Project Management for Chemical Engineers Training Course

Professional Development Training Course Outline

Category	General Training	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The modern chemical and process industries are experiencing rapid transformation driven by Digital Transformation, Industry 4.0, Sustainability, Energy Transition, Process Optimization, Artificial Intelligence (AI), ESG Compliance, and Operational Excellence. Chemical engineers are increasingly expected to lead multidisciplinary projects involving plant design, process improvements, capacity expansion, technology implementation, safety management, and sustainability initiatives. Effective project management skills are therefore essential for ensuring projects are delivered on time, within budget, safely, and in compliance with international standards.

Project Management for Chemical Engineers Training Course equips chemical engineers with advanced project management competencies tailored to the unique challenges of the chemical, petrochemical, pharmaceutical, oil & gas, energy, manufacturing, and process industries. Participants will gain practical knowledge in Agile Project Management, Risk Management, Digital Project Controls, CAPEX Optimization, Process Safety Management (PSM), ESG Project Governance, Data-Driven Decision Making, Stakeholder Engagement, and Sustainable Project Delivery through real-world case studies and industry best practices.

Programme Curriculum

Project Management for Chemical Engineers Training Course

Introduction

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Course Duration

5 days

Course Objectives

Upon completion of this training, participants will be able to:

1. Apply Project Management Best Practices within chemical and process engineering environments.
2. Integrate Agile and Hybrid Project Management Methodologies into engineering projects.
3. Develop effective Project Planning and Scheduling strategies using industry tools.
4. Implement advanced Project Risk Management and Mitigation Frameworks.
5. Manage CAPEX and OPEX Optimization Projects effectively.
6. Utilize Digital Project Management and Industry 4.0 Technologies.
7. Lead Process Safety Management (PSM) Projects with compliance focus.
8. Improve Stakeholder Engagement and Communication Management.
9. Apply Sustainability and ESG Principles in project execution.
10. Monitor and control projects using Data Analytics and KPI Dashboards.
11. Manage procurement, contracts, and vendor relationships for engineering projects.
12. Deliver successful Plant Expansion and Brownfield Projects.
13. Build high-performance project teams through Leadership and Change Management practices.

Target Audience

1. Chemical Engineers
2. Process Engineers
3. Project Engineers
4. Plant Managers
5. Operations Managers
6. Production Supervisors
7. Engineering Consultants
8. Technical Project Leaders

Course Modules

Module 1: Fundamentals of Project Management for Chemical Engineers

- Project management principles and frameworks
- Project lifecycle in chemical industries
- Engineering project governance
- Project stakeholder identification
- Project success factors and KPIs

- **Case Study:** Chemical processing plant expansion project lifecycle management.

Module 2: Project Planning, Scheduling and Resource Management

- Work Breakdown Structure (WBS)
- Project scheduling techniques
- Resource allocation and optimization
- Critical Path Method (CPM)
- Project scheduling software applications
- **Case Study:** Production capacity increase project scheduling and resource planning.

Module 3: Cost Estimation, Budgeting and Financial Control

- Engineering cost estimation methods
- CAPEX and OPEX management
- Budget development and forecasting
- Earned Value Management (EVM)
- Financial performance monitoring
- **Case Study:** Petrochemical facility modernization budget control project.

Module 4: Risk Management and Process Safety Integration

- Project risk identification techniques
- Quantitative and qualitative risk assessment
- Process Hazard Analysis (PHA)
- HAZOP and safety reviews
- Risk mitigation planning
- **Case Study:** Process safety risk management during refinery upgrade projects.

Module 5: Agile Project Management and Digital Transformation

- Agile project management principles
- Hybrid project delivery approaches
- Digital transformation strategies
- Industry 4.0 integration
- AI-driven project monitoring
- **Case Study:** Smart manufacturing implementation project.

Module 6: Procurement, Contract Management and Supply Chain Excellence

- Procurement planning
- Vendor evaluation and selection
- Contract administration
- Supply chain risk management
- Strategic sourcing techniques
- **Case Study:** EPC contractor management in a chemical plant construction project.

Module 7: Sustainability, ESG and Regulatory Compliance Projects

- ESG project frameworks
- Sustainability performance indicators
- Environmental compliance requirements

- Carbon reduction initiatives
- Circular economy project strategies
- **Case Study:** Net-zero emissions project implementation in a manufacturing facility.

Module 8: Leadership, Communication and Project Execution Excellence

- Leadership for engineering project managers
- Stakeholder communication strategies
- Conflict resolution techniques
- Change management frameworks
- Project closure and lessons learned
- **Case Study:** Managing cross-functional teams during a pharmaceutical plant commissioning project.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com