

Course No. 1583

Project Planning, Scheduling & Control Training Course

PROJECT ENGINEERING & CONSTRUCTION
INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The Project Planning, Scheduling & Control Training Course provides a comprehensive professional program designed to develop the technical, analytical, and managerial capabilities required to plan, schedule, monitor, and control complex projects effectively. Strong project planning and scheduling provide the foundation for disciplined project execution by establishing clear scope, realistic timelines, resource requirements, performance targets, and control mechanisms that enable project teams to make informed decisions throughout the project lifecycle.

The course examines the complete project planning and scheduling process, from defining project objectives and developing work breakdown structures through activity development, sequencing, duration estimating, resource allocation, baseline establishment, progress measurement, performance analysis, forecasting, and corrective action. Participants develop a practical understanding of how project scope, resources, procurement, engineering, construction, contracts, risks, and changes influence schedule performance and overall project delivery.

A major focus of the Project Planning, Scheduling & Control Training Course is the integration of planning and scheduling with project controls. Participants explore scheduling methodologies, critical path analysis, schedule logic, milestones, resource loading, schedule baselines, progress measurement, schedule variance analysis, forecasting, recovery planning, and performance reporting. The program emphasizes practical approaches for identifying schedule risks early, understanding the causes of delays, and developing effective corrective actions to protect project completion objectives.

The course also addresses project control systems, change management, risk integration, productivity monitoring, cost and schedule relationships, contractor and supplier schedules, progress reporting, and management dashboards. Through practical exercises, case studies, scheduling scenarios, and integrated workshops, participants develop the ability to build reliable project schedules, monitor performance against approved baselines, evaluate deviations, and implement timely interventions. The program is particularly relevant to engineering, construction, oil and gas, energy, utilities, infrastructure, manufacturing, industrial, technology, and major capital investment projects.

Objectives

- Analyze project objectives, scope, deliverables, constraints, and execution requirements to establish an effective planning and control framework during the course.
- Develop structured work breakdown structures that translate project scope into measurable work packages, activities, and deliverables.
- Design integrated project schedules using appropriate activity definitions, sequencing, relationships, durations, milestones, and schedule logic.
- Evaluate critical path activities, schedule float, constraints, and dependencies to identify factors that can influence project completion.
- Apply resource planning and allocation techniques to align labor, equipment, materials, and other resources with project activities and schedule requirements.
- Establish realistic schedule baselines and performance measurement methods for monitoring planned versus actual project progress.
- Analyze schedule performance, delays, productivity trends, and deviations to determine their causes and potential impact on project completion.
- Assess the relationship between project schedule, cost, procurement, engineering, construction, risks, and contractual requirements.
- Develop practical schedule recovery strategies and corrective actions to address delays, resource constraints, productivity issues, and changing project conditions.
- Implement effective progress measurement, reporting, forecasting, and project control processes that provide management with timely and reliable information.
- Strengthen coordination between project planning, engineering, procurement, construction, contractors, suppliers, commercial teams, and project management.
- Develop an integrated project planning and scheduling improvement plan aligned with organizational priorities, project objectives, and delivery requirements.

Who Should Attend

The Project Planning, Scheduling & Control Training Course is designed for project planners, planning engineers, project controls engineers, project controls managers, project managers, project directors, project engineers, construction managers, engineering managers, scheduling specialists, cost engineers, and professionals responsible for project planning, scheduling, monitoring, and control.

The program is also highly relevant to contract and claims professionals, quantity surveyors, procurement and supply chain specialists, risk professionals, cost controllers, construction supervisors, discipline engineers, project coordinators, progress measurement specialists, and professionals involved in contractor and supplier schedule management. It is particularly valuable for professionals who need to understand the relationship between project scope, schedule, resources, cost, procurement, contracts, risks, and execution performance.

The course is suitable for executives, senior managers, and decision makers in government entities, ministries, public sector organizations, engineering consultancies, project owners, EPC contractors, construction companies, oil and gas organizations, petrochemical companies, energy and utilities organizations, infrastructure developers, industrial organizations, manufacturing companies, and large corporations managing complex projects and capital investment programs.

