will investigate the ways the environment contributes to the well being (physical, emotional, spiritual) of people. The history of healthcare environments will be explored to show how healthcare environments have evolved to meet changing medical protocols and environmental technologies. A range of contemporary building types will studied, from critical-care hospitals to assisted-living residences and health spas. Students will research bibliographic sources, prepare case studies of existing health and wellness environments and prepare preliminary planning and design proposals for an environment that human well being.

ARCH 735. Graduate Seminar in Environmental Systems. 3 Credits.

The intention of this seminar is to provide a substantive overview of the literature and themes in environmental systems. It will serve to introduce students to skills required to conduct research in environmental systems. In addition, the course will entail discussions of students' works in progress, peer review sessions, and completion of a conference paper.

ARCH 762. Urban Design Studies. 3 Credits.
Seminar concerned with the factors, processes, techniques, and current issues in urban design practice.

ARCH 799. Independent Study. 1-3 Credits.
May be repeated for credit up to a total of nine (9) credits. Prerequisite: Graduate standing and consent of instructor.

ARCH 800. Special Topics in Architecture: _____. 1-3 Credits.
Advanced or experimental courses on specialized topics representing unique or changing needs and resources in the graduate program in architecture.

ARCH 802. Urban and Community Issues II. 6 Credits.
Continuation of the critical and rigorous investigations into issues of urban and community design with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 801.

ARCH 803. Design-Build and Materiality I. 6 Credits.
An advanced studio with an emphasis on issues of design-build and/ or materiality with a focus on problem-setting, discovery, and analysis. Students are required to bring a lap top computer to this studio class. Prerequisite: ARCH 609 and/or consent of the Architecture Department Chair.

ARCH 804. Design-Build and Materiality II. 6 Credits.
Continuation of the critical and rigorous investigations into issues of design-build and/or materiality with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 803.

ARCH 805. Sports & Entertainment Internship. 6 Credits.
Faculty-directed investigations within the context of a 7-Month Sports & Entertainment professional internship experience will focus on the development of a research topic related to Sports or Entertainment architecture or Sports or Entertainment urban district planning. Prerequisite: ARCH 609 and acceptance into the sports and entertainment option.

ARCH 806. Sports & Entertainment Capstone Studio. 6 Credits.
An advanced studio focused on research and design concepts for large-scale architectural projects including stadiums, convention centers, entertainment venues, and other recreational facilities, with an emphasis on urban site analysis, programming, concept design, and building technology. Students are required to bring a laptop computer. Prerequisite: ARCH 805.

ARCH 807. Health and Wellness Design Internship. 6 Credits.
Investigations of the connections between built environments and human health and well-being. Students are exposed to environmental issues of healthcare design through seven-month professional internships in firms doing significant work in this field. Prerequisite: Successful completion of ARCH 609 and acceptance into the Health and Wellness design option.

ARCH 808. Health and Wellness Design Capstone Studio. 6 Credits.
An advanced capstone studio with an emphasis on investigations into healthy and sustainable environments and a focus on problem-solving, research, and design synthesis. The course builds on the real-world experience gained by students in their ARCH 807 internships. Prerequisite: ARCH 807.

ARCH 809. Study Abroad. 6 Credits.
An advanced studio abroad involving directed investigations with a focus on problem- setting, discovery, and analysis. Prerequisite: ARCH 609.

ARCH 810. Public Interest Design Studio. 6 Credits.
An advanced studio with an emphasis on engaging community stakeholders and the general public, with a focus on problem-setting, discovery, and analysis. Prerequisite: ARCH 809.

ARCH 811. Architectural Investigation I. 6 Credits.
A workshop-based course involving approved self and group directed investigations in a particular area of architectural investigation with a focus on problem-setting, discovery and analysis. Students are required to bring a lap top computer to this studio class. Prerequisite: ARCH 609.

ARCH 812. Architectural Investigation II. 6 Credits.
Continuation of the critical and rigorous investigations in a particular area of architectural investigation with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 811.

ARCH 813. Urban Design Internship and Cooperatives. 6 Credits.
Faculty-directed investigations within the context of a 7-month Urban Design professional internship experience will focus on the development of a research topic related to urban design. It has an emphasis on professional collaboration and scholarship. Prerequisite: ARCH 609 and acceptance into the Urban Design Internship program.

