

ARCHITECTURE (ARCH)

ARCH 101 **INTRODUCTION TO ARCHITECTURE AND ENVIRONMENTAL DESIGN** **1 UNIT**

Pass/No Pass or Grade is Allowed

Recommended Concurrent Enrollment: ARCH 110, ANTH 112, ARCH 115, or ARCH 150.

Lecture 1 hour, laboratory 1 hour

Offered: FALL, SPRING

Develops an understanding of the built environment. Explores architectural design, history, theory, and practice. Provides an overview of architectural representation, model-making techniques, and design psychology. Includes the study of urban planning and interior design. [D; CSU]

ARCH 110 **FREEHAND DRAWING FOR DESIGNERS** **2 UNITS**

Grade Only

Fee: \$5

Lecture 1 hour, laboratory 3 hours

Offered: FALL, SPRING

Introduces drawing in media including, but not limited to, graphite pencil, felt marker, and ink. Provides a study of drawing fundamentals, sketching, and presentation drawings from elements found in the built environment and from nature. [D; CSU; UC]

ARCH 112 **ARCHITECTURAL RENDERING** **3 UNITS**

Grade Only

Fee: \$15

Lecture 2 hours, laboratory 4 hours

Offered: FALL, SPRING

Explores the theory and practice of the development of architectural renderings. Studies and practices the use of various media and techniques involved. Provides an approach to drawing in color in order to efficiently and effectively illustrate design ideas. Introduces the use of digital media as an architectural visualization tool. [D; CSU; UC]

ARCH 114 **ADVANCED ARCHITECTURAL RENDERING** **3 UNITS**

Pass/No Pass or Grade is Allowed

Recommended Preparation: ARCH 112 or equivalent.

Lecture 2 hours, laboratory 4 hours

Offered: ALL

Advanced rendering techniques using color marker, color pencil, and exploration of other medium. Portfolio preparation. [D; CSU]

ARCH 115 **GRAPHIC COMMUNICATION FOR ARCHITECTS AND DESIGNERS** **3 UNITS**

Grade Only

Fee: \$20

Lecture 2 hours, laboratory 4 hours

Offered: FALL, SPRING

Explores the fundamental technical aspects and basic theories of architectural graphic representation. Includes the study of orthographic and axonometric projection, perspective drawing, shade, shadow, tonal value, diagramming, typography and architectural presentation development through various media and techniques. [D; CSU; UC]

ARCH 120 **PORTFOLIO DEVELOPMENT FOR ARCHITECTS AND DESIGNERS** **1 UNIT**

Grade Only

Recommended Preparation: ARCH 115 or ARCH 150 or equivalent.

Recommended Concurrent Enrollment: ARCH 252 and ARCH 253 (may be taken previously).

Lecture 1 hour, laboratory 1 hour

Offered: SPRING

Establishes an understanding of the process of developing, designing, and assembling a portfolio of creative work. Studies techniques of: curation, visual structure, organizational strategies, representational strategies, editing, text, and delivery methods as related to an architectural or design portfolio. [D; CSU; UC]

ARCH 150 **ARCHITECTURAL DESIGN I** **5 UNITS**

Grade Only

Fee: \$20

Lecture 3 hours, laboratory 6 hours

Offered: FALL, SPRING

Introduces the theories and principles of architectural design and the development of problem solving skills as related to three-dimensional spatial design problems. Emphasizes drawing and modeling as a means to design. [D; CSU; UC]

ARCH 151 **ARCHITECTURAL DESIGN II** **3 UNITS**

Grade Only

Fee: \$20

Prerequisite: ARCH 150 or equivalent.

Corequisite: ARCH 165 (may be taken previously).

Lecture 1.50 hour, laboratory 4.50 hours

Offered: SPRING, SUMMER

Explores theories and principles of design as applied to the development of architectural space. Analyzes architectural form through three-dimensional modeling. Studies methods and problem-solving strategies with application to architectural design. [D; CSU; UC]

ARCH 165
ARCHITECTURAL PRACTICE I
3 UNITS

Grade Only

Fee: \$7

Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.

Lecture 2 hours, laboratory 4 hours

Offered: SPRING, SUMMER

Introduces principles of building construction and technology. Provides an overview of the major systems of a building. Includes construction document preparation, architectural drafting, and detailing. [D; CSU]

ARCH 200
INTRODUCTION TO COMPUTER AIDED DESIGN
3 UNITS

Grade Only

Recommended Preparation: ARCH 150 or equivalent.

Lecture 2 hours, laboratory 4 hours

Offered: FALL

Introduces computer aided design as applied to the architectural field - using AutoCAD. [D; CSU]

ARCH 201
BEGINNING BUILDING INFORMATION MODELING
3 UNITS

Pass/No Pass or Grade is Allowed

Fee: \$15

Recommended Preparation: ARCH 165 or equivalent; RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.

Lecture 2 hours, laboratory 4 hours

Offered: SPRING

Introduces Building Information Modeling (BIM), an integrated process built on coordinated information for architectural projects. Improves drawing coordination, enhances accuracy, reduces waste, and enables better-informed decisions. Develops skills in the architectural field using Revit Architecture building information modeling software. [D; CSU]

ARCH 204
ADVANCED BUILDING INFORMATION MODELING
3 UNITS

Grade Only

Prerequisite: ARCH 201 or equivalent.

