

# School of Architecture & Design

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## Introduction

## The University of Kansas

Graduation requirements and regulations for every academic program are provided in this catalog; however, this catalog is for informational purposes only and does not constitute a contract. Degree and program requirements and course descriptions are subject to change.

The University of Kansas School of Architecture and Design has been using interdisciplinary learning to produce pioneering leaders for more than 100 years. Our experienced, diverse faculty and innovative degree paths promote the development of creative talent that fits each student's personal interests and abilities. Students learn through the processes of designing, drawing, and making, learning to solve problems through design-thinking, taking advantage of a wide array of global study opportunities, community engagement, and collaborative research.

Our courses are significantly influenced by the practical input of architects and designers from major firms the world over. These employers consistently say that those who receive degrees from KU are not only able to contribute as soon as they begin work, but also quickly ascend to leadership positions. Prepared as designers, critical thinkers, and problem solvers, graduates enjoy personal career fulfillment and serve, enrich, and sustain their professions and communities.

Architecture (<https://catalog.ku.edu/architecture/architecture/>)

Master of Architecture (5-year) (<https://catalog.ku.edu/architecture/architecture/master-architecture-five-year/>)  
 Bachelor of Science in Interior Architecture (<https://catalog.ku.edu/architecture/architecture/bs-interior-architecture-design/>)  
 Master of Architecture (3-year and 2-year) (<https://catalog.ku.edu/architecture/architecture/master-architecture-three-year/>)  
 Master of Arts in Architecture (<https://catalog.ku.edu/architecture/architecture/master-arts-architecture/>)  
 Doctor of Philosophy in Architecture (<https://catalog.ku.edu/architecture/architecture/phd/>)  
 Undergraduate Certificate in Architecture Acoustics (<https://catalog.ku.edu/architecture/architecture/architecture-acoustics-undergraduate-certificate/>)  
 Graduate Certificate in Architectural Acoustics (<https://catalog.ku.edu/architecture/architecture/architectural-acoustics-gcert/>)  
 Graduate Certificate in Architecture of Health and Wellness (<https://catalog.ku.edu/architecture/architecture/architecture-health-wellness-gcert/>)  
 Graduate Certificate in Building Information Modeling (BIM) (<https://catalog.ku.edu/architecture/architecture/building-information-modeling-gcert/>)  
 Graduate Certificate in Designbuild (<https://catalog.ku.edu/architecture/architecture/designbuild-gcert/>)  
 Graduate Certificate in Historic Preservation (<https://catalog.ku.edu/architecture/architecture/historic-preservation-gcert/>)  
 Graduate Certificate in Participatory Design (<https://catalog.ku.edu/architecture/architecture/public-interest-design-gcert/>)  
 Graduate Certificate in Urban Design (<https://catalog.ku.edu/architecture/architecture/urban-design-gcert/>)

Design (<https://catalog.ku.edu/architecture/design/>)

Bachelor of Fine Arts in Design (<https://catalog.ku.edu/architecture/design/bfa/>)  
 Minor in Design (<https://catalog.ku.edu/architecture/design/design-minor/>)  
 Minor in Design Entrepreneurship (<https://catalog.ku.edu/architecture/design/design-entrepreneurship-minor/>)  
 Minor in Photography (<https://catalog.ku.edu/architecture/design/photography-minor/>)  
 Undergraduate Certificate in Book Arts (<https://catalog.ku.edu/architecture/design/book-arts-ucert/>)  
 Master of Arts in Design with a concentration in Design Management (<https://catalog.ku.edu/architecture/design/ma-design-management/>)  
 Master of Arts in Design with a concentration in Interaction Design (<https://catalog.ku.edu/architecture/design/ma-interactive-design/>)  
 Graduate Certificate in Book Arts (<https://catalog.ku.edu/architecture/design/book-arts-gcert/>)

## Facilities

The School of Architecture & Design (ArcD) at the University of Kansas is committed to providing students with facilities and resources to prepare for careers as designers, architects, and creative leaders.

**Marvin Hall**, located on historic Jayhawk Boulevard, offers connections to most ArcD campus facilities, resources, and people. Built in 1908, the four-level building houses ArcD academic services and administration offices, Department of Architecture studios and faculty offices, and multiple facilities that support students in all academic programs.

**The Forum** designed and built in 2014 by ArcD students in the Studio 804 program, sits directly centered between the two campus buildings that have long been home to our academic departments. This light-filled LEED Platinum-certified glass, steel, and timber structure is a gathering place for our school community and a venue to welcome visitors. The Forum includes a 121-seat lecture hall and a multipurpose space with moveable exhibition walls, flexible furniture systems, and digital displays. The Forum Commons, a student lounge and exhibition gallery, connects The Forum to Marvin Hall.

The 160,000-square-foot **Chalmers Hall**, next to Marvin Hall, houses the main Design Department programs, including studios and classrooms. The building also houses the **Art and Design Gallery**, **Art Supply Store**, and **Chalmers Café** which were fully renovated by students in 2017. Chalmers has multi-platform computer labs with the latest software for photography, animation, CAD, 3-D modeling, video production, desktop publishing, scanning, illustration, large-and medium-format plotters, and color and black-and-white laser printers. Unique satellite computer areas are dedicated to each type of work. Also located here is a traditional film lab that includes a dark room for black-and-white photography, as well as a digital processing lab with dedicated spaces for video and digital image

production. An equipment check-out facility allows students to borrow equipment they will need for photography assignments.

**East Hills Design-Build Center**, at 66,000 square feet, the East Hills Design-Build Center is the largest academic makerspace in the world. Home to multiple Architecture and Industrial Design design-build studios, the steel and concrete building contains fabrication labs, collaborative research spaces, a computer lab, and multiple cavernous assembly areas for ArcD students and researchers.

The historic **Chamney Farm**, located on KU's West Campus on the site of a former dairy farm, is home to the school's **Center for Design Research (CDR)**. The award-winning LEED Platinum-certified building connects the converted native limestone farmhouse and restored 19th-century barn. The CDR is a working laboratory and incubator that brings together KU students, faculty, and industry representatives. This project was completed in 2011 by KU Studio 804 design-build students.

**Marvin Studios** (more commonly referred to as "The Mud Hut") is home to studios, presentation space, and advanced digital fabrication labs. Students in both departments have access to advanced computer systems and automated tools to create 3D prototypes, manufacture products, and research innovative material applications.

**Snow Hall**, overlooking Potter Lake and Memorial Stadium stands directly across Jayhawk Boulevard from Marvin Hall and houses architecture and interior architecture studios, flexible presentation spaces, offices, and a computer lab. Located in a unified space on the first floor of Snow Hall, facilities include large studio spaces, a flexible presentation gallery, and is home to PhD in Architecture student offices.

The **Helen Foresman Spencer Museum of Art** houses the only comprehensive art collection in Kansas. Collections are particularly noteworthy in medieval art, 17th- and 18th-century German and Austrian painting, sculpture, American painting, prints, American photography, Japanese art of the Edo period, textiles, and decorative arts. Spencer Museum sponsors exhibitions, lectures, films, workshops, and activities that support curricular instruction in the arts.

The KU Libraries have over 5.7 million volumes in seven library locations. In addition to the physical collections, students and faculty have access to more than 1.5 million electronic books, 168,000 electronic journals, and 1,733 subscription databases. An important resource for the School of Architecture and Design is the **Murphy Art and Architecture Library**, which has a collection of approximately 182,000 volumes.

## Undergraduate Programs

Degree programs available to entering first-year students include a 5-year professional Master of Architecture (<https://catalog.ku.edu/architecture/architecture/master-architecture-five-year/>); a professional Bachelor of Fine Arts (<https://catalog.ku.edu/architecture/design/bfa/>) in design with concentrations in Illustration and Animation, Industrial Design, Photography, and Visual Communication Design and a Bachelor of Science in Interior Architecture.

