المركز العالمي للتدريب والتطوير
International Centre For Training & Development

Electrical Safety Codes

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Course Introduction:

This program establishes minimum standards to prevent hazardous electrical exposures to personnel and ensure compliance with regulatory requirements applicable to electrical systems. Working on equipment in a de-energized state is required unless de-energizing introduces an increased hazard or is infeasible.

This program is designed to help ensure that energized electrical work at State facilities is performed safely by qualified electrical workers, who are trained and provided with the appropriate safe work procedures, protective equipment and other controls. The program is intended to protect employees against electrical shock, burns and other potential electrical safety hazards as well as comply with regulatory requirements.

Course Objectives:

At the completion of the course participants are expected to have gained knowledge and experience on how to apply concepts of Electrical Safety for Electrical Utilities in a manner that follows international best practice and be aware of the kind of tools appropriate for the task.

Who Should Attend?

This course will be of interest to:

- Engineers and others in design and construction
- Engineers and other plant personnel
- Maintenance and safety personnel
- Contractors
- Fire and accident investigators
- Operating personnel
- Manufacturing, government and electrical utility staff

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Course Outline:

Module (01) Hazards of Contact with Electricity

- Electrocution
- Electrical Shock
- Burns
- Falls
- Death
- Respiratory Paralysis
- Ventricular Fibrillation
- Muscular Contractions

- Blood Vessel Clotting
- Nerve Damage
- Bone Fractures
- Internal Bleeding

Module (02) Properties of Electricity

- Voltage
- Amperage
- Resistance
- Conductor

Module (03) Electrical Shock

- Amount
- Duration
- Path

Module (04) Burns Caused by Electricity

- Electrical Burns
- Arc Burns
- Thermal Contact Burns
- Electrical Fires

Module (05) Common Hazards

- Inadequate Wiring
- Exposed Electrical Parts
- Defective Insulation
- Improper Grounding
- Overloads
- Improper PPE

Module (06) Preventive Means and Devices

- Circuit Breaker
- Fuse
- Wet Conditions Hazards
- Ground Fault Circuit Interrupter (GFCI)
- Arc-fault Circuit Breaker
- Ground Circuits and Equipment
- Grounding Rod in the Earth
- Grounding-type Receptacle

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- Bonding

Module (07) Creating a Safe Work Environment

- Work permit
- Lock out and Tag out
- Hazards of Fixed Wiring
- Hazards of Flexible Wiring
- Extension Cords
- Isolating Energized Components

Module (08) Tools Inspections

- Double-insulated Tools
- PPE and Safe Clothing
- Safety Glasses
- Proper Clothing
- Contain and Secure Loose Hair
- Foot Protection
- Head Protection
- Proper Hard Hat Classification
- Hearing Protectors

Module (09) OSHA Standards

- Subpart S
- Subpart J
- Subpart R
- Subpart K
- Subpart V

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Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionaires
- Group Work

- Discussion
- Presentation

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Fees:

To be advised as per course locations. This rate includes participant's manual, Hand-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session

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