

# Arc Flash Electrical Safety NFPA 70E®

# Electrical Safety



The foremost goal of this two-day Arc Flash Electrical Safety course is to keep workers safe while working on or around electrically energized equipment. The course is structured to help companies fulfill requirements set forth in OSHA 29 CFR Part 1910, Subpart S Electrical and NFPA 70E® "Standard for Electrical Safety in the Workplace," which requires this type of instructor-led training for anyone working with electrically energized equipment.

Overall, this program is designed to reduce liability for the employer while establishing a culture of safe work practices among employees; it is a key component of any electrical training program.

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## Course Topics and Objectives

### Electrical Safety & the Qualified Person (Electrical Worker)

- Code and Standards: OSHA, NFPA 70E, NEC, ANSI, IEEE and others
- Notable Changes to NFPA 70E 2018
- Qualified Person Requirements
- Contractor Safety Requirements
- Unqualified Person Requirements

### Electrical Hazards & Injuries

- Electrical Incident Overview
- Shock Hazards
- Arc Flash & Arc Blast Hazards
- Electrical Fires
- Electrical Burns
- Static Electricity
- First Responder/Emergency Response for Electrical Incidents
- Identifying Electrical Hazards:
- Design & Installation Problems
- Work Procedure Problems

### Safety Related Work Practices

- Elements of an Electrical Safety Program
- Job Planning
- Work on or near Energized Parts
- Boundaries and Safe Approach Distances:
- Shock Hazards
- Arc Flash Hazards
- Overhead Lines
- Motor Vehicles
- Six Steps to Establishing a Safe Work Condition
- Lockout/Tagout
- Temporary Grounding Overview
- Operating Circuit Breakers
- Energized Work Permit
- Housekeeping

### Electrical Equipment & Tools

- Test Equipment Safety & Care
- Power Tool Equipment Safety & Care
- Hand Tool Equipment Safety & Care
- Extension Cords & Temporary Wiring
- Portable Ladders

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## Arc Flash Safety Practices

- Arc Flash & Arc Blast Overview
- Incident Energy & PPE
- Interpreting Arc Flash Data
- Arc Flash Boundaries
- Hazard/Risk Categories
- Identifying Proper PPE for Arc Flash and Shock Hazards
- Reading and Using Arc Flash Labels & NFPA 70E Table 130.7(C) (15) (A)

## Personal Protective Equipment (PPE) for Electrical Safety

- Understanding PPE for Electrical Safety:
- Clothing & Apparel
- Tools
- Barricades, Signs & Attendants
- Other Protective Devices
- Proper Care of PPE
- Testing Requirement of Electrical Safety PPE

## Electrical Preventative Maintenance for Safety

- Role of Electrical Preventive Maintenance for Electrical Safety
- General Maintenance Requirements
- Electrical Studies – Short Circuit, Protective Device Coordination and others
- Electrical Testing
- GFCI
- Infrared (IR)
- Circuit Breakers
- Relays
- Transformer Oil

## Performing Risk Assessments & Job Planning

- Performing Risk Assessments
- Performing Job Briefings

## Reading & Applying Arc & Shock Hazard Data

- Using NFPA Tables and Arc Flash Labels
- Review and Understanding Arc Flash Calculations
- Identify Shock Hazards and Arc Flash Hazards

## Application of PPE & Boundaries

- Select Appropriate PPE
  - Establish Proper Boundaries & Notifications
  - Demonstrate Appropriate use of PPE
- ## Creating an Electrically Safe Work Environment

- Demonstrate Appropriate Safe Work Safety Practices within Boundaries
- Selecting and Using Meters
- Lockout Process

# Arc Flash Electrical Safety NFPA 70E®

## Who Should Attend:

- Energy management personnel
- Apprentice and experienced HVAC technicians
- IT Technicians
- Fire Alarm Technicians
- Electricians
- Multi-craft personnel
- Plant & facility maintenance technicians
- Building engineers
- Building managers & superintendents
- Plant & facility managers
- Stationary engineers
- Anyone who works with electrical systems and circuits.

## Onsite Training:

- We offer onsite training at your facility.
- We can provide the same courses as we offer in public seminars. We can even design courses especially to meet your needs.

## Advantages of On-Site Training:

- Modify the content to your specific needs
- Protect company privacy
- Workers remain on site in case of an emergency
- Saves time and travel costs
- Instructors can discuss your specific equipment
- Problems can be openly discussed
- Flexible scheduling
- Increased price savings as the groups get larger
- Promote teamwork & camaraderie among workers
- More comfortable learning environment

## Class Options:

### 2 Day Class

- Arc Flash Electrical Safety NFPA 70E

### 3 Day Class

- Arc Flash Electrical Safety NFPA 70E with Arc Safe Certification

## Requirements:

Students should have a basic knowledge of basic electrical theory.