



London TDM

# Engineering and Technical Skills Training Courses

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

**Course Date:** From 23 August 2026 To 27 August 2026

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

HVAC (Heating, Ventilation, and Air Conditioning) systems are critical components of modern buildings, ensuring comfort, air quality, and efficiency. This 5-day professional course is designed to equip participants with comprehensive knowledge and skills in designing and operating HVAC systems, focusing on both theoretical concepts and practical applications.

- Understand the fundamental principles of HVAC systems.
- Gain insights into the latest technologies and trends in HVAC design and operation.
- Learn to design efficient and sustainable HVAC systems for various settings.
- Develop troubleshooting skills to resolve common HVAC system issues.
- Enhance operational management skills to improve HVAC system performance.

## Course Outlines

### Day 1: Introduction to HVAC Systems

- Overview of HVAC System Components
- Principles of Thermodynamics and Heat Transfer
- Energy Sources and Efficiency in HVAC Systems
- Basic Control Systems in HVAC
- Regulatory Standards and Compliance

### Day 2: HVAC Systems Design

- Design Considerations for Residential and Commercial Buildings
- Load Calculations and System Sizing
- Ductwork and Piping Design
- Selection of HVAC Equipment
- Sustainable Design Practices

### Day 3: HVAC Systems Installation and Commissioning

- Installation Best Practices
- Pre-Commissioning and Start-Up Procedures
- Quality Assurance and Testing
- Commissioning Documentation and Reports
- System Handover and Client Training

### Day 4: HVAC Systems Operation and Maintenance

- Routine Maintenance Procedures
- Troubleshooting Common HVAC Issues
- Energy Management and Optimization Strategies
- Use of Building Automation Systems
- Long-Term System Performance Monitoring

### Day 5: Advanced Topics and Emerging Trends

- Integration with Smart Building Technologies
- Innovations in HVAC Systems
- Impact of Climate Change on HVAC Design
- Retrofit Strategies for Existing Systems
- Future Trends in HVAC Industry