

Degree Applicable
Course ID 001318

Glendale Community College
March 2016

COURSE OUTLINE

Architecture 120 Residential Architectural Design I

Catalog Statement

ARCH 120 presents a study of the numerous considerations required to build a two story dwelling.. Discussion covers fundamentals of design, structural considerations, building code considerations, and techniques of construction.

Total Lecture Units: 1.5

Total Laboratory Units: 1.5

Total Course Units: 3.0

Total Lecture Hours: 24.0

Total Laboratory Hours: 72.0

Total Laboratory Hours To Be Arranged: 0.0

Total Faculty Contact Hours: 96.0

Prerequisites: ARCH 102 or equivalent

Recommended Preparation: ENGR 109, ARCH 105 ARCH 250

Course Entry Expectations

Prior to enrolling in the course, the student should be able to:

- possess the ability to communicate a three-dimensional idea using hand sketching techniques;
- possess basic skills in the use of the AutoCAD drafting and design program and traditional drafting methods to complete a set of architectural working drawings;
- understand the concepts of design for a single story residential structure;
- possess the skills required to complete a traditional model of a single story residential structure;
- understand the concepts of perspective drawing and possess the ability to complete digital or traditional-method renderings of an architectural project.

Course Exit Standards

Upon successful completion of the required coursework, the student will be able to:

- plan and design a two story structure;
- draw a complete set of documentation or working drawings;
- document selection of components from structural manufacturing literature;
- expand usage of the uniform building code;
- demonstrate familiarity with a body of technical vocabulary coinciding with the study of two story construction.

Course Content

Total Faculty Contact Hours = 96.0

- Introduction to the project (**lecture 3 hours, lab 3 hours**)
 - Size and location limitations
 - Building department considerations
 - Presentation methods of finished project
 - Use of architectural materials
 - Reference material sources-Sweet's catalogs
 - Manufacturers' resources
 - Library and on-line resources
- Design considerations (**lecture 5 hours, lab 19 hours**)
 - Scale and proportion
 - Weather and sunlight
 - Traffic flow in a two-story structure
 - Stairs
 - Location within structure
 - Design and construction
 - Code requirements
 - Client considerations
- Architectural drawing techniques (**lecture 10 hours, lab 37 hours**)
 - Freehand sketching.
 - Preliminary sketches
 - Instructor and peer critique
 - Presentation drawings
 - Working drawings
 - Cartooning of sheets
 - Computer Aided Design (CAD) file setup
 - Examples of "real-world" projects
- Construction concerns (**lecture 4 hours, lab 10 hours**)
 - Structural needs in a two-story wood frame structure
 - Materials and construction techniques
- Presentation of project (**lecture 2 hours, lab 3 hours**)
 - Portfolio review and critique
 - Creating a three dimensional study model of project
 - Verbal and written final presentation

Methods of Instruction

The following methods of instruction may be used in this course:

- lecture;
- multimedia;
- guest speakers;
- student presentations of individual and group projects.

Out of Class Assignments

The following out of class assignments may be used in this course:

- field trip (e.g. a written summary or summaries of visits to local construction sites, tour of architectural offices).

Methods of Evaluation

The following methods of evaluation may be used in this course:

- midterm examination;
- final individual project. (e.g. produce a set of working drawings or architectural model of a two story, three or four bedroom residential structure);
- final examination or presentation (e.g. a written or verbal presentation of the final project to the instructor and the rest of the class);
- portfolio review and critique. (e.g. portfolio critique of all of the work that the student has accomplished during the course. The work is bound in a portfolio and evaluated by the instructor).

Textbooks

Wakita, Osama, Richard M. Linde and Nagy R. Bakhoun *The Professional Practice of Architectural Working Drawings*. 4th ed. New York: John Wiley, 2011. Print.
10th Grade Textbook Reading Level. ISBN: 0-470-61815-9.

Student Learning Outcomes

Upon successful completion of the required coursework, the student will be able to:

- demonstrate the process to plan, design and document a two-story residential structure;
- discuss the application of the building code;
- explain various technical terms as they apply to the study of two story residential construction.