



London TDM

# Mechanical and Electrical Engineering Training Courses

**Course Venue:** United Arab Emirates - Dubai

**Course Date:** From 31 May 2026 To 04 June 2026

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

This five-day professional course on the "Maintenance and Troubleshooting of HVAC Systems" is designed to provide technicians and engineers with the practical skills and knowledge needed to maintain and troubleshoot HVAC systems efficiently. Participants will engage with both theoretical concepts and hands-on practices to enhance their competency in dealing with various HVAC-related challenges.

## Objectives

- Understand the fundamental components and operation of HVAC systems.
- Gain knowledge of preventive maintenance strategies to optimize HVAC performance.
- Learn diagnostic techniques for identifying and resolving common HVAC issues.
- Develop skills in using tools and equipment for HVAC maintenance and troubleshooting.
- Enhance safety awareness and best practices in HVAC system handling.

## Course Outlines

### Day 1: Introduction to HVAC Systems

- Overview of HVAC system components and their functions
- Principles of heating, ventilation, and air conditioning
- Types of HVAC systems and their applications
- Basic thermodynamics in HVAC operations
- Introduction to indoor air quality and climate control

### Day 2: Preventive Maintenance Procedures

- Scheduled maintenance tasks and their importance
- Inspecting and replacing HVAC filters
- Lubrication procedures for moving parts
- Checking electrical connections and components
- Calibration of thermostats and control systems

### Day 3: Diagnostic Techniques and Tools

- Identifying common HVAC problems and symptoms
- Using multimeters and other diagnostic tools
- Interpreting system error codes and alerts
- Analyzing airflow and duct performance
- Assessing refrigerant levels and leak detection

### Day 4: Troubleshooting Common HVAC Issues

- Resolving thermostat failures and mismatches
- Fixing airflow obstructions and duct leaks
- Addressing refrigerant and cooling system issues
- Handling electrical and mechanical malfunctions
- Documenting repair processes and solutions

## **Day 5: Safety and Best Practices**

- HVAC system safety standards and regulations
- Using personal protective equipment (PPE)
- Handling refrigerants and hazardous materials safely
- Emergency response and first aid procedures
- Implementing best practices for long-term HVAC efficiency