



## Electrical Safety (NFPA 70E) 4 Hour Course Outline



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

**Course Length:** 4 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 thirty (30) 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

Safety Related Work Practices

- Definitions

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



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- 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
    - Isolation Procedures
    - General Requirements
  - Electrically Safe Work Condition



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### 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

### Practical Session

- LOTO Application

### Training Center Provided Material

- Course Materials

### Delegate Requirements

- None

### Reference Material / Documents

NFPA 70E Standard (National Fire Protection Agency)

- 2021 Edition