informatech



CONSTRUCTION MANAGEMENT | CM-002

Concrete Structural Design For Industrial Projects

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Course content

Why Attend

Industrial facilities such as factories, warehouses, refineries, and power plants demand highly specialized structural design approaches. This course provides engineers and technical professionals with the essential knowledge and practical skills to design safe, durable, and cost-effective reinforced concrete structures tailored to industrial applications. Participants will gain insight into handling heavy loads, dynamic forces, environmental exposure, and compliance with international standards. By attending, you will enhance your ability to deliver efficient designs, minimize risks, and ensure long-term structural performance in complex industrial environments.

Course Methodology

This course uses a combination of interactive lectures, real-world case studies, and practical design exercises. Participants will work through examples based on actual industrial projects, applying international codes and standards. Group discussions and problem-solving sessions will encourage knowledge sharing, while hands-on calculations and design reviews will strengthen technical understanding. Software demonstrations may also be included to illustrate modern structural design practices.

Course Objectives

By the end of this course, participants will be able to:

- Understand the principles of reinforced concrete design for industrial structures
- Identify different types of loads and load combinations specific to industrial facilities
- Apply relevant international design codes and standards
- Design key structural elements such as slabs, beams, columns, and foundations
- Evaluate structural performance under static and dynamic loads
- Address durability, sustainability, and safety considerations
- Interpret structural drawings and design documentation
- Solve practical design challenges in industrial projects



Course content

Target Audience

- Civil and Structural Engineers
- Design Engineers and Consultants
- Project Engineers and Construction Managers
- Technical Professionals in Industrial Projects
- Engineering Graduates seeking specialization in structural design

Target Competencies

- Structural analysis and design
- Load assessment and structural modeling
- Reinforced concrete detailing
- Code compliance and standards application
- Problem-solving in industrial structural design
- Risk assessment and mitigation
- Technical drawing interpretation

Course outline

Day 1: Fundamentals of Concrete Structural Design

- Introduction to industrial structures and their requirements
- Properties of concrete and reinforcing steel
- Design philosophies (Working Stress vs Limit State Design)
- Overview of international codes (ACI, Eurocode)
- Load types and load combinations

Day 2: Structural Analysis and Load Considerations



Course content

Course outline

- Structural systems in industrial projects
- Dead, live, wind, seismic, and dynamic loads
- Load paths and distribution
- Structural analysis methods
- Introduction to modeling tools and software

Day 3: Design of Reinforced Concrete Elements

- Design of beams and slabs
- Design of columns and walls
- Shear, bending, and torsion considerations
- Serviceability limits (deflection, cracking)
- Reinforcement detailing best practices

Day 4: Foundation Design for Industrial Structures

- Types of foundations (shallow and deep foundations)
- Soil-structure interaction basics
- Design of footings, raft foundations, and piles
- Foundations for heavy machinery
- Settlement and stability considerations

Day 5: Advanced Topics and Practical Applications

- Design for durability and harsh environments
- Industrial structures under dynamic and impact loads
- Retrofitting and strengthening techniques
- Review of real industrial case studies



Course content

Course outline

• Final project and design review discussion



Seminar dates

Available seminar dates

Live dates and pricing for Concrete Structural Design For Industrial Projects generated from the course details page.

Date	Location	Format	Fee
9 - 13 November 2026	Frankfurt - Germany	Classroom	**€2,600.-**
14 - 18 December 2026	Barcelona - Spain	Classroom	**€3,080.-**
18 - 22 January 2027	London - U.K	Classroom	**€3,360.-**
15 - 19 February 2027	Istanbul - Turkey	Classroom	**€2,280.-**
15 - 19 March 2027	Vienna - Austria	Classroom	**€3,400.-**
19 - 23 April 2027	Barcelona - Spain	Classroom	**€3,080.-**
17 - 21 May 2027	Paris - France	Classroom	**€3,600.-**
21 - 25 June 2027	Frankfurt - Germany	Classroom	**€2,600.-**
19 - 23 July 2027	Barcelona - Spain	Classroom	**€3,080.-**
16 - 20 August 2027	London - U.K	Classroom	**€3,360.-**
20 - 24 September 2027	Istanbul - Turkey	Classroom	**€2,280.-**
18 - 22 October 2027	Cape Town - South Africa	Classroom	**€3,400.-**
15 - 19 November 2027	Barcelona - Spain	Classroom	**€3,080.-**
20 - 24 December 2027	Paris - France	Classroom	**€3,600.-**

Live online option	Online delivery is available at €1,850.-.