

# **NFPA 70E (arc blast) & Electrical Safety for the Workplace**

## **Regulatory Requirement References**

NFPA 70E, Handbook for Electrical Safety in the Workplace  
29 CFR 1910 Subpart S - Electrical (OSHA)  
29 CFR 1910.147 “Control of Hazardous Energy Sources” (OSHA)  
29 CFR 1910.331-335  
MIOSHA Part 40 “Electrical Safety-Related Work Practices”  
MIOSHA Part 85 “Control of Hazardous Energy Sources”

## **Est. Time Required**

8 Hrs. - Initial  
4 Hrs. – Requal/update

## **Pre-Requisites**

None

## **General Overview**

Based on NFPA 70E, this course reviews electrical fundamentals and safety “best practices” and is designed to provide awareness and an overview of the requirements for employees and employers necessary to maintain a safe work environment by observing electrical safety during routine electrical procedures. Students will also review energy control procedures, energized electrical work permits, the purpose of a Hazard/Risk analysis and the effects of an arc blast. In addition, this course reviews electrical safety “best practices” based on NFPA 70E, and why the use of correct PPE appropriate for the job and observing electrical safety procedures are essential during routine electrical procedures. In addition, this course not only provides a detailed description of NFPA 70E content, but it also includes a review of the electrical fundamentals and principles that are required to fully understand the regulatory requirements.

## **Expected Outcomes**

Students will understand the difference between qualified and unqualified employees, basic lock out tag out procedures, minimum safe distance from energized parts and equipment, insulative protective equipment, and basic de-energizing procedures and arc blast. Students will also learn how to prevent or minimize exposure to all widely recognized electrical hazards as well as better understand the importance of the guidelines and regulations of NFPA 70E and OSHA.

## **Topics Covered**

- Safe work practices for working on electrical equipment.
- An overview of what arc flash, arc blast, shock waves are including their traits and effects.
- How to eliminate major electrical hazards such as shock and arc flash.
- Review of electrical hazards and how to identify them.
- Review of the legally required safety programs and procedures to protect workers on the job.
- Review of hazards that may be reduced by design and selection of PPE based on hazard risk, its intent, and its limitations.

## **Implementation Mechanism**

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, video presentation, written material), and evaluation of the student’s performance (quiz).

## **Client Supplied Equipment**

Any lock out device, insulating or shielding equipment specific to client.

## **Client Supplied Policies and Procedures**

Lockout/Tag-out, Electrical safety policies or procedures.