ARCH 814. Urban Design Capstone Studio. 6 Credits.
An advanced studio centered upon the research and development of transformational urban design projects, including district framework strategies, infrastructure and public realm proposals. Projects will emphasize site research and analysis; urban equity and access; public space programming; ecological resiliency; architectural concepts and emergent technology. students are required to bring a laptop computer. Prerequisite: Successful completion of ARCH 813 or an equivalent studio as approved by Architecture Program Chair.

ARCH 815. Global Internship: _____. 6 Credits.
An architectural internship that is part of the global Internship program with a focus on international architectural design practice, and professional development. Prerequisite: ARCH 609 and acceptance into the Global Internship Program.

ARCH 816. Global Internship Documentation. 3 Credits.
A documentation and reflective analysis of the experience, and professional development of the student during their Global architectural internship. Prerequisite: ARCH 609 and acceptance into the Global Internship Program. Corequisite: ARCH 815.

ARCH 830. Designing Healthy Places and Communities. 3 Credits.

This seminar investigates the research-based evidence regarding health outcomes at four different levels of dwelling: settlement, institution, home and proximate. Research domains that will be explored include how the urban fabric impacts active living; the role of public parks in urban health; environmental factors on health outcomes in hospitals and workplaces; environmental pathogens in the home; and ergonomic health. Healthy design will be understood as an important variable impacting people's health by: increasing physical activity; reducing injury; improving air and water quality; minimizing environmental degradation; decreasing mental health stresses; and strengthening social fabric. Environmental assessment audits appropriate at various scales as well as space syntax as an analytic tool will be introduced and utilized. Participation in class discussion will be an essential component of the class. The semester will include a problem-based service-learning project requiring application of research in a real-life setting and active student reflection. Prerequisite: Graduate status or consent of the instructor.

ARCH 899. Thesis or Project Research. 1-6 Credits.
Independent study, research and project work leading to the submission of a master's thesis or master's project. May be repeated for credit. Note: In some cases a Comprehensive Oral Examination Option may be substituted. Prerequisite: Permission of the Architecture Program Chair.

ARCH 930. Doctoral Seminar I. 1 Credits.
The purpose of this discussion-based seminar is to explore issues of architectural research from a variety of perspectives. May be repeated up to a maximum of two (2 credits). Prerequisite: Admission to the Ph.D. in Architecture Program or consent of the Architecture Program Chair.

ARCH 931. Theories of Architectural Inquiry. 3 Credits.
This course will introduce the doctoral student to the major historical and theoretical foundations of architectural research. Architectural inquiry will be defined from diverse and distinct perspectives, and it will be assumed that buildings should be viewed as physical and cultural artifacts, as elements within larger social, natural and urban contexts, and as products of design and fabrication processes. The course will be a seminar format in which students will contribute to the discussions through independent research and critical analyses of the assigned readings and lectures. Prerequisite: Admission to the Ph.D in Architecture Program or consent of the Architecture Program Chair.

ARCH 951. Methods of Inquiry in Architectural Research. 3 Credits.

This course will provide students a foundation in methods of inquiry in researching the built environment. The purpose is to train students in developing research strategies applicable to the areas of design-fabrication processes, dwelling and community, and health and sustainability. Students will be exposed to a variety of methods of inquiry drawn from a number of disciplines. Through critical reading and content analysis, students will consider the value of scholarly research, learn to develop research questions, understand the nature of evidence, and the writing, presentation and illustration of scholarship. The course will be a seminar format in which students will contribute to the discussions through independent research and critical analyses of the assigned readings and lectures. Prerequisite: Admission to the Ph.D. in Architecture Program or consent of the Architecture Program Chair.

ARCH 958. Research Practicum Preparation. 1-6 Credits.
In this course, the students will frame a research question and develop a research proposal. The course is intended to serve as preparation for ARCH 959. Prerequisite: ARCH 931 and ARCH 951.

ARCH 959. Research Practicum. 4 Credits.
This is a research project undertaken and completed under the supervision of the student's major professor. The student designs, executes, and completes a small scale research project and produces a document of publishable quality within his/her area of inquiry. The project is intended to serve as a pilot study leading towards the dissertation. Prerequisite: ARCH 958.

ARCH 999. Doctoral Dissertation. 1-9 Credits.
Individual research work. A minimum of nine credits is required for the degree. May be repeated for credit. Prerequisite: Successful completion of the Comprehensive Oral Examination.

Courses

IA 205. Professional Communications Skills. 3 Credits.
This course is an introduction to visual and oral communication skills. It will build practical skills to design and communicate ideas to a variety of audiences. This practice-based approach will introduce the students

to two major fundamentals of communications. Oral competency, through presentations and writing; and visual communications through composition, color theory, typography and branding. The students will have an opportunity to present their work through one on one discussions, small and large group presentations. The course is intended to equip students with the practice-based tools to communicate and demonstrate their design ideas in relation to different fields and to a variety of audiences in practical situations. Prerequisite: ARCH 109 and ARCH 110.

IA 208. Interior Architecture Studio I. 6 Credits.
This second-year design studio is responsible for introducing students to the basic application of design determinants of interior architecture in which precedents research, programming, design, and presentation skills are developed. Design solution methodologies for small and medium scale interior spaces allow students to explore spatial configurations, programming, user centered design solutions, human psychology, behavior in space. There is an introduction to accessibility requirements. Students will learn to demonstrate their explorations with verbal presentations and visual communication skills including but not limited to sketching, diagramming, photography, digital representations and physical models. Prerequisite: ARCH 108 Architecture Foundations I and ARCH 109 Architecture Foundations II.

IA 209. Interior Architecture Studio II. 6 Credits.
A continuation of IA 208 Interior Architecture Studio, the emphasis of this design studio is to develop the application of design determinants in which architecture/design precedent study, programming, materials and furniture integration, and presentation skills are developed. Design solution methodologies for medium scale interior spaces allow students to explore complex spatial configurations and programming, user centered design solutions, furnishings, manufactured products, materials and finishes integrations. Students further develop design skills to address human psychology and behavior in space, and the ability to apply accessibility requirements in their design solutions. Students will demonstrate their explorations with written narratives, verbal presentations and visual communication skills not limited to, sketching, diagramming, photography, digital representations, and physical models. Prerequisite: IA 208 Interior Architecture Studio I.

IA 210. Human Factors in the Built Environment. 3 Credits.
This course provides an introduction to human factors theory, data, and analysis from an architectural perspective. Topics covered include how proxemics, anthropometrics, ergonomics, and material choices in the built environment impact our psychology, behaviors, and health. Furthermore, students will learn how human-centered design can be used to create optimal environments for diversity and inclusion. Open to students enrolled in the Interior Architecture degree. Restricted to students in the IA program. Prerequisite: Must be admitted to the IA program and ARCH 109.

IA 220. Sustainable Interior Materiality. 3 Credits.
This course is an introduction to the application of materials, processes, specification, and craft in the construction of the built environment. Along with presenting the information required for understanding the basic principles and appropriate application and performance of construction systems and assemblies, the course also provides a conceptual framework to bridge between the physical conditions of construction related to materials selections and the abstract processes of tectonics design. Students will demonstrate their explorations through different methods including model building and hands-on building experiences. Prerequisite: IA 210.

IA 230. Lighting Design and Technology. 3 Credits.
An exploration of topics on natural lighting and illuminance in interior spaces. Includes lighting sources, technology, specifications of luminaires and design applications through technical drawings. Prerequisite: IA 208, IA 510.

IA 240. History and Theory of Built Environments I. 3 Credits.
Chronological survey of historic architectural and interior environments in European and non-European contexts from Classical periods up to the 19th Century. Emphasis is on how social, cultural, political and economic influences have shaped the built environment around the world, including cross-influences on furniture, material culture, design objects, and major European art movements during these periods. Prerequisite: Sophomore standing.

IA 241. History and Theory of Built Environments II. 3 Credits.
Chronological survey of historic architectural and interior environments in European and non-European contexts from Classical periods up to the 19th Century. Emphasis is on how social, cultural, political and economic influences have shaped the built environment around the world, including cross-influences on furniture, material culture, design objects, and major European art movements during these periods. Prerequisite: Sophomore standing.

