London TDM

Engineering and Technical Skills Training Courses

Course Venue: United Kingdom - London

Course Date: From 14 June 2026 To 18 June 2026

Course Place: London Paddington

Course Fees: 7,500 USD

Introduction

This professional course on "Motor Controls and Electrical Drives" is designed to provide participants with a comprehensive understanding of the fundamental concepts and practical applications of motor controls and electrical drives in industrial settings. Throughout this 5-day course, attendees will gain insights into system design, installation, and troubleshooting techniques, empowering them to implement efficient and reliable motor control systems in their workplaces.

Objectives

- Understand the fundamentals of motor controls and electric drives.
- Learn about various types of motors and their applications.
- Explore different control strategies and their implementation.
- Develop skills for troubleshooting and maintaining motor control systems.
- Gain practical experience through hands-on exercises and case studies.

Course Outlines

Day 1: Introduction to Motor Controls and Basics of Electrical Drives

- Overview of electrical motor types and applications
- Introduction to motor control systems and components
- Basics of electrical drive operation and control
- Safety standards and regulations in motor controls
- Introduction to industrial automation systems

Day 2: Control Strategies and Motor Control Components

- Discussion of open-loop and closed-loop control systems
- Understanding sensors and actuators in motor control
- Exploration of contactors, relays, and motor starters
- Introduction to programmable logic controllers (PLCs)
- Hands-on exercises with motor control components

Day 3: Motor Drives and Advanced Control Techniques

- Types of motor drives and their applications
- Vector control and direct torque control methods
- Variable frequency drives (VFDs) and their integration
- Energy efficiency in motor control and drives
- Case studies of advanced motor control applications

Day 4: Troubleshooting and Maintenance of Motor Systems

- Diagnosing common issues in motor control systems
- Maintenance practices for prolonged motor life
- Use of diagnostic tools and software for troubleshooting
- Strategies for predictive and preventive maintenance
- Troubleshooting exercises with real-world scenarios

Day 5: Practical Applications and Future Trends in Motor Controls

- Integration of IoT and smart technologies in motor systems
- Automation and control in Industry 4.0
- Hands-on project: Implementing a motor control system
- Discussion on the future of motor controls and drives
- Review, assessment, and course completion ceremony