## Admission

Information on undergraduate admission standards and requirements, as well as application procedures and deadlines, is found on the Department of Architecture, Department of Design and Interdisciplinary Programs pages. Visit the Office of Admissions (<http://admissions.ku.edu/>) (<http://admissions.ku.edu>) for information about admission to KU. Visit the Office of International Support Services (<http://www.iss.ku.edu/>) for

information about international admissions. Students who plan to transfer into programs and need advising assistance should contact Architecture and Design Admissions Office (<http://www.arch.ku.edu>) at 785-864-3167 or specific Design information at <http://design.ku.edu/ApplytoKU> at 785-864-2073.

## Advising

In addition to advising and academic assistance from KU offices, the School has individual advisors for each student. Advisors are available throughout the course of study by appointment, and students are expected to see their advisors at enrollment times. For Architecture and Interior Architecture and advising information, students should contact Laura Leonard at [lauraleonard@ku.edu](mailto:lauraleonard@ku.edu) or 785-864-5130. For design advising information (<http://design.ku.edu/advising/>), contact Zac Shields at [ZacShields@ku.edu](mailto:ZacShields@ku.edu) or 785-864-2959.

## University Honors Program

The School encourages qualified students to participate in the University Honors Program (<http://www.honors.ku.edu/>). Students should be aware that the course load for professional architecture and design degrees may make it difficult to participate in the Honors Program.

## Graduate Programs

Graduate programs include

- Master of Architecture (<https://catalog.ku.edu/architecture/architecture/master-architecture-three-year/>) (M.Arch.), a 2- year or 3-year professional degree for students already holding bachelor's degrees in any field;
- Doctor of Philosophy in Architecture (<https://catalog.ku.edu/architecture/architecture/phd/>) (Ph.D.);
- Master of Arts (M.A.) in Architecture; (<https://catalog.ku.edu/architecture/architecture/master-arts-architecture/>)
- Master of Arts (<https://catalog.ku.edu/architecture/design/ma-design-management/>) (M.A.) in Design with a concentration in Design Management & Strategy;
- Master of Arts (<https://catalog.ku.edu/architecture/design/ma-interactive-design/>) (M.A.) in Design with a concentration in Interaction & User Experience Design

## Undergraduate Scholarships and Financial Aid

Awards and scholarships are available to students at all year levels. All students who wish to be considered for KU financial aid or for the scholarships available within the School must complete applications with Financial Aid and Scholarships (<http://financialaid.ku.edu/>).

## Graduate Fellowships and Assistantships

For information about graduate assistantships, contact the School of Architecture and Design. (<http://www.sadp.ku.edu/>)

Visit the Graduate Studies website for information about funding opportunities (<http://graduate.ku.edu/funding/>) for graduate students at KU.

The Office of Financial Aid and Scholarships (<http://financialaid.ku.edu/>) administers grants, loans, and need-based financial aid.

## Undergraduate University Regulations

For information about University regulations, see Regulations (<https://catalog.ku.edu/regulations/>) or visit the University of Kansas Policy Library (<http://www.policy.ku.edu/>).

## Absences

A student with excessive absences may be withdrawn from the course by the dean.

## Credit/No Credit

A Credit/No Credit option is available to all degree-seeking undergraduates. You may enroll in one course a semester under the option, if the course is a free or external elective not in your major or minor. Students must submit an online form during the two week period designated by the University in order to elect a course for Credit/No Credit. For more information, visit the KU Policy Library (<http://www.policy.ku.edu/>).

**Warning:** Certain undesirable consequences may result from exercising the option. Some schools, scholarship committees, and honorary societies do not accept this grading system and convert grades of No Credit to F when computing grade-point averages.

Credit/No Credit is allowed for electives not in the major. It is not allowed for required courses or electives in the major.

ARCH 690 can only be graded as Satisfactory/Unsatisfactory.

## Graduation with Distinction and Highest Distinction

Students who rank in the upper 10 percent of their graduating class graduate with distinction. The upper third of those awarded distinction graduate with highest distinction. The list is compiled each spring and includes July, December, and May graduates.

## Honor Roll (Dean's List)

Students in the upper 10 percent of undergraduate student body who have completed at least 15 hours with letter grades are recognized on the honor roll or dean's list in fall and spring. An Honor Roll notation appears on the transcript.

## Maximum and Minimum Semester Enrollment

No student may enroll in more than 19 credits without the approval of the department. No more than 15 hours for architecture students and no more than 9 hours for design students may be taken in summer session without permission of the respective departments.

## Prerequisites and Corequisites

The School strictly enforces prerequisites for all courses. Students enrolled in a course without successfully completing the appropriate prerequisites may be administratively dropped with notice in the first weeks of the semester.

## Probation

### Master of Architecture, Bachelor of Arts in Architectural Studies, Interior Architecture, and Bachelor of Fine Arts in Design

#### Probation

Student records are reviewed after each semester. A student is placed on probation if the KU semester or cumulative grade-point-average is below 2.0. Students placed on probation are sent a letter stating the length of probation and the requirements for being returned to good standing.

#### Continued on Probation

A student on probation may be continued on probation for one more semester if the following KU semester and cumulative grade-point-averages show considerable improvement, but the semester or cumulative grade-point-average is lower than 2.0.

#### Dismissal

A student may be dismissed for poor scholarship if any of the following situations apply:

1. Fall and spring KU semester or cumulative grade-point-averages are below 2.0 with no considerable improvement.
2. The student has been placed on probation and has failed to meet the conditions required to return to good standing.
3. The student has repeatedly failed to make progress toward graduation.

#### Reinstatement

Appeals for reinstatement may be submitted to the department's probation committees at 200 Marvin Hall. A student reinstated has one semester to return to good standing.

#### Good Standing

Students with KU semester and cumulative grade-point-averages of 2.0 or above are in good standing.

Required Work in Residence

## Architecture Students

All architecture students must complete 30 hours of KU work.

## Design Students

Six of the final 30 hours may be taken for nonresident credit, with advance permission. Nonresident credit may fill only elective requirements not in the major field of study.

## Transfer of Credit

CredTran (<http://creditransfer.ku.edu/>) is a transfer course equivalency system that lists more than 2,200 colleges and universities from which KU has accepted transfer courses in the past. If your school or course is not listed, your evaluation will be completed when you are admitted to KU.

## Architecture and Design Students

Only grades of C- or higher are accepted in transfer credit toward a degree. Architecture students who wish to transfer design courses may do so only upon submission of a portfolio of work done in such courses. Placement in the professional curriculum is based on completed course work, a review of the comprehensive portfolio of prior work in

architecturally oriented courses, and on a space-available basis. The student must conform to the work in residence requirements stated above.

## Design Students

Grades for studio related course work must be B or higher for transfer credit. Applicants with a lapse of four or more years since their last full-time enrollment may not expect studio credits to be accepted for transfer.

## Architecture 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 chosen 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 skills, 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 interconnectedness 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 be 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 laptop 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 laptop 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.

## Architecture 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 addition 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 addition 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.

## Design Courses

**ADS 300. Foundations in Interaction Design. 3 Credits.**

This course examines the fundamental principles and materials underlying the interactions between people, artifacts, and systems. Students will be introduced to a variety of new tools and techniques that will facilitate the prototyping of interactions/user interfaces/experiences of mobile devices, desktop devices, cars, games, consoles, kiosks, and/or apps. Projects, lectures and tutorials will provide a working knowledge of fundamental principles, processes and current tools. Prerequisite: Admission to a major and/or minor offered by the Department of Design or instructor permission.

