

Course Overview:

This course provides an in-depth understanding of identifying and resolving electrical faults, tailored for professionals in maintenance and engineering. Participants will gain critical insights into diagnosing faults, using systematic troubleshooting techniques, and implementing effective repair strategies. Emphasis is placed on safety, precision, and the adoption of modern diagnostic tools, enabling attendees to enhance reliability and efficiency in electrical systems.

Course Objective:

- Diagnose various types of electrical faults using analytical methods
- Apply systematic troubleshooting approaches to minimize downtime
- Implement effective maintenance and repair strategies
- Use modern diagnostic tools and predictive maintenance technologies
- Ensure safety compliance in all fault resolution procedures

Course Outline:

1. Principles of Electrical Faults
 - Fault types and root causes
 - Circuit analysis fundamentals
 - Effects of faults on system performance
2. Troubleshooting Methodology
 - Systematic diagnostic approach
 - Use of electrical testing tools
 - Root cause identification techniques
3. Common Electrical Faults
 - Diagnosing short circuits
 - Managing overload conditions
 - Identifying and addressing ground faults
4. Fault Analysis and Detection
 - Signal and waveform analysis
 - Visual inspection techniques
 - Advanced electrical testing methods
5. Repair and Maintenance Strategies
 - Planning corrective maintenance
 - Replacing faulty components
 - System upgrades and retrofitting
6. Safety in Electrical Work
 - Conducting risk assessments
 - Safe work practices for technicians
 - Responding to emergencies
7. Emerging Technologies in Fault Diagnosis
 - Smart diagnostic systems
 - Use of advanced tools and software
 - Integrating predictive maintenance
8. Case Studies and Practical Applications
 - Analysis of real-world 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

Riyadh | 07-09-2025 | 17,250 SAR

- Lessons from past incidents

- Implementing best practices

9. Group Discussions and Peer Learning

- Sharing troubleshooting experiences

- Collaborative problem-solving

- Cross-functional learning

10. Final Review and Assessment

- Comprehensive knowledge check

- Review of key concepts

- Preparation for implementation at the workplace

Who Should Attend:

- Electrical Engineers

- Maintenance Technicians

- Facility Managers

- Electrical Supervisors