Degree Applicable

Glendale Community College
February 1993
Revised: October, 2009

COURSE OUTLINE

Architecture 120
Architectural Design I

I. Catalog Statement

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

Units – 3.0
Lecture Hours – 2.0
Total Laboratory Hours – 4.0
(Faculty Laboratory Hours – 4.0 + Student Laboratory Hours – 0.0 = 4.0 Total Laboratory Hours)

Prerequisites: Architecture 102 or equivalent and Architecture 105

Recommended Preparation: Engineering 109, Architecture 250

II. Course Entry Expectations

Skills Level Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 3.

Prior to enrolling in the course, the student should:

1. possess the ability to communicate a three-dimensional idea using hand sketching techniques;
2. 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;
3. understand the concepts of design for a single story residential structure;
4. possess the skills required to complete a traditional model of a single story residential structure;
5. understand the concepts of perspective drawing and possess the ability to complete digital or traditional-method renderings of an architectural project.

III. Course Exit Standards

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

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

IV. Course Content

A. Introduction to the project — 6 hours
   1. Size and location limitations
   2. Building department considerations
   3. Presentation methods of finished project
   4. Use of architectural materials
      a. Reference material sources-Sweet's catalogs
      b. Manufacturers' resources
      c. Library and on-line resources

B. Design considerations — 24 hours
   1. Scale and proportion
   2. Weather and sunlight
   3. Traffic flow in a two-story structure
   4. Stairs
      a. Location within structure
      b. Design and construction
   5. Code requirements
   6. Client considerations

C. Architectural drawing techniques. — 46 hours
   1. Freehand sketching.
   2. Preliminary sketches
      a. Instructor and peer critique
   3. Presentation drawings
   4. Working drawings
      a. Cartooning of sheets
      b. CAD file setup
   5. Examples of "real-world" projects

D. Construction concerns 12 hours
   1. Structural needs in a two-story wood frame structure
   2. Materials and construction techniques

E. Presentation of project 8 hours
   1. Portfolio review and critique
   2. Creating a three dimensional study model of project
   3. Verbal and written final presentation

V. Methods of Presentation

The following instructional methodologies may be used in the course:

a. lecture;
b. multimedia;
c. guest speakers;
d. individual and group projects;
e. field trips.

VI. Assignments and Methods of Evaluation

1. Midterm examination.
2. Final individual project. (eg. this will typically consist of a set of working drawings or architectural model of a two story, three or four bedroom residential structure.)
3. Final examination or presentation (eg. this will typically be a 5-10 minute presentation of the final project to the instructor and the rest of the class.)
4. Portfolio review and critique. (eg. this is typically a 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.)

VII. Textbook

Wakita, O., The Professional Practice of Architectural Working Drawings,
Current Edition, New York: John Wiley and Sons, 2003.
10th Grade Textbook Reading Level. ISBN: 0-471-39540-4

VIII. Student Learning Outcomes

1. Students will demonstrate the process to plan, design and document a two-story residential structure.
2. Students will have the ability to evaluate structural manufacturing literature to select the proper structural building components for their project.
3. Students will discuss the application of the Uniform Building Code (UBC) to their project.

4. Students will explain various technical terms as they apply to the study of two story residential construction and their project.