



*Training Course:
Structural Design for Non-Structural Engineers*

*21 - 25 March 2027
Cairo (Egypt)*

Training Course: Structural Design for Non-Structural Engineers

Training Course code: EN6086 From: 21 - 25 March 2027 Venue: Cairo (Egypt) - Training Course Fees: 4410 € Euro

Introduction

Structural design is a fundamental aspect of engineering projects, ensuring that buildings and infrastructure are safe, stable, and capable of withstanding loads and environmental conditions. For non-structural engineers, understanding the basics of structural behavior and design principles is essential for effective coordination, decision-making, and project success.

This program, designed by Global Horizon Training Center, provides a practical and accessible approach to structural design, equipping participants with essential knowledge to interpret structural systems, collaborate with specialists, and contribute effectively to engineering projects.

Course Objectives

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

- Understand fundamental concepts of structural engineering
- Identify different structural systems and components
- Recognize types of loads and their effects on structures
- Interpret basic structural drawings and specifications
- Understand material behavior concrete, steel, etc.
- Apply simplified design concepts and checks
- Coordinate effectively with structural engineers
- Identify potential structural risks and considerations

Target Audience

This program is designed for:

- Mechanical, Electrical, and Civil Engineers non-structural roles
- Project Managers and Site Engineers
- Architects and Design Professionals
- Construction Supervisors
- Facility and Infrastructure Professionals
- Anyone involved in engineering projects requiring structural awareness

Outline

Day 1: Fundamentals of Structural Engineering

- Introduction to structural design concepts
- Types of structures and systems frames, trusses, shells
- Load types dead, live, wind, seismic
- Structural behavior basics
- Safety factors and design philosophy

Day 2: Structural Materials and Their Behavior

- Properties of concrete, steel, and composite materials
- Stress-strain relationships
- Strength, stiffness, and durability
- Material selection criteria
- Introduction to design codes and standards

Day 3: Structural Elements and Load Paths

- Beams, columns, slabs, and foundations
- Load transfer and distribution
- Structural detailing concepts
- Reading and interpreting structural drawings
- Common design considerations

Day 4: Basic Design Concepts and Coordination

- Simplified structural calculations and checks
- Design considerations for stability and safety
- Coordination between disciplines MEP, architecture, structure
- Identifying design conflicts and solutions
- Risk awareness in structural design

Day 5: Practical Applications and Case Studies

- Review of real project examples
- Common structural issues and lessons learned
- Best practices in project coordination
- Introduction to structural software tools
- Case studies and real-world applications

Registration form on the Training Course: Structural Design for Non-Structural Engineers

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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