

€ TRAINING

Planning Projects for Performance
Excellence





Planning Projects for Performance Excellence

Introduction:

The Planning Projects for Performance Excellence program trains participants for optimizing project planning and execution to achieve outstanding performance outcomes. The program aims to enable participants to drive project success by optimizing resources, managing risks, and ensuring alignment with organizational goals.

Program Objectives:

At the end of this program the participants will be able to:

- Acquire proficiency in project estimating techniques, covering conceptual to detailed estimates.
- Differentiate between various estimate types for precise cost estimation during project progression.
- Comprehend diverse contract types and their implications on risk distribution among parties.
- Master resource planning and control techniques to optimize project execution.
- Evaluate time-cost trade-offs and implement strategies to sustain project momentum while minimizing risks.

Targeted Audience:

- Project Managers and Projects Planners.
- Project Cost Estimators.
- Cost Controllers.
- Contract Professionals.
- Project Procurement Staff.

Program Outlines:

Unit 1:

Project Scope Planning and Definition Fundamentals:

- Scope Planning.
- Work Breakdown Structures WBS and Work Packages.
- Statement of Work SOW - Technical Baseline.

- Scope Execution Plan.
- Triple Constraints - Time, Cost, Scope.
- Project Quality Issues, Risk Analysis and Deliverables.
- Resource Requirements.

Unit 2:

Project Schedule Planning and Critical Path Method:

- Utilize Precedence Network Diagramming and Job Logic Relationship Chart techniques to map project workflows and dependencies effectively.
- Conduct Critical Path Analysis and Project Float Analysis to identify key tasks and optimize project timelines.
- Implement Lead and Lag Scheduling methods to fine-tune task sequences and minimize delays.
- Employ Activity Duration Estimation and Milestone Charts for accurate project scheduling and progress tracking.
- Utilize Gantt Chart - Schedule Baseline and Project Estimating Processes for comprehensive project planning and resource allocation.

Unit 3:

Resource Allocation and Resource Levelling:

- Efficiently manage resources through planning and scheduling techniques, especially when resources are limited.
- Implement resource allocation algorithms to prioritize resources effectively in project planning.
- Address resource contention issues using techniques like the Brooks Method and resource leveling.
- Manage workforce fluctuations by strategically increasing manpower when necessary.
- Mitigate interruptions to schedules and meet deadlines by scheduling overtime when appropriate.

Unit 4:

Accelerating the Project Schedule:

- Identify Circumstances Requiring Project Acceleration and understand the Time-Cost-Scope Trade-off.
- Explore methods for Project Time Reduction, considering Direct and Indirect Project Costs.

- Evaluate Options for Accelerating the Schedule, including strategies like Crashing the Schedule.
- Develop a Pre-Accelerated Schedule and a Crash Cost Table to plan for acceleration.
- Implement Acceleration in Practice, finding the Optimal Acceleration Point and utilizing tools like the Gantt Chart for an Accelerated Schedule.
- Manage Network Activity Risk Profiles and consider Additional Considerations such as Multiple Critical Paths and Project Cost Reduction strategies.

Unit 5:

Project Contingency Planning:

- Master Program Evaluation and Review Technique PERT alongside Path Convergence Analysis techniques.
- Address the Path Convergence Problem effectively and analyze various Network Risk Profile Types.
- Understand the Normal Distribution and its relevance to PERT, Probability, and Standard Deviation Formulae.
- Calculate Standard Deviation for critical path activities to gauge project variability.
- Utilize Z-Values to determine the Probability of Project Completion at a Required Date.
- Apply Network Activity Risk Profiles to estimate Project Duration accurately in practical scenarios.

Unit 6:

Line of Balance Scheduling - The Planning of Recurring Activities:

- Develop a Line of Balance Schedule, ensuring linear sequences of activities are prepared effectively.
- Utilize Velocity Diagrams and Linear Scheduling techniques for streamlined project planning.
- Calculate Production Rate and determine Target Units per Week to maintain schedule consistency.
- Apply Line of Balance Formulae to balance the schedule, including Crew Size determination and Time to Complete Activities.
- Incorporate Buffers into the schedule to account for variability and ensure project timelines are met.
- Evaluate progress by comparing Planned versus Actual Progress, accounting for Expected and Actual Work Conditions.
- Measure progress against the Balanced Schedule and make adjustments accordingly to ensure project success.

Unit 7:

Project Execution Management, Control and Reporting:

- Implement Progress Tracking and Monitoring techniques to oversee project advancement.
- Manage Project Costs effectively through Earned Value Control Processes.
- Analyze Schedule and Cost Variances to assess project performance.
- Utilize Progress Control Charts for Trend Analysis and Forecasting of Schedule and Cost Variances.
- Implement Earned Value Analysis and Reporting for comprehensive project evaluation and reporting.

Unit 8:

Project Recovery Plan Development:

- Conduct Project Variance Analysis and Quantification to identify discrepancies.
- Utilize Schedule Performance Index SPI and Cost Performance Index CPI for performance evaluation.
- Establish Schedule and Cost Control Limits to manage project constraints effectively.
- Assess Project Recovery Data to determine necessary actions for improvement.
- Develop Schedule and Cost Recovery Plans based on Recovery Analysis, incorporating Recovery Baselines and Controls for project stabilization.

Unit 9:

Cost Estimating Basics:

- Understand the Estimating Life Cycle, including the Phases of the Design Process.
- Progress through Programming, Schematic Design, Design Development, and Construction Documents phases.
- Evaluate Estimating Accuracy by phase, from Conceptual Cost Estimates to Definitive Estimates.
- Utilize various Estimating Methods, such as Rough Order of Magnitude, Assemblies, and Semi-detailed Estimates.
- Familiarize with Cost Indices and Basic Procedures for estimating.
- Explore different Contract Types including Lump-sum, Unit-price, Cost-plus, and Time-and-Materials contracts.
- Implement Procurement Methods and Pre-construction Services, including Risk Analysis and Contingencies, in project planning.

Unit 10:

Broad Scope Cost Estimating Techniques:

- Apply Adjustments to Project Costs for Broad Scope Estimates, considering factors like location and size.
- Perform PERT Project Cost Analysis and derive PERT Unit Cost Estimates for accurate budgeting.
- Utilize Formulae for Cost Estimating, including adjustments based on previous projects and economic factors.
- Understand the Normal Distribution Curve and Z-Value Table to assess the Probability of Project Completion within Budget.
- Estimate Project Unit Cost by using Standard Deviation and adjust estimates for Time and Location.
- Review concepts such as Future Value of Money, Present Value of Money, and Equivalent Annual Interest Rate for financial analysis.
- Incorporate Learning Curve Effects into estimating durations and costs, including adjustments for Unit Costs based on learning curves.