

ARC 212
COMMERCIAL CONSTRUCTION TECHNOLOGY

COURSE DESCRIPTION:

Prerequisites: ARC 111, ARC 112

Corequisites: None

This course introduces regional construction techniques for commercial plans, elevations, sections, and details. Topics include production of a set of commercial contract documents and other related topics. Upon completion, students should be able to prepare a set of working drawings in accordance with building codes. Course Hours Per Week: Class, 1. Lab, 6. Semester Hours Credit, 3.

LEARNING OUTCOMES:

A student who successfully completes this course should be able to:

- a. Develop and draw commercial construction details and documents (type 1 and 2 as defined in NC building code)
- b. Design a functional building using commercial construction techniques
- c. Perform preliminary code research under supervision
- d. Solve drafting and design problems for steel and/or concrete wood construction
- e. Understand the relationship of building codes as applied to commercial construction technology
- f. Size major structural components as applied to commercial construction technology

OUTLINE OF INSTRUCTION:

- I. Brief Introduction to Building Codes, and Administrative Law for the project
 - A. Planning the building and construction documents
 - B. Research and details
 - C. Site and the building environment
- II. Site Plan and the Environment
 - A. Survey
 - B. Utilities
 - C. Landscaping
 - D. Ordinances
- III. Floor Plan
 - A. Symbols
 - B. Dimensioning
 - C. Layout
- IV. Structural details of engineered steel products
 - A. Steel decking
 - B. Steel connections and joints
 - C. Steel Trusses

- D. Steel “I” Joists
- E. Steel bracing

- V. Wall Sections
 - A. Symbols
 - B. Dimensioning
 - C. Layout

- VI. Foundation Systems
 - A. Symbols
 - B. Dimensioning
 - C. Layout

- VII. Exterior Elevations
 - A. Symbols
 - B. Layout

- VIII. Systems Drafting
 - A. CADD
 - B. Standard detailing

- IX. Drawing set organization
 - A. Keying drawings
 - B. Keying details

- X. Masonry
 - A. Details
 - B. Interface with other materials

- XI. Commercial window walls
 - A. Details
 - B. Elevations