



London TDM

# Mechanical and Electrical Engineering Training Courses

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

**Course Date:** From 12 April 2026 To 16 April 2026

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

Renewable Energy Systems: Solar and Wind is a comprehensive professional course designed to provide participants with an in-depth understanding of the fundamentals, technologies, and applications of solar and wind energy systems. This course aims to equip attendees with the skills and knowledge necessary to design, evaluate, and implement sustainable energy solutions using these renewable resources.

- Understand the basic principles of solar and wind energy generation.
- Analyze the components and configurations of solar and wind energy systems.
- Evaluate the environmental and economic benefits of renewable energy solutions.
- Explore the latest advancements in solar and wind technologies.
- Develop skills to design and implement effective renewable energy projects.

## Course Outlines

### Day 1: Introduction to Renewable Energy Systems

- Overview of renewable energy sources
- Importance of solar and wind energy in the energy mix
- Global and local energy trends and policies
- Introduction to sustainability and environmental impacts
- Case studies of successful renewable energy projects

### Day 2: Solar Energy Systems

- Principles of solar radiation and photovoltaic effect
- Types and configurations of solar PV systems
- Design and sizing of solar energy systems
- Integration of solar energy with the grid
- Maintenance and performance analysis of solar installations

### Day 3: Wind Energy Systems

- Understanding wind energy fundamentals
- Components and types of wind turbines
- Siting and resource assessment for wind farms
- Design and operation of wind energy systems
- Challenges and solutions in wind energy deployment

### Day 4: Advanced Technologies and Innovations

- Emerging technologies in solar energy
- Advancements in wind turbine designs
- Hybrid renewable energy systems
- Energy storage solutions and smart grids
- Research and development trends in renewable energy

### Day 5: Implementation and Project Management

- Financial analysis and feasibility studies
- Regulatory frameworks and compliance
- Project management methodologies for renewable energy
- Risk assessment and mitigation strategies
- Building stakeholder and community engagement