

COURSE OUTLINE

Firefighter Safety

Course Description

FS 110. Firefighter Safety. 3 hours credit. Prerequisite: FS 100 with a C or better or currently enrolled in FS 100. This course will enable the student to identify the various dangers involved with firefighting including those dangers encountered on the fire ground, responding to emergencies, and training.

Course Relevance

Firefighting is an inherently dangerous occupation, with over 100 firefighters being killed and over 80,000 being injured each year. This course will enable the student to recognize and correctly deal with those situations, which pose the greatest threat to today's firefighters.

Required Materials

Dunn, V. (1994). *Safety and survival on the fire ground*. (1st ed). New York: PennWell Publishing.

Supplemental Materials

United States Fire Administration. *Firefighter fatalities in the United States*. (latest edition). Emmitsburg, MD: USFA

Learning Outcomes

The intention is for the student to be able to

1. Identify situations/events, which routinely contribute to firefighter injuries and line of duty deaths
2. Identify corrective measures, which could be used to help reduce the incidence of injury and death to firefighters
3. Understand the programs and initiatives as well as standards and laws, which have been launched nationally to help reduce firefighter injuries and line of duty deaths

Primary Learning PACT Skills that will be DEVELOPED and/or documented in this course

Through the student's involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas:

1. Critical Thinking
 - Through case studies and other written assignments the student will develop critical thinking skills
2. Problem Solving
 - Through exercises that demonstrate the understanding of steps and procedures, the student will be able to develop problem solving skills.
3. Field-Related Training

- Through a variety of exercises, case studies, and simulations, the student will be able to demonstrate their understanding of safety as it relates to firefighting.

Secondary skills (developed but not documented):

Teamwork
Leadership
Writing

Major Summative Assessment Task(s)

These learning outcomes and the primary Learning PACT skills will be demonstrated by

1. Presenting a case study on a recent line of duty death. The presentation will include findings, contributing factors and recommendations needed to prevent a recurrence
2. Completing a writing assignment requiring critical thinking and application of principals related to firefighter safety based on national standards and laws

Course Content

- I. Themes – Key recurring concepts that run throughout this course:
 - A. Firefighter safety
- II. Issues – Key areas of conflict that must be understood in order to achieve the intended outcome:
 - A. Safety during emergency response
 - B. Safety during fire ground operations
 - C. Safety during training exercises
 - D. Firefighter health and fitness
- III. Concepts – Key concepts that must be understood to address the issues:
 - A. Knowledge of the proper operation of emergency vehicles
 - B. Knowledge of the various dangers encountered on the fire ground
 - C. Knowledge of national standards and laws related to live fire training
 - D. Knowledge of the various physiological and environmental demands placed on firefighters
- IV. Skills/Competencies – Actions that are essential to achieve the course outcomes:
 - A. Identify and properly deal with hazards involved with operating emergency vehicles
 1. Identify hazards involving emergency response
 2. Review basics of defensive driving
 3. Understand the laws governing emergency vehicle operation
 4. Identify hazards associated with specific types of fire apparatus
 - B. Identify and properly deal with hazards encountered while operating on the fire ground
 1. Identify building collapse hazards
 2. Predict rapid-fire events (flashover, smoke explosion, back draft, rapid-fire progression, etc.)
 3. Identify hazards associated with aggressive interior firefighting
 4. Identify hazards associated with defensive firefighting operations
 - C. Identify the hazards associated with live fire training
 1. Understand the standards and laws governing live fire training

2. Understand the hazards associated with live fire training conducted in acquired structures
 3. Understand the most common factors contributing to injuries and deaths, which occur during live fire training
 4. Understand which steps must be taken to ensure safety during a live fire training exercise
- D. Understand the physiological demands placed on firefighters
1. Understand the importance of physical fitness for the firefighter
 2. Understand how environmental extremes affect firefighter health and safety
 3. Understand ways to reduce stress
 4. Identify which steps should be taken in order to keep firefighters healthy

Learning Units

- I. Firefighter death and injury statistics
 - A. Fire ground death and injury statistics
 - B. Responding to or returning from death and injury statistics
 - C. Training death and injury statistics

- II. Safety and survival on the fire ground
 - A. Collapse dangers
 - B. Interior firefighting dangers
 - C. Rapid fire event dangers
 - D. Defensive firefighting dangers

- III. Safety during live fire training exercises
 - A. Review of recent case studies and case law
 - B. NFPA 1403
 - C. Live fire training in acquired structures
 - D. Live fire training using engineered burn buildings

- IV. Firefighter health and fitness
 - A. Importance of health and fitness for the firefighter
 - B. Physiological demands placed on the firefighter

Learning Activities

Lecture will enable the student to understand the key principals in firefighter safety. Case studies will be used to illustrate the relevance of the materials being presented. Written exercises and student presentations will allow the student to apply the knowledge, which has been learned during the class.

Grade Determination

The student will be graded on assessment tasks and written examination.