IA 300. Special Topics in Interior Architecture: _____. 3 Credits.
Study of special topics related to interior architecture in response to changing needs and/or resources of the interior architecture degree program. It may be offered concurrently by different instructors under different subtitles as announced in the semester timetable. May be repeated for credit. Prerequisite: Varies by topic.

IA 308. Interior Architecture Studio III. 6 Credits.
This third-year architecture studio builds on the skills developed in the second-year IA Studios. It covers design development of a nonresidential medium scale project. Students work individually to explore application of complex programming, spatial configuration, sustainability, lighting design, acoustics, psychology of a space, human experience, and ability to apply code and accessibility requirements to their projects. Students will explore manufactured products and furniture systems with an emphasis on material selections and specifications. Students will demonstrate their explorations with written narratives, verbal presentations, and visual communication skills including but not limited to, sketching, diagramming, photography, digital representations and physical models. Prerequisite: IA 209.

IA 309. Advanced Interior Architecture Studio. 6 Credits.
Continuation of the Interior Architecture studio sequence with an emphasis developing advanced skills of design process, design research, building codes and regulations, materiality, technical documentation, and design production. Prerequisite: IA 308.

IA 322. Furniture Design. 3 Credits.
This course explores the methodology of furniture design and construction. Investigative studies of theory, materials and construction methods of classical, modern, and contemporary furniture design result in a basic knowledge of human factors, design processes, and tectonics. Students will develop skills in design and construction of a piece of furniture from using interior millwork to advanced digital technology. Prerequisite: IA 220.

IA 341. History of Interior Architecture. 3 Credits.
This lecture course offers a survey of interior spaces and built environments in relationship to historical, architectural, religious, political, cultural, and social context of different eras. This course provides a global overview of the historical evolution of interior spaces and furnishings from pre-historic times to the 20th century and covers geographical areas of Europe, America, Latin America, Asia, Middle-East and Africa. Students will be asked to demonstrate their learnings in the form of research,

drawings, and written papers. Prerequisite: Must be admitted to the IA Program and ARCH 541.

IA 359. Special Problems. 1-3 Credits.
Special problems in Interior Architecture. This study of a particular problem in Interior Architecture involving individual research and presentation, conferences and reports. Prerequisite: Student must submit to his/her faculty advisor in advance, a statement they wish to pursue. The instructor must give permission to study with the student.

IA 390. Study Abroad. 5 Credits.
Students participate in a study abroad program approved by the IA program. Students will be evaluated upon a submitted journal, sketchbook, or equivalent assignments assigned by the instructor. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Must be admitted to the IA Degree program.

IA 401. Professional Internship. 3 Credits.
Students will have an opportunity to work in a professional firm approved by the IA program. In addition to the work experience students will document their internship or relevant work experience. The purpose of this course is to give students a structured opportunity to select, explore, research, and document a topic relevant to their internship experience. Prerequisite: IA 508.

IA 405. Professional Communications Skills. 3 Credits.
This course is an introduction to visual and oral communication skills. It will build practical skills to design and communicate ideas to a variety of audiences. This practice-based approach will introduce the students to two major fundamentals of communications. Oral competency, through presentations and writing; and visual communications through composition, color theory, typography and branding. The students will have an opportunity to present their work through one on one discussions, small and large group presentations. The course is intended to equip students with the practice-based tools to communicate and demonstrate their design ideas in relation to different fields and to a variety of audiences in practical situations. Prerequisite: Must be admitted to the BS Interior Architecture degree.

IA 408. Design Research. 3 Credits.
A seminar-based elective that exposes students to critical interior design research approaches, including but not limited to programming, post-occupancy evaluations (POE), global and cultural dimensions, and design thinking. Topics variable on accreditation needs, represented by subtitles as announced in the semester timetable. May be repeated for credit. Prerequisite: IA 308.

IA 409. Integrated Interior Architecture Studio. 6 Credits.
An advanced studio with an emphasis given to the student's demonstration of integration of all previously learned design skills. These include program analysis, space configuration, formal design composition, structure, materials and methods of construction, technical development of interior spaces, environmental systems, lighting design, acoustics, code and regulation compliance, and principles of sustainability. Students should also demonstrate an appropriate awareness of history, theory, and culture of the given context. The level of project development should be demonstrated by technically precise drawings and well-researched written documentation in additional to other means of representation. Students work in groups and with professional consultants. Prerequisite: IA 308.

