Electrical Power Systems: Start-Up, Commissioning & Testing

TE388

Course Overview:

Aimed at beginners in the maintenance and engineering sectors, this course focuses on the essential phases of electrical power system initialization—start-up, commissioning, and testing. Participants will gain foundational knowledge necessary for safely activating and verifying electrical systems, ensuring reliability and compliance with safety standards. Emphasis is placed on structured procedures, real-world troubleshooting, and emerging technologies in electrical systems.

Course Objective:

-Understand the architecture and design of electrical power systems

-Conduct effective pre-start-up checks and start-up sequences

-Execute commissioning processes and validate system readiness

-Apply testing procedures using proper tools and safety protocols

-Identify and troubleshoot common electrical system issues

Course Outline:

Module 1: Introduction to Electrical Power Systems

-Components and functions of electrical systems

-Power system design principles

-Role of safety in system design

Module 2: Start-Up Procedures for Electrical Systems

-Pre-start-up inspection and checks

-Start-up sequencing and controls

-Monitoring and adjustments during start-up

Module 3: Commissioning Electrical Power Systems

-Planning and execution of commissioning activities

-System validation techniques

-Documentation and reporting

Module 4: Electrical System Testing

-Types of electrical tests and their purposes

-Testing equipment and methods

-Performance benchmarks and reporting

Module 5: Troubleshooting and Problem Solving

-Diagnostic procedures for electrical faults

-Common start-up and operational issues

-Implementation of corrective actions

Module 6: Safety Standards and Regulations

-Key electrical safety protocols

-Workplace regulatory compliance

-Safe handling and operating procedures

Module 7: Maintenance of Electrical Power Systems

-Routine and preventive maintenance practices

-Recordkeeping and documentation

-Integration with reliability-centered maintenance

Module 8: Advancements in Electrical Power Systems

-Emerging technologies in the power sector

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 | 16-11-2025 | 17,250 SAR

-Sustainable and renewable integration

-Future trends and innovation paths

Who Should Attend:

-Electrical technicians

-Junior electrical engineers

-Maintenance personnel

-Technical staff involved in electrical projects