# Introduction to Steel Structures Analysis and Design

18 – 22 July 2027
Amman (Jordan)



# Introduction to Steel Structures Analysis and Design

**Ref:** 322973_220521 **Date:** 18 – 22 July 2027 **Location:** Amman (Jordan) **Fees:** 4900 GBP

## Course Description

This intensive 1-week course provides a comprehensive introduction to steel structures analysis and design. Participants will gain a solid foundation in structural engineering principles, learn industry-standard design methods, and develop practical skills for analyzing and designing steel structures. The course covers essential topics from basic concepts to advanced applications.

## Learning Objectives

- Understand fundamental principles of steel structure behavior and design
- Apply industry codes and standards for steel structure analysis and design
- Perform structural analysis and member design calculations
- Develop proficiency in using design software for steel structures
- Interpret and create structural drawings and specifications
- Gain practical insights into real-world steel structure projects

## Course Modules

### Day 1: Introduction to Steel Structures

- Overview of steel as a structural material
- Types of steel structures and their applications
- Structural systems and load paths
- Introduction to design codes and standards
- Basic structural analysis concepts

### Day 2: Structural Analysis Methods

- Load types and load combinations
- Analysis of statically determinate structures
- Introduction to indeterminate structures
- Computer-aided structural analysis
- Interpretation of analysis results



### Day 3: Design of Steel Members

- Tension member design
- Compression member design
- Flexural member design
- Combined loading scenarios
- Member stability considerations

### Day 4: Connections and Detailing

- Bolted connection design
- Welded connection design
- Connection failure modes
- Structural detailing principles
- Reading and creating structural drawings

### Day 5: Advanced Topics and Applications

- Steel-concrete composite structures
- Seismic design considerations
- Fatigue and fracture in steel structures
- Case studies of notable steel structures
- Emerging trends in steel structure design

## Practical Wins for Participants

- Ability to perform basic steel structure analysis and design calculations
- Proficiency in using industry-standard design software
- Skills to interpret and create structural drawings and specifications
- Insights into real-world steel structure projects and best practices

