Precast Concrete Structural Design & Application Course

6 – 10 September 2027
Rome (Italy)

UK Traininig
PARTNER



Precast Concrete Structural Design & Application Course

Ref: 323004_221640 **Date:** 6 – 10 September 2027 **Location:** Rome (Italy) **Fees:** 5200 GBP

Course Description

This intensive 1-week course provides comprehensive training in the modeling, analysis, and design of precast reinforced concrete RC structures. Participants will learn to use advanced software tools like ETABS and SAFE, covering aspects from initial modeling to detailed design considerations. The course focuses on efficient construction methods and structural integrity for various precast concrete applications.

Learning Objectives

- Understand fundamental principles of precast concrete structural design
- Master modeling and analysis techniques using ETABS and SAFE software
- Learn detailed design methodologies for various precast concrete elements
- Develop skills in designing efficient and safe connections for precast systems
- Gain practical knowledge in prestressed concrete design and applications
- Understand the benefits and applications of precast concrete in urban design

Course Modules

Day 1: Introduction to Precast Concrete Systems

- Overview of precast concrete structures and applications
- Material properties and manufacturing processes
- Introduction to ETABS and SAFE software
- Basic modeling approaches for precast structures

Day 2: Modeling and Analysis of RC Wall Systems

- Detailed modeling of RC wall structures using ETABS
- Loading considerations and structural analysis
- Foundation design methodologies
- Strip footing calculations and design practices

Day 3: Design of Structural Elements

- Design methodologies for RC walls and spandrels
- Rectangular beam and slab design for precast systems
- Staircase design considerations
- Practical design for lifting, stripping, and transportation



Day 4: Connections and Joints in Precast Systems

- Types of connections in precast concrete structures
- Wall-to-foundation and wall-to-wall connections
- Beam-to-wall and slab-to-wall connections
- Progressive collapse considerations and diaphragm actions

Day 5: Advanced Topics and Applications

- Introduction to prestressed concrete principles
- Design of precast frame systems
- Various types of precast slab systems
- Urban design applications of precast concrete

Practical Wins for Participants

- Ability to efficiently model and analyze precast concrete structures using industry-standard software
- Skills to design safe and economical precast concrete elements and connections
- Knowledge to implement precast concrete solutions in various construction projects
- Understanding of how to optimize precast designs for improved constructability and performance

