London TDM

Mechanical and Electrical Engineering Training Courses

Course Venue: Malaysia - Kuala Lumpur

Course Date: From 31 May 2026 To 04 June 2026

Course Place: Royale Chullan Hotel

Course Fees: 6,000 USD

Introduction

This 5-day professional course on "Electrical Circuit Analysis and Troubleshooting" is designed to equip participants with the knowledge and skills necessary to analyze and troubleshoot electrical circuits effectively. Through a combination of theoretical knowledge and practical exercises, attendees will gain a comprehensive understanding of electrical circuits, their components, and methods to diagnose and resolve common issues.

Objectives

- To understand the fundamental principles of electrical circuit analysis.
- To learn how to apply Ohm's Law and Kirchhoff's Laws in circuit analysis.
- To develop skills for identifying and troubleshooting common circuit problems.
- To gain hands-on experience with testing equipment and diagnostic tools.
- To enhance problem-solving abilities in real-world electrical applications.

Course Outlines

Day 1: Introduction to Electrical Circuits

- Overview of circuit components and symbols
- Understanding voltage, current, and resistance
- Basic circuit configurations and concepts
- Introduction to Ohm’s Law
- Laboratory: Constructing simple circuits

Day 2: Circuit Analysis Techniques

- Application of Kirchhoff's Voltage and Current Laws
- Series and parallel circuits analysis
- Thevenin’s and Norton’s theorems
- Mesh and nodal analysis methods
- Lab session: Solving circuit problems using analysis techniques

Day 3: Advanced Circuit Concepts

- AC vs. DC circuit characteristics
- Impedance in RLC circuits
- Power factor and its correction
- Introduction to transformers and inductors
- Hands-on: Analyzing complex circuits with inductance

Day 4: Troubleshooting Techniques

- Common circuit problems and failure modes
- Use of multimeters and oscilloscopes
- Systematic troubleshooting approaches
- Case studies of typical troubleshooting scenarios
- Practical session: Identifying and fixing circuit issues

Day 5: Practical Applications and Final Assessment

- Real-world applications of circuit analysis
- Team-based troubleshooting projects
- Review and discussion of troubleshooting strategies
- Final assessment: Theory and practical examination
- Feedback session and course wrap-up