**ADS 320. KU Design Symposium. 1 Credits.**

Visiting Design professionals discuss various aspects of their work and the industry of Design. Professionals from all the Design areas of the Department are represented: Illustration & Animation, Industrial Design, Photography, and Visual Communication Design. Alternative courses may be allowed to count in place of ADS 320 in limited cases for students with immutable time conflicts. Students enrolled in this course must attend all sessions of the symposium each semester in order to earn a passing grade in the course. Open to all KU students. Graded on a satisfactory/unsatisfactory basis.

**ADS 325. Design Thinking & Research Methodologies. 3 Credits.**

Introduction to the principles of design thinking, design processes, design strategies and methods, including techniques and tools for the development of human-technology interfaces. Abstract through concrete representation methods and techniques will be applied to interaction design projects/problems. Information collection and analysis methods, scenario and prototyping methods, evaluation methods (empirical),

creativity methods, and task-oriented methods (non-empirical) will also be considered. Prerequisite: Admission to a major and/or minor offered by the Department of Design or instructor permission.

**ADS 340. History and Philosophy of Design. 3 Credits.**

Survey of design history from 1800 to present with emphasis on graphics, architecture, industrial and interior design movements, individuals and their influences. Prerequisite: Admission to a major and/or minor offered by the Department of Design or instructor permission.

**ADS 401. Design Ethics. 3 Credits.**

Since the time of Socrates, philosophers have struggled with understanding everyday moral dilemmas. In this course, we will look at how cultures throughout history have framed everyday moral choices and how those choices apply to working as a designer/artist/architect in our contemporary world. Through presentations, guest lectures, small group discussions, and role-playing experiences, we will question and analyze ethical and moral problems faced by today's shapers of culture. This course is named after industrial designer Victor Papanek, who served as a Distinguished Professor of Architecture & Design at KU from 1981 until his death in 1998. His 1971 book "Design for the Real World" is credited as being one of the first publications which challenged designers to understand their social and ecological responsibilities. Open to all students admitted to majors and minors offered by the Department of Design. Other students may request instructor permission to enroll. Prerequisite: Admission to a major and/or minor offered by the Department of Design or instructor permission.

**ADS 411. Design Trends and Forecasting. 3 Credits.**

This course introduces students to principles and theories from various disciplines concerning an understanding of cultural trends and micro-trends. Emphasis is placed on adaptation of these theories to an understanding of the practice of trends research and trend forecasting within the design practice, as well as how trends can be integrated into the designer's thinking and making process. Open to all students.

**ADS 530. Intra Design Problems: \_\_\_\_\_. 3 Credits.**

A collaborative studio across all Design Department areas of study. Students of the different areas will be organized into work groups and conduct in-depth research, investigate new problem solving methodologies, develop new applications and working knowledge of specialized subjects. Prerequisite: Junior level or higher standing in Design or Architecture or permission of the instructor.

**ADS 531. Internship Credit. 1-6 Credits.**

Students develop professional skills and problems solving through applied work with an employer in a Design field. Supervision by a professional designer, and prior approval by the relevant Area Coordinator is mandatory. May be repeated twice for credit. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Junior level or higher standing in the Design Department.

**ADS 532. Study Abroad: \_\_\_\_\_. 3 Credits.**

Students will participate in a Design focused study abroad program. The student will be required to attend group meetings prior to the trip along with development of research topics of interest. Simple documentation would be required - sketchbook/journal responding to day-to-day itinerary and other events, following the trip and presented for a grade. Prerequisite: Junior level or higher standing in Design or with permission of the instructor. Corequisite: ADS 533.

**ADS 533. Study Abroad Documentation. 3 Credits.**

Consists of research work prior to the trip as well as follow-up and required studio work due after return. A portfolio of work will be required for a grade. Course will also fulfill Design-specific requirements or studio credits for other majors. Areas may designate specific Design courses as

substitutions for this course. Prerequisite: Junior level or higher standing in Design or with permission of the instructor. Corequisite: ADS 532.

**ADS 560. Topics in Design: \_\_\_\_\_. 3 Credits.**

A study of different topics in different semesters in a special area of interest to a staff member and suitable qualified students. May be repeated for credit. Prerequisite: Junior standing in department or permission of instructor.

**ADS 580. Special Problems in Design. 1-6 Credits.**

A study of current problems in design or crafts with an emphasis on research. Special problems proposals must be discussed with and approved by the instructor and advisor prior to enrollment in the course. A student may not take more than six credit hours of special problems in any one semester. Prerequisite: Junior standing in department.

**ADS 601. Design Ethics. 3 Credits.**

Since the time of Socrates, philosophers have struggled with understanding everyday moral dilemmas. In this course, we will look at how cultures throughout history have framed everyday moral choices and how those choices apply to working as a designer/artist/architect in our contemporary world. Through presentations, guest lectures, small group discussions, and role-playing experiences, we will question and analyze ethical and moral problems faced by today's shapers of culture. This course is named after industrial designer Victor Papanek, who served as a Distinguished Professor of Architecture & Design at KU from 1981 until his death in 1998. His 1971 book "Design for the Real World" is credited as being one of the first publications which challenged designers to understand their social and ecological responsibilities. Open to all graduate students. Prerequisite: Graduate student status.

**ADS 710. Advanced Human Factors in Interaction Design. 3 Credits.**

The study of human factors principles and guidelines are fundamental to interaction design. In this course, these principles will be illustrated and applied to real-world design projects/problems. Human physical and cognitive capabilities, computer-human interface and systems properties, interaction design methods, and the physical and socio-cultural environment will be considered. Fundamental issues in human-centered systems, basic research methods, including statistics and literature searches, will be included. Prerequisite: Admission to the MA in Design Management or MA in Interaction Design or instructor permission.

**ADS 712. Advanced Design Methods. 3 Credits.**

This course will cover the principles of design thinking, design processes, design strategies and methods, including techniques and tools for the development of human-technology interfaces. Abstract through concrete representation methods and techniques will be applied to interaction design projects/problems. Information collection and analysis methods, scenario and prototyping methods, evaluation methods (empirical), creativity methods, and task-oriented method (non-empirical) will also be considered. Methods common to design-related disciplines in the social sciences, business, architecture, communication studies and engineering are integrated. Prerequisite: Admission to the MA in Design Management or MA in Interaction Design or instructor permission.

**ADS 714. Service and User Experience Design. 3 Credits.**

Business products, services and environments are often intermingled in ways that require more holistic ways of thinking and development. A challenge of service innovation is to design with an understanding of the many dimensions of human experience and satisfaction. This course elaborates how, where, when, and why design can enhance the value of business services. Theory, methods, and practice aspects of services design are presented. Prerequisite: Admission to the MA in Design Management or MA in Interaction Design or instructor permission.

**ADS 720. Graduate Seminar in Design. 1 Credits.**

Comparative studies of various areas of specialization in design. Repeat for credit to a maximum of six credit hours.

**ADS 730. Directed Reading in Design. 1-3 Credits.**

Research reading and presentation of reports on specific subjects related to the students major area of specialization. Required of all graduate students.

**ADS 740. Special Problems in Design. 1-6 Credits.**

An in-depth study of current problems in design or crafts with an emphasis on research. Special problems proposals must be discussed with and approved by the instructor and graduate advisor prior to enrollment in the course.

**ADS 750. Design Management. 3 Credits.**

Design Management has been described as "applied innovation" or the methodical capturing of talent and resources available inside and outside an organization to create valuable new offerings, brands, and business models. This course explores the design functions in business as a means to solve difficult challenges and develop new market-facing opportunities. Subjects include brand value creation, differentiation, coordination, and transformation. Numerous cases will be discussed. Prerequisite: Admission to the MA in Design Management or MA in Interaction Design or instructor permission.

