

SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Design & Drafting Technology Program
Revision Date: August 22, 2022

I. CATALOG DESCRIPTION

Course Number: DDRT2540
Course Title: Building Safety & Design
Prerequisites: None
Catalog Description: You will learn about a variety of types of buildings and the design features that are used to keep the occupants of those buildings safe. You will learn how to design buildings that will allow the occupants to exit quickly and safely in the event of a disaster. You will learn how to navigate various building codes to solve design challenges.
Credit Hours: 2
Class Hours: 30
Lab Hours: 0
Total Contact Hours: 30

II. COURSE OBJECTIVES: *Course will:*

- A. Provide the information needed for the student to become familiar with building codes and their implication to building design and occupant safety.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

- A. Student Learning Outcomes: *Student will be able to:*
1. Explain the building process from concept to fruition.
 2. Recognize strategies that pertain to sustainable design practices and specifically relate to Green Build standards and LEED criteria.
 3. Describe the importance of building codes and the agencies that develop, revise and enforce the codes.
 4. Examine the International Building Code and its inclusion with respect to egress access, occupancy classification, occupancy calculation, means of egress, egress calculations, and hazardous material storage.
 5. Assess fire rated construction and opening restriction on exterior walls based on location on property.
 6. Compare and contrast building codes and ADA standards for requirements for handicap accessibility in the Means of Egress.
 7. Assess and apply building codes and ADA requirements for handicap accessibility Means of Egress.
 8. Develop an understanding of Illumination of the Means of Egress.
 9. Determine the location and size of signage of Means of Egress.
- B. General Education Learning Outcomes (GELOs)
1. GELO #3: Critical Thinking & Problem Solving
Outcome 1: Collect, identify, interpret and analyze data.

IV. CONTENT/TOPICAL OUTLINE

- A. How do buildings come to being?
B. Green Building and LEED Design
C. Governmental Constraints on Construction
D. IBC Code

- E. ADA Requirements
- F. Life Safety Code

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s):
 - 1. Current edition of the *International Building Codes* (online copy acceptable)
 - 2. Mehta, Scarborough, and Armpriest, *Building Construction: Principles, Materials and Systems*, (Refer to CID and/or instructor for current edition)

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 - 1. Lecture
 - 2. Classroom demonstration
 - 3. Classroom discussion
 - 4. Video presentation
 - 5. Computer presentation

VII. METHODS OF EVALUATION

- A. Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
 - 1. Attendance and participation
 - 2. Daily assignments
 - 3. Written exams and/or quizzes
 - 4. Performance and observational assessment

VIII. SPECIFIC COURSE REQUIREMENTS

- A. Student must meet all of the following:
 - 1. Achieve passing grade of 60% or higher, based on SCC grading scale.
 - 2. Demonstrate attitude, skills, and character commensurate with Industry standards.