London TDM

Engineering and Technical Skills Training Courses

Course Venue: United Kingdom - London

Course Date: From 03 May 2026 To 07 May 2026

Course Place: London Paddington

Course Fees: 7,500 USD

Introduction

The "Mechanical Design and Drafting Principles" course is tailored for professionals seeking to enhance their skills in mechanical design and drafting. This intensive 5-day program will cover fundamental concepts and practical applications, ensuring participants gain a comprehensive understanding of mechanical design principles and the ability to apply them in drafting detailed mechanical drawings.

Objectives

- Understand the fundamentals of mechanical design principles.
- Develop the skills to create detailed mechanical drawings.
- Learn to use computer-aided design (CAD) software effectively.
- Apply industry standards and best practices in drafting.
- Facilitate problem-solving and innovation in mechanical design.

Course Outlines

Day 1: Introduction to Mechanical Design

- Overview of mechanical design and its significance.
- Understanding design requirements and constraints.
- Basic principles of design and engineering materials.
- Introduction to design processes and methodologies.
- Case studies of successful mechanical design projects.

Day 2: Drafting Fundamentals

- Introduction to technical drawing and its applications.
- Understanding drawing scales, dimensions, and tolerances.
- Types of technical drawings and their uses in the industry.
- Standards and conventions in mechanical drafting.
- Hands-on practice with basic drafting tools.

Day 3: Computer-Aided Design (CAD)

- Overview of CAD systems and software.
- Basic CAD commands and functionalities.
- Creating and modifying 2D drawings in CAD.
- Introduction to 3D modeling techniques.
- Practical exercises using CAD software.

Day 4: Advanced Drafting Techniques

- Creating complex assemblies and detailed parts in CAD.
- Advanced dimensioning and annotation practices.
- Geometric dimensioning and tolerancing (GD&T).
- Working with layers and templates in CAD software.
- Collaborative design and revision control techniques.

Day 5: Application and Problem Solving

- Application of design principles in real-world scenarios.
- Problem-solving methodologies in mechanical design.
- Innovation and creativity in design solutions.
- Final project: Design and draft a comprehensive mechanical component.
- Review and feedback on project and course learnings.