ARCHITECTURE (ARCH)

Courses

ARCH 265 Environmental Systems 1 Credits: 3
This course will focus on the techniques of passive heating and cooling via a better understand of sun, wind and other environmental factors that affect the comfort of buildings. The impact of passive design on sustainability, climate and health will also be covered, including discussion of LEED rating systems.
Prerequisites: ENV-DSN 203

ARCH 266 Environmental Systems 2 Credits: 3
This course will build upon the information learned in Environmental Systems 1, but with a focus on mechanical means of heating, cooling and ventilating buildings. Various methods of HVAC systems will be explored, with a special focus on how they should supplement (not replace) passive design techniques.
Prerequisites: ARCH 265

ARCH 303 Design Studio 5 Credits: 5
Building upon the foundation of your second-year design coursework, the third-year fall studio will continue to develop your design process, especially as it relates to non-residential architecture in urban settings. Special emphasis will be placed on building structure, cladding systems, sustainability and adherence to building safety codes.
Prerequisites: ENV-DSN 302

ARCH 304 Design Studio 6 Credits: 5
The third-year spring studio will continue to develop your design process, especially as it relates to non-residential architecture in urban settings. Special emphasis will be placed on building structure, cladding systems, sustainability and adherence to building safety codes. Case studies, field trips and site research skills will also be a strong focus, especially in areas outside the Kansas City metropolitan area.
Prerequisites: ARCH 303

ARCH 348 Building Structures 2 Credits: 4
This course continues the development of your structural knowledge through an analysis of contemporary structural systems and their components, including wood, timber, steel, concrete, masonry, and hybrid structures. Discussion of building code requirements for structure, general guidelines for building structures, including appropriate application, and methods for schematic estimation of structural member sizing. Advanced understanding of how gravity and lateral forces are propagated through a structural frame from load to building foundation.
Prerequisites: ENV-DSN 347

ARCH 374 Digital Architecture 3 Credit: 1
Having already covered 3D modeling programs and rendering tools in Digital Architecture 12, this course will focus primarily on Revit as a development and documentation tool.
Prerequisites: ENV-DSN 274, ENV-DSN 373

ARCH 401 Professional Support Elective Credits: 3
The intention of a professional support elective is to foster a deeper understanding of a wide variety of potential topics, including but not limited to: building design and typology, building construction methods, sustainability, design theory and skills to improve one's design process. The specific topic of a professional support elective will be determined by the professor's area of research.
Prerequisites: ENV-DSN 302

ARCH 405 Design Studio 7 Credits: 5
The fourth-year fall studio, while continuing to emphasize building design and technical development, will have a special focus on international architecture and urban planning. The development, density and walkability of non-Western cities will be explored, especially as it relates to sustainability and creating diverse, vibrant communities. Although an on-campus studio section will be offered, participating in the Study Abroad program is highly encouraged.
Prerequisites: ARCH 304

ARCH 425 Professional Practice Credits: 3
This course will give a broad overview of the architect's contractual and professional relationships with clients, engineers, developers and contractors. City building codes and zoning ordinances will be studied to better understand their use in design development. The AIA (American Institute of Architects) Contract Documents will be reviewed for their definitions of work to be performed, performance standards and legal implications. We will also spend time with the organizational systems of the Construction Specifications Institute, and how they inform construction document packages.
Prerequisites: ARCH 405, ARCH 491

ARCH 434 Building Construction Systems 2 Credits: 3
This course will delve deeper into the topics of concrete, steel and heavy timber frames covered in BCSA 1, as well as the wall assemblies and applications required for a wide variety of cladding materials. Special emphasis will be place on best practices for sustainability.
Prerequisites: ENV-DSN 433

ARCH 475 Project Programming Credits: 3
In preparation for your spring Design Studio 10, this fall course will be focused on the development of a program for your specific thesis project. Once you have completed the program document, you will design and document the project for Design Studio 10. Focus will be on research related to site selection, building typology, material selection and sustainability goals. The final product will be a bound copy of your research and thesis program.
Co-requisites: ARCH 495.

ARCH 476 Design Communications Credits: 3
Seen as a companion course to Project Programming, this course will focus on the production of a written and illustrated appendix to your Project Programming book, documenting your design process, design intentions and the evolution of your building design.
Prerequisites: ARCH 475

Co-requisites: ARCH 496.

ARCH 491 Internship Credits: 10
Your architectural education takes place partly in the academic realm and partly in the professional realm. Thus, this required internship is a critical part of your overall development as an aspiring architect. The primary focus of the internship program is to develop a better understanding of how architectural offices operate: how to run a business, how to market for new work, how to run the design process and construction of projects efficiently and profitably, how to coordinate with consultants and how to work well with a professional design team.
Prerequisites: ARCH 266, ARCH 374, ARCH 348, ARCH 405, ARCH 434.

ARCH 495 Design Studio 9 Credits: 5
The fifth-year fall studio is seen as a "capstone" studio, meaning that your goal is to demonstrate a comprehensive understanding of the design process, building code, structure and environmental systems gleaned from your previous four years of education. We will focus on a single project over the course of the semester, and develop the design into a set of professional working drawings. In addition to traditional floor plans, elevations and sections, you will also be asked to develop reflected ceiling plans (with lighting and schematic ductwork), enlarged detail plans (stairs and restrooms), wall sections and construction details.
Prerequisites: ARCH 405, ARCH 491

ARCH 496 Design Studio 10 Credits: 5
During the course of this spring fifth-year design studio, you will design, develop and document the thesis project you planned in Project Programming. A special emphasis will be place on the professionalism of your verbal and visual presentations. Each studio will have a team of professional advisors who will be present for each of your critiques over the course of the semester.
Prerequisites: ARCH 495, ARCH 475