

**ARC 111**  
**INTRODUCTION TO ARCHITECTURAL TECHNOLOGY**

**COURSE DESCRIPTION:**

Prerequisites: None  
Corequisites: None

This course introduces basic architectural drafting techniques, lettering, use of architectural and engineer scales, and sketching. Topics include orthographic, isometric, and oblique drawing techniques using architectural plans, elevations, sections, and details; reprographic techniques; and other related topics. Upon completion, students should be able to prepare and print scaled drawings within minimum architectural standards. Course Hours Per Week: Class, 1. Lab, 6. Semester Hours Credit, 3.

**COURSE OBJECTIVES:**

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

- a. Understand the architectural profession and the job opportunities it has to offer
- b. Use drafting equipment, media and reproduction techniques
- c. Apply drafting skills to produce a set of architectural working drawings
- d. Understand the conventions and symbols used on architectural drawings
- e. Produce architectural lettering
- f. Dimension and check dimensions
- g. Measure lineal distances in a variety of scales

**OUTLINE OF INSTRUCTION:**

- I. Course introduction
  - A. Course outline and policies
  - B. Introduction to Sketching
  - C. Introduction to Lettering
  - D. Equipment demonstration
  - E. The architectural profession and the drafters role in the architects office
  
- II. Geometric layout
  - A. Scale layout
  - B. Division
  - C. Lines
  - D. Curves
  - E. Polygons

- III. Lettering techniques
  - A. Fonts and adaptations
  - B. Notes Vs Titles
  - C. Lettering aids
  
- IV. Applied Descriptive Geometry
  - A. Orthographic projection of points, lines, and planes
  - B. Types of planes in relation to orthographic views
  - C. Auxilliary projection
    - 1) Edge views
    - 2) Oblique planes
  - D. Developments
  - E. Revolutions
  
- V. Pictorial Projection
  - A. Axonometric
    - 1) Isometric
    - 2) Dimetric
    - 3) Trimetric
  - B. Oblique
    - 1) Cavalier
    - 2) Cabinet
  - C. Perspective
    - 1) One point
    - 2) Two point
    - 3) Division and addition techniques
    - 4) Proportion and scale
  
- VI. Dimensioning Techniques
  - A. Terminology
  - B. Arrowhead styles
  - C. Linear dimensions
    - 1) Text placement options: aligned and unaligned systems
    - 2) Continued Vs Baseline
    - 3) Ordinate dimensions
  - D. Radial dimensions
  - E. Angular dimensions
  - F. Tolerances
  
- VII. Sectioning
  - A. Materials symbols
  - B. Partial sections
  - C. Revolved sections
  - D. Plan Vs Elevation sections
  
- VIII. Wall construction
  - A. Foundation options
    - 1) Turned down slab
    - 2) Pier and curtain wall

- 3) Spread footing
    - 4) Post and beam
    - 5) Grade beam
  - B. Framing options
    - 1) Platform Vs Balloon
  
- IX. Architectural floor plans
  - A. Wall types and drafting conventions: stud Vs masonry
  - B. Window and door styles
  - C. Casework representation
  - D. Plumbing fixture symbols
  - E. Dimensioning
  - F. Cross referencing symbols: keys: (elevation, section, door, window, finish)
  - G. Hatching
  
- X. Architectural elevations
  - A. Relationship to wall sections and annotations
  - B. Projection from plan
  - C. Materials and hatching
  
- XI. Architectural roofing
  - A. Relationship to wall sections and annotations
  - B. Projection from plan
  - C. Materials
  
- XII. Material symbols and legends / wall section keys and cross referencing of drawings
  
- XIII. Advanced sketching techniques (plans, details, elevations)
  
- XIV. Introduction to site plans

**REQUIRED TEXTBOOKS AND MATERIALS:**

To be announced

**STATEMENT FOR STUDENTS WITH DISABILITIES:**

Students who require academic accommodations due to any physical, psychological, or learning disability are encouraged to request assistance from a disability services counselor within the first two weeks of class. Likewise, students who potentially require emergency medical attention due to any chronic health condition are encouraged to disclose this information to a disability services counselor within the first two weeks of class. Counselors can be contacted by calling 686-3652 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1309.