

Course No. 1340

# Shutdown & Turnaround Management Training Course

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**MAINTENANCE ENGINEERING**  
**INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS**

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DURATION

**5 Days**

DELIVERY

**Classroom**



## Course Overview

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The Shutdown & Turnaround Management Training Course provides a comprehensive professional framework for planning, executing, controlling, and closing shutdowns and turnarounds in asset-intensive and operationally critical environments. The course focuses on managing planned periods in which facilities, plants, units, systems, or critical equipment are taken out of service for inspection, maintenance, repair, replacement, statutory work, upgrades, and reliability improvement activities.

Shutdowns and turnarounds are among the most complex and high-risk activities in oil and gas, petrochemicals, power, utilities, manufacturing, infrastructure, transport, and large facility operations. They involve a concentrated volume of technical work, multiple contractors, specialist resources, materials, equipment, permits, quality controls, and strict safety requirements within a limited time window. Inadequate planning, weak coordination, incomplete scope definition, or ineffective control can result in schedule delays, cost overruns, safety exposure, quality issues, and delayed return to service.

This Shutdown & Turnaround Management Training Course enables organizations to establish a disciplined approach from early scope identification and prioritization through integrated planning, resource readiness, detailed scheduling, execution control, risk management, restart assurance, and post-turnaround review. Participants will learn how to align maintenance, operations, engineering, procurement, supply chain, HSE, quality, finance, contractors, and leadership around one integrated turnaround plan.

The course connects shutdown and turnaround management with asset reliability, process safety, business continuity, maintenance excellence, compliance, cost discipline, and lifecycle asset value. It supports executives and managers in establishing effective governance, investment priorities, and decision-making processes, while giving specialists practical tools to manage scope, schedules, resources, contractors, risks, and operational interfaces.

Through case-based discussions, practical exercises, and implementation planning, participants will gain the capability to prepare realistic shutdown and turnaround plans, monitor critical activities, manage changes, coordinate multidisciplinary teams, and verify readiness for safe restart. The course provides an implementation-oriented foundation for improving turnaround performance in line with organizational requirements and asset criticality.

## Objectives

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- Analyze the shutdown and turnaround lifecycle and relate each phase to safety, reliability, operational continuity, quality, and cost-control requirements during the course.
- Assess shutdown scope according to asset criticality, operational risk, statutory requirements, reliability needs, budget, and business impact.
- Develop a clear turnaround organization structure that defines roles, responsibilities, governance, decision rights, communication, and escalation routes.
- Design an integrated turnaround plan covering scope, schedule, resources, materials, contractors, quality, risk, and restart readiness.
- Apply scope management principles to distinguish mandatory, critical, corrective, improvement, and emergent work before execution.
- Evaluate the readiness of labour, specialist services, materials, critical spares, tools, equipment, and contractor support before shutdown commencement.
- Develop an integrated schedule that identifies critical paths, dependencies, milestones, resource constraints, and opportunities to reduce turnaround duration.
- Implement practical controls for daily progress, productivity, safety, quality, costs, changes, and schedule performance during execution.
- Improve coordination among operations, maintenance, engineering, procurement, supply chain, contractors, and management through structured communication processes.
- Apply risk management and contingency planning methods to identify critical turnaround risks, controls, responsibilities, and response actions.
- Assess restart readiness through technical, operational, safety, quality, and handover verification activities.
- Develop a time-bound action plan for improving shutdown and turnaround management practices after the course.

## Who Should Attend

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The Shutdown & Turnaround Management Training Course is designed for maintenance managers, reliability managers, engineering managers, operations managers, asset managers, project managers, facilities managers, plant managers, site managers, and technical services leaders. It is particularly relevant for executives, directors, and decision makers responsible for turnaround programs, maintenance budgets, capital and operational expenditure, asset availability, process safety, production continuity, and operational risk.

The course is suitable for maintenance engineers, reliability engineers, mechanical engineers, electrical engineers, instrumentation and control engineers, process engineers, inspection and integrity engineers, planners, schedulers, turnaround coordinators, execution supervisors, project engineers, contract managers, and HSE and quality specialists. It is highly relevant to professionals working in oil and gas, petrochemicals, power generation, water and utilities, manufacturing, mining, transport, infrastructure, and other critical asset environments.

Procurement, supply chain, materials management, finance, human resources, security, internal audit, compliance, digital transformation, and operational excellence professionals will also benefit where their responsibilities involve contractor mobilization, critical spares, logistics, maintenance services, cost monitoring, workforce readiness, safety controls, or performance assurance. The course supports cross-functional turnaround teams in working to a common plan, clear responsibilities, and measurable performance standards.

