

€ TRAINING

Electrical Distribution Systems Planning and
Maintenance



6 - 10 October 2024
Cairo (Egypt)



Electrical Distribution Systems Planning and Maintenance

REF: O1390 DATE: 6 - 10 October 2024 Venue: Cairo (Egypt) - Fee: 4465 Euro

Introduction:

This training program is designed to provide participants with comprehensive knowledge and skills for effective planning, operation, and maintenance of electrical distribution systems. It empowers them to manage and optimize electrical distribution systems effectively.

Program Objectives:

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

- Understand the principles and components of electrical distribution systems.
- Gain proficiency in planning and designing distribution networks.
- Learn techniques for effective operation and maintenance.
- Develop skills in troubleshooting and fault analysis.
- Implement best practices for system optimization and reliability.

Target Audience:

- Electrical engineers and technicians.
- Maintenance and reliability engineers.
- Utility managers and operators.
- Project managers involved in electrical distribution.
- Professionals seeking to enhance their skills in electrical distribution systems.

Program Outline:

Unit 1:

Fundamentals of Electrical Distribution Systems:

- Introduction to Electrical Distribution Systems.
- Components of Distribution Networks transformers, switches.
- Load Flow and Demand Analysis.

- Voltage Regulation and Power Quality.
- Standards and Codes for Electrical Distribution.

Unit 2:

Planning and Design of Distribution Networks:

- Principles of Distribution Network Planning.
- Steps for Designing Overhead and Underground Systems.
- Network Configuration and Layout.
- Capacity Planning and Load Forecasting.
- Integration of Distributed Generation.

Unit 3:

Operation of Electrical Distribution Systems:

- Operational Strategies and Best Practices.
- System Monitoring and Control.
- Load Management and Demand Response.
- SCADA Systems and Automation.
- Emergency Response and Outage Management.

Unit 4:

Maintenance of Electrical Distribution Systems:

- Preventive and Predictive Maintenance Techniques.
- Condition Monitoring and Diagnostic Tools.
- Maintenance of Key Components transformers, cables.
- Asset Management and Lifecycle Planning.
- Safety Practices and Procedures.

Unit 5:



Troubleshooting and Fault Analysis:

- Identifying and Analyzing Faults in Distribution Systems.
- Techniques for Fault Location and Isolation.
- Power System Protection and Coordination.
- Root Cause Analysis and Corrective Actions.
- Case Studies on Fault Management and Resolution.