

Testing, Inspection, Commissioning and Maintenance of Electrical Systems

COURSE OVERVIEW

This intensive course provides a comprehensive approach to the lifecycle of electrical systems, with a focus on safety, reliability, and performance. Delegates will gain hands-on and theoretical knowledge in testing, inspection, commissioning, and maintenance processes across low, medium, and high-voltage systems.

It covers international standards, diagnostic tools, safety protocols, documentation practices, and failure prevention techniques, ensuring participants are equipped to oversee or execute electrical systems' transition from installation to full operation and long-term maintenance.

WHO SHOULD ATTEND?

This course is ideal for Electrical Engineers, Commissioning Specialists, Maintenance Technicians, Project Engineers, Site Supervisors, Utility Inspectors, and professionals responsible for ensuring the safe and efficient operation of electrical infrastructure.

COURSE OUTCOMES

Delegates will gain knowledge and skills to:

- Understand the full lifecycle of electrical systems from installation to operation
- Perform functional and acceptance testing of electrical components and system
- Conduct inspections in line with safety and compliance standards
- Lead or support the commissioning of new or upgraded installations
- Develop and execute preventive and corrective maintenance plans
- Apply diagnostic tools to identify faults and improve system reliability

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand:

- Pre-commissioning vs. commissioning processes explained
- Testing procedures: insulation resistance, earth continuity, relay testing, high-voltage tests
- Visual and thermal inspection techniques using infrared cameras
- Safety and compliance standards (e.g., IEC, IEEE, OSHA)
- Maintenance planning and asset management systems
- Failure analysis and predictive maintenance strategies
- Hands-on case studies from industrial and utility environments
- Improving system uptime and reducing operational risks

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded