Global Horizon
TRAINING CENTER

Training Course:
Electrical Engineering Practices for Facility Engineers

11 - 15 October 2026
Dubai (UAE)

Training Course:
Electrical Engineering Practices for Facility Engineers

Training Course code: EN236626 From: 11 - 15 October 2026 Venue: Dubai (UAE) - Training Course Fees: 5830 Euro

Introduction

Electrical systems are a fundamental component of modern facilities, supporting lighting, HVAC systems, elevators, pumps, communication systems, security equipment, data infrastructure, and other critical building services. Facility engineers therefore require a practical understanding of electrical engineering principles to operate facilities safely, maintain system reliability, coordinate maintenance activities, and respond effectively to electrical problems.

This training program, designed by Global Horizon Training Center, provides facility engineers and technical professionals with practical knowledge of electrical power distribution, transformers, switchgear, motors, protection systems, grounding, power quality, electrical maintenance, energy efficiency, and electrical safety within commercial, industrial, and institutional facilities.

The program emphasizes the practical responsibilities of facility engineers rather than advanced electrical design. Participants will learn how major electrical systems interact, how to interpret essential electrical information, recognize abnormal operating conditions, coordinate preventive maintenance, identify potential failures, and apply appropriate safety practices.

Objectives

By the end of this training program, participants will be able to:

- Understand fundamental electrical engineering concepts relevant to facility operations.
- Identify major components of facility electrical distribution systems.
- Understand transformers, switchgear, distribution boards, and protective devices.
- Interpret basic electrical single-line diagrams.
- Understand electrical loads, demand, and equipment ratings.
- Recognize the operating principles of motors and motor control systems.
- Understand emergency and standby power systems.
- Identify common electrical faults and abnormal operating conditions.
- Understand grounding and earthing principles.
- Recognize common power quality problems.
- Apply effective electrical preventive maintenance practices.
- Identify early warning signs of electrical equipment deterioration.

- Understand electrical safety, isolation, and LOTO requirements.
- Improve facility electrical reliability and operational continuity.
- Identify opportunities for electrical energy efficiency.

Course Methodology

The program uses a practical, facility-oriented learning approach focused on understanding, operation, maintenance, and troubleshooting of electrical systems.

The methodology includes:

- Instructor-led technical presentations.
- Electrical diagrams and system illustrations.
- Facility-based examples and scenarios.
- Interpretation of simplified single-line diagrams.
- Equipment operating and maintenance examples.
- Electrical fault and troubleshooting discussions.
- Preventive maintenance scenarios.
- Electrical safety and risk discussions.
- Energy-efficiency examples.
- Case studies and knowledge-review sessions.

Organizational Impact

This program will help organizations improve the management, reliability, and safety of their facility electrical systems through:

- Improved electrical knowledge among facility engineering personnel.
- Increased reliability and availability of electrical systems.
- Reduced risk of unexpected electrical failures.
- Improved preventive maintenance planning.
- Better identification of electrical equipment deterioration.
- Reduced electrical-related downtime.

- Improved coordination between facility, electrical, maintenance, and contractor teams.
- Enhanced electrical safety and risk awareness.
- Improved management of emergency and standby power systems.
- Better understanding of power quality issues.
- Improved energy-efficiency awareness.
- More effective technical decision-making regarding electrical facility assets.

Target Audience

This training program is suitable for:

- Facility Engineers
- Facility Managers
- Maintenance Engineers
- Building Services Engineers
- Electrical Maintenance Personnel
- Mechanical Engineers involved in facility operations
- MEP Engineers
- Operations Engineers
- Maintenance Supervisors
- Plant Engineers
- Reliability Engineers
- Technical Supervisors
- Asset Management Personnel
- Property and Building Management Professionals
- Technical Managers responsible for facility operations

Course Outline

Day 1 - Electrical Fundamentals & Facility Power Distribution

- Essential electrical concepts for facility engineers
- Voltage, current, resistance, power, and energy
- AC and three-phase electrical systems
- Power factor and electrical demand
- Facility electrical distribution architecture
- Main and sub-distribution boards
- Electrical loads and equipment ratings
- Reading basic single-line diagrams

Day 2 - Transformers, Switchgear & Protection

- Transformer principles and facility applications
- Transformer ratings and operating considerations
- Switchgear and distribution equipment
- Circuit breakers, isolators, and fuses
- Protective relays and basic protection concepts
- Overload, short-circuit, and earth-fault protection
- Electrical panel inspection considerations
- Common equipment failure indicators

Day 3 - Motors, Building Loads & Standby Power

- Fundamentals of electrical motors
- Motor starting and protection
- Variable Frequency Drives VFDs
- Electrical considerations for HVAC equipment
- Pumps, elevators, and other facility loads
- Emergency and standby generators
- Automatic Transfer Switches ATS

- Uninterruptible Power Supply UPS fundamentals
- Essential and critical electrical loads

Day 4 - Electrical Maintenance, Power Quality & Energy Efficiency

- Preventive electrical maintenance principles
- Inspection and maintenance planning
- Common electrical faults and troubleshooting approach
- Overheating, loose connections, and insulation deterioration
- Fundamentals of power quality
- Voltage disturbances and harmonics
- Power factor correction
- Electrical energy consumption in facilities
- Energy-efficiency improvement opportunities

Day 5 - Electrical Safety & Facility System Reliability

- Electrical hazards in facility environments
- Electric shock and arc-flash awareness
- Safe electrical isolation
- Lockout/Tagout LOTO principles
- Grounding, earthing, and bonding
- Electrical fire prevention
- Electrical emergency response
- Reliability and continuity of electrical supply
- Managing electrical contractors and maintenance activities
- Developing effective electrical maintenance priorities
- Course review and key learning outcomes

Registration form on the Training Course: Electrical Engineering Practices for Facility Engineers

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Company Information

Company Name: .....
Address: .....
City / Country: .....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
- ☐ Please invoice my company

Easy Ways To Register

Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.