

Course Overview:

This intermediate-level course equips professionals with essential knowledge and practices for the safe operation and maintenance of circuit breakers and switchgears—critical components in any industrial or commercial electrical system. It focuses on improving equipment reliability, minimizing downtime, and ensuring adherence to safety standards, making it ideal for teams responsible for operational safety and system integrity.

Course Objective:

- Understand the operating principles and types of circuit breakers and switchgears
- Apply effective maintenance techniques to enhance equipment reliability
- Identify and troubleshoot common operational issues
- Implement safety protocols in handling and servicing electrical systems
- Comply with applicable industry standards and regulations

Course Outline:

1. Fundamentals of Circuit Breakers
 - Operating mechanisms
 - Types of circuit breakers
 - Electrical characteristics
2. Switchgear Components and Functionality
 - Design and construction
 - Control systems
 - Role in power distribution
3. Maintenance Techniques
 - Routine inspections and check-ups
 - Wear and tear analysis
 - Preventive maintenance strategies
4. Troubleshooting Common Issues
 - Fault detection techniques
 - Root cause analysis
 - Effective repair procedures
5. Safety in Operation
 - Conducting risk assessments
 - Safe handling practices
 - Emergency response protocols
6. Standards and Regulations
 - Key compliance requirements
 - Overview of industry best practices
 - Regulatory frameworks
7. Advanced Technologies in Switchgear
 - Integration of smart systems
 - Innovations in circuit breakers
 - Modern control methodologies
8. Case Studies and Practical Applications
 - Real-world operational scenarios

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

Jubail | 24-08-2025 | 17,250 SAR

Khobar | 21-09-2025 | 14,375 SAR

- Analysis of lessons learned
- Application of best maintenance practices

Who Should Attend:

- Electrical Engineers
- Maintenance Technicians
- Safety Managers
- Electrical Supervisors