



Electrical Safety (NFPA 70E) 8 Hour Course Outline



Prerequisites: This course shall have no formal pre-requisite.

Course Length: 8 hours - Course length shall vary depending on the number of delegates. Total course time includes breaks.

Class Size: The maximum number of delegates that may be trained and tested per instructor shall be thirty-five (35) in the classroom session.

Course Objective

- Provide delegates with the knowledge to safely perform work around energized and non-energized electrical equipment.
- Provide delegates with recommended practices and guidelines to perform safely while working with electricity.
- Delegates should be able to demonstrate knowledge during written examination.

Course Design

- Power Point© / Lecture / Audio Video / Visual Aids

Successful Course Completion

- Requires a minimum score of 75% or better.
- Delegates will have no more than sixty (60) minutes to complete the exam.
- Grades shall be calculated by dividing the number of questions answered correctly by the total number of exam questions.

Course Content Summary

- Classroom

Breaks: 10 minutes (approximately every hour)

Lunch: 1 Hour

Course Outline

Course Objectives

About NFPA 70E

- What is Covered
- What is Not Covered



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Safety Related Work Practices

- Definitions

Article 105 - Application of Safety-Related Work Practices and Procedures

- Responsibilities
 - Employer
 - Employee

Article 110 - General Requirements for Electrical Safety-Related Work Practices

- Electrically Safe Work Condition
- Energized Work
- Normal Operating Condition
- Elements of an Electrical Safety Program
- Risk Assessment Procedure
 - Human Error
 - Hierarchy of Risk Control Methods
- Job Safety Planning and Job Briefing
- Incident Investigations
- Auditing
- Training Requirements
 - Qualified Person
 - Unqualified Person
 - Lockout/Tagout Procedure
 - Emergency Response
- Ground-Fault Circuit-Interrupter (GFCI) Protection

Article 120 - Establishing an Electrically Safe Work Condition

- Lockout/Tagout Program
 - Employer Responsibilities
 - Employee Involvement
 - Procedure
 - Coordination
 - Lockout Device
 - Tagout Device
 - Planning
 - Elements of Control
 - Process Equipment and Piping Isolation Procedures
 - Purpose
 - Scope
 - Applications
 - Hazards
 - Responsibilities



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- Isolation Procedures
- General Requirements
- Electrically Safe Work Condition

Article 130 - Work Involving Electrical Hazards

- Energized Electrical Work Permit
- Elements of a Work Permit
- Exemptions to Work Permit
- Shock Risk Assessment
- Arc Flash Risk Assessment
- Incident Energy Analysis Method
- Equipment Labeling
- Personal and Other Protective Equipment
- Care of Equipment
- Personal Protective Equipment (PPE)
 - PPE Category 1 – 4
- Other Protective Equipment
- Portable Ladders
- Alerting Techniques & Other Protective Equipment
- Standards for Other Protective Equipment
- Overhead Lines

Informative Annexes

Practical Session

- Conduct Risk Assessment and Risk Control
- Complete Job Briefing and Planning Checklist
- Complete Energized Electrical Work Permit
- LOTO Application

Training Center Provided Material

- Course Materials

Delegate Requirements

- None

Reference Material / Documents

NFPA 70E Standard (National Fire Protection Agency)

- 2021 Edition