

**J. Sargeant Reynolds Community College  
Course Content Summary**

**Course Prefix and Number:** FST 220

**Credits:** 3

**Course Title:** Building Construction for Fire Protection

**Course Description (including lecture hours, lab hours, total contacts)**

Provides the components of building construction that relate to fire and life safety. Focuses on firefighter safety. Covers the elements of construction and design of structures shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. Lecture 3 hours per week.

**Course Prerequisites/Corequisites** (*Entry-level competencies **required** for enrollment*)

None

**Course Objectives** (Each item should complete the following sentence.)

Upon completing the course, the student will be able to:

1. Demonstrate an understanding of building construction as it relates to firefighter safety, buildings codes, fire prevention, code inspection and firefighting strategy and tactics.
2. Classify major types of building construction.
3. Analyze the hazards and tactical considerations associated with the various types of building construction.
4. Explain the different loads and stresses that are placed on a building and their interrelationships.
5. Identify the principle structural components of buildings and demonstrate an understanding of the functions of each.
6. Differentiate between fire resistance and flame spread, and describe the testing procedures used to establish ratings for each.
7. Classify occupancy designations of the building code.
8. Identify the indicators of potential structural failure as they relate to firefighter safety.
9. Identify and analyze the causes of firefighter deaths in the line of duty related to structural and wild land firefighting, training and research, and the reduction of emergency risks and accidents.

**Major Topics to be Included**

1. Building construction as it relates to firefighter safety, buildings codes, fire prevention, code inspection and firefighting strategy and tactics.
2. Classification of major types of building construction.
3. Hazards and tactical considerations associated with the various types of building construction.
4. Loads and stresses that are placed on a building and their interrelationships.
5. Structural components of buildings.
6. Fire resistance and flame spread
7. Occupancy designations of the building code.
8. Indicators of potential structural failure.
9. Causes involved in the line of duty firefighter deaths related to structural and wild land firefighting, training and research, and the reduction of emergency risks and accidents.

**Effective Date of Course Content Summary (Month, Date Year):** September 11, 2008