MERCURY

Turnaround Planning and Scheduling for Shutdown Works

24 – 28 May 2027
Madrid (Spain)



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Turnaround Planning and Scheduling for Shutdown Works

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Turnaround Planning and Scheduling for Shutdown Works is a 1-week course for planners, schedulers and engineers who prepare a plant shutdown before the first valve is closed. It covers scope freeze, work packages, critical path scheduling, cost estimating, logistics and readiness reviews. You build a Turnaround Planning Package for a real event, and this turnaround planning and scheduling course is delivered by Mercury Training Center.

About This Course

Many shutdown overruns are set months earlier, when scope stays open and jobs lack detail. To follow, you should already help prepare maintenance work or shutdown schedules. Each day you plan part of a sample turnaround, from job list to a schedule that is ready for execution.

Who It Is For

- Planners who turn approved jobs into detailed work packages and job plans.
- Schedulers who build and update the event schedule and its critical path.
- Maintenance and reliability engineers who define equipment scope and inspection needs.
- Cost and procurement staff who estimate the event and secure materials and rentals.
- Safety and quality staff who build permits and inspection points into the plan.

This course is not for senior managers who want the leadership side of turnaround decisions, who will gain more from a turnaround leadership course, nor for readers new to plant maintenance, who are better served by a course on maintenance fundamentals first.

Competencies You Will Build

- Scope Definition: you screen and freeze the job list and control late additions.
- Work Packaging: you write job plans with steps, crafts, tools, materials and safety needs.
- Critical Path Scheduling: you sequence jobs, estimate durations and find the path that sets the event length.
- Resource Leveling: you balance crafts and contractors so the peak workforce fits the site.
- Cost Estimating: you build the event estimate from labor, materials, tools and rentals.
- Readiness Assessment: you confirm materials, permits and crews before mobilization.

What You Will Be Able to Do

By the end of the course you will be able to:

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- From an unscreened job request list, apply a prioritization matrix and produce a frozen scope.
- Given a frozen scope, build a work breakdown structure and the work packages under it.
- Using Primavera P6 or Microsoft Project, load the work packages and calculate the critical path.
- Given a peak manpower curve, level resources and adjust the schedule to fit site limits.
- From work package estimates, prepare a cost forecast and cash flow profile for the event.
- Using a readiness checklist, judge whether the event can start and list the gaps to close.

Course Content

Day 1: Turnaround Lifecycle and Planning Basis

- Turnaround, Shutdown and Outage Definitions and Their Typical Durations
- Lifecycle Stages and Planning Milestones From Initiation to Close-Out
- Turnaround Policy, Governance and Stakeholder Buy-In for Early Planning
- Shutdown Strategy Aligned With Maintenance and Reliability Goals
- Planning KPIs for Scope Stability, Package Readiness and Schedule Quality

Day 2: Scope Definition and Work Packages

- Job Identification and Prioritization Matrix for Shutdown Requests
- Scope Freeze Dates, Deliverables and Change Control for Late Jobs
- Work Breakdown Structure for a Multi-Unit Turnaround
- Job Plan Template With Steps, Crafts, Tools and Materials
- Confined Space and Hazardous Area Entry Requirements Built Into Job Plans

Day 3: Critical Path Scheduling and Resources

- Duration Estimating and Logical Sequencing of Turnaround Activities
- Critical Path Method and Gantt Charts in Primavera P6 and Microsoft Project
- Workforce Leveling and Peak Manpower Curves for Shared Crafts
- Inspection and Test Plans With QA/QC Hold Points in the Schedule
- Daily Progress Reporting Structure and Dashboard Set Up Before Execution

Day 4: Estimates, Risk and Logistics

- Cost Estimate, Budget Forecast and Cash Flow Plan for the Event
- Shutdown Risk Register With Contingency and Emergency Response Plans
- Contractor Pre-Qualification and Interface Planning Between Contractors
- Logistics Plan for Materials, Cranes, Scaffolding and Rental Equipment
- Startup Sequence, System Turnover and Close-Out Reporting Planned in Advance

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Day 5: Planning a Turnaround in Practice

- Exercise: Scope Freeze Review of a Sample Job List
- Exercise: Critical Path Schedule Built From Prepared Work Packages
- Exercise: Pre-Mobilization Readiness Review With Gap List
- Lessons-Learned Records and Backlog Integration Feeding the Next Plan
- Turnaround Planning Package Completed for Your Own Event

Case Studies and Exercises

The following are suggested activities and may be adapted to the group.

- Case study: a gas processing plant receiving new job requests after scope freeze; you decide which to accept.
- Case study: a power station boiler outage where two crafts peak on the same days; you level the resources.
- Exercise: a petrochemical unit heat exchanger cleaning job; you write the full job plan and work package.
- Exercise: a water treatment plant shutdown before start; you run a readiness review and list open items.

What You Take Back

You take back the Turnaround Planning Package, the set of planning documents for your next shutdown. In your first month back you use it to fix the scope freeze date, start writing work packages to the shared template and load the first activities into the schedule.

- A prioritized and frozen scope with a change control log.
- A work breakdown structure and job plan template.
- A critical path schedule with leveled resources.
- A cost estimate, logistics plan and readiness checklist.

Quick Answers FAQ

What do I need to know before turnaround planning and scheduling training?

You should already prepare maintenance work orders, job plans or schedules. Basic familiarity with a scheduling tool helps, but critical path logic is explained from the start.

How does turnaround planning and scheduling differ from a turnaround management course?

A management course looks at the whole event and the decisions leaders make during it. Turnaround planning and scheduling stays with the preparation phase: scope, work packages, schedules, estimates and readiness, at the level of detail planners and schedulers produce.

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When should turnaround planning for a shutdown start?

Planning for a major turnaround usually starts many months ahead, so scope can be frozen, long-lead materials ordered and contractors prepared. Every event needs a scope freeze date that leaves room to finish work packages.

What do I take back from turnaround planning and scheduling training?

You take back a Turnaround Planning Package for your next event: a frozen scope, work package template, critical path schedule, cost estimate and readiness checklist you can start using at once.

For Your Manager

After this course, your team member can freeze and control shutdown scope, write work packages, build a leveled critical path schedule and prepare the event estimate and readiness review. They return with a Turnaround Planning Package for the next shutdown, first used to set the scope freeze date and start the work package preparation.