

Principles of Fire Protection Engineering

Course Description

This three- day course is open to all individuals interested in gaining or refreshing their basic to intermediate knowledge of the principles of fire protection engineering. This course presents the application of science and engineering principles to protect people, property, and their environments from harmful and destructive effects of fire and smoke. It covers areas of fire detection, suppression, and mitigation as well as human behavior and recommendations on how to maintain a tenable environment for evacuation during a fire scenario. Fire suppression systems components will be examined to include fire science, fire safety design, fire detection and fire alarm systems, fire suppression systems, automatic sprinkler systems and smoke control principles. Industry standards and variations will be discussed using NFPA codes and building codes.

Learning Objectives

Upon completion of this course, participants should be able to:

- Understand the phenomena of combustion and ignition.
- Forecast how buildings can be protected from fire and how human behavior respond can be expected during emergencies
- Recognize means of egress concepts, human tenability limits, occupant responses to cues and decision making process by people in fire situations and during evacuation.
- Distinguish the performance of basic construction materials in the fire environment.
- Evaluate water-based fire suppression systems types such as fire sprinkler and water mist systems.
- Discuss smoke management forces, and design principles for smoke management systems.
- Categorize fire detection and alarm systems including various types.

Prerequisite

None.

Who will benefit: Experience Level Basic

Fire Protection Engineers (FPEs), Fire Alarm Designers, Architectural, Civil, Structural, Mechanical and Electrical Engineers.

Course assessment

Participants will be assessed via a written exam. A passing score of 70% will be required to obtain a Certificate of Completion

Professional Development Hours

Upon completion each participant qualifies for 21 PDHs or 2.1 CEUs. A certificate of completion will be awarded.