London TDM

Mechanical and Electrical Engineering Training Courses

Course Venue: United Arab Emirates - Dubai

Course Date: From 18 January 2026 To 22 January 2026

Course Place: Downtown Dubai

Course Fees: 5,000 USD

Introduction

This professional 5-day course on "Mechanical Design and CAD Drafting" is designed to provide participants with a comprehensive understanding of the principles and practices involved in mechanical design, along with hands-on experience in computer-aided design (CAD) drafting. The course is tailored for aspiring mechanical engineers, designers, and draftsmen who aim to enhance their skills and proficiency in using CAD tools for effective mechanical designing and drafting.

Objectives

- Understand the fundamental principles of mechanical design.
- Master the use of CAD software for drafting and designing purposes.
- Develop skills to create detailed mechanical drawings and models.
- Enhance problem-solving abilities in design and drafting tasks.
- Apply best practices and industry standards in mechanical design and CAD drafting.

Course Outlines

Day 1: Fundamentals of Mechanical Design

- Introduction to mechanical design principles
- Study of materials and their properties
- Concepts of force, stress, and strain in design
- Design for manufacturability and assembly
- Case studies on successful mechanical design projects

Day 2: Introduction to CAD Software

- Navigating the CAD interface
- Basic commands and tools in CAD software
- Creating and organizing layers
- Using templates and standardization in CAD
- Introduction to 2D drafting and annotation

Day 3: Advanced CAD Drafting Techniques

- 3D modeling fundamentals
- Advanced sketching and parametric modeling
- Assemblies and constraints in CAD
- Creating and editing detailed part drawings
- Using CAD for simulation and analysis

Day 4: Design Validation and Documentation

- Performing design validation and stress analysis
- Generating bills of materials (BOM)
- Creating technical drawings and specifications
- Documentation and revision management in projects
- Standards and compliance in mechanical design

Day 5: Real-world Applications and Project Work

- Industry trends and innovations in CAD design
- Best practices in collaborative design work
- Final project: Designing a mechanical component
- Presentation of design projects and peer review
- Course recap and future learning pathways