

## **Advanced Fire Alarm System Design Course- Session I: Applying the Principles of Performance-Based Design**

### **Course Description**

This two-day course presents a review of the performance-based design process and its applicability to the design of fire alarm systems. The course covers the developing of a stakeholder committee, refining performance objectives to concrete performance criteria, and developing performance equivalent alternative designs. Fire dynamics and the roll of fire modeling in the design process and design documentation are also addressed.

### **Learning Objectives**

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

- Understand the process of performance-based design and how it is applied to the design of fire alarm systems.
- Understand the nature and character of fire and the associated products of combustion.
- Analyze fire hazards.
- Distinguish current technologies used to mitigate fire damage by proper design, construction, arrangement, and occupancy type of buildings.
- Knowledge of how to mitigate fire damage by proper design, construction, arrangement and use of buildings.
- Understand the basics of design, installation, and maintenance of fire detection and suppression communication systems.
- Identify the factors that influence design and inputs from stakeholders and authority having jurisdiction.
- Determine suitable detection methods and technologies to satisfy performance requirements.

### **Pre-requisite**

Successful completion of the NFPA Fire Alarm Code Course or equivalent knowledge. Basic computer skills, and basic knowledge of performance-based design. Know and apply fire and life safety codes and standards. Can read and understand basic construction drawings/technical documents.

### **Who will benefit: Experience Level**

Fire Protection Engineers (FPEs), Fire Alarm Designers, Code Officials, Plan Reviewers, Design Professionals (Architects/Engineers)

### **Materials Needed**

Participants should bring with them their own copies of NFPA 101®, Life Safety Code®; NFPA 72®, National Fire Alarm and Signaling Code®, and a scientific calculator.

### **Course assessment**

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

### **Professional Development Hours**

Upon completion each participant qualifies for 14 PDHs or 1.4 CEUs. A Certificate of Attendance will be awarded.