

Degree Applicable  
Course ID 001319

Glendale Community College  
March 2016

## COURSE OUTLINE

### **Architecture 125 Residential Architectural Design II**

#### **Catalog Statement**

ARCH 125 presents a study of the numerous considerations required to build a typical two story, four unit townhouse or apartment complex. Discussion reviews fundamentals of design, building code considerations, techniques of construction, working drawings and construction details. Additional work includes structural considerations, heating, insulation, sound proofing, sanitary systems, foundation design, presentation techniques, and model building techniques.

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 120 or equivalent

Recommended Preparation: ENGR 109, ARCH 250

#### **Course Entry Expectations**

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

- understand the concepts of design for a two-story residential structure;
- possess the skills required to complete a traditional or digital model of a two-story residential structure;
- experience in the creation of architectural working drawings using traditional and computer aided methods.

#### **Course Exit Standards**

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

- plan and design a group of two story structures;
- draw a complete set of documentation or working drawings;
- demonstrate familiarity with a body of technical vocabulary coinciding with the study of two story apartment or townhouse construction;
- demonstrate a high level of understanding of the design of various types of residential structures.

#### **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
- Code requirements
- Client considerations
- Other considerations
  - Sanitary
  - Heating and cooling
- Site factors
  - Parking needs
  - City requirements
  - Landscaping
- Preliminary sketches
  - Instructor and peer critique

Working drawings (**lecture 11 hours, lab 40 hours**)

- Site plan
- Floor plan
- Foundation plan
- Roof plan
- Landscaping plan
- Exterior elevations
- Interior elevations - notations
- Schedules
  - Door
  - Windows
  - Room finish
- Structural sections

Selected construction details (**lecture 3 hours, lab 4 hours**)

- Foundation details
- Door and window details
- Earthquake requirements

Presentation of project (**lecture 2 hours, lab 6 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 presentation 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. 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. 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*. 4<sup>th</sup> ed. New York: John Wiley, 2011. Print.  
10<sup>th</sup> 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:

- plan and design a group of two story structures on a single property;
- draw a complete set of documentation or working drawings of a group of two story structures using either CAD (Computer Aided Design) software or Traditional (Manual) methods;
- describe the various technical vocabulary as it applies to the study of two story apartment or townhouse construction.