London TDM

Engineering and Technical Skills Training Courses

Course Venue: United Arab Emirates - Dubai

Course Date: From 11 January 2026 To 15 January 2026

Course Place: Downtown Dubai

Course Fees: 5,000 USD

Introduction

This 5-day professional course on "Electrical Power Systems Fundamentals" is designed to provide participants with a comprehensive understanding of the essential concepts, components, and operations involved in electrical power systems. Through theoretical lessons and practical exercises, attendees will gain a strong foundation in the fundamentals of power system engineering, which is crucial for professionals working in power generation, transmission, and distribution sectors.

Objectives

- Understand the basic concepts and components of electrical power systems.
- Gain knowledge about power generation methods and technologies.
- Learn about power transmission and distribution networks.
- Analyze power system protection and stability issues.
- Develop problem-solving skills related to power system operations.

Course Outlines

Day 1: Introduction to Power Systems

- Overview of electrical power systems
- Key components and their functions
- Types of power systems: AC and DC
- Basic electrical concepts and laws
- Introduction to power system modeling

Day 2: Power Generation

- Introduction to power generation methods
- Thermal and hydroelectric power plants
- Nuclear power generation
- Renewable energy sources: solar and wind
- Environmental impact and sustainability

Day 3: Power Transmission

- Basics of power transmission systems
- High-voltage transmission lines
- Transformers and substations
- Transmission line modeling and performance
- Introduction to smart grids

Day 4: Power Distribution

- Principles of power distribution systems
- Distribution network configurations
- Components of a distribution system
- Load management and demand-side management
- Reliability and quality of power supply

Day 5: Power System Protection and Stability

- Introduction to power system protection
- Protective devices and relays
- Fault detection and isolation
- Power system stability analysis
- Future trends in power system protection