



London TDM

# Engineering and Technical Skills Training Courses

**Course Venue:** United Arab Emirates - Dubai

**Course Date:** From 19 October 2025 To 23 October 2025

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

The "Power Distribution and Protection Systems" course is designed for professionals in the electrical engineering and utilities sectors, focusing on the reliability and safety of power delivery. This five-day program covers essential aspects of power distribution, system protection strategies, and state-of-the-art technologies to equip participants with the skills necessary to manage and safeguard power systems effectively.

## Objectives

- Understand the principles of power distribution networks.
- Gain insights into the latest protection systems and technologies.
- Learn to design and maintain effective distribution systems.
- Analyze system faults and implement protective measures.
- Enhance skills in managing system upgrades and compliance.

## Course Outlines

### Day 1: Introduction to Power Distribution Systems

- Overview of Electrical Power Systems
- Components of Distribution Networks
- Load Flow and System Planning
- Distribution Network Configurations
- Regulatory and Safety Standards

### Day 2: Fundamentals of Protection Systems

- Introduction to Protection Systems
- Types of Faults and Their Impacts
- Protection System Components
- Relay Coordination and Settings
- Fault Analysis Techniques

### Day 3: Advanced Protection Techniques

- Digital Protection Relays
- Overcurrent and Earth Fault Protection
- Distance Protection Techniques
- Differential Protection Schemes
- Arc Flash Analysis and Mitigation

### Day 4: Distribution System Design and Analysis

- Network Design Considerations
- Smart Grids and Renewable Integration
- Reliability Analysis and Improvement
- Voltage Regulation and Stability
- Case Studies: Real-world Applications

## **Day 5: Maintenance, Testing, and System Upgrades**

- System Maintenance Strategies
- Testing and Commissioning Procedures
- Troubleshooting and Diagnostic Tools
- Upgrade Planning and Implementation
- Compliance and Risk Management