

Architecture (ARC)

ARC 1010 Classical Architecture Workshop 3

Provides an understanding of the fundamental principles and language of architecture. Instructs in the design principles that inform classical architecture which are found in the order, proportion, archetypal geometry, and patterns found in nature and the cosmos. Creates a solid foundation for learning and applying architecture's vocabulary and syntax to compose poetic and meaningful buildings.

ARC 2110 Architecture Studio I 4

* Prerequisite(s): EGDT 1020 and ARC 1010 with a grade of C- or higher

Introduces the classical theories of architectural language, design, and craftsmanship in a hands on studio setting. Focuses on the classical vocabulary of the built environment. Investigates the forms, spaces, and ordering systems of design. Produces hand drawings in orthographic, perspective, and axonometric views. Illustrates light through shade and shadows. Applies understanding of classical building forms in the design of increasingly complex projects. Develops skills in traditional rendering and presentation techniques.

ARC 2210 Architecture Studio II 4

* Prerequisite(s): EGDT 1020, ARC 1010, and ARC 2110 with a grade of C- or higher

Exposes students to architectural site analysis and the process of evaluating a particular locations physical, historical, and cultural characteristics to inform design. Develops a building project of significant merit by measuring and documenting a selected site. Analyzes the complex elements of a site such as varying topography, watercourses, vegetation, habitats, weather patterns, and historical data to guide design decisions. Researches elements to determine the building placement, orientation, form and material selection.

ARC 2220 Construction Documents and Specifications 3

* Prerequisite(s): EGDT 1020 and EGDT 1100 with a grade of C- or higher

Prepares for the Construction Documents Technician (CDT) industry certification using standard software to complete working drawings for the architectural, civil, MEP, and structural industries. Develops a project manual and outline specifications, which coordinate with the working drawings of a commercial design.

ARC 3110 Architecture Studio III 6

* Prerequisite(s): Matriculation to the B-Arch Program and University Advanced Standing.

Immerses students into the architecture studio culture and a design thinking environment. Emphasizes the fundamental design skills with attention on site and precedent. Requires research of a site and program necessary to develop cultural, theoretical, environmental, and historical contexts. Follows a Project based approach with a final presentation to a professional jury.

ARC 3120 Architectural Graphic Communication 3

* Prerequisite(s): Matriculation to the B-Arch Program and University Advanced Standing

Enables the student to confidently communicate design ideas to others. Includes involvement in producing complex 3D models and renderings of various project types. Combines traditional drawing techniques and contemporary software to complete assignments and projects.

ARC 3130 Codes and Construction Law 3

* Prerequisite(s): EGDT 2100, EGDT 2610 both with a grade of C- or higher and University Advanced Standing.

Explores the modern building codes and how they affect building design and construction. Examines written specifications and the various jurisdictional requirements for architectural works. Provides in-depth information about the preparation and content necessary for a set of construction documents. Defines and explains the several types of construction contracts, bidding requirements, methods of specifying, substitutions, instructions, and warranties.

ARC 3210 Architecture Studio IV 6

* Prerequisite(s): ARC 3110 with a grade of C- or higher and University Advanced Standing.

Engages in the essential pre-design processes of a project type. Includes the assessment of client and user needs, space analysis, and examination of project site. Follows a project based approach with a final presentation to a professional jury.

ARC 3220 Passive Environmental Systems 3

* Prerequisite(s): Matriculation to the B-Arch degree program, University Advanced Standing.

Examines the principles of environmental systems design and the building envelope's affect on occupant comfort. Investigates passive heating and cooling strategies, natural ventilation, solar geometry, daylighting, climate considerations, thermal comfort, and mechanical systems.

ARC 3230 Global History of Architecture to 1700 WE 3

* Prerequisite(s): Matriculation to the B-Arch degree program, University Advanced Standing.

Explores the history of architecture and urbanism from a global perspective, beginning with the first settlements to roughly 1700 AD. Analyzes buildings and their surroundings through different methods of interpreting history. Presents that architecture is the result of complex interrelationships dealing with aesthetic, cultural, contextual, symbolic, religious, social, economic, political, technological, behavioral, and ecological issues.

ARC 4110 Architecture Studio V 6

* Prerequisite(s): ARC 3210 with a grade of C- or higher and University Advanced Standing.

