

Course No. 1166

Maintenance Planning & Scheduling Training Course

MAINTENANCE ENGINEERING
INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The