# ARCHITECTURE (ARCH)

**ARCH 101** **4.0 UNITS**
**Introduction to Civil Engineering and Architecture**
Class Hours: 3.0 Lecture / 3.0 Laboratory
Total Contact Hours: 54 Lecture / 54 Laboratory

This course introduces the student to the design and construction practices of residential and commercial building projects, design teams and teamwork, communication methods, building codes and ordinances, engineering design calculations, and technical documentation. Students will use industry standard 3D architectural modeling software to facilitate site and building design and technical documentation. Students will use the activity-project-problem-based learning approach to develop their interpersonal skills and creative abilities while applying math, science, and technology knowledge to solve design problems and communicate their solutions.
Transfer Credit: CSU

**ARCH 110** **3.0 UNITS**
**Introduction to Architecture and Environmental Design**
Class Hours: 3.0 Lecture
Total Contact Hours: 54 Lecture

This course provides an overview of the architectural profession allowing the student to make an informed career choice. Topics include professional ethics, licensing and educational requirements, career opportunities in related fields, typical organizational structure of architectural firms, legal requirements, and a review of contemporary issues facing the profession.
Transfer Credit: CSU; UC*
*UC: credit limits may apply: Any or all of the following architecture courses - ARCH 110, 112, 122, 212 - combined with ART 120 and ART 121: maximum credit, 18 units.

**ARCH 111** **3.0 UNITS**
**Architectural Drafting and Design I**
Class Hours: 2.0 Lecture / 4.0 Laboratory
Total Contact Hours: 36 Lecture / 72 Laboratory

This course is an introduction to the preparation of architectural working drawings. The course includes drawing conventions, design considerations, and the relationship between different types of architectural drawings, specifications, and construction techniques. Emphasis is placed on residential construction and commercial buildings. The theory of computer-aided drafting is included.
Transfer Credit: CSU

**ARCH 112** **3.0 UNITS**
**History of Architecture**
Class Hours: 3.0 Lecture
Total Contact Hours: 54 Lecture

This course is a survey of the history of architecture from the birth of civilization to the present. Emphasis is placed upon the understanding of the technological, sociological, aesthetic, and artistic influences which determine our built environment. This course will familiarize students with the different architectural periods as well as their characteristic design elements and significant architects.
Transfer Credit: CSU; UC*
*UC: credit limits may apply: Any or all of the following architecture courses - ARCH 110, 112, 122, 212 - combined with ART 120 and ART 121: maximum credit, 18 units.

**ARCH 113** **4.0 UNITS**
**Building Codes**
Class Hours: 4.0 Lecture
Total Contact Hours: 72 Lecture

This course is an in-depth study of the statutes and regulations which have been established by law to protect the public health, safety, and welfare. Analysis of the construction of buildings, their use, and accessibility requirements in compliance with applicable laws will be stressed.
Transfer Credit: CSU

**ARCH 114** **3.0 UNITS**
**Green Architecture and LEED**
Class Hours: 3.0 Lecture
Total Contact Hours: 54 Lecture

This course is an introduction to sustainable architecture and Leadership in Energy and Environmental Design (LEED). Exercises emphasize the development of basic skills used in the design of environmentally friendly architectural projects. Focus is on the investigation of the relationship between planetary concerns, energy, indoor air, quality, site selection, building orientation, and alternative construction techniques.
Transfer Credit: CSU

**ARCH 121** **3.0 UNITS**
**Architectural Drafting and Design II**
Class Hours: 2.0 Lecture / 4.0 Laboratory
Total Contact Hours: 36 Lecture / 72 Laboratory

Prerequisite: ARCH 111 or equivalent with a grade of "C" or higher or "Pass", or appropriate work experience.
This course is a continuation of the study of methods utilized in the preparation of architectural working drawings. This course includes advanced drawing conventions, design considerations, construction specifications, and structural requirements. Analysis of the materials and construction details of commercial and industrial buildings is given. Emphasis on the purpose and presentation of working drawings and their relationship to building codes is provided.
Transfer Credit: CSU

**ARCH 122** **2.0 UNITS**
**Architectural Delineation**
Class Hours: 1.0 Lecture / 3.0 Laboratory
Total Contact Hours: 18 Lecture / 54 Laboratory

This course is a study of, and laboratory experience in, three-dimensional representations including renderings, perspective drawings, paraline drawings and presentation drawings of architectural projects. Emphasis is on the techniques of various drawing media which will enable the students to express their architectural ideas.
Transfer Credit: CSU; UC*
*UC: credit limits may apply. Any or all of the following architecture courses - ARCH 110, 112, 122, 212 - combined with ART 120 and ART 121: maximum credit, 18 units.".

