

Degree Applicable
Course ID 001321

Glendale Community College
March 2016

COURSE OUTLINE

Architecture 135 Commercial Architectural Design II

Catalog Statement

ARCH 135 is a study of the concepts of two story commercial building construction. Emphasis is placed on the basic planning and design of medium sized, two-story commercial buildings of concrete block or tilt-wall construction. Current construction techniques and applicable building codes are covered.

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

Prerequisite: ARCH 130.

Recommended Preparation: ENGR 109, ARCH 250

Course Entry Expectations

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

- communicate a three-dimensional idea using hand sketching techniques;
- use of the AutoCAD drafting and design program and traditional drafting methods to complete a set of architectural commercial working drawings;
- recognize the concepts of design for small commercial structure;
- create a traditional or digital model of a commercial structure;
- recognize concepts of perspective drawing and possess the ability to complete digital or traditional-method renderings of a small commercial architectural project.

Course Exit Standards

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

- plan and design a two-story commercial structure;
- draw a set of working drawings for a medium sized commercial structure;
- recognize the basic principles of design of public structures;
- expand use of the building code and how it applies to two-story commercial buildings;
- demonstrate familiarity with a body of technical vocabulary coinciding with the study of two story commercial 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
- Commercial office design
- Code requirements
 - Residential vs. commercial
 - Occupant Safety
- Utility needs
- Parking requirements
- Elevators and stairs
 - Location within building
 - Egress requirements
 - Other design considerations
- Landscaping and other site 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
 - CAD file setup
- Examples of "real-world" projects

Construction concerns (lecture 4 hours, lab 10 hours)

- Structural needs for a two-story concrete block building
- Materials and construction techniques
 - Concrete block
 - Tilt-up construction
 - Footer design
 - Floor Slab design
 - Structural steel needs
 - Roof diaphragm

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;
- individual and group projects.

Out of Class Assignments

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

- field trip (e.g. 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. student presentation of the final project to the instructor and the rest of the class);
- portfolio review and critique (e.g. critique of all of the work that the student has accomplished during the course).

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 single story commercial structure;
- discuss the application of the International Building Code (IBC) and how it applies to commercial buildings and their project;
- describe the terms used in the technical vocabulary as it applies to the study of one story commercial construction and their project.