



## **M&A Safety Services**

512 Viaulet Road  
Youngsville, Louisiana 70592  
Main: 337-451-4685  
Fax: 337-451-5847  
[www.masafetyservices.com](http://www.masafetyservices.com)

### **Electrical Safety (NFPA 70E)**

#### Course Outline

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

**Course Length:** 6-8 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 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**

About NFPA 70E

- What is NFPA 70E?
- Training Requirements
- Definition - Qualified Person
- Related Statistics – Bureau of Labor
- Steps to NFPA 70E Compliance



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- Compliance Guide Example

### Electrical Safety

- Definitions
  - Amp
  - Watt
  - Voltage
  - Circuit Breaker
  - Electrical Load
  - Ground Fault Circuit Interrupter (GFCI)
  - Lock Out / Tag Out
  - Authorized Employee
  - Electrical Panel
  - Current Flow
  - Current Transformers
  - High Voltage
  - Hazardous Energy Sources
  - Energy Isolation Device
  - Infeasibility
- Establishing an Electrical Safe Work Condition
- How Electricity Works
- Ohm's Law
- Extension Cords
- Power Line Clearances
- Power Line Safety
- Underground Electrical Lines
- Ground Fault Circuit Interrupters (GFCI)
- Circuit Breaker Tripping
- Battery Maintenance
- Electrical Shock
- Common Electrical Injuries
- Effects of Electrical Current on Body
- Prohibited Actions
  - Electrocution Victim
- Common Mistakes that Lead to Accidents
- Pre-Job Briefings

### Lock Out/Tag Out

- Why Lock Out/Tag Out?
- What is Stored Energy?
- Identifying Hazardous Energy



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- Energy Isolation Devices
- Lock Out/Tag Out Safety
- Energy Isolation Plan
- Energy Control Program
- Energy Control Procedure
- Lock Out/Tag Out Requirements
  - General Requirements
  - Removal Exceptions
  - Group Lock Out/Tag Out
  - Tag Out Only
  - Lock Out Only
  - Electrical Plug Lock Out

### Electrical Labeling

- Equipment Labeling
  - Requirements
  - Content
  - Exceptions

### Arc Flash

- What is Arc Flash?
- Severity
- Warning Label
  - Requirements
  - Content
  - Example
- Arc Flash Boundary
  - Limited Approach Boundary
  - Restricted Approach Boundary
  - Prohibited Approach Boundary
- Housekeeping Duties

### Personal Protective Equipment (PPE)

- Hazard Risk Category (HRC)
  - Discuss the PPE Requirements of Each Category
    - HRC – 0
    - HRC – 1
    - HRC – 2
    - HRC – 3
    - HRC – 4



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### **Practical Session**

- None

### **Training Center Provided Material**

- Course Materials

### **Delegate Requirements**

- None

### **Reference Material / Documents**

NFPA 70E Standard (National Fire Protection Agency)

- 2015 Edition