**ARCH 123** **4.0 UNITS**
**Introduction to 2D Computer Aided Drafting**
Class Hours: 3.0 Lecture / 3.0 Laboratory
Total Contact Hours: 54 Lecture / 54 Laboratory

This course provides an introduction to two-dimensional computer aided drafting and design using AutoCAD software. Students will learn the fundamentals of creating and modifying objects, the placing of text and dimensions, working with blocks and hatches, and creating professional quality output. Hands-on exercises will be used to reinforce the functions of AutoCAD.
Transfer Credit: CSU

**ARCH 212** **3.0 UNITS**
**Architectural Design Theory I**
Class Hours: 2.0 Lecture / 4.0 Laboratory
Total Contact Hours: 36 Lecture / 72 Laboratory

This course is an introduction to the creative thinking process and its application to basic architectural design theory. Exercises emphasize the development of basic skills and presentation techniques used in the design of simplified architectural projects. Focus on the investigation of the relationship between theoretical concepts, color, space, form, and texture is emphasized.
Transfer Credit: CSU; UC*
*UC: credit limits may apply: Any or all of the following architecture courses - ARCH 110, 112, 122, 212 - combined with ART 120 and ART 121: maximum credit, 18 units.

**ARCH 213** **4.0 UNITS**
**Introduction to 3-D Computer Aided Drafting**
Class Hours: 3.0 Lecture / 3.0 Laboratory
Total Contact Hours: 54 Lecture / 54 Laboratory

This course provides an introduction to three-dimensional computer aided drafting and design using AutoCAD software. Students will learn the fundamentals of creating and modifying three-dimensional objects, the placing of cameras and lights, the creation and application of materials, computer rendering techniques, and creating professional quality out-put. Hands-on exercises will be used to reinforce the functions of the applicable software.
Transfer Credit: CSU

**ARCH 221** **4.0 UNITS**
**AutoCAD Architecture**
Class Hours: 3.0 Lecture / 3.0 Laboratory
Total Contact Hours: 54 Lecture / 54 Laboratory

This course provides an introduction to the production of three-dimensional building design models and working drawings using AutoCAD Architecture software. Students will learn the fundamentals of creating and modifying three-dimensional massing objects, creating floor plans with doors and windows, the placing of roof and stairs, generating building elevations and sections, annotating and documenting the drawing, creating a building walk-through, and creating professional quality output. Hands-on exercises will be used to reinforce the functions of AutoCAD Architecture. Students who repeat this course will improve skills through further practice and remain current with the latest software updates.
Transfer Credit: CSU

**ARCH 222** **3.0 UNITS**
**Architectural Design Theory II**
Class Hours: 2.0 Lecture / 4.0 Laboratory
Total Contact Hours: 36 Lecture / 72 Laboratory

Prerequisite: ARCH 212 or equivalent with a grade of "C" or higher or "Pass", or appropriate work experience.
This course includes the continued development of the creative thinking process and its application to advanced architectural design theory, focusing on the synthesis of the relationship between theoretical concepts, space, color form, and texture. The emphasis of the course is on presentation graphics, models, and the development of a portfolio of student work. This course is particularly applicable to students wishing to transfer into a professional architectural degree program.
Transfer Credit: CSU

**ARCH 223** **4.0 UNITS**
**Revit Architecture**
Class Hours: 3.0 Lecture / 3.0 Laboratory
Total Contact Hours: 54 Lecture / 54 Laboratory

This course provides an introduction to the production of parametric three-dimensional building models and working drawings using Revit Architecture software. Students will learn the fundamentals of creating and modifying three-dimensional topography and building mass objects, parametric building walls with floor and roof slabs, creating floor and reflected ceiling plans, generating building elevations and sections, annotating and documenting the drawing, and creating professional quality renderings. Hands-on exercises will be used to reinforce the functions of Revit Architecture. Students who repeat this course will improve skills through further practice and remain current with latest software updates.
Transfer Credit: CSU