

# H S E

HEALTH

SAFETY

ENVIRONMENT



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# Introduction to Fire Alarm & Detection Systems

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**Duration:** 5 Days

## Introduction:

The primary function of a fire alarm is to alert the occupants of a building to the presence of a fire. It may also perform other functions. For instance, the system can be designed to simultaneously alert the fire department by means of a direct or relayed signal where a rapid response by the fire department is essential.

This course is designed to provide the participant with the due knowledge and skills that enable them to build up and effectively manage fire alarm and detection systems based on NFPA 72

## Methodology

This interactive Training will be highly interactive, with opportunities to advance your opinions and ideas and will include;

- Lectures
- Workshop & Work Presentation
- Case Studies and Practical Exercise
- Videos and General Discussions

## Certificate

**BTS** attendance certificate will be issued to all attendees completing minimum of 80% of the total course duration.

## **Course Objectives:**

**At the conclusion of this course, the participants will:**

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- Understand the reasons for installing the fire alarm system;
- Learn the relevant design standards;
- Learn the various type of smoke & heat detectors;
- Understand the type of alarm technology to be used;
- Be able to select and position relevant system components;
- Understand the alarm notification arrangements (audible alarms, visual alerts and communication systems etc);
- Understand the auxiliary and emergency control features associated with fire alarm system;
- Review the design such as to - minimize the potential for false alarms; and
- Learn few relevant definitions.

## **Course Outline:**

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### **DAY ONE**

- Introduction to NFPA 72
- Definitions & Terminology
- Purpose of Fire Alarm Systems
- Device and System Compatibility
- Circuits and Pathways

### **DAY TWO**

- Main components of fire alarm and detection system
- Power Sources
- System Calculations
- Initiating Devices
- Automatic Detection Methods
- Prevention of Nuisance and False Alarms
- System Notification Appliances
- Relocation and Evacuation Signals

### **DAY THREE**

- Smoke Detector Operation
- Smoke Detector Spacing
- Heat Detector Operation
- Heat Detector Spacing
- Gas Detector
- Combined Detector
- Fire alarm system layout (workshop)

#### **DAY FOUR**

- Logic and Control Functions
- Types of Fire Alarm Systems
- Protective Premises Systems
- Proprietary Supervising Stations
- Central Station Systems
- Remote Station Systems
- Auxiliary Systems
- Guard's Tour Service

#### **DAY FIVEE**

- Fire Alarm System Repair and Maintenance
- Emergency Voice and Alarm Communication Systems (EVAC)
- System Integrity and Supervision
- System Periodic Test
- Fire Suppression Systems
- Fire alarm system testing (practical)