**London TDM**

# Mechanical and Electrical Engineering Training Courses

**Course Venue:** Malaysia - Kuala Lumpur

**Course Date:** From 21 June 2026 To 25 June 2026

**Course Place:** Royale Chullan Hotel

**Course Fees:** 6,000 USD

## Introduction

This professional course on "Power Transformers: Operation and Testing" is designed to provide participants with comprehensive knowledge and practical skills necessary for understanding, operating, and testing power transformers. Through this course, professionals will be equipped with the expertise to ensure efficient and reliable transformer operations, crucial for any power system.

- Understand the fundamental concepts of power transformers.
- Gain insight into the operation and maintenance of power transformers.
- Learn the techniques and procedures for transformer testing.
- Identify and troubleshoot common transformer issues.
- Enhance practical skills through real-world examples and case studies.

## Course Outlines

### Day 1: Introduction to Power Transformers

- Overview of power transformer fundamentals.
- Types and classifications of transformers.
- Basic electrical and magnetic principles of operation.
- Key components and their functions.
- Understanding transformer specifications.

### Day 2: Transformer Installation and Operation

- Transformer site selection and installation procedures.
- Operational principles and power flow management.
- Understanding transformer cooling systems.
- Monitoring and control systems for transformers.
- Transformer efficiency and performance metrics.

### Day 3: Maintenance and Diagnostics

- Routine and preventive maintenance strategies.
- Identifying and addressing transformer faults.
- Diagnostic techniques and tools.
- Field analysis and condition monitoring.
- Case studies on common transformer issues.

### Day 4: Transformer Testing Methodologies

- Overview of transformer testing standards and protocols.
- Insulation resistance and winding resistance testing.
- Transformer turns ratio (TTR) and impedance testing.
- Oil quality and dissolved gas analysis (DGA).
- Safety practices during testing.

### Day 5: Advanced Topics and Case Studies

- Analysis of complex transformer failures and solutions.
- Emerging technologies in transformer design and monitoring.
- Integration of smart grid technologies with power transformers.
- Environmental considerations and transformer recycling.
- Interactive session: solving real-world transformer problems.