## Learning Outcomes

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- Explain the importance of shutdown and turnaround management in supporting process safety, asset reliability, operational continuity, compliance, and lifecycle performance.
- Identify the key phases of a shutdown and turnaround lifecycle, from early planning to execution, restart, closeout, and lessons learned.
- Assess and prioritize turnaround scope according to risk, criticality, statutory obligations, technical condition, and operational value.
- Develop an organizational structure for turnaround management that clarifies governance, authority, accountability, communication, and escalation.
- Prepare an initial resource plan covering workforce requirements, contractors, specialist services, equipment, materials, and critical spares.
- Develop an integrated schedule that identifies activities, dependencies, milestones, critical paths, constraints, and monitoring requirements.
- Apply practical methods for controlling scope changes, schedule deviations, costs, productivity, quality, and emerging work.
- Use performance indicators to monitor safety, work progress, schedule adherence, productivity, quality, budget performance, and risk exposure.
- Manage interfaces and daily coordination among operations, maintenance, engineering, contractors, and other stakeholders.

- Prepare a turnaround risk register and contingency plan with clear controls, owners, response actions, and escalation mechanisms.
- Assess asset readiness for restart using technical, operational, safety, quality, testing, and handover requirements.
- Develop an actionable improvement plan for strengthening turnaround planning, execution, review, and organizational learning.

## Course Outline

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### DAY 01

## Shutdown and Turnaround Foundations, Strategy, and Governance

- The purpose of shutdown and turnaround management in asset reliability, maintenance excellence, process safety, and operational performance.
- Types of shutdowns and turnarounds: planned, statutory, operational, emergency, partial, and full-facility events.
- The turnaround lifecycle: initiation, planning, preparation, execution, restart, closeout, and continuous improvement.
- Turnaround governance, organizational structure, roles, responsibilities, decision rights, communication, and escalation.

### PRACTICAL APPLICATION OR DISCUSSION

Assessing current turnaround challenges, success factors, and key organizational risks.

### DAY 02

## Scope Development, Planning, and Resource Readiness

- Collecting turnaround work scope from maintenance, inspection, integrity, operations, engineering, projects, safety, and compliance functions.
- Scope screening and prioritization: mandatory work, critical work, reliability work, improvement work, and deferred work.
- Workforce, contractor, specialist service, equipment, access, worksite, and logistics planning.

## DAY 02 — CONTINUED

- Materials management, critical spares, procurement, fabrication, expediting, receiving, storage, and readiness verification.

**PRACTICAL APPLICATION OR DISCUSSION**

Developing an initial scope register and resource readiness plan for a selected turnaround.

## DAY 03

**Scheduling, Critical Path, and Execution Control**

- Work breakdown structures, activity definition, dependencies, milestones, constraints, and integrated turnaround scheduling.
- Critical path analysis, parallel work opportunities, resource levelling, schedule compression, and duration reduction strategies.
- Daily and weekly work planning, progress measurement, productivity management, resource allocation, and performance reporting.
- Scope change control, schedule change management, cost control, approval requirements, documentation, and escalation.

**PRACTICAL APPLICATION OR DISCUSSION**

Building an integrated turnaround schedule and identifying critical-path activities and control measures.

## DAY 04

**Safety, Quality, Risk Management, and Contractor Coordination**

- Turnaround HSE planning, permit-to-work systems, isolation management, energy control, simultaneous operations, and emergency preparedness.
- Turnaround risk management, risk registers, critical risk controls, contingency plans, and escalation processes.
- Quality planning, inspection and test plans, hold points, acceptance criteria, work verification, and documentation control.
- Contractor management: prequalification, scope definition, mobilisation, performance monitoring, supervision, quality, safety, and closeout evaluation.

## DAY 04 — CONTINUED

**PRACTICAL APPLICATION OR DISCUSSION**

Preparing a risk register and HSE-quality control plan for critical turnaround work.

**DAY 05**

## Restart, Closeout, Performance Review, and Continuous Improvement

- Restart readiness requirements, completion verification, testing, commissioning, handover, and removal of operational constraints.
- Coordination between operations, maintenance, engineering, and contractors for safe, controlled, and timely return to service.
- Turnaround performance measures: safety, schedule adherence, cost variance, quality, productivity, scope growth, and reliability outcomes.
- Closeout reporting, lessons learned, knowledge retention, improvement actions, and updates to maintenance plans and future turnaround processes.

**FINAL WORKSHOP, ACTION PLAN, OR IMPLEMENTATION EXERCISE**

Developing an integrated shutdown and turnaround management plan covering scope, resources, schedule, risks, governance, restart, and improvement actions.

## Register or Request More Information

Course page: <https://quest-training.com/courses/shutdown-turnaround-management-training-course>

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

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