

ARC 131 – Building Codes

COURSE DESCRIPTION:

Prerequisites: ARC-112 must be completed prior to taking this course

Corequisites: None

This course covers the methods of researching building codes for specific projects. Topic include residential and commercial building codes. Upon completion, students should be able to determine the code restraints governing residential and commercial projects.

Course Hours per Week: Class, 2. Lab, 2. Semester Hours Credit, 3.

LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

1. Perform supervised preliminary code research.
2. Understand the relationship of building codes to building design.
3. Produce scaled, detailed drawings showing adherence to the building code.

OUTLINE OF INSTRUCTION:

- I. General administration
 - A. Purpose.
 - B. Scope.
 - C. Authority.
 - D. Entry.
 - E. Liability.
 - F. Permit.
 - G. Plans.
 - H. Inspections.
 - I. Existing structures.
 - J. Stop work orders.
 - K. Contractor responsibilities.
- II. Building code definitions
- III. Building planning
 - A. Design criteria.
 - B. Location on lot.
 - C. Light, ventilation, and heating.
 - D. Room sizes.
 - E. Ceiling height.
 - F. Sanitation.
 - G. Toilet, bath and shower spaces.
 - H. Glazing.
 - I. Garages.

- J. Exits.
 - K. Doors and hallways.
 - L. Landings, ramps, and stairways.
 - M. Handrails and handguards.
 - N. Foam plastic.
 - O. Insulation.
 - P. Dwelling unit separation.
 - Q. Moisture vapor retarders.
 - R. Protection against decay.
 - S. Protection against termites.
- IV. Foundations
- A. General.
 - B. Materials.
 - C. Footings.
 - D. Foundation walls.
 - E. Foundation drainage.
 - F. Foundation waterproofing and damp-proofing.
 - G. Foundation insulation.
 - H. Foundation vents.
 - I. Columns.
 - J. Crawl space.
 - K. Reinforcing.
 - L. Anchoring.
- V. Floors
- A. Floor framing.
 - B. Floor sheathing.
 - C. Treated-wood floor (On Ground).
 - D. Concrete floor (On Ground).
- VI. Wall construction
- A. Wall framing.
 - B. Cold-formed steel.
 - C. General masonry construction.
 - D. Unit masonry.
 - E. Multiple wythe masonry
 - F. Grouted masonry.
 - G. Windows.
 - H. Doors.
 - I. Plywood and structural panels.
- VII. Wall covering
- A. Interior covering.
 - B. Exterior covering.

- VIII. Roof-ceiling construction
 - A. Roof framing.
 - B. Roof sheathing.
 - C. Ceiling finishes.
 - D. Roof ventilation.
 - E. Attic access.

- IX. Roof coverings
 - A. Deck preparation.
 - B. Asphalt shingles.
 - C. Built-up roofing.
 - D. Wood shingles.
 - E. Wood shakes.
 - F. Roof tiles.

- X. Chimneys and fireplaces
 - A. Masonry chimney.
 - B. Manufactured chimney.
 - C. Masonry fireplaces.
 - D. Manufactured fireplaces.

REQUIRED TEXTBOOK AND MATERIAL:

The textbook and other instructional material will be determined by the instructor.