**ADS 751. Design Scenarios and Simulations. 3 Credits.**

Most organizations are imaginatively challenged and experience difficulty innovating and marketing new concept offerings. Conventional methods spotting and validating new opportunities often lack the persuasive power necessary for change to occur. Scenario-based design and simulation offers ways to vividly representing a future that is different from the past. This course presents theory, methods and practice aspects of design scenario construction and simulation. Prerequisite: Admission to the MA in Design Management or MA in Interaction Design or instructor permission.

**ADS 760. Strategic Design Innovation. 3 Credits.**

As companies struggle with the demands of increasing consumer, intense competition and downward price pressures, there is a corresponding increase in the demand for more innovative business models and higher-value offerings. These forces have significantly broadened the strategic scope of design. Advanced, multi-disciplinary design teams are being engaged early to help guide new business and product development efforts. Why, where, when, and how this is done in order to deliver on the promise of innovation is the subject of this course. Prerequisite: ADS 750 or instructor permission.

**ADS 765. Interaction Design. 3 Credits.**

Interaction Design is about creating products, services or environments that offer significant experiential value to people and economic value to organizations. This course engages the comprehensive subject of design for human experience. Building on the gamut of human factors and design methods knowledge, this offers hands-on experience in the research, analysis, modeling and simulation of original and experientially compelling design solutions. ADS 710 must be taken prior to or concurrently with this course. Prerequisite: Corequisite: ADS 710 or instructor permission.

**ADS 850. Studio Teaching Practice. 1 Credits.**

Graduate students only. Must hold an assistant instructor or teaching appointment. Credit earned does not satisfy any credit requirement for a degree. Graded on a satisfactory/unsatisfactory basis.

**ADS 860. Graduate Synthesis and Applications Seminar. 1 Credits.**

Group discussion and presentations on timely industry topics. Topics will be substantial, bridging relevant program subjects and professional area

boundaries. May be repeated for up to six credit hours in subsequent semesters.

**ADS 861. Thesis Research Seminar. 1 Credits.**

Approaches to producing original design research. Methods, resources, topics and projects are discussed and evaluated. May be repeated for up to six credit hours in subsequent semesters. Prerequisite: Admission to the MA in Design Management or MA in Interaction Design or instructor permission.

**ADS 890. Thesis. 1-8 Credits.**

This course involves substantive individual research and thesis development, as well as regular discussions between student and instructor/advisor. Your ADS 890 instructor serves as your thesis advisor, and chairs your thesis committee. A thesis topic and research focus is expected very early in the term, followed by a formal thesis proposal containing clear objectives, schedule and deliverables. When green lighted, the proposed thesis is then executed by the student who prepares and presents the work to their thesis committee for evaluation. Prerequisite: Successful completion of ADS 861 and either ADS 750 or ADS 765.

## Design Courses

**BDS 100. Design Thinking. 1 Credits.**

Design, like almost every industry, profession, school or major on campus, is forever being changed by technology, it's reach, global access, and social innovation. From the basics of how to think like a designer or how to design a better presentation in powerpoint to how design can be situated in businesses and organizations to create innovative new products, services or social change. This course will give students an awareness of design in our everyday world; an understanding of some of the cultural, theoretical, conceptual, and practical issues related to design and designing. The ultimate goal is that by the end of this course students will know how design contributes to contemporary society and how they might use this understanding throughout their life in little and big ways. Open to all majors. Graded on a satisfactory/unsatisfactory basis.

**BDS 101. Design Thinking and Making. 3 Credits.**

This course is an introduction to creative problem-solving and the fundamentals of two-, three-, and four-dimensional design. Drawing, Photography, and 2D and 3D models are used in this course as a means of design thinking to visually represent problems and solutions. Prerequisite: Admission to a major and/or minor offered by the Department of Design or instructor permission.

**BDS 102. Design Thinking and Making II. 3 Credits.**

This is a course for all Design Department majors and serves as a continuation of BDS 101 with a greater emphasis on examining the relationships between design and other systems: environment, society and culture, and technology and economics. One and a half hours of lecture and six hours of studio-lab per week. Students must receive at least a grade of C (2.0) in this course to continue in their Design program. Prerequisite: Must be admitted into the Design Department and have completed BDS 101 and 103 with at least a grade of C (2.0) or equivalent course work, or receive instructor permission. Prerequisite: BDS 101 and 103.

**BDS 103. Drawing for Design. 3 Credits.**

This course will focus on drawing as a tool of communication through freehand exercises that explore observation and perception, form and proportion, dimensional illusion and expressive characteristics using a variety of materials and media. Some identified sections of this course will also use two-and three-dimensional modeling software. Prerequisite:



Admission to a major and/or minor offered by the Department of Design or instructor permission.

## Design Courses

### **ILLU 200. Foundations in Image Making. 3 Credits.**

Presentation of fundamental principles for communication through visual language. Exploration of theories in visual perception and visual communication, with focus on reading and developing visual images for intended meaning. Emphasis is placed on concept development, compositional exploration, color theory, the affect of value and color on images, and the significance of reference creation. Prerequisite: BDS 101 and BDS 103 with semester grades of "C+" or higher or instructor permission.

### **ILLU 205. Drawing Media for Illustration I. 3 Credits.**

Exploration of problems in drawing for various reproduction processes. Emphasis on perspective, head drawing, the clothed and nude figure, nature illustration, perspective, and environments. Various drawing media and materials are explored. Prerequisite: ILLU 200 and VISC 200 with semester grades of "C+" or higher or instructor permission.

### **ILLU 305. Image Making. 3 Credits.**

Concentrated study in developing methodologies for producing contemporary illustration. Emphasis is placed on concept development, composition exploration, value and color studies, and reference creation. Required for Illustration majors as a pre-review course. If this course is required under the major studies section on the degree requirement sheet, students must receive a grade of C (2.0) or higher to continue on to the next course in the sequence. Prerequisite: ILLU 200.

### **ILLU 315. Introduction to Illustration. 3 Credits.**

Concentrated study in developing skills and techniques with media and materials that are employed in producing contemporary illustration. Continued emphasis on methods of research and idea generation. Prerequisite: ILLU 200 and VISC 200 with semester grades of "C+" or higher or instructor permission.

### **ILLU 405. Drawing Media for Illustration II. 3 Credits.**

Students will explore various drawing and painting media to continue developing their mastery of representational imagery for illustration. Reference collecting, model making, and the creating of photographic reference material will be addressed. Emphasis on mark making, value and color relationships, and placing the figure in an environment is also covered. Prerequisite: ILLU 205 and ILLU 315 with semester grades of "C+" or better or instructor permission.

### **ILLU 410. Fundamentals of Animation. 4 Credits.**

Concentrated study in developing skills and techniques with digital media and materials employed in producing basic contemporary animation. Development of concept, script, storyboard, and use of audio, music and sound effects are part of this animation experience. Prerequisite: ILLU 205 and ILLU 315 with semester grades of "C+" or higher or instructor permission.

### **ILLU 415. Illustration Concepts. 3 Credits.**

Focus of this course is to learn how to think visually. Concentrated study on developing different forms of concepts for illustration. Continued development of technical skills and visual literacy to gain insight on how to make images that communicate unique ideas clearly. Prerequisite: ILLU 405 and ILLU 410 with semester grades of "C+" or higher or instructor permission.

### **ILLU 425. Concept Art. 3 Credits.**

Introductory exploration of the process, skills and concepts necessary for successful concept art character design and effective blending of matte painting and film. Drawing will be of primary concern for this course, yet

exploring digital means of character development will also be introduced. Prerequisite: Successful completion of ILLU 405 and ILLU 410 with semester grades of "C+" or higher or instructor permission.