Produces an architectural design as part of an interdisciplinary team. Integrates a complex architectural program and associated needs of a user. Utilizes collaboration between disciplines such as mechanical, civil, and electrical engineering. Follows a project-based approach with a final presentation to a professional jury.

ARC 4120 Active Environmental Systems 3

* Prerequisite(s): ARC 3220 and University Advanced Standing

Investigates the principles of environmental systems design and the building envelope's affect on occupant comfort and life safety. Investigates HVAC systems, indoor air quality, lighting, communication, security, fire protection, acoustics, vertical transportation, electrical, and plumbing systems.

ARC 4130 Global History of Architecture Since 1700 WE 3

* Prerequisite(s): ARC 3230 with a grade of C- or higher. Matriculation to the B-Arch degree program, and University Advanced Standing

Explores the history of architecture and urbanism from a global perspective beginning with the first settlements since 1700 AD. Analyzes buildings and their surroundings through different methods of interpreting history. Explores architecture's complex interrelationships dealing with aesthetic, cultural, contextual, symbolic, religious, social, economic, political, technological, behavioral, and ecological issues.

Course Descriptions

ARC 4210

Architecture Studio VI

6

* Prerequisite(s): ARC 4110 with a grade of C- or higher and University Advanced Standing

Immerses students in the design of an architectural work to fulfill a community need. Encourages networking with community leaders and citizens. Employs project components such as client interviews, research methods, and interdisciplinary study. Explores a complex architectural program and associated needs of the community.

ARC 4220

Building Envelope and Science

3

* Prerequisite(s): ARC 4120 with a grade of C- or higher and University Advanced Standing

Introduces modern architectural materials, methods of construction, and building enclosures including steel, concrete, curtain walls, high-performance materials, and thermal and moisture barriers. Evaluates the inclusion of sustainable systems to save energy and reduce the carbon footprint in building construction.

ARC 4230

Capstone Project Research

3

* Prerequisite(s): ARC 4210 with a grade of C- or higher and University Advanced Standing

* Corequisite(s): ARC 4510, ARC 4540

Applies investigative, pre-design, and research skills towards an independent capstone project. Integrates critical thinking while developing an architectural building program, assessing client-user needs, selecting a project site, analyzing environmental and climatic concerns, understanding building code requirements, analyzing the immediate site context and historic fabric, and planning for site specific zoning regulations.

ARC 4510

Architecture Studio VII

6

* Prerequisite(s): ARC 4210 with a grade of C- or higher and University Advanced Standing

Applies design skills through an architectural work which integrates critical and abstract thinking. Researches building systems, life safety considerations, building envelope, financial, cultural & environmental balance, and construction documentation skills.

ARC 4520

Architectural Theory

3

* Prerequisite(s): ARC 3210, with a grade of C- or better and University Advanced Standing

Surveys contemporary architectural thought and theory. Focuses on key figures, movements, and texts. Provides an overview of the principal theories that have informed or undermined architecture of the past four decades. Considers the changing role of theory with respect to practice. Provides a set of questions, techniques, and tools for criticism and self-reflection.

ARC 4530

Culture and Behavior in Architecture

3

* Prerequisite(s): ARC 4110 with a grade of C- or better and University Advanced Standing

Examines the relationship between architecture, culture, history, economics, and humanity. Explores varying cultures and human behaviors and how they represent and manifest themselves in the built environment.

ARC 4540

Architecture Professional Practice

3

* Prerequisite(s): ARC 4210 with a grade of C- or higher and University Advanced Standing

* Prerequisite(s) or Corequisite(s): ARC 4510, ARC 4230

Examines the fundamentals of running and managing an architectural firm including project management, finances, working with consultants, stakeholder considerations, and ethical issues. Prepares for the Architectural Registration Exam (ARE).

ARC 459R

Special Topics in Architecture

3

* Prerequisite(s): Matriculation to the B-Arch degree program and University Advanced Standing.

Provides exposure to emerging technologies, techniques of design and construction, and the craft of building lasting high quality structures. Varies each semester with a different topic. May be repeated for a maximum of 6 credits towards graduation.

ARC 4610

Architecture Studio VIII

7

* Prerequisite(s): ARC 4510 with a grade of C- or higher and University Advanced Standing

Applies design skills through an architectural work which integrates critical and abstract thinking. Researches building systems, life safety considerations, building envelope, financial, cultural and environmental balance, and construction documentation skills.