IA 508. Interior Architecture Studio III. 3 Credits.
This third-year architecture studio builds on the skills developed in the second-year IA Studios. It covers design development of a nonresidential medium scale project. Students work individually to explore application of complex programming, spatial configuration, sustainability, lighting design, acoustics, psychology of a space, human experience, and ability to apply code and accessibility requirements to their projects. Students will explore manufactured products and furniture systems with an emphasis on material selections and specifications. Students will demonstrate their explorations with written narratives, verbal presentations, and visual communication skills including but not limited to, sketching, diagramming, photography, digital representations and physical models. Prerequisite: IA 209 Interior Architecture Studio II.

IA 509. Design-Build Studio. 6 Credits.
A continuation of the Interior Architecture studio sequence with major emphasis on materiality and construction of built assemblies through hands-on activities. Development of craft, process, collaboration and technical documentation skills will be primary objective of the course. Prerequisite: Must have completed IA 209 Studio.

IA 510. Human Factors in The Built Environment. 3 Credits.
This course provides an introduction to human factors theory, data, and analysis from an architectural perspective. Topics covered include how proxemics, anthropometrics, ergonomics, and material choices in the built environment impact our psychology, behaviors, and health. Furthermore, students will learn how human-centered design can be used to create optimal environments for diversity and inclusion. Open to students enrolled in the Interior Architecture degree. Restricted to students in the IA program. Prerequisite: Must be admitted to the IA program.

IA 511. Ergonomics. 3 Credits.
This course focuses on analyzing human perception and behavioral patterns in the built environment and the study of natural, cultural, social and ethnical patterns and rituals. Students will survey and design a series of solutions for design problems addressing relationships between the organic and human-made environments as they relate to human experience. These explorations will be demonstrated by written narratives, universal design solutions, wayfinding techniques and ergonomics studies. Prerequisite: Must be admitted to the IA degree plan.

IA 520. Products Materials and Specifications. 3 Credits.
This course is an introduction to the application of materials, processes, specification, and craft in the construction of the built environment. Along with presenting the information required for understanding the basic principles and appropriate application and performance of construction systems and assemblies, the course also provides a conceptual framework to bridge between the physical conditions of construction related to materials selections and the abstract processes of tectonics design. Students will demonstrate their explorations through different methods including model building and hands-on building experiences. Prerequisite: Must be admitted to the IA degree plan.

IA 522. Furniture Design. 3 Credits.
This course explores the methodology of furniture design and construction. Investigative studies of theory, materials and construction methods of classical, modern, and contemporary furniture design result in a basic knowledge of human factors, design processes, and tectonics. Students will develop skills in design and construction of a piece of furniture from using interior millwork to advanced digital technology. Prerequisite: IA 520 Products, Materials and Specifications.

IA 541. History of Interior Architecture. 3 Credits.
This lecture course offers a survey of interior spaces and built environments in relationship to historical, architectural, religious, political, cultural, and social context of different eras. This course provides a global overview of the historical evolution of interior spaces and furnishings from pre-historic times to the 20th century and covers geographical areas of Europe, America, Latin America, Asia, Middle-East and Africa. Students will be asked to demonstrate their learnings in the form of research,

drawings, and written papers. Prerequisite: Student must be in the IA program and have taken ARCH 540.

IA 609. Integrated Interior Architecture Studio. 6 Credits.
An advanced studio with an emphasis given to the student's demonstration of integration of all previously learned design skills. These include program analysis, space configuration, formal design composition, structure, materials and methods of construction, technical development of interior spaces, environmental systems, lighting design, acoustics, code and regulation compliance, and principles of sustainability. Students should also demonstrate an appropriate awareness of history, theory, and culture of the given context. The level of project development should be demonstrated by technically precise drawings and well-researched written documentation in additional to other means of representation. Students work in groups and with professional consultants. Prerequisite: IA 508 Interior Architecture Studio III.

IA 690. Study Abroad. 5 Credits.
Students participate in a study abroad program approved by the IA program. Students will be evaluated upon a submitted journal, sketchbook, or equivalent assignments assigned by the instructor. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Must be admitted to the IA Degree program.