MERCURY

Electrical and High Voltage Safety Training Course

27 September – 1 October 2027
Dar es Salaam (Tanzania)



Dubai - UAE: +971 4 450 5697
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Amman - Jordan: +962 79 712 3347

Electrical and High Voltage Safety Training Course

Ref: 16044_1068137 **Date:** 27 September – 1 October 2027 **Location:** Dar es Salaam (Tanzania) **Fees:** 5300 Euro

Introduction:

The Electrical and High Voltage Safety training course equips professionals with the knowledge and skills necessary to safely operate and maintain electrical systems in demanding industrial environments. Electricity is a vital component of modern life, yet it poses significant risks if not properly managed. High-voltage systems, in particular, require strict safety procedures to prevent accidents, injuries, and fatalities. It focuses on developing an understanding of electrical hazards and effective prevention methods.

Participants will explore both theoretical concepts and applied safety protocols tailored to workplace environments. The Electrical and High Voltage Safety program emphasizes compliance with industry standards, including electrical safety regulations and inspection requirements. Learners will gain insights into hazard identification, safe work practices, and protective equipment. Case-based scenarios will help reinforce real-world applications. Participants will apply comprehensive safety strategies in their daily operations.

Targeted Groups:

This Electrical and High Voltage Safety training course targets professionals seeking specialized knowledge and skills:

- Electrical engineers are enhancing workplace safety practices.
- Safety officers manage electrical risk controls.
- Technicians working in high-voltage environments.
- Facility managers are responsible for the electrical infrastructure.
- Project managers oversee electrical system upgrades.
- Maintenance staff with power equipment.
- Compliance officers ensure safety regulations.
- Industrial workers handling electrical installations.

Targeted Competencies:

Participants will gain the following competencies during the Electrical and High Voltage Safety program:

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- Competence in identifying electrical hazards and high-voltage risks.
- Ability to assess arc flash, shock, and fire hazards.
- Skills in implementing workplace electrical safety training protocols.
- Knowledge of LOTO safety training procedures.
- Proficiency in PPE selection and application for electrical work.
- Capacity to perform inspections and ensure compliance.
- Ability to apply electrical safety procedures as an electrician.
- Skills in creating electrical accident prevention strategies.
- Competence in developing safety leadership across teams.

Course Objectives:

Participants will achieve the following objectives by completing the Electrical and High Voltage Safety course:

- Understand the core principles of electricity and high-voltage systems.
- Recognize electrical hazards and identify factors that increase accident risk.
- Apply preventive methods to reduce workplace electrical incidents.
- Implement structured safety procedures across operations.
- Demonstrate proper use of electrical PPE in hazardous areas.
- Conduct systematic inspections using safety checklists.
- Develop effective strategies for LOTO safety training applications.
- Respond appropriately to electrical emergencies and accidents.
- Apply industry standards for compliance in electrical safety.
- Design preventive action plans for arc flash safety training.
- Evaluate workplace safety culture and strengthen risk management.
- Demonstrate applied knowledge through electrical hazard training simulations.
- Manage electrical maintenance tasks while minimizing risks.
- Lead teams in adopting electrical safety procedures effectively.

Studying Scenarios:

In this Electrical and High Voltage Safety training, participants will develop their skills through the analysis of the following scenarios:

- Evaluating unsafe electrical maintenance tasks.
- Responding to a simulated arc flash event in a facility.
- Applying emergency first aid after an electrical accident.
- Conducting a compliance audit using an electrical safety inspection checklist.
- Designing safe work procedures for engineers in high-voltage projects.
- Identifying hazards during electrical system upgrades.
- Managing Electrical PPE Training in Industrial Workplaces.
- Implementing electrical accident prevention strategies during routine tasks.

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Course Content:

Unit 1: Introduction to Electrical and High Voltage Safety:

- Overview of electricity and industrial applications.
- Key differences between low-voltage and high-voltage systems.
- Common electrical hazards and injury mechanisms.
- The importance of electrical safety awareness training.
- Causes of workplace electrical accidents and prevention.
- Fundamentals of arc flash safety training and prevention.
- Legal importance of electrical safety compliance.
- Electrical safety procedures for electricians and technicians.
- Role of electrical and high-voltage safety certification in industry.
- Linking safety culture with industrial electrical safety training.

Unit 2: Risk Assessment and Hazard Identification:

- Core Principles of High-Voltage Risk Management.
- Identifying hazards during installations and maintenance.
- Using structured methods for workplace electrical safety training.
- Applying risk assessments for arc flash and shock prevention.
- Conducting hazard analysis with electrical safety inspection checklists.
- Prioritizing electrical risks in critical environments.
- Preventive planning for electrical accident prevention strategies.
- Linking compliance requirements with risk management.
- Documenting inspections for electrical safety compliance for maintenance staff.
- Role of supervisors in managing electrical hazard training programs.

Unit 3: Safety Procedures and Best Practices:

- Implementing structured electrical safety procedures.
- Applying Lockout/Tagout LOTO safety training effectively.
- Ensuring grounding and bonding of high-voltage systems.
- Applying safe practices for electrical repairs and upgrades.
- Adopting Electrical Accident Prevention Strategies for Teams.
- Handling system faults without compromising safety.
- Monitoring compliance during industrial electrical safety training.
- Best practices for electrical safety awareness training sessions.
- Integrating electrical hazard training in daily operations.
- Conducting workplace audits for safety improvement.

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Unit 4: Personal Protective Equipment PPE:

- Introduction to PPE in electrical safety procedures.
- Arc-rated clothing and protective gear in high-voltage tasks.
- Gloves, helmets, footwear, and insulated tools in practice.
- Training personnel in electrical PPE training procedures.
- Addressing compliance issues in PPE maintenance.
- Regular inspection of protective equipment in industries.
- Reducing accident risks through PPE adherence.
- Educating engineers on PPE requirements in projects.
- The Role of PPE in High-Voltage Safety Measures in Industry.
- Linking PPE use with broader industrial electrical safety training.

Unit 5: Emergency Procedures and Compliance Standards:

- Developing an electrical emergency response plan.
- First aid in electrical shock and burn scenarios.
- Shutdown protocols during high-voltage emergencies.
- Legal frameworks for workplace electrical safety compliance.
- International standards in electrical safety training OSHA, IEC.
- Conducting effective incident reporting and investigation.
- Maintaining records of electrical safety compliance for audits and inspections.
- Workers' Compensation and Insurance in Electrical Accidents.
- Promoting continuous education for electrical safety awareness training.
- Ensuring organizational compliance through regular certification updates.

Final Insights & Key Takeaways:

The Electrical and High Voltage Safety training course equips professionals with advanced knowledge to ensure workplace safety in high-risk electrical environments. It emphasizes compliance, accident prevention, and effective use of protective equipment. It integrates practical safety strategies with theoretical foundations. Participants will confidently and systematically manage hazards, fostering a strong culture of safety across electrical and industrial operations.