

Electrical Safety for Inspectors

4 Days, 3.2 CEUs

Organizations are becoming more aware of electrical hazards in the workplace. Many managers and electricians are taking on the responsibility of auditing their own facilities for electrical safety compliance issues. This course provides up-to-date information on OSHA General Industry, NFPA, and IEEE standards that are relevant to electrical safety in the workplace. The information provided prepares participants to recognize existing issues within their facility. Armed with this knowledge, safety managers can implement an effective self-auditing program that helps prevent electrical accidents, OSHA citations and outages caused by accidents.

This course is intended for managers responsible for safety, Human Resources (HR), risk and loss control, as well as any other personnel responsible for ensuring a safe and compliant workplace. A background in industrial safety and electrical installation requirements is helpful.

Participants will be supplied with an NFPA 70E® *Standard for Electrical Safety in the Workplace*® and an NFPA 70B® *Recommended Practice for Electrical Equipment Maintenance*®.

Classroom Attire:

AVO is committed to the personal safety of each participant. Lecture courses may involve a tour of a work or shop area and for this reason open-toe shoes and shorts are not considered appropriate attire for the classroom.

Learning Objectives:

Upon completion of this course, the participant will demonstrate by answering review questions and attaining a minimum grade of 80% in the final exam, that he/she is able to:

- Explain the hazards and effects of electricity.
- Interpret applicable regulations.
- Establish a preventive maintenance program per NFPA 70E & 70B
- Perform hazardous energy control for industrial facilities as required by OSHA.
- Use safe work practices for work on or around industrial electrical equipment and overhead lines.
- Select appropriate personal protective equipment (PPE) for a variety of applications.
- Apply the general requirements of electrical regulations and standards to establish an electrically safe work environment.
- List the requirements for an electrical safety inspection of an industrial, utility or utility-like installation following a comprehensive checklist.

SCOPE

Day 1*

I. Introduction

- A. Schedule
- B. Course Outline

II. Hazards of Electricity

- A. Electrical Shock
- B. Electrical Arc Flash
- C. Electrical Arc Blast

III. Electrical Safety Regulations and Standards

- A. Who is OSHA?
- B. Overview of the Regulations and Standards

IV. National Fire Protection Association (NFPA)

- A. NFPA 70® *National Electric Code*® (NEC®)
- B. NFPA 70B® *Recommended Practice for Electrical Equipment Maintenance*®

Day 2

- C. NFPA 70E® *Standard for Electrical Safety in the Workplace*®

V. Deenergized Work (LOTO)

- A. Deenergization
- B. Confirming a System Is Deenergized

- C. One-Line Diagrams
- D. Lockout/Tagout
- E. Application of Control
- F. Reenergization
- G. Additional Requirements
- H. Additional Regulatory Requirements for Electrical Lockout
- I. Typical Minimal Lockout or Tagout System Procedures

VI. Energized Work

- A. Definition of Energized Work
- B. Definition of Qualified Person
- C. Electrical Hazard Risk Assessment
- D. Training Requirements for a Qualified Person
- E. Regulatory Requirements for Energized Work
- F. Overhead Line Clearances
- G. Protective Equipment and Tools

Day 3

VII. Personal Protective Equipment

- A. Protective Techniques
- B. Electrical Protective Equipment
- C. Arc Flash Protective Equipment

- D. Arc Blast Protective Equipment
- E. Other Protective Equipment
- F. Energy Detection Equipment

VIII. General Requirements

- A. Examination, Installation and Use of Electrical Equipment
- B. Working Space for Electrical Equipment
- C. Requirements for Industrial Facilities with Utility Like Installations

Day 4

IX. Electrical Inspection Techniques and Procedures

- A. OSHA and Self Auditing
- B. OSHA Mandated Written Programs
- C. Principle Items to Inspect
- D. Conducting the Inspection
- E. Use of Checklists

X. Conclusion

- A. Review
- B. Final Exam

*Class scheduling times may vary based on discussions and size of class

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