### **ILLU 435. Sequential and Narrative Illustration. 3 Credits.**

Exploration of thematic illustration through the development of a series of images based on a topic or story. Aspects of continuity, consistency, storytelling, pacing, editing, packaging and a holistic method of developing illustration are addressed. Prerequisite: ILLU 415 and ILLU 425 with semester grades of "C" or higher or instructor permission.

### **ILLU 445. Advanced Concept Art. 3 Credits.**

Continuation in exploration of the process, skills and concepts for successful concept art character design, along with continued development of digital characters and 3D modeling. Prerequisite: ILLU 415 and ILLU 425 with semester grades of "C" or higher or permission of instructor.

### **ILLU 510. Advanced Animation. 4 Credits.**

Continued development of concepts, scripts, storyboards, and use of audio, music and sound effects in the production of a 1-3 minute animated film. Prerequisite: Prior completion of ILLU 410, ILLU 435, and ILLU 445 with semester grades of "C" or higher.

### **ILLU 535. Promotion and Marketing for Illustration I. 3 Credits.**

Focus will be on preparation for entering the profession. Development and completion of a self-promotion and marketing package will supplement and support the senior portfolio. Contemporary business practices and legal issues will be addressed. Prerequisite: ILLU 435 and ILLU 445 with semester grades of "C" or higher.

### **ILLU 545. Promotion and Marketing for Illustration II. 4 Credits.**

Continuation of phase development and completion of a self-promotion and marketing package from ILLU 535. Additional business practices and legal issues will be addressed. Prerequisite: ILLU 510 and ILLU 535 with semester grades of "C" or higher.

## Design Courses

### **INDD 200. Foundations in Industrial Design. 3 Credits.**

Course introduces tools, techniques and processes used in the professional practice of Industrial Design. Learning is through a series of short, focused projects. Techniques in prototyping, drawing, computer modeling, digital fabrication, and presentation are demonstrated and developed. Prerequisite: BDS 101 and BDS 103 with semester grades of "C+" or higher or instructor permission.

### **INDD 212. Drawing for Industrial Design I. 3 Credits.**

This course will focus on drawing as a tool of communication through a variety of exercises that explore observation and perception, form and proportion, dimensional illusion and expressive characteristics using a variety of materials and media. This course will also use two- and three-dimensional modeling software necessary for all industrial designers. Prerequisite: BDS 101 and BDS 103 with semester grades of "C+" or better or instructor permission.

### **INDD 284. Basic Industrial Design Studio. 3 Credits.**

Course introduces tools, techniques and processes used in the professional practice of Industrial Design. Learning is through a series of short, focused projects. Techniques in drawing, computer modeling, physical modeling, and presentation are demonstrated and developed. Strategies to improve creativity are explored, while addressing market and production considerations. Prerequisite: INDD 200 and INDD 212 with semester grades of "C+" or higher or instructor permission.

### **INDD 302. Intermediate Industrial Design Studio. 4 Credits.**



This course introduces tools, techniques and processes used in the professional practice of Industrial Design. Learning is through a series of short, focused projects. Techniques in drawing, computer modeling, physical modeling, and presentation are demonstrated and developed. Strategies to improve creativity are explored, while addressing market and production considerations. Prerequisite: INDD 284 and INDD 312 with semester grades of "C+" or higher or instructor permission.

**INDD 308. Materials and Processes. 3 Credits.**

A study of modern materials, manufacturing processes, and construction methods applicable to the fields of industrial design and interior design. Design analysis of existing products, furniture, building components, and storage systems. Design assignments in furniture, storage systems, and interior space arrangements with emphasis on materials and construction. Field trips to area manufacturing and design facilities. Prerequisite: INDD 284 and INDD 312 with semester grades of "C+" or higher or instructor permission.

**INDD 312. Drawing for Industrial Design II. 3 Credits.**

Sketching allows product designers to generate ideas quickly, without committing resources to any single idea. This course continues to focus on sketching/drawing as a tool of communication through a variety of exercises that continues to explore form and proportion, composition, dimensional illusion and expressive characteristics. Prerequisite: INDD 200 and INDD 212 with semester grades of "C+" or better or instructor permission.

**INDD 320. Directed Readings in Industrial Design. 1 Credits.**

This course is an alternative to ADS 320 (Hallmark Symposium) for Industrial Design students with unavoidable scheduling conflicts. Students will watch relevant films and digital media, read important texts and articles, attend lectures, then compose and submit careful reflections on those media and experiences. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Admission to the Department of Design in the School of Architecture & Design and department permission.

**INDD 350. Computer-Aided Design. 3 Credits.**

Students will develop the skills needed to efficiently built parametric CAD models consistent with industrial design professional standards using Solidworks, an industry standard solid modeling software. Emphasis will be placed on how to translate 2D designs into 3 Dimensional models, focusing on design for manufacturing, understanding complex surfacing, and assemblies. Students will learn how to create photorealistic renderings using Keyshot. Prerequisite: INDD 302 with a semester grade of "C" or higher or instructor permission.

**INDD 378. Problems in Industrial Design: \_\_\_\_\_. 3 Credits.**

Individual and/or group research projects in one of several specific design areas which will be identified on a semester by semester basis. May be repeated for credit. Prerequisite: INDD 302 with a semester grade of "C" or higher or permission of instructor.

**INDD 446. Advanced Industrial Design Studio. 3 Credits.**

Continuation of INDD 284 and 302 but encompassing design problems of greater complexity including group research and problem solving assignments in advanced product and service design. Advanced techniques in problem solving, concept communication, visualization, and overall design expression will be demonstrated and explored. Prerequisite: INDD 302 with a semester grade of "C" or higher or instructor permission.

**INDD 448. Professional Industrial Design Studio Practices. 3 Credits.**

Continuation of Industrial Design studios, projects are longer requiring a high level of demonstrated design ability for successful completion. Issues regarding professional ethics, accountability, and responsibility to

public and client are discussed and implemented. Professional design, presentation, and visualization skills will be demonstrated and explored. Finished designs will include full production technical specifications. Prerequisite: INDD 446 with a semester grade of "C" or higher or instructor permission.

**INDD 508. Materials and Processes. 3 Credits.**

A study of modern materials, manufacturing processes, and construction methods applicable to the fields of industrial design and interior design. Design analysis of existing products, furniture, building components, and storage systems. Design assignments in furniture, storage systems, and interior space arrangements with emphasis on materials and construction. Field trips to area manufacturing and design facilities. Prerequisite: Permission of instructor.

**INDD 510. Human Factors and Ergonomics. 3 Credits.**

Introduction to the field of human factors appropriate to industrial, interior, interaction, and visual design. The course will cover a wide range of topics that fall underneath the umbrellas of cognitive ergonomics and physical ergonomics. This course aims to examine the cognitive and physical constraints of the human system and how design can address those issues. Prerequisite: INDD 302 with a semester grade of "C" or higher or instructor permission.

**INDD 512. Methods in Design. 3 Credits.**

Introduction to the study of methods of designing common to industrial, interior, and visual design. Evaluation methods (semantic differential), creativity methods (scenario writing), and task-oriented method: (PERT/CPM) will be considered in relation to design problems. Open to non-design students. Prerequisite: Corequisite: INDD 302 for industrial design majors or ENVD 200 for environmental design majors respectively. Consent of instructor for all other students.

**INDD 555. Portfolio. 3 Credits.**

Work directed toward maximizing the quality and effectiveness of the individual student's professional portfolio. Prerequisite: INDD 446 with a semester grade of "C" or higher or instructor permission.

