

**Course Overview:**

This course offers an in-depth understanding of AC electrical motors and drives, focusing on troubleshooting, maintenance, and protection techniques vital for ensuring equipment longevity and minimizing downtime. Tailored for professionals in industrial and engineering settings, it addresses operational challenges, equips learners with diagnostic and repair skills, and emphasizes safety and efficiency in motor and drive systems.

**Course Objective:**

- Diagnose and troubleshoot common issues in AC motors and drives
- Implement effective maintenance practices to extend motor lifespan
- Apply protection techniques to enhance equipment safety and reliability
- Utilize diagnostic tools for performance assessment and fault detection
- Improve energy efficiency through optimized drive control strategies

**Course Outline:****Module 1: AC Motor Fundamentals**

- Motor Types and Characteristics
- Operating Principles
- Electrical Connections

**Module 2: Troubleshooting AC Motors**

- Fault Diagnosis
- Common Motor Failures
- Repair Techniques

**Module 3: Maintenance of AC Motors**

- Routine Maintenance Procedures
- Wear and Tear Assessment
- Performance Optimization

**Module 4: Protection Techniques for Motors**

- Overload Protection
- Thermal Management
- Electrical Safeguards

**Module 5: AC Drives and Controls**

- Drive Configurations
- Control Strategies
- Energy Efficiency

**Module 6: Advanced Diagnostic Tools**

- Vibration Analysis
- Thermography
- Electrical Testing Methods

**Module 7: Industrial Applications**

- Application-Specific Motors
- Drive Integration
- Automation Systems

**Module 8: Safety and Standards**

- Compliance with Regulations

**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 | 12-10-2025 | 14,375 SAR

Khobar | 07-12-2025 | 14,375 SAR

- Safety Practices
- Industry Standards

**Who Should Attend:**

- Electrical Maintenance Engineers
- Industrial Electricians
- Automation Technicians
- Maintenance Supervisors