Lecture 2 hours, laboratory 4 hours

Offered: ALL

Continues the study of ARCH 201. Develops advanced skills in the use of Autodesk's Revit Architecture as applied to architectural design best office practices. [D; CSU]

ARCH 205
ADVANCED ARCHITECTURAL CAD
3 UNITS

Grade Only

Prerequisite: ARCH 200 or equivalent.

Lecture 2 hours, laboratory 4 hours

Offered: ALL

Continues the study of ARCH 200 for students who wish to develop advanced CAD skills as applied to the architectural field using AutoCAD. [D; CSU]

ARCH 208
WORLD ARCHITECTURE I
3 UNITS

Grade Only

Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.

Lecture 3 hours

Offered: FALL, SPRING

Studies the formal, cultural, aesthetic, and sociopolitical dimensions of architecture from prehistory to the beginning of the Industrial Revolution in the 1750s. Provides an understanding of the influences and the forces that most critically impact the design and building practices of past cultures and societies. [D; CSU; UC]

ARCH 209
CONSTRUCTION SURVEYING
3 UNITS

Grade Only

Lecture 1 hour, laboratory 5 hours

Offered: ALL

Basic surveying as related directly to building construction. Use of the standard surveying instruments in the measuring and laying out of buildings, topographic surveying, and the establishing of levels and profiles. [D; CSU]

ARCH 210
WORLD ARCHITECTURE II
3 UNITS

Grade Only

Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.

Lecture 3 hours

Offered: FALL, SPRING

Studies the formal, cultural, aesthetic, and sociopolitical dimensions of architecture from the mid-eighteenth century to the present day. Provides an understanding of the influences and the forces that most critically impact the design and building practices of both the past and the present. [D; CSU; UC]

ARCH 222
ENVIRONMENTAL CONTROLS
2 UNITS

Grade Only

Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.

Lecture 2 hours

Offered: SPRING

Introduces the physical relationship between man and his environment. Studies the physical phenomena (heat, light, and sound) as it relates to our existence and comfort. Introduces fundamentals of climate-responsive design of the built environment and study of Green Building Codes. [D; CSU]

ARCH 235
STRUCTURES
3 UNITS

Grade Only

Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes; MATH 62 or MATH 72 or equivalent or through the Southwestern College multiple measures placement processes.

Lecture 3 hours

Offered: SPRING

Analyzes forces on building structures. Studies static equilibrium, shear, bending moment diagrams, stress and strain relationships, and deformation in structures. [D; CSU]

ARCH 252
ARCHITECTURAL DESIGN III
3 UNITS

Grade Only

Fee: \$20

Prerequisite: ARCH 151 or equivalent.

Corequisite: ARCH 265.

Lecture 1.50 hour, laboratory 4.50 hours

Offered: FALL

Continues the study of the principles of architectural design. Studies analysis techniques as applied to space adjacency, contextual issues of architectural design, and the meaning of architectural form. [D; CSU; UC]

ARCH 253
ARCHITECTURAL DESIGN IV
3 UNITS

Grade Only

Fee: \$25

Prerequisite: ARCH 252 or equivalent.

Corequisite: ARCH 266.

Lecture 1.50 hour, laboratory 4.50 hours

Offered: SPRING

Continues the study of the principles of architectural design. Applies design techniques and strategies to the solution of an architectural design problem. Integrates building code requirements to an architectural solution. [D; CSU; UC]

ARCH 265
ARCHITECTURAL PRACTICE II
3 UNITS

Grade Only

Fee: \$10

Prerequisite: ARCH 165 or equivalent.

Lecture 2 hours, laboratory 4 hours

Offered: FALL

Studies the processes of building from design through construction. Explores the application of building/green codes and standards to the design and construction of a building. Includes a study of building nomenclature, construction technology, and structural components. [D; CSU]

ARCH 266
ARCHITECTURAL PRACTICE III
2 UNITS

Grade Only

Fee: \$10

Prerequisite: ARCH 265 or equivalent.

Lecture 1 hour, laboratory 3 hours

Offered: SPRING

Continues the study of ARCH 265. Explores building construction processes including the study of thermal and moisture protection, mechanical, electrical, and plumbing building systems. Applies building/green codes and standards to building construction. Studies construction documents, AIA contracts, and construction management with application of the critical path method. [D; CSU]

ARCH 270
ARCHITECTURE LABORATORY
1-3 UNITS

Pass/No Pass or Grade is Allowed

Fee: \$6

Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.

Laboratory 9 hours

Offered: ALL

Provides a supplemental laboratory to the architecture design studios and practice courses. Covers the safe use of hand and power tools used in the model shop. Includes the application of design principles and problem solving scenarios to directed projects and presentation strategies as applied to directed projects. [D; CSU]

ARCH 299
INDEPENDENT STUDY
1-3 UNITS

Pass/No Pass or Grade is Allowed

Limitation on Enrollment: Eligibility for independent study.

Lecture 3 hours

Offered: ALL

Individual study or research in some area of architecture of particular interest to the student and not included in regular courses of the college. [D; CSU]