London TDM

Engineering and Technical Skills Training Courses

Course Venue: Malaysia - Kuala Lumpur

Course Date: From 18 January 2026 To 22 January 2026

Course Place: Royale Chullan Hotel

Course Fees: 6,000 USD

Introduction

Industrial automation and PLC (Programmable Logic Controller) programming are critical components in modern manufacturing and production systems. This 5-day professional course is designed to equip participants with the knowledge and skills necessary to design, implement, and manage automated systems. Through a combination of theoretical knowledge and hands-on practice, participants will learn to enhance operational efficiency, productivity, and safety in industrial settings.

Objectives

- Understand the fundamental principles of industrial automation and its applications.
- Gain proficiency in PLC programming and configuration.
- Develop skills in designing and implementing automated control systems.
- Learn to troubleshoot and maintain industrial automation equipment.
- Explore the latest trends and advancements in industrial automation technology.

Course Outlines

Day 1: Introduction to Industrial Automation

- Overview of industrial automation and its impact on production.
- Key components and types of industrial automation systems.
- Introduction to control systems and their role in automation.
- Understanding sensors and actuators in industrial applications.
- Discussion on the benefits and challenges of automation in industry.

Day 2: Basics of PLC Programming

- Introduction to PLCs and their role in automation.
- Understanding the architecture of a typical PLC system.
- Basics of ladder logic and programming languages used in PLCs.
- Hands-on practice: Writing and simulating basic PLC programs.
- Discussion on PLC hardware and software options available in the market.

Day 3: Advanced PLC Programming Techniques

- Exploring advanced programming techniques and functions.
- Timers, counters, and data handling in PLCs.
- Implementing analog and digital signals in PLC systems.
- Hands-on practice: Programming for complex automation tasks.
- Introduction to Human-Machine Interface (HMI) integration with PLCs.

Day 4: Designing and Implementing Automated Systems

- Principles of designing automated control systems.
- Developing process flow diagrams and control logic.
- Integration of PLCs with robotics and other automation equipment.
- Hands-on practice: Building and testing an automated system project.
- Safety standards and best practices in automated systems design.

Day 5: Troubleshooting and Maintenance of Automation Systems

- Identifying common issues in automated systems and solutions.
- Strategies for effective troubleshooting and diagnostics.
- Scheduled maintenance practices for PLC systems.
- Case studies on successful automation troubleshooting.
- Exploring future trends and innovations in industrial automation.