



London TDM

# Civil and Construction Engineering Training Courses

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

**Course Date:** From 19 April 2026 To 23 April 2026

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

This 5-day professional course on "Steel Structures Design and Detailing" is designed to provide participants with an in-depth understanding of the principles and practices involved in the design and detailing of steel structures. Participants will gain hands-on experience in designing steel elements according to industry standards and learn how to apply these skills in real-world projects. This course is ideal for structural engineers, architects, and construction professionals who are looking to enhance their expertise in steel structures.

## Objectives

- Understand the fundamental concepts of steel structures design.
- Familiarize with industry standards and codes related to steel design.
- Learn the techniques of detailed steel member design and connection detailing.
- Gain practical skills in structural analysis and design software.
- Develop proficiency in reading and interpreting steel detailing drawings.

## Course Outlines

### Day 1: Fundamentals of Steel Structures

- Introduction to Steel as a Construction Material
- Types and Applications of Steel Structures
- Basic Concepts of Structural Design
- Overview of Steel Design Codes and Standards
- Material Properties and Steel Grades

### Day 2: Design of Steel Members

- Tension Member Design
- Compression Member Design
- Design of Beams and Girders
- Introduction to Plate Girders and Trusses
- Serviceability and Deflection Criteria

### Day 3: Design of Steel Connections

- Bolt and Weld Types and Design
- Design of Simple Connections
- Design of Moment Connections
- Base Plates and Anchor Bolt Design
- Connection Detailing Practices

### Day 4: Steel Structure Detailing

- Introduction to Steel Detailing
- Drawing and Detailing Standards
- Detailing of Different Steel Elements
- Interpretation of Structural Design Drawings

- Software Applications in Steel Detailing

### **Day 5: Practical Applications and Case Studies**

- Case Studies of Steel Structure Projects
- Problem-solving and Design Challenges
- Hands-on Practice with Design Software
- Project-Based Detailing Workshop
- Final Assessment and Course Review