

Course Overview:

This beginner-level course is tailored for professionals in the maintenance and engineering sectors who require a foundational understanding of low voltage electrical substations. It equips participants with the knowledge to manage substation components, follow operational procedures, uphold safety standards, and address common technical issues—critical for ensuring reliable power distribution in industrial and commercial settings.

Course Objective:

- Identify and describe the components and design of low voltage electrical substations.
- Apply standard operational and maintenance procedures effectively.
- Diagnose and resolve common electrical faults and substation issues.
- Implement safety standards and emergency protocols in substation environments.
- Optimize substation operations for energy efficiency and sustainability.

Course Outline:

1. Fundamentals of Low Voltage Substations
 - Introduction to Substation Components
 - Types of Low Voltage Substations
 - Basic Electrical Principles in Substation Design
2. Operational Procedures of Substations
 - Standard Operating Procedures
 - Control and Monitoring Systems
 - Effective Power Distribution
3. Maintenance of Substation Equipment
 - Routine Maintenance Practices
 - Inspection and Testing
 - Identifying Wear and Potential Failures
4. Safety Measures in Substations
 - Safety Standards and Compliance
 - Risk Assessment and Management
 - Emergency Procedures and Response
5. Troubleshooting Common Issues
 - Diagnosing Electrical Faults
 - Basic Troubleshooting Techniques
 - Common Substation Problems and Solutions
6. Efficient Substation Management
 - Optimizing Substation Operations
 - Energy Efficiency Measures
 - Sustainability Practices in Substations
7. Emerging Technologies and Trends
 - Innovations in Low Voltage Substations
 - Smart Technologies and Automation
 - Future Trends in Substation Technology
8. Practical Exercises and Case Studies

Training Language:

English/Arabic

Training Methodology:

The course combines various teaching methods, including instructor-led presentations, group discussions, case study analyses, and assessments through quizzes and a final exam to engage participants and ensure they understand and retain the material.

Venue | Date | Fees

Riyadh | 17-08-2025 | 17,250 SAR

- Hands-On Training Sessions
- Real-World Case Studies
- Interactive Learning and Skill Development

Who Should Attend:

- Junior Electrical Technicians
- Maintenance Staff in Electrical Substations
- New Entrants in Electrical Engineering
- Technical Personnel in Power Distribution