

**Course Overview:**

This course provides essential foundational knowledge and practical guidance for professionals involved in the operation and maintenance of electrical transformers. It equips participants with the skills to perform routine inspections, apply safety standards, and diagnose common faults, ensuring enhanced reliability and operational efficiency of transformer systems within industrial and facility settings.

**Course Objective:**

- Understand the fundamental principles and components of electrical transformers
- Conduct routine maintenance to ensure transformer reliability and efficiency
- Identify and diagnose basic transformer faults using standard tools
- Apply safety protocols when handling and maintaining high-voltage equipment
- Recognize innovations and emerging technologies in transformer maintenance

**Course Outline:****Module 1: Fundamentals of Transformers**

- Transformer operating principles
- Key types and their industrial applications
- Components and their functions

**Module 2: Maintenance of Transformers**

- Routine inspection practices
- Managing oil levels and temperature
- Ensuring insulation and electrical connection integrity

**Module 3: Safety Standards in Maintenance**

- Essential safety protocols
- High-voltage equipment handling
- Proper use of personal protective equipment (PPE)

**Module 4: Basic Fault Diagnosis**

- Recognizing typical transformer faults
- Diagnostic tools and their usage
- Troubleshooting methods

**Module 5: Transformer Efficiency and Reliability**

- Techniques for improving performance
- Factors influencing reliability
- Practices for long-term health

**Module 6: Emerging Technologies in Transformer Maintenance**

- Technological innovations
- Advanced diagnostic tools
- Future trends in maintenance

**Module 7: Case Studies and Practical Examples**

- Real-world maintenance examples
- Insights from case analyses
- Industry best practices

**Module 8: Interactive Learning Sessions**

- Structured group discussions
- Simulation-based learning

**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 | 26-10-2025 | 17,250 SAR

-Q&A and feedback integration

**Who Should Attend:**

- Junior Maintenance Engineers
- Electrical Technicians
- Facility Maintenance Staff
- Trainees in Electrical Engineering