**INDD 580. Senior Industrial Design Studio. 4 Credits.**

Course requires the negotiation and accomplishment of a comprehensive body of work, comprising independent research, ideation, refinement, detail technical specifications, renderings, and a working and tested prototype of your final design. A final report of the project is required documenting your design process, the depth and complexity of which are commensurate with expectations for entry-level professionals. Faculty may consider national or international competitions as appropriate substitutions for student derived briefs, where applicable. The nature and scope of the work (1-2 projects maximum), as well as details of anticipated accomplishment must be outlined by the student and approved by the instructor prior to the beginning of the second week of classes. In exceptional circumstances, projects may extend into both semesters, via INDD 581--this requires permission/negotiation with faculty and is to be declared as an aspiration at start of INDD 580. Prerequisite: INDD 448 and INDD 555 with semester grades of "C" or higher.

**INDD 581. Senior Industrial Design Studio II. 4 Credits.**

Course requires the negotiation and accomplishment of a comprehensive body of work, comprising independent research, ideation, refinement, detail technical specifications, renderings, and a working and tested prototype of your final design. A final report of the project is required documenting your design process, the depth and complexity of which are commensurate with expectations for entry-level professionals. Faculty may consider national or international competitions as appropriate substitutions for student derived briefs, where applicable. The nature and scope of the work (1-2 projects maximum), as well as details of anticipated accomplishment must be outlined by the student and

approved by the instructor prior to the beginning of the second week of classes. In exceptional circumstances, projects may be a continuation of those started in INDD 580--this requires permission/negotiation with faculty and is to be declared as an aspiration at start of INDD 580. Prerequisite: INDD 580 with a semester grade of "C" or higher or instructor permission.

**INDD 715. Industrial Design. 2-6 Credits.**

Research-oriented advanced study in industrial design. Prerequisite: Graduate major in industrial design or consent of instructor.

**INDD 815. Industrial Design. 2-6 Credits.**

Prerequisite: INDD 715.

## Design Courses

**PHTO 101. Fundamentals of Photography. 3 Credits.**

Open to students of all disciplines and experience levels, this course provides an introduction to the medium and language of photography. Basic DSLR camera operation and workflow will be accompanied by lectures, readings, and discussions regarding the historical and theoretical concerns of the medium. A digital camera with full manual controls is required - RAW capable preferred.

**PHTO 177. First Year Seminar: Picturing Place: Photographing Lawrence. 3 Credits.**

Are you new to KU, Lawrence, or even the Midwest? Would you like to know your new home better? The act of photographing - observing, participating, being present - can accelerate a connection to Place. In this digital photography class, each student will identify a specific community or environment within the Lawrence area to photograph repeatedly and meaningfully over the course of the semester. Class time will be spent reviewing and refining the work, discussing its context, introducing research methods for deeper understanding of the chosen topic, and gaining inspiration from relevant historic and contemporary models of photographic inquiry. By the end of the semester, the student will have strengthened both their visual literacy skills and their ties to their new surroundings. All photographic experience levels welcome.

**PHTO 200. Foundations in Photography: Digital. 3 Credits.**

Foundations in Photography (Digital) explores the technical and creative possibilities of digital photography from image capture to print and the web. This advanced introductory-level studio course covers manual camera operation with dSLR or mirrorless digital cameras, basic digital processing workflow with Adobe software, and inkjet print or digital output methods, accompanied by lectures, readings, and discussions regarding the historical and theoretical concerns of the medium. A digital camera with full manual controls and RAW capable is preferred; a limited number of cameras are available for check-out.

**PHTO 201. Photography I. 4 Credits.**

The first of the two-part foundational Photography sequence, this majors-only course provides students with a rigorous immersion into the formal, technical, and conceptual concerns and challenges of photography by way of the view camera. Embracing both the wet and digital darkrooms, students shoot and develop sheet film that is then utilized to produce both traditional and digital prints. Intermediate digital editing methods are introduced and explored. View cameras are provided. If this course is required under the major studies section on the degree requirement sheet, students must receive a grade of C (2.0) or higher to continue on to the next course in the sequence. Prerequisite: BDS 101 and PHTO 200 with grades of C (2.0) or higher.

**PHTO 202. Photography II. 4 Credits.**

The second of the two-part foundational Photography sequence, this advanced course builds upon PHTO 201 with additional emphasis

on color, RAW workflow, and advanced methods for digital capture, manipulation, editing, and compositing. Additionally, students work extensively with large-format inkjet printers to create custom ICC printing profiles. A digital SLR (RAW capable) camera with full manual controls is required. If this course is required under the major studies section on the degree requirement sheet, students must receive a grade of C (2.0) or higher to continue on to the next course in the sequence. Prerequisite: PHTO 201 with a grade of C or higher or permission of instructor.

**PHTO 205. Foundations in Photography: Darkroom. 3 Credits.**

This introductory studio explores the technical and creative possibilities of black & white film photography. PHTO 205 covers manual camera operation using 35mm film cameras, darkroom film developing, and silver-gelatin printing methods, accompanied by lectures, readings, and discussions regarding the historical and theoretical concerns of the medium. Cameras are provided for check-out. No darkroom experience necessary.

**PHTO 210. Understanding Photographs. 3 Credits.**

Understanding Photographs is a lecture-based course that focuses on developing a critical understanding of how images, paired with culture and society, generate meaning in both the historical and contemporary contexts. Open to students of all disciplines and experience level.

**PHTO 303. Photography I: View Camera. 4 Credits.**

The first of the two-part second-year foundational Photography sequence for Photography majors, this course provides students with a rigorous immersion into the formal, technical, and conceptual concerns and challenges of photography by way of the view camera. Embracing both the wet and digital darkrooms, students shoot and develop sheet film that is then utilized to produce both traditional and digital prints. Intermediate digital editing methods are introduced and explored. View cameras are provided. Prerequisite: Admission to the Photography Major or Minor and PHTO 200 or PHTO 205 with a semester grade of "C+" or higher or instructor permission. Priority will be given to Photography majors.

**PHTO 304. Photography II: Color Digital. 4 Credits.**

The second of the two-part foundational Photography sequence, this advanced course builds upon PHTO 303 with additional emphasis on color, RAW workflow, and advanced methods for digital capture, manipulation, editing, and compositing. Additionally, students work extensively with large-format inkjet printers to create custom ICC printing profiles. A digital SLR (RAW capable) camera with full manual controls is required. Prerequisite: Admission to the Photography major or minor and PHTO 303 with a semester grade of "C+" or higher, or instructor permission.

**PHTO 305. Photography III: The Moving Image. 4 Credits.**

This course serves as an introduction to the principles and challenges of photography as a time-based medium. Fundamental concepts of production are introduced and explored through hands-on exercises, class presentations and discussions, lectures, critiques, and individual and group projects. Prerequisite: Successful completion of PHTO 304 with a semester grade of "C" or higher.

**PHTO 313. Lighting Studio. 3 Credits.**

Lighting Studio is a fundamental course in awareness, modification, and control of light. Students work extensively with strobe and continuous light sources. Principles of natural and artificial light are introduced, explored, and applied through hands on assignments both in and out of the studio environment. Prerequisite: Admission to the Photography major or minor and PHTO 304 with a semester grade of "C" or higher or instructor permission.

**PHTO 314. The Moving Image. 3 Credits.**

This course serves as an introduction to the principles and challenges of photography as a time-based medium. Fundamental concepts of production are introduced and explored through hands-on exercises, class presentations and discussions, lectures, critiques, and individual and group projects. Prerequisite: Admission to the Photography major or minor and PHTO 304 with a semester grade of "C" or higher or instructor permission.

**PHTO 315. Experimental Processes. 3 Credits.**

Experimental Processes is an introduction to the understanding and production of image-based works utilizing experimental approaches and alternative processes in an interdisciplinary environment. Prerequisite: Admission to the Photography major or minor and PHTO 304 with a semester grade of "C" or higher or permission of instructor.

