TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000570

ELPO004 - Electrical Installation & Maintenance Technology

Electrical maintenance is crucial.



Learn from the Best in the Business!

Course overview

Foundation level

Why take this course

Electrical maintenance is crucial. A majority of the time, outside of new installations electricians aren't called to a building unless a noticeable issue is present. This is generally within some aspect of the wiring or the terminations sockets or fuse board. Therefore, interim maintenance is essential to maintaining a safe building. Routine inspections allow you to detect any underlying issues before they grow to a detrimental status. Furthermore, they allow a quick resolution that will likely be more efficient in terms of safety and costs.

A well-maintained electrical system that undergoes routine inspection, will likely contribute to the longevity of the system itself. Modern technology is a very large part of a modern business and therefore it needs to be protected from electrical damage. A faulty circuit or socket can easily damage a high-cost piece of technology causing a large replacement cost. Besides, there is the possibility of lost working time while it is replaced.

By upholding regular electrical maintenance, you are ensuring that the likelihood for potential problems to develop is minimised and that current ones cannot develop into greater issues.

This Electrical Installation and Maintenance Technology course teaches the fundamental training concepts of electrical wiring, including the industry-standard components used by electricians and technicians to install, operate, repair, and design equipment for modern industry. Learners will gain expertise in key skill areas, such as basic electrical system wiring, interpreting wire installation plans, handling non-metallic cable, connecting electrical services, and installing basic electrical components like switches, outlets, and lighting.

Who it is for and how it helps

This course is ideal for employees working in the electricity sector or any individual working as an electrical technician. The programme will also be useful to engineers, supervisors and other technical individuals who require a fundamental understanding of how the wiring of electrical systems need to be performed or under.

What you will learn

- Describe the basics of operating and setting up electrical wiring systems
- Select suitable types and ratings of electrical wiring systems
- Understand the importance of fulfilling the requirements for safe use of electrical equipment and systems
- Comprehend various earthing mechanisms and its importance in safety
- Perform simple methods of calculating to check the suitability of conductors and protective earthing elements to guarantee safe operation
- Specify electrical system testing procedures

Course overview — continued

- Conduct sporadic checks and verification measures that need to be carried out in an electrical installation as required for compliance purposes
- Draw up simple operational policies for safety guidelines
- Develop realistic maintenance strategies for electrical wiring systems

Curriculum

Modules 01–03

01 Preliminary Design Requirements

- Building Services
- Purpose of an Installation
- Cables
- External Influences
- Transformers
- Compatibility
- Protective Devices
- Maintainability

02 Design Characteristics

- Electrical Safety
- Cable Installation
- IEC 60364
- Cable Terminations Hot and Cold Shrinks
- Wiring Regulations
- Inspection and Testing
- Cable Sizing
- Documentation

03 Designing an Installation

- Single Phase Design
- Power Quality
- Three Phase Design
- Cable Requirements
- Protective Device Selection
- Installation Method
- Earthing and Bonding
- Source of Supply

Curriculum

Modules 04–05

04 Commissioning and Testing

- The Need to Maintain
- Test Results
- What is Maintenance?
- Documentation
- Introduction to Commissioning
- Harmonics
- Inspection
- Earth Leakage

05 Periodic Maintenance

- Maintenance Planning
- Periodic Inspection
- Equipment Reliability
- Complex Testing
- Categories of System
- Harmonic Analysis
- Safety Critical
- Records

Participation and contacts

Joining the programme

Contact the Academy and quote course code 000570 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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