

## Course Description

Prevent Injuries, Save Lives & Reduce OSHA fines Implement NFPA 70E for Electrical Arc Flash Safety. OSHA requires all employees working around 50v or more to be trained in Arc Flash Electrical safety.

This one-day electrical safety training course is designed specifically for those responsible for making decisions regarding employee safety and NFPA 70E regulatory compliance.

This NFPA 70E Electrical Arc Flash Safety Course will provide your employees with the knowledge to make sound decisions and institute safe work practices resulting in a much safer facility.

Students will learn safe work practices and procedures and as a result, be able to recognize dangerous situations and avoid hazards before an incident occurs. They will learn the safe approach distances to exposed electrical conductors and by class end they'll be able to determine the proper Personal Protective Equipment (PPE) for any situation or working condition encountered.

Every student will leave this class with a much better understanding of the hazards they encounter every day and a newfound respect for electricity. This in turn will make your facility a safer environment for everyone.

Training is required for employees who face comparable risk of injury due to electric shock or other electrical hazards. The lack of proper training can be costly and result in damage to equipment and your facility. Proper training can reduce the risk of serious injury and even save lives.

This NFPA 70E Arc Flash training course is specially designed for Qualified and Unqualified workers. You will learn what NFPA 70E covers and why everyone is concerned about it. You will learn what options you have when you decide to implement NFPA 70E, and what resource commitments you should anticipate. You will learn from an expert in NFPA 70E who can help answer any questions you may have.

## Students Will Learn

- What is NFPA 70E?
- Is compliance with NFPA 70E mandatory?
- What are Arc Flash Hazards and Shock Hazards?
- What is a Arc Flash Hazard Analysis ?
- What Personal Protective Equipment and Clothing do your employees need?
- What are your options to reduce Hazard Risk levels?
- What is the Cost of NFPA 70E Implementation?
- What are the Potential Problems with Implementation?
- What are the Benefits of Implementation?

## Target Audience

Electricians, Electrical Technicians, Engineers, HVAC Technicians, Machine/Equipment Operators, Field Service Technicians, Maintenance Personnel, Stationary Engineers, Building Engineers, Electrical/Maintenance Supervisors, Plant/Facility Engineers & Supervisors, EHS Personnel, etc. Anyone concerned and/or interested in Learning About NFPA 70E Arc Flash Compliance.

## Prerequisites

None.

## Course Outline

### OVERVIEW

Electrical Hazards

Existing and Proposed Standards

Preparing to Work Safely  
Determining Safe Approach Distance  
Determining Arc Hazard Category  
Fault Current Calculations  
Determination of Arcing Fault Clearing Time  
Boundary Calculations  
Determining Arc Flash Hazard Risk Category  
Incident Energy Exposure Calculations  
Hazard Analysis

#### INCIDENT CAUSES

Unsafe Switching Acts  
Not following Operating Procedure  
Unsafe Working Conditions  
Not following Maintenance procedures

#### ELECTRICAL HAZARDS

5 Main Factors in Electrical Accidents  
Electrical Shock  
Arc Flash Defined  
Incident Energy Defined  
Arc Flash Burn Injuries  
Arc Blast Pressure  
Inhalation Injuries

#### EXISTING AND PROPOSED STANDARDS AND IMPORTANT DATE

OSHA 1910.269  
NFPA 70E-2012 edition  
NESC Rule 410A3

#### DEFINITIONS

Essential to the application of this standard

## PREPARING TO WORK SAFELY (Dead Work)

- Safety Training
- Emergency Procedures
- Detailed Description of a "Job Briefing"
- Use of Equipment
- Establishing an electrically safe work condition
- Lockout / Tagout
- Isolation and Grounding

## SHOCK HAZARD PROTECTION (LIVE WORK)

- Understanding and Applying NFPA 70E Tables
- Shock Protection Boundaries
- Limits of Approach
- Energized Work Permit
- Limited Approach Boundary
- Restricted Approach Boundary
- Prohibited Approach Boundary

## DETERMINING ARC HAZARD RISK CATEGORY (LIVE WORK)

- Using NFPA 70E Table 130.7
- Using the Calculation Labels

## Delivery Method

Instructor-Led with numerous Labs and exercises.

## Equipment Requirements

(This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

## Course Length

1 Day