MERCURY

Planning and Scheduling Professional

7 – 11 December 2026
Amsterdam (Netherlands)



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Planning and Scheduling Professional

Ref: 121923_1084237 **Date:** 7 – 11 December 2026 **Location:** Amsterdam (Netherlands) **Fees:** 5600 Euro

Introduction

This Planning and Scheduling Professional course develops advanced capabilities in project planning, scheduling, maintenance planning, and schedule control. It strengthens planners, schedulers, project management professionals, maintenance engineers, and maintenance planners by helping them develop practical, integrated schedules. It covers scheduling methodologies, critical path analysis, resource management, risk integration, schedule optimization, and project controls. Participants examine maintenance scheduling, work order management, CMMS, EAM systems, asset reliability, and operational constraints. Learners connect scheduling techniques with maintenance operations, progress monitoring, forecasting, and stakeholder communication.

Targeted Groups

This Planning and Scheduling Professional training targets professionals seeking knowledge and skills:

- Project planners developing integrated project plans and schedules.
- Project schedulers managing activities, relationships, milestones, and critical paths.
- Maintenance engineers coordinating planned maintenance and shutdown activities.
- Maintenance planners organizing work orders, resources, and maintenance priorities.
- Project management professionals monitoring timelines, resources, and progress.
- Project controls professionals analyzing performance, variances, and schedule forecasts.
- Engineering professionals involved in complex project and maintenance planning.

Course Objectives

Participants will achieve the following objectives by completing the Planning and Scheduling Professional course:

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- Understand core principles, terminology, standards, and practices used in professional project planning and scheduling.
- Develop structured schedules using WBS, activities, relationships, milestones, calendars, and logical constraints.
- Apply CPM and PERT to determine critical paths, float, durations, and schedule implications.
- Manage project resources through allocation, leveling, optimization, and schedule adjustments.
- Use scheduling software to create, update, monitor, analyze, and communicate project schedules.
- Evaluate schedule performance, identify variances, forecast completion dates, and recommend corrective actions.
- Integrate risk analysis, schedule optimization, compression, and recovery techniques into project controls.
- Develop maintenance schedules covering preventive, predictive, corrective, and shutdown activities.
- Coordinate work orders, resources, priorities, and asset availability to reduce operational downtime.
- Apply CMMS and EAM concepts to maintenance planning, scheduling, reporting, and analysis.

Targeted Competencies

Participants will gain the following competencies during the Planning and Scheduling Professional program:

- Build structured, measurable project schedules.
- Define activities, relationships, milestones, and constraints.
- Calculate critical paths, float, and durations.
- Allocate and level project resources.
- Assess risks and integrate response actions.
- Update baselines, variances, and forecasts.
- Apply compression, resequencing, and recovery.
- Coordinate maintenance work orders and resources.
- Interpret CMMS and EAM planning data.
- Communicate schedule status and forecasts.

Real-world Case Studies

In this Planning and Scheduling Professional PSP training, participants develop skills through the following cases:

- Analyze a delayed engineering project to determine critical-path impacts and recovery options.
- Plan a maintenance shutdown around limited crews, equipment, materials, and asset availability.
- Prioritize a growing maintenance backlog according to urgency, asset criticality, resources, and downtime constraints.
- Update the baseline schedule based on progress changes, emerging risks, and approved scope adjustments.

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Course Content

Unit 1: Principles of Project Planning and Scheduling

- Define integrated planning, scheduling, and schedule governance frameworks.
- Translate scope into WBS, control accounts, work packages, and activities.
- Establish activity attributes, durations, calendars, and coding structures.
- Develop network logic using PDM relationships, leads, lags, and constraints.
- Apply CPM and PERT to assess criticality, float, and duration uncertainty.
- Analyze schedule paths, near-critical activities, and logic-driven completion risks.
- Establish schedule structures supporting baseline control and performance measurement.

Unit 2: Scheduling Techniques and Tools

- Perform forward and backward passes to calculate schedule dates and float.
- Analyze total float, free float, critical paths, and driving relationships.
- Configure resource-loaded schedules for labor, equipment, and materials.
- Apply resource leveling, smoothing, allocation, and constraint analysis.
- Evaluate schedule integrity using logic, duration, float, and constraint metrics.
- Configure scheduling software for baselines, calendars, codes, updates, and reporting.
- Analyze schedule data through filters, layouts, dashboards, and progress metrics.

Unit 3: Risk Management and Schedule Optimization

- Identify schedule risks across scope, interfaces, procurement, resources, and execution.
- Quantify schedule exposure through probability, impact, sensitivity, and uncertainty.
- Integrate risk responses with activities, milestones, logic, and ownership.
- Assess schedule quality, network integrity, constraints, and path sensitivity.
- Apply crashing, fast-tracking, resequencing, and recovery strategies.
- Optimize sequencing, resource utilization, workflow, and schedule performance.
- Analyze forecast trends to determine corrective and preventive schedule actions.

Unit 4: Maintenance Planning and Scheduling

- Differentiate preventive, predictive, corrective, and turnaround planning strategies.
- Develop maintenance schedules using asset criticality and operational windows.
- Integrate labor, materials, permits, tools, and equipment into work plans.
- Prioritize work orders using risk, urgency, criticality, and asset condition.
- Optimize maintenance loading to minimize downtime and resource conflicts.
- Utilize CMMS/EAM data for work orders, history, backlog, and planning.
- Evaluate backlog, schedule compliance, wrench time, and maintenance KPIs.

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Unit 5: Project Controls, Communication, and Applications

- Establish schedule baselines, status dates, and progress measurement rules.
- Update schedules using actuals, remaining duration, and forecast logic.
- Analyze planned-versus-actual performance and schedule variance trends.
- Integrate schedule controls with forecasting, risk, and earned value analysis.
- Develop schedule narratives covering variances, impacts, and recovery actions.
- Present dashboards, critical-path changes, forecasts, and exceptions to stakeholders.
- Apply integrated scenarios to project and maintenance scheduling.

Final Insights & Key Takeaways

Participants strengthen skills in planning, scheduling, maintenance, resources, risk, optimization, and project controls. Practical scenarios reinforce effective schedule development, analysis, forecasting, and communication.