Learning Outcomes

- Explain the principles, processes, and organizational requirements of effective project planning, scheduling, and control.
- Develop a structured work breakdown structure that converts project scope into measurable work packages and activities.
- Create logical project schedules by defining activities, relationships, durations, milestones, constraints, and dependencies.
- Identify critical path activities and evaluate schedule float and potential impacts on project completion.
- Allocate and analyze project resources to support realistic and achievable execution schedules.
- Establish schedule baselines and compare planned progress with actual project performance.
- Measure physical progress and evaluate schedule performance using appropriate project control techniques.
- Analyze schedule variances, delays, productivity issues, and root causes affecting project delivery.
- Evaluate the relationship between schedule performance, project cost, procurement, engineering, construction, contracts, and risks.
- Develop schedule recovery and mitigation strategies for delayed or underperforming project activities.
- Prepare effective project progress reports, schedule forecasts, dashboards, and management information.

- Develop a practical project planning, scheduling, and control improvement plan suitable for implementation within a real project environment.

Course Outline

DAY 01

Project Planning Fundamentals and Work Breakdown Structures

- Principles, objectives, and importance of project planning and control
- Project lifecycle, project governance, and planning requirements
- Defining project objectives, scope, deliverables, constraints, and assumptions
- Translating project scope into measurable work packages
- Development and application of work breakdown structures
- Activity definition and development of detailed project work plans
- Project milestones, key dates, deliverables, and completion requirements
- Roles and responsibilities of project planners, managers, engineers, contractors, and stakeholders
- Planning interfaces between engineering, procurement, construction, commissioning, and project management
- Common project planning challenges and causes of ineffective schedules

PRACTICAL APPLICATION

Develop a work breakdown structure and initial project planning framework for a representative project

DAY 02

Project Scheduling, Logic, Resources, and Baselines

- Principles of project scheduling and schedule development
- Activity sequencing and logical relationships
- Predecessors, successors, dependencies, and schedule logic
- Activity duration estimating and planning assumptions

DAY 02 — CONTINUED

- Milestones, constraints, calendars, and schedule parameters
- Critical path method and identification of critical activities
- Total float, free float, and schedule flexibility
- Resource planning, resource loading, and resource allocation
- Development of integrated engineering, procurement, and construction schedules
- Establishing schedule baselines and approved project control targets

PRACTICAL APPLICATION

Develop an integrated project schedule, identify critical activities, analyze float, and establish an initial schedule baseline

DAY 03

Progress Measurement, Schedule Control, and Performance Analysis

- Principles of schedule monitoring and project progress control
- Planned progress versus actual progress
- Physical progress measurement and activity status evaluation
- Progress weighting and measurement methodologies
- Updating project schedules using actual project information
- Schedule variance analysis and performance assessment
- Identifying productivity trends and emerging schedule problems
- Relationship between schedule performance and project cost
- Schedule reporting, progress curves, milestones, and management dashboards
- Root cause analysis of schedule delays and performance deviations

PRACTICAL APPLICATION

Update a project schedule using actual progress data, identify schedule variances, and determine the key causes affecting project performance

DAY 04**Schedule Risk, Delay Analysis, Change, and Recovery Planning**

- Identifying schedule risks and assessing their potential impact
- Integrating project risks into planning and scheduling processes
- Engineering, procurement, construction, and supplier-related schedule risks
- Impact of changes, variations, and scope development on project schedules
- Delay identification, classification, and root cause analysis
- Schedule impact assessment and evaluation of critical delays
- Resource constraints, productivity losses, and their effect on completion dates
- Contractor and subcontractor schedule performance management
- Developing recovery schedules and mitigation strategies
- Schedule forecasting and evaluating potential completion dates

PRACTICAL APPLICATION

Analyze a delayed project, identify the causes and critical impacts of delay, and develop a realistic recovery and mitigation plan

DAY 05**Integrated Project Controls, Forecasting, and Delivery Optimization**

- Integration of planning, scheduling, cost, risk, procurement, contracts, and project performance
- Linking project schedules with cost and resource information
- Forecasting project completion dates and remaining project activities
- Developing effective project control dashboards and management reports
- Schedule performance indicators and management decision-making
- Optimizing resources, productivity, sequencing, and project execution
- Managing schedule changes and maintaining an effective baseline
- Improving coordination between project teams, contractors, suppliers, and stakeholders
- Lessons learned and continuous improvement in project planning and scheduling
- Developing organizational standards and procedures for project controls

DAY 05 — CONTINUED

FINAL WORKSHOP

Conduct a comprehensive project planning and schedule performance assessment and develop an integrated improvement plan covering scope, work breakdown, schedule logic, resources, critical path, progress, risks, delays, recovery actions, forecasting, and project control reporting

Register or Request More Information

Course page: <https://quest-training.com/courses/project-planning-scheduling-control-training-course>

Website: <https://quest-training.com>

Email: info@quest-training.com

Phone: +905016771440