**PHTO 316. Professional Practices. 3 Credits.**

This course provides an introduction to standards and conventions with regards to professional photographic practice. Topics include portfolio development, copyright, contracts, grant/statement writing, presentation methods, and self-promotion. Prerequisite: PHTO 400 or PHTO 402 each with a semester grade of "C" or higher or instructor permission.

**PHTO 360. The Photobook. 3 Credits.**

This class introduces students to the many potentials of photographic imagery in book form, from the traditional monograph to the narrative or lyrical and experimental. Considerations of sequencing, context, text, design, materiality, meaning, and production methods will be explored through book examples, readings, discussions, and in-class exercises. The class will culminate in the design and production of a hand-made or on-demand book. Prerequisite: PHTO 304 with a grade of C or higher or declaration of the Undergraduate Certificate in Book Arts or admission to the Photography Minor or instructor permission.

**PHTO 400. Junior Seminar. 3 Credits.**

This junior-level seminar is focused primarily on the development of independent and collaborative projects through an on-going group critique with an emphasis on research and analysis. Learning is focused on personal development and other issues relevant to contemporary photographic practice through assigned readings, presentations, and group discussion. Prerequisite: PHTO 304 with a semester grade of "C" or better or instructor permission.

**PHTO 402. Photo Media Seminar. 3 Credits.**

This upper-level seminar is focused primarily on the development of independent and collaborative projects through on-going group critique with an emphasis on research and analysis. Learning is focused on personal development and other issues relevant to contemporary photographic practice through assigned readings, presentations, and group discussion. If this course is required under the major studies section on the degree requirement sheet, students must receive a grade of C (2.0) or higher to continue on to the next course in the sequence. May be repeated for credit. Prerequisite: PHTO 304 or instructor permission.

**PHTO 450. Senior Seminar. 3 Credits.**

This senior-level seminar is focused primarily on the further development of independent and collaborative projects through an on-going group critique with an emphasis on research and analysis. Learning is focused on personal development and other issues relevant to contemporary photography practice through assigned readings, presentations, group discussions, and rotating special topics. Prerequisite: PHTO 400 with a semester grade of "C" or higher or instructor permission.

**PHTO 500. Portfolio and Thesis. 4 Credits.**

Taken the final semester of study, this capstone course guides students through the research, development, and refinement of a final body of photographic work and appropriate supplemental materials. Methods

and strategies of presentation and dissemination are discussed and explored. Prerequisite: PHTO 450 with a semester grade of "C" or higher or instructor permission.

**PHTO 513. Advanced Lighting Studio. 3 Credits.**

A continuation of the skills and principles discussed in PHTO 313. If this course is required under the major studies section on the degree requirement sheet, students must receive a grade of C (2.0) or higher to continue on to the next course in the sequence. Prerequisite: PHTO 313 or instructor permission.

**PHTO 514. Advanced Moving Image. 3 Credits.**

A continuation of the skills and principles discussed in PHTO 314. If this course is required under the major studies section on the degree requirement sheet, students must receive a grade of C (2.0) or higher to continue on to the next course in the sequence. Prerequisite: PHTO 314 or instructor permission.

**PHTO 515. Advanced Experimental Processes. 3 Credits.**

A continuation of the skills and principles covered in PHTO 315. If this course is required under the major studies section on the degree requirement sheet, students must receive a grade of C (2.0) or higher to continue on to the next course in the sequence. Prerequisite: PHTO 315.

**PHTO 560. Special Topics in Photography: \_\_\_\_\_. 3 Credits.**

Special topics courses in Photography vary by instructor and provide additional opportunities for interdisciplinary research and advanced specialized study. A semester grade of "C" or higher is required in order for this course to count toward the "Major Studies Electives" component of the Photography major. May be repeated for credit. Prerequisite: PHTO 304 with a semester grade of "C" or higher or instructor permission.

## Design Courses

**VISC 177. First Year Seminar: \_\_\_\_\_. 3 Credits.**

A limited enrollment, seminar course for Freshmen, addressing current issues in Graphic Design. Course is designed to meet the critical thinking learning outcome of the KU Core. First-Year Seminar topics are coordinated and approved by the Office of Academic Programs and Experiential Learning. Prerequisite: Open to Freshmen only (less than 30 hours).

**VISC 200. Foundations in Typography. 3 Credits.**

Introduces the discipline, function, and tradition of typography as it relates to visual/verbal communication. Emphasis is on interrelationships of letter, word, line and page. Projects examine two-dimensional typographic space, sequence and information hierarchy. Prerequisite: BDS 101 and BDS 103 with semester grades of "C+" or higher or instructor permission.

**VISC 201. Visual Communication Design. 3 Credits.**

Presentation of fundamental concepts of visual and non-visual communication. Exploration of various theories of visual perception and visual communication with emphasis on reading visual images for meaning and making meaning through the construction of visual images and typography. A special laboratory section will include design thinking and making strategies and processes which are common to visual communication design from the handmade to the computer. This course is for non-Visual Communication majors. Prerequisite: Corequisite: BDS 102.

**VISC 202. Elements of Typography. 3 Credits.**

Introduces the discipline, function, and tradition of typography as it relates to visual/verbal communication. Emphasis is on interrelationships of letter, word, line and page. Projects examine two-dimensional typographic space, sequence and information hierarchy. Prerequisite: VISC 200 and ILLU 200 with semester grades of "C+" or higher or instructor permission.



**VISC 204. Principles of Visual Communication. 3 Credits.**

Visual communication problems involving the student in the translation of verbal concepts and design theory into visual images. This course focuses attention on the process of defining problems, gathering information, and formulating clear, powerful, and persuasive visual statements. Introduction to methods of research, idea generation, and image making will be an integral part of this course. Prerequisite: VISC 200 and ILLU 200 with semester grades of "C+" or higher or instructor permission.

**VISC 302. Typographic Systems. 4 Credits.**

Further exploration of typographic form and manipulation of variables which affect content; stresses the importance of typographic composition as an integral component of visual communication design. Projects examine advanced structures of typographic space, work-image structure, and typographic details and aesthetic. Prerequisite: VISC 202 and VISC 204 with semester grades of "C+" or higher or instructor permission.

**VISC 304. Designing Understanding. 4 Credits.**

Exploration of the relationships among people, places, and the visual objects and information they use. Attention on the different roles of the designer as observer, empathizer, communicator and experience builder. Introduction to information design processes and procedures of understanding by ordering data into useful and persuasive information tools and experiences. Various methodologies will be explored for visualizing information for clarity, resonance, and editorial voice with special attention to the relationships among audience and context in the creation of meaning. Prerequisite: VISC 202 and VISC 204 with semester grades of "C+" or higher or permission of instructor.

**VISC 310. Letterpress. 3 Credits.**

This course concentrates on the traditional methods of hand typesetting, using the Department of Design's collection of lead and wood type. Learn how to use a pica rule, composing stick, leading, spacing material, the California Job Case, mix ink and operate a Vandercook proof press and C&P or Galleys. Be inspired by visits to Special Collections. Emphasis will be placed on the acquisition of skills and the creative use of type and images. Prerequisite: BDS 101 with a semester grade of "C+" or higher or instructor permission.

**VISC 360. The Photobook. 3 Credits.**

This class introduces students to the possibilities of visual communication through photobook design, from the traditional monograph to the narrative or lyrical and experimental. Considerations of sequencing, context, text, materiality, meaning, and production methods will be explored through book examples, readings, discussions, and in-class exercises. Visual Communication students will partner with a photographer in the class to design and produce a hand-made or on-demand book. Prerequisite: VISC 304 with a semester grade of "C+" or higher or declaration of the Undergraduate Certificate in Book Arts or instructor permission.

**VISC 402. Designer as Author. 3 Credits.**

Building from the structures and approaches of VISC 302, the course is a research-based examination of traditional, non-traditional and expressive uses of the typographic medium. Projects emphasize the student as both content generator as well as designer and include development of text + image narrative, word as image and typographic "voice" while further refining technical proficiency. Prerequisite: VISC 302 and VISC 304 with semester grades of "C+" or higher.

**VISC 404. Designing for Social Interactions. 3 Credits.**

Introduces the discipline of designing for dynamic media (i.e., internet, on screen, multi-media.) Emphasis will be placed on concept development and on the fundamental principles of information hierarchy, user experience, navigation strategies, site development and site architecture. Projects, lectures and tutorials will provide a working knowledge of current

tools and techniques, while exploring the issues of narrative structure, rhythm, space, animation, sound, and video. Prerequisite: VISC 302 and VISC 304 with semester grades of "C+" or higher.

**VISC 405. Designing Brand Identity. 3 Credits.**

A brand's visual identity expresses an organization's big idea of what it is, how it lives in the world, who it serves and why. Simply put, it identifies, explains and persuades. A visual brand identity needs to engage and communicate to specific audiences while differentiating the brand from its competition. This class will explore the creation of brand identity elements such as logos, icons and symbols, as well as how these can be organized into a "system of parts" that can communicate across multiple applications. Additionally, logo, symbol and iconography workflow and methods of brand identity ideation and conceptualization will also be explored. Prerequisite: Successful completion of VISC 302 and VISC 304 with semester grades of "C+" or higher and successful completion of the Second Year Full Review or instructor permission.

**VISC 410. Digital Letterpress. 3 Credits.**

In this course students will explore the possibilities that digital technologies offer to the letterpress printer, including laser cutting and polymer platemaking. Students will learn how to prepare digital files to make negatives, and to process and print polymer plates on the Vandercook press. Emphasis will be placed on creativity and craft. Starting with the simplest of techniques, projects will grow in increasing technical and aesthetic complexity. No previous letterpress experience is required. Knowledge of Adobe InDesign and Illustrator is essential. Prerequisite: Permission of instructor.

**VISC 414. Publication and Editorial. 3 Credits.**

Exploration of topics dealing intensively with editorial concept and format organization. Projects stress advanced problems in the integration of text and image through the development of complex and variable structures. Emphasis on thorough researching of content and audience as well as understanding of production/execution implications of solutions. Prerequisite: VISC 302 and VISC 304 with semester grades of C+ or higher or instructor permission.

**VISC 415. Motion Graphics. 3 Credits.**

Introduction to the elements, principles and history of motion design. Emphasis on the conceptualization, planning and storyboarding of time-based media with respect to some specific, clearly stated aesthetic and/or communicative purpose. Students will examine methods for synthesizing still & moving imagery, typography and audio, in motion, using Adobe After Effects in combination with other software such as Final Cut Pro, Illustrator and Photoshop. Prerequisite: VISC 302 and VISC 304 with semester grades of "C+" or higher or instructor permission.

**VISC 420. Exhibition Design. 3 Credits.**

This course will explore how exhibitions are conceptualized, designed and made. It will look at the role of curators, exhibition designers, graphic designers as well as the audience of cultural institutions. Prerequisite: VISC 302 and VISC 304 with semester grades of "C+" or higher or instructor permission.

**VISC 425. Environmental Graphics. 3 Credits.**

This course will examine core principles and practices of environmental graphic design. Many of these concepts will be concerned with the visual aspects of wayfinding, communicating identity and information, and shaping the idea of place. Some of the topics discussed will include: signage, exhibit design, identity graphics, pictogram design, mapping, civic design and themed environments. Prerequisite: VISC 302 and VISC 304 with semester grades of "C+" or higher or instructor permission.

**VISC 435. Book Arts. 3 Credits.**



Producing books in editions is a complex undertaking. Students work in teams to create or compile content of their choosing, then edit, design, and bind their own books in a small edition. The class combines both traditional letterpress technology and digital interface for the creation of text and image. Each student receives two copies of the team's final book, one copy is archived in Special Collections at the Spencer Research Library. Prerequisite: BDS 101 with a semester grade of "C+" or instructor permission.

**VISC 440. Bookmaking. 3 Credits.**

Students will learn to make a variety of book structures and enclosures, from historical to contemporary. Prototypes and models, as well as comprehensive notes and instructions will provide the student with a library of bindings for future reference. Students will document paper that is made in class and create a record for themselves, other students, and the Department of Design. Prerequisite: BDS 101 with a semester grade of "C+" or higher or instructor permission.

**VISC 455. Designing Information. 3 Credits.**

Making preliminary visualizations, models, and prototypes. Examines words, diagrams, type, and sequencing to restructure messages so that they tell a story more effectively. Editing images to make messages clear, unambiguous and understandable by their intended audience(s). Designing the appearance of an information product so that users can find what they want and understand it when they get there. Prerequisite: VISC 302 and VISC 304 with semester grades of "C+" or higher or instructor permission.

**VISC 520. Designing for Change. 4 Credits.**

Exploration of branding, service and interaction design opportunities that respond to real-life complexity: audiences, systems and contexts. Introduces business and design thinking strategies associated with brand development and the idea that design plays a vital role in our local, national, and global society and well-being. Emphasis on the methods of thinking and research which precede the making of design as well as the importance of writing and verbal presentation to the visual communication design profession. Prerequisite: VISC 404 and VISC 405 with semester grades of "C" or higher or instructor permission.

**VISC 525. Senior Problems. 3 Credits.**

Goal-oriented graphic design problem-solving with emphasis on research, analysis, and synthesis of complex visual problems. Will allow for in-depth study of professional design issues and topics; provides a forum for multi-disciplinary collaboration with related professional disciplines. May be repeated for credit. Prerequisite: VISC 530 with a semester grade of "C" or higher, or instructor permission.

**VISC 530. Portfolio. 4 Credits.**

Instruction in the organization and presentation of a professional quality visual portfolio. Readings, feedback and online collaborations will focus on the development of a focused portfolio consistent with the individual student's pursuits. Prerequisite: VISC 402 and VISC 520 with semester grades of "C" or higher or instructor permission.

**VISC 560. Special Topics in Visual Communication: \_\_\_\_\_. 3 Credits.**

A study of different topics in different semesters in a special area of visual communication. Entry by permission of instructor. May be repeated for credit.

**VISC 706. Graphics. 3-6 Credits.**

**VISC 710. Letterpress. 3 Credits.**

This introductory course in letterpress will instruct the student in methods for printing from moveable type and other type-high surfaces. The discipline will be explored from a historic as well as artistic perspective. Emphasis will be placed on the acquisition of skills and vocabulary, and

the creative use of type and techniques. Prerequisite: Graduate student status and instructor permission.

**VISC 712. Letterpress II: Form and Content. 3 Credits.**

Artists' books are books created as original works of art that push the boundaries of the traditional book. This course will focus on the interdependence of form and content through studio work, readings, and the examination of historical and contemporary models. Students will explore a wide range of book structures from basic to innovative. Final outcomes will combine images, hand set type, and digital processes to create both one-of-a-kind, and limited edition artists' books. VISC 710 is recommended, but not required. Open to all majors. Prerequisite: Permission of the instructor.

**VISC 735. Book Arts. 3 Credits.**

Combines wide range of traditional letterpress and digital processes for type and image for individually determined student book projects. Projects will culminate in a small printed and bound edition. Prerequisite: Graduate student status and instructor permission.

**VISC 740. Bookmaking. 3 Credits.**

This course will seek to acquaint the student with the origins of the book, paper, and pre-paper writing surfaces. Prototypes and models, as well as comprehensive notes and instructions will provide the student with a library of structures and variations for future reference. Students will document paper that is made in class and create a record for themselves, other students, and the School of Architecture & Design. Prerequisite: Graduate student status and instructor permission.