



*Training Course:  
Mastering Project Engineering for Optimal  
Project Management*

*3 - 7 November 2024*

*Cairo (Egypt)*

*Holiday Inn & Suites Cairo Maadi, an IHG Hotel*

# Training Course: Mastering Project Engineering for Optimal Project Management

Training Course code: EN235530 From: 3 - 7 November 2024 Venue: Cairo (Egypt) - Holiday Inn & Suites Cairo Maadi, an IHG Hotel Training Course Fees: 3900 € Euro

## Introduction

This program is designed to provide participants with in-depth knowledge and practical skills in project engineering and management to ensure successful project outcomes. It covers the integration of engineering principles, project planning, risk management, and performance optimization to lead complex projects efficiently.

## Target Audience

- Project Engineers
- Project Managers
- Engineering Managers
- Technical Leads
- Senior Engineers
- Professionals involved in project-based work in various sectors such as construction, oil & gas, energy, and manufacturing

## Objectives

By the end of this program, participants will:

- Understand the fundamentals of project engineering and its role in successful project management.
- Develop skills in project planning, scheduling, and resource management.
- Learn how to integrate technical, financial, and human resource aspects to drive project success.
- Gain expertise in risk management and problem-solving techniques.
- Master the tools for monitoring, controlling, and optimizing project performance.

## Outline

Day 1

Foundations of Project Engineering and Management

- Session 1: Introduction to Project Engineering
  - Overview of project engineering
  - The relationship between project engineering and project management
  - Key roles and responsibilities of a project engineer
- Session 2: Project Life Cycle

- Phases of a project: initiation, planning, execution, monitoring, and closure
- Engineering deliverables throughout the project life cycle
- Session 3: Stakeholder Management and Communication
  - Identifying key stakeholders
  - Effective communication strategies for project success
  - Managing expectations and stakeholder engagement

## Day 2

### Project Planning and Scheduling

- Session 1: Project Scope Definition and Breakdown
  - Defining project objectives and deliverables
  - Work breakdown structure WBS creation
  - Aligning engineering deliverables with project scope
- Session 2: Advanced Scheduling Techniques
  - Techniques in project scheduling Gantt charts, Critical Path Method
  - Resource allocation and leveling
  - Scheduling tools and software
- Session 3: Cost Estimation and Budgeting
  - Techniques for cost estimation
  - Budget preparation and tracking
  - Integrating project costs with engineering aspects

## Day 3

### Risk Management in Project Engineering

- Session 1: Risk Identification and Assessment
  - Types of risks in project engineering
  - Risk assessment techniques qualitative and quantitative
  - Creating a risk management plan
- Session 2: Risk Mitigation Strategies
  - Developing mitigation and contingency plans
  - Managing uncertainty in complex engineering projects
  - Case studies in risk management
- Session 3: Problem Solving and Decision Making
  - Tools and techniques for effective problem solving
  - Decision-making frameworks for project engineers
  - Handling engineering challenges in dynamic project environments

## Day 4

### Optimizing Project Performance

- Session 1: Monitoring and Controlling Project Engineering Performance

- Key performance indicators KPIs in project engineering
- Tools for monitoring progress Earned Value Management
- Variance analysis and corrective actions
- Session 2: Quality Assurance and Control in Engineering Projects
  - Quality management processes and standards
  - Implementing quality assurance QA and control QC plans
  - Ensuring compliance with engineering standards
- Session 3: Managing Changes in Engineering Projects
  - Change management principles in project engineering
  - Handling scope changes and their impact on engineering work
  - Change control process and documentation

## Day 5

### Leadership and Collaboration in Project Engineering

- Session 1: Leadership in Project Engineering
  - Key leadership skills for project engineers
  - Leading engineering teams for optimal performance
  - Fostering a collaborative work environment
- Session 2: Engineering and Project Management Integration
  - Best practices for aligning engineering with project management processes
  - Collaboration between project engineers and managers for project success
  - Case study analysis: Successful integration in complex projects

## Registration form on the Training Course: Mastering Project Engineering for Optimal Project Management

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

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Full Name (Mr / Ms / Dr / Eng): .....  
 Position: .....  
 Telephone / Mobile: .....  
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### Company Information

Company Name: .....  
 Address: .....  
 City / Country: .....

### Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....  
 Position: .....  
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### Payment Method

- Please find enclosed a cheque made payable to Global Horizon
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