Degree Applicable

Glendale Community College
February 1993
Revised: October, 2009

COURSE OUTLINE

Architecture 130
Architectural Design III

I. Catalog Statement

Architecture 130 is a study of the concepts of basic commercial building construction. Emphasis will be placed on the planning and design of a small commercial retail center of concrete block construction. Current construction techniques and applicable building codes will be covered.

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

Recommended Preparation: Architecture 120, 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 residential structure;
4. possess the necessary skills required to create a traditional or digital model of a 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 single story commercial structure;
2. draw a set of working drawings for a commercial structure;
3. understand the basic principles of design of public structures;
4. expand use of the building code and how it applies to commercial buildings;
5. demonstrate familiarity with a body of technical vocabulary coinciding with the study of one story commercial 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
   4. Retail shop design
   5. Code requirements
      a. Residential vs. commercial
      b. Occupant Safety
   6. Utility needs
   7. Parking requirements
   8. 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 for a one-story concrete block building
   2. Materials and construction techniques
      a. Concrete block
      b. Footer design
      c. Slab design
      d. Roof diaphragm
      e. Walkway cover
      f. Pilaster design

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 one story, nine unit retail commercial 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 single story commercial structure.
2. Students will discuss the application of the Uniform Building Code (UBC) and/or the International Building Code (IBC) and how it applies to commercial buildings and their project.
3. Students will describe the terms used in the technical vocabulary as it applies to the study of one story commercial construction and their project.