



Course Outline

2026-2027 Catalog

FSC 10 - Building Construction for Fire Protection

Catalog Description

Transfer Status: CSU

Unit(s): 3.00

Lecture: 51.00 Contact hours/102.00 Out of class hours/153.00 Total hours/3.00 Unit(s)

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Course Description: This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre-planning fire operations and operating at emergencies. (C-ID FIRE 130X).

Objectives

Upon successful completion of this course, the student should be able to:

1. Identify various classifications of building construction.
2. Understand theoretical concepts of how fire impacts major types of building construction.
3. Describe building construction as it relates to firefighter safety, building codes, fire prevention, code inspection, firefighting strategy and tactics.
4. Classify major types of building construction in accordance with a local/model building code.
5. Analyze the hazards and tactical considerations associated with the various types of building construction.
6. Explain the different loads and stresses that are placed on a building and their interrelationships.
7. Identify the function of each principle structural component in a typical building design.
8. Differentiate between fire resistance and flame spread, and describe the testing procedures used to establish ratings for each.
9. Classify occupancy designations of the building code.
10. Identify the indicators of potential structural failure as they relate to fire safety.
11. Identify the role of GIS as it relates to building construction.

Course Content

Topic Titles / Suggested Time Topic	
	<u>Lecture</u>
<u>Topics</u>	<u>Lec Hrs</u>
Introduction	1.00
Principles of Construction	6.00
Building Construction	6.00
Principles of Fire Resistance	6.00
Fire Behavior vs. Building Construction	6.00
Ordinary Construction	4.00
Wood Construction	4.00
Steel Construction	4.00
Concrete Construction	4.00
High Rise Construction	4.00
Collapse	2.00
Ventilation	2.00
Non-combustible	2.00
Total Hours:	
51.00	

Methods of Instruction

- A. Discussion
- B. Field Trips
- C. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- D. Lecture
- E. Multimedia Presentations
- F. Handouts

Methods of Evaluation

- A. Exams/Tests
- B. Quizzes
- C. Projects
- D. Participation in field trips.

Examples of Assignments

Reading Assignments

1. Read the textbook chapter on pre-planning fire responses, and be prepared to take a quiz on the material covered.
2. Locate and read an article in "Firefighter Close Calls" related to an accident that was caused by building structure failure

Writing Assignments

1. Write a minimum one page report describing an incident where an accident occurred because of building structure failure.
2. Participate in a short essay exam based upon a cumulation of material covered in class.

Out-of-Class Assignments

1. Conduct a scavenger hunt, and locate 100 instructor assigned building construction features on buildings in your community.
2. Prepare a Powerpoint presentation which gives an overview of building design features.

Recommended Materials of Instruction

IFSTA. (2010). Building Construction Related to the Fire Service. *IFSTA*, 3rd.

IFSTA. (2009). Fire Inspection and Code Enforcement. *IFSTA*, 7th.

IFSTA. (2009). Fire Inspection and Code Equipment Study Guide. *IFSTA*, 7th.

Other Learning Materials

Handouts

Audiovisual

Minimum Qualifications

Fire Technology

Building Codes And Regs

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