Content Community Connection

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Electrical Safety For Non Electrical Workers

View Course Details

COURSE DATES AND TIMES

May 8, 2026

10:00 am - 4:30 pm ET

Why Electrical Safety for Non Electrical Workers Training Matters

Virtually every worker on an industrial or commercial job site works with or uses electrically powered equipment. Most of these workers are unaware of the hazards they may be exposed to while performing common, everyday tasks. Jewelry that contacts energized components, overstressed power strips, coffee pots, and workplace heaters can all increase the risk to employees and production if workers are unaware of the potential issues involved.

This course (which includes a CEU certificate of completion) covers workplace electrical safety and the methods used to recognize, identify, and avoid the hazards of arc flash and personal shock. The worker's roles and responsibilities are summarized. The course also teaches the effects of electrocution on the body and principles such as touch step potential. Normal and abnormal equipment conditions are described, and students are trained in how to properly identify potential hazards.

The course teaches basic safe electrical work procedures, how to avoid the risk of personal shock from power tools, broken power cords, and the hazards of not using GFCIs. The risk of personal injury related to Overhead Power Lines is also identified.

Course Objectives

- Basic terminology and definitions.
- Raise awareness of electrical safety
- Instruct how to recognize electrical hazards
- Provide ways to eliminate, remove and prevent hazards in the workplace
- Emphasize the extreme importance of observing all safety requirements and practices
- Instruct what to do during an accident

Learning Outcomes

- Review of electrical hazards, their causes and the potential for injuries and fatalities
- Understand how to avoid these hazards
- Common situations that can increase the risk to workers
- OSHA’s safety-related work practices regulation as it applies to non-electrical personnel
- Understand LOTO and the Safe Work Zone
- Understand applicable OSHA regulations for non-electrical workers
- Understand and apply NFPA 70E requirements for unqualified persons
- Understand the safe approach distances for shock and arc flash, and the purpose of a safe work zone

WHO SHOULD ATTEND

- Industrial plant managers and supervisors

- Occupational health and safety coordinators
- Government building owners, managers, operators and building service technicians
- Private commercial and institutional building owners, managers, operators and Building service technicians
- Non-electrical skilled workers, such as Fitters, Painters, Carpenters, Laborers, Utility Operators, Equipment Operators, Janitors, Waste Handlers and Warehouse Workers, HVAC Personnel
- Pipe Fitters
- Painters
- Carpenters
- Laborers
- Utility Operations
- Equipment Operators
- Janitors
- Waste Handlers
- Warehouse Workers
- Administration
- Grounds Keepers
- HVAC Technicians

STUDENTS RECEIVE

- Electrical Safety Certificate of Course Completion
- .6 Continuing Education Unit (CEU) Credits (6 Professional Development Hours)
- $50 Coupon Toward any Future Electricity Forum Event (Restrictions Apply)
- FREE 100-Page Digital Safety Handbook (Value $20)
- FREE Magazine Subscription (Value $25.00)
- Course Materials in PDF Format

COURSE OUTLINE

Electrical Safety Awareness Training For Non Electrical Workers - Course Outline

Basic Electrical Terminology

- Current
- Resistance
- Voltage
- Conductors
- Insulators
- Grounding

Hazards of Electricity

- Electrical shock
- Arc flash
- Arc blast

Step and Touch Potential

- Step potential
- Touch potential

Electrical Shock

- Dangers of electrical shock
- Effects of electricity on the body
- How is a shock received?
- Low voltage does not mean low hazard
- Examples of burns and injuries
- Examples of accidents involving non-electrical personnel

Arc Flash

- Characteristics of an arc flash

Arc Blast

- Characteristics of an arc blast

Recognizing Electrical Hazards

- Exposed wiring
- Tripping and abrasion hazards
- Cabinets, boxes, and fittings
- Daisy chain multi-outlet strips
- Electrical boxes
- Damaged grounding plugs
- Broken conduit and damaged equipment
- Overhead lines
- Underground cable

Safe Work Practices

- Portable electric equipment and flexible cord set requirements
- Power tool safety
- Cord control
- Extension cords - items to consider before use
- Resetting breakers
- Conductive apparel
- Wall penetrations

- Equipment applications and standards labelling
- Using a ground fault circuit interrupter to protect workers
- Circuit breaker tripping and molded case circuit breakers
- Downed power lines
- Ladders are used around hazards
- Approach distances to overhead lines.
- Specific clearance requirements around power equipment
- Emergency generators
- Battery banks
- Battery chargers

Power System Intrusions

- Excavating, cutting or drilling into power systems

Obeying All Signs and Barriers

- Signs, symbols, tags, and barricades are used to warn personnel of potential hazards - know how to read and obey them

Electrical Hazards Encountered by Specific Work Groups

- Welders
- Heavy equipment operators

- Excavators
- Warehouse workers
- Painters

Electrical Emergencies

- Electrical accidents
- Electrical rescue techniques
- Role of CPR

Electrical Safety For Building Owners, Managers and Supervisors

- Federal legislation - Bill C45
- Provincial Safety legislation governing the workplace
- Canadian Electrical Code
- Overview of NFPA 70e/CSA Z462 Arc Flash Safety in the Workplace (simplified)
- Who is a qualified electrical worker?
- Who is an unqualified electrical worker?
- Safe work vs unsafe work

Hiring outside contractors who are NFPA 70e/CSA Z462 Compliant (checklist)

- Provide Arc Flash assessment to contractors
- Provide hazard assessment of work location(s) to contractors
- Have contractors provide their procedures when working with electricity
- Contractor qualifications and who from the contractor to take out the electrical permit as per local regulations

Electrical Safety Training Programs

- Meeting provincial regulations
- Adopting electrical standards such as NFPA 70e/CSA Z462
- Establishing and identifying who within the facility is qualified to work on power equipment

Electrical Energized Work Permits

- Where an energized work permit is needed
- Exemptions
- Sample of an energized work permit

Lockout Rules

- Individual lockout requirements
- Group lockout requirements
- Locks, tags and hardware to be used

Role of "the Safety Watcher"

- Qualifications of a safety watcher
- Where the safety watcher is used
- Authority of the safety watcher

Rules governing Electrical Equipment Labelling

- Labelling to address code requirements
- Labelling needed to meet NFPA 70e/CSA Z462 standard
- Who applies labelling

Electrical Safety Clothing and PPE for electrical personnel

- Description of all PPE as related to hock and arc flash
- Training on the use of PPE
- Procedures where PPE is required

Questions and Answers

COURSE TIMETABLE

Start: 10:00 a.m.
Finish: 4:30 p.m.

Contact us Today for a FREE quotation to deliver this course at your company’s location.

Request Quote