

COMMON COURSE NUMBER: FFP 1120

COURSE TITLE: Fire Protection through Building Construction

CREDIT HOURS: 3

CONTACT HOURS BREAKDOWN:

Lecture/Discussion 48

Lab 00

Other 00

Contact Hours/Week 3

CATALOG COURSE DESCRIPTION:

Prerequisite: None

Corequisite: None

Course examines objectives and criteria of South Florida Building Code requirements for various types of occupancies, classification by types of construction, building materials, fire resistant standards, egress, permits, inspections, and standards, and other pertinent material for building construction.

General Education Requirements - Associate of Arts Degree, meets Area(s):
General Education Requirements - Associate in Science Degree, meets Area(s):

UNIT TITLES:

1. Organization and Enforcement
2. Requirements Based on Occupancy A to J
3. Fire Zone Locations
4. Requirements of Various Types of Construction
5. Construction Principles
6. Exiting Regulations
7. Heat Producing Apparatus
8. National and South Florida Electrical Code Hazards
9. Plumbing, Gas, Mechanical Ventilation, Swimming Pools

I. Course Overview:

Upon successful completion of this course, the students should be able to identify various parts of the Building and Fire Prevention Code and demonstrate its use in relation to the fire department.

II. Units:

Unit 1. Organization and Enforcement

General Outcome:

- 1.0 The students should be able to discuss the Code's organization and enforcement.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 1.1 Relate the purpose of the Code.
- 1.2 Discuss the scope of the Code.
- 1.3 Apply the Code to existing buildings.
- 1.4 Explain the property owner's responsibility.
- 1.5 Delineate the powers and duties of the Rules and Appeals Board.
- 1.6 Determine when permits are required.
- 1.7 Describe the conditions for permits.
- 1.8 Determine when a Certificate of Occupancy is required.
- 1.9 Define terms used in the Code.
- 1.10 Explain the legal right to make an inspection.

Unit 2. Requirements Based on Occupancy A to J

General Outcome:

2.0 The students should be able to discuss the various Occupancy Classification Requirements.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 2.1 Identify different kinds of occupancies.
- 2.2 Identify the change of use of a building.
- 2.3 Describe exit facilities.
- 2.4 Identify hazardous utilities.
- 2.5 Describe exit facilities for mixed occupancies.

Unit 3. Fire Zone Locations

General Outcome:

3.0 The students should be able to describe various types of fire zones and the types of buildings permissible within each.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

3.1 Define a fire zone.

3.2 Identify each type.

3.3 Describe their application to fire safety.

3.4 Apply the specific fire zone to construction.

Unit 4. Requirements of Various Types of Construction

General Outcome:

4.0 The students should be able to discuss the construction requirements for A-J occupancies.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 4.1 Classify occupancies.
- 4.2 Identify enclosure for vertical and horizontal openings.
- 4.3 Identify location on the property.
- 4.4 Describe special hazards in some occupancies.
- 4.5 Describe exceptions and deviations from the requirements.
- 4.6 Differentiate between occupancy constructions.

Unit 5. Construction Principles

General Outcome:

5.0 The students should be able to differentiate among the various construction classifications.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 5.1 Describe Fire Resistance Construction II in detail.
- 5.2 Describe frame construction.
- 5.3 Describe non-fire resistance construction.
- 5.4 Describe ordinary construction.
- 5.5 Identify line and dead loads.
- 5.6 Describe load tests.
- 5.7 Describe foundation design and identify the materials used.

Unit 6. **Exiting Regulations**

General Outcome:

6.0 The students should be able to explain construction standards in exits.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 6.1 Identify required exits.
- 6.2 Describe the various types of stairways.
- 6.3 Describe types of smoke-proof enclosures.
- 6.4 Apply knowledge to A-J occupancies.
- 6.5 Define elevator, escalator, and moving stairway.
- 6.6 Describe guidelines for elevators and stairways.

Unit 7. Heat Producing Apparatus

General Outcome:

7.0 The students should be able to apply rules concerning heating apparatus and installation in various occupancies and explain dangers involved in awnings, tents, and roof signs.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 7.1 Identify different types of heat-producing appliances.
- 7.2 List requirements for installation.
- 7.3 Discuss occupant hazards connected with these devices.
- 7.4 Identify various flammable and combustible liquids and the hazards connected with heating devices.
- 7.5 Describe how to store these materials safely.
- 7.6 Explain Code requirements for installation and use of spray booths.
- 7.8 Identify different types of signs, awnings, and canopies.
- 7.9 Discuss requirements for tent installation.
- 7.10 Discuss dangers inherent to tent operations.

Unit 8. National and South Florida Electrical Code Hazards

General Outcome:

8.0 The students should be able to explain the common electrical hazards in new and existing buildings.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 8.1 Explain the purpose of the Electrical Code.
- 8.2 Describe requirements for electrical inspection.
- 8.3 Identify the source for each regulation.
- 8.4 Identify problems encountered in electrical installation.
- 8.5 Identify the source of approval for electrical appliances.

Unit 9. Requirements for Plumbing, Gas, Mechanical Ventilation, and Swimming Pools

General Outcome:

9.0 The students should be able to discuss plumbing and heating requirements and their application to swimming pools.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 9.1 Explain the purpose and application of the Plumbing Code.
- 9.2 Discuss the maintenance of plumbing fixtures.
- 9.3 Explain the installation of gas appliances.
- 9.4 Identify fire hazards from gas appliances.
- 9.5 Identify special requirements for portable gas appliances.
- 9.6 Identify various types of air conditioning units.
- 9.7 Test air conditioning systems.
- 9.8 Gain access in air conditioning systems for firefighting purposes.
- 9.9 Identify materials used in swimming pool installation.
- 9.10 Test pool water for chlorine and PH.