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## **NFPA 72 Training - National Fire Alarm & Signaling Code**

Contact us Today for a FREE quotation to deliver this course at your company's location.

<https://www.electricityforum.com/onsite-training-rfq>

Our NFPA 72 training course provides the latest fire safety provisions to meet America's changing fire detection, signaling, and emergency communications demands. In addition to the core focus on fire alarm systems, the NFPA72 includes requirements for mass notification systems used for weather emergencies; terrorist events; biological, chemical, and nuclear emergencies; and other threats.

NFPA 72 rules cover the application, installation, location, performance, inspection, testing, and maintenance of fire alarm systems, supervising station alarm systems, public emergency alarm reporting systems, fire warning equipment and emergency communications systems (ECS), and their components.

You'll bring your knowledge up-to-code with in-depth instruction that focuses on the correct design, installation, testing, and use of fire alarm and signaling systems.

Technical workshops and exercises are based on the types of challenges you encounter in the

field, so you'll leave with a wealth of practical tips, insights, and solutions you can immediately implement back on the job. This course will review the types of fire alarm systems, their selection and their applications for structures and processes. It will also cover special systems designed to prevent costly, life-threatening industrial fires and/or explosions.

**Upon completion, students will be able to:**

- Locate, interpret, and apply NFPA 72 requirements on the job Understand and apply requirements for circuits and pathways, including new Class N circuits.
- Locate and apply new requirements for interconnected fire alarm control units.
- Use key 2016 NFPA 72 definitions to help interpret specific Code rules.
- Identify the key elements of all phases of a fire alarm system's life and identify the stakeholders at each stage Recognize the function of major fire alarm system components.
- Locate and apply key fire detection requirements for emergency control functions such as door control and elevator recall.
- Calculate the required spacing and determine the correct placement of fire detection devices for both protected premises fire alarm systems and for single- and multiple-station alarms and household fire alarm systems.

**COURSE OBJECTIVES**

To provide an understanding of the various types of fire alarm systems, their design, maintenance, upgrade and retrofit.

**WHO SHOULD ATTEND**

Fire System and Electrical installation personnel, testing and maintenance personnel, electrical contractors, facility managers, physical plant directors, fire and building inspectors in municipal, state and federal government facilities and service personnel, owners, plant managers and/or property managers for housing authorities, industrial, commercial and

institutional properties.

### **STUDENTS RECEIVE**

- **\$100 Coupon** Toward any Future Electricity Forum Event (Restrictions Apply)
- 1.4 Continuing Education Unit (CEU) Credits
- **FREE** Intelligent Power Today Digital Magazine Subscription (Value \$25.00)
- Course Materials in Paper Format

### **COURSE OUTLINE**

#### **DAY ONE**

#### **INTRODUCTION TO CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24 AND FIRE ALARM SIGNALING AND DETECTION SYSTEMS**

- Administration
- Purpose and Scope

#### **GOVERNING DOCUMENTS**

- California Building Code (CBC)
- California Fire Code (CFC)
- California Electric Code (CEC)
- Referenced Standards and NFPA 72

## **DEFINITIONS**

- CBC & CFC Definitions
- CEC Definitions
- NFPA 72 Definitions
- NFPA Official Definitions

## **DOCUMENTATION REQUIREMENTS**

- Application
- Minimum Required Documentation
- Design (Layout) Documentation
- Shop Drawings (Installation Documentation)
- Completion Documentation
- Inspection, Testing, and Maintenance Documentation
- Records, Record Retention, and Record Maintenance
- Forms

## **THE CALIFORNIA BUILDING CODE AND FIRE ALARM AND DETECTION SYSTEMS BY USE AND OCCUPANCY CLASSIFICATION**

- Assembly Group A
- Business Group B
- Educational Group E
- Factory Group F
- High-Hazard Group H
- Institutional Group I
- Mercantile Group M
- Residential Group R
- High-Rise Buildings

## **THE CALIFORNIA FIRE CODE AND FIRE ALARM SYSTEMS**

- General Requirements and Scope
- Overlapping Requirements with the CBC
- CCR Title 19 Public Safety References
- Additional Group Occupancies and Specific Requirements

## **THE CALIFORNIA ELECTRIC CODE AND FIRE ALARM SYSTEMS**

- General Requirements and Scope
- Wiring Methods and Materials
- Installation Requirements for NPLFA Circuits
- Installation Requirements for PLFA Circuits
- Fire Alarm Circuit Integrity (CI)

## **NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE AUTOMATIC INITIATING DEVICES FUNDAMENTALS**

- Application
- Purpose
- Equipment
- Design and Installation
- Personnel Qualifications
- Power Supplies
- Signal Priority
- Detection and Signaling of Conditions
- Responses
- Distinctive Signals
- Alarm Signals

- Fire Alarm Notification Appliance Deactivation
- Supervisory Signals
- Trouble Signals
- Emergency Control Function Status Indicators
- Notification Appliance Circuits and Control Circuits
- Annunciation and Annunciation Zoning
- Monitoring Integrity of In-Building Fire Emergency Voice/Alarm Communications Systems
- Documentation and Notification
- Impairments
- Unwanted Alarms

## **CIRCUIT PATHWAYS**

- Application General
- Pathway Class Designations
- Pathway Survivability
- Shared Pathway Designations
- Monitoring Integrity and Circuit Performance of Installation Conductors and Other Signaling Channels
- Nomenclature

## **DAY TWO**

### **INSPECTION TESTING AND MAINTENANCE**

- Application
- General
- Inspection
- Testing
- Maintenance

- Records

## **INITIATING DEVICES**

- Application
- Purpose
- Performance-Based Design
- General Requirements
- Requirements for Smoke and Heat Detectors
- Heat-Sensing Fire Detectors
- Smoke-Sensing Fire Detectors
- Radiant Energy-Sensing Fire Detectors
- Combination, Multi-Criteria, and Multi-Sensor Detectors
- Gas Detection
- Other Fire Detectors
- Sprinkler Waterflow Alarm-Initiating Devices
- Detection of Operation of Other Automatic Extinguishing Systems
- Manually Actuated Alarm-Initiating Devices
- Fire Extinguisher Electronic Monitoring Device
- Supervisory Signal-Initiating Devices

## **NOTIFICATION DEVICES**

- Application
- Purpose
- General
- Audible Characteristics
- Visible Characteristics - Public Mode
- Visible Characteristics - Private Mode
- Supplementary Visible Signaling Method
- Textual Audible Appliances
- Textual and Graphical Visible Appliances
- Tactile Appliances

- Standard Emergency Service Interface

## **EMERGENCY CONTROL FUNCTION INTERFACES**

- Application
- General
- Elevator Phase I Emergency Recall Operation
- Elevator Shutdown
- Fire Service Access Elevators
- Occupant Evacuation Elevators
- Heating, Ventilating and Air-Conditioning (HVAC) Systems
- Door and Shutter Release
- Electrically Locked Doors
- Exit Marking Audible Notification Systems

## **PROTECTED PREMISES FIRE ALARM SYSTEMS**

- Application
- General
- System Features
- System Performance and Integrity
- Performance of Initiating Device Circuits (IDCs)
- Performance of Signaling Line Circuits (SLCs)
- Performance of Notification Appliance Circuits (NACs)
- System Requirements
- In-Building Fire Emergency Voice/Alarm Communications
- Fire Alarm Systems Using Tone
- Suppression System Actuation
- Off-Premises Signals
- Guard's Tour Supervisory Service
- Suppressed (Exception Reporting) Signal System
- Protected Premises Emergency Control Functions
- Special Requirements for Low-Power Radio (Wireless) Systems



## **SUPERVISING STATION ALARM SYSTEMS**

- Application
- General
- Central Station Service Alarm Systems
- Proprietary Supervising Station Alarm Systems
- Remote Supervising Station Alarm Systems
- Communications Methods for Supervising Station Alarm Systems

## **PUBLIC EMERGENCY ALARM REPORTING SYSTEMS**

- Application
- General Fundamentals
- Management and Maintenance
- Communications Methods
- Alarm Processing Equipment
- Alarm Boxes
- Public Cable Plant
- Emergency Communications Systems (ECS)

## **SINGLE- AND MULTIPLE-STATION ALARMS AND HOUSEHOLD FIRE ALARM SYSTEMS**

- Application
- Purpose
- Basic Requirements
- Assumptions
- Detection and Notification
- Power Supplies
- Equipment Performance

- Installation
- Optional Functions

## **Questions and Answers**

## **COURSE TIMETABLE**

Start: 8:00 a.m.

Coffee Break: 10:00 a.m.

Lunch: 12:00 noon

Restart: 1:15 p.m.

Finish: 4:30 p.m.

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