Engineering Project Planning & Control Training Course

Professional Development Training Course Outline

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

Course Introduction

Engineering projects are becoming increasingly complex, requiring precise planning, effective scheduling, and robust control mechanisms to ensure timely delivery and optimal resource utilization. Engineering Project Planning & Control Training Course is designed to equip professionals with cutting-edge knowledge, tools, and techniques to manage engineering projects efficiently. Participants will gain practical insights into project scheduling, cost estimation, risk management, and resource optimization. With a focus on real-world applications, this course empowers engineers and project managers to deliver high-quality results while maintaining budgetary and time constraints.

The training emphasizes the integration of project management best practices with advanced planning tools, enabling participants to handle multi-disciplinary projects effectively. Through interactive sessions, case studies, and hands-on exercises, learners will understand how to align project objectives with organizational goals, optimize workflows, and mitigate risks. By the end of the program, participants will be adept at using project management methodologies to achieve operational excellence, enhance team collaboration, and drive sustainable engineering outcomes.

Programme Curriculum

Engineering Project Planning & Control Training Course

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Course Objectives

1. Master project planning and scheduling techniques using industry-standard tools.
2. Develop critical path analysis and resource allocation strategies.
3. Implement effective project control mechanisms to monitor performance.
4. Apply risk management and mitigation strategies in engineering projects.
5. Enhance cost estimation and budgeting skills for large-scale projects.
6. Optimize workflow and resource utilization for engineering teams.
7. Integrate modern project management software for tracking progress.
8. Understand the fundamentals of quality assurance in project control.
9. Improve stakeholder communication and reporting strategies.
10. Analyze project performance metrics for data-driven decision-making.
11. Apply lean and agile principles in engineering project management.
12. Explore case studies of successful and failed engineering projects.
13. Strengthen leadership skills for engineering project managers.

Organizational Benefits

- Improved project delivery time and efficiency.
- Enhanced resource allocation and utilization.
- Reduced project risks and cost overruns.
- Increased stakeholder satisfaction and transparency.
- Better decision-making through data-driven insights.
- Streamlined project workflows and processes.
- Enhanced team collaboration and accountability.
- Improved project quality and compliance with standards.

- Competitive advantage in engineering project execution.
- Alignment of project outcomes with strategic organizational goals.

Target Audiences

1. Project engineers and project managers.
2. Civil, mechanical, and electrical engineers.
3. Construction project coordinators.
4. Engineering consultants and analysts.
5. Operations managers overseeing projects.
6. Team leaders in engineering departments.
7. Professionals pursuing PMP or equivalent certifications.
8. Organizational leaders seeking project efficiency improvements.

Course Duration: 5 days

Course Modules

Module 1: Introduction to Engineering Project Planning

- Overview of engineering project life cycle.
- Key project planning principles and concepts.
- Role of project manager in planning and control.
- Tools and techniques for effective planning.
- Case Study: Planning a multi-disciplinary infrastructure project.
- Hands-on exercise on creating project planning templates.

Module 2: Work Breakdown Structure (WBS) Design

- Principles of WBS development.
- Structuring project deliverables and tasks.
- WBS coding and documentation practices.
- Linking WBS with project schedule.
- Case Study: Developing WBS for a manufacturing plant.
- Practical exercise on WBS creation using software tools.

Module 3: Project Scheduling and Time Management

- Techniques for schedule development.

- Gantt charts and milestone tracking.
- Critical Path Method (CPM) for project planning.
- Resource leveling and schedule optimization.
- Case Study: Scheduling a large construction project.
- Interactive session on creating a project schedule.

Module 4: Resource Allocation and Optimization

- Identifying and managing project resources.
- Resource allocation strategies and conflict resolution.
- Cost and manpower optimization techniques.
- Software tools for resource management.
- Case Study: Resource allocation in a renewable energy project.
- Group exercise on resource allocation planning.

Module 5: Cost Estimation and Budget Control

- Methods for accurate project cost estimation.
- Budget planning and cost tracking.
- Contingency planning and financial risk management.
- Cost control tools and dashboards.
- Case Study: Budget management in a highway construction project.
- Hands-on exercise on budgeting and cost tracking.

Module 6: Risk Management in Engineering Projects

- Identification of project risks and uncertainties.
- Risk assessment and prioritization techniques.
- Mitigation strategies for high-impact risks.
- Risk management planning templates.
- Case Study: Risk mitigation in a chemical plant project.
- Practical exercise on developing a risk register.

Module 7: Project Monitoring, Reporting, and Control

- Key performance indicators (KPIs) for project control.
- Project tracking and reporting techniques.

- Change management in engineering projects.
- Dashboard and reporting software for project monitoring.
- Case Study: Implementing project control in an IT infrastructure project.
- Interactive session on reporting and variance analysis.

Module 8: Case Study Integration and Project Simulation

- Comprehensive project simulation exercise.
- Integration of planning, scheduling, and control techniques.
- Stakeholder communication and team management.
- Performance evaluation and lessons learned.
- Case Study: Full-scale engineering project planning and control simulation.
- Group presentation and discussion of project outcomes.

Training Methodology

- Instructor-led interactive lectures and discussions.
- Real-life case studies and project simulations.
- Hands-on exercises with project management software tools.
- Group activities and collaborative learning sessions.
- Role-playing scenarios for project stakeholder management.
- Continuous assessment and feedback to reinforce learning.

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:

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