

# **Automatic Fire Detection and Fire Alarm Systems**

## **1-day Course Outline (7 hours)**

### **Course Description and Objectives -**

This basic fire alarm seminar is a fire alarm application course beneficial for new installers, sales personnel, service technicians, and building and fire inspectors involved in acceptance testing and/or plans review, or is useful as a refresher for anyone involved with fire alarms. This course describes fire alarm systems and components and the proper way to apply them to meet the requirements of NFPA 72 National Fire Alarm Code, 2002 edition and NFPA 70, National Electrical Code, 2002 edition.

### **Course Materials -**

1. Student workbook and handouts (provided)
2. Calculator, pencils and note paper (Student to provide)

### **Course Outline -**

8:00 am – 9:00 am	Chapter 1 - Basic Fundamentals Control panels, power supplies, initiating device, notification appliance and signaling line circuits; fire safety control functions; addressable, analog and multiplex systems; emergency voice/alarm communication systems, survivability, and two-way emergency communications systems. Includes information on battery and voltage drop calculations.
9:00 am – 9:10 am	Break
9:10 am – 10:00 am	Continue Chapter 1
10:00 am – 10:10 am	Break
10:10 am – 11:00 am	Chapter 2 - Initiating Devices Types of initiating devices (manual stations, heat and smoke detectors, beam detectors, radiant energy sensing fire detectors, sprinkler alarm and supervisory devices for wet, dry, pre-action and deluge systems), how they operate, and their proper application in accordance with the standards. Attendees will complete worksheets on heat and smoke detector spacing.
11:00 am – 11:10 am	Break
11:10 am – 12:00 pm	Continue Chapter 2

12:00 pm – 1:00 pm	Lunch Break
1:00 pm – 2:00 pm	Chapter 3 – Notification Appliances Types of notification appliances (horns, speakers, strobes, annunciators, etc.) and their proper application. Discuss the nature of sound, ADA and ANSI/NFPA requirements for visible notification appliances. Demonstrate the use of a sound level meter.
2:00 pm – 2:10 pm	Break
2:10 pm – 3:00 pm	Continue Chapter 3
3:00 – 3:10 pm	Break
3:10 pm – 4:00 pm	Chapter 4 - Fire Safety Control Functions Control functions such as smoke door release, elevator recall, air handler fan shutdown, smoke control and management systems (smoke control systems in high rise buildings, covered malls and atriums). Duct detector applications and installation requirements, and monitoring of installation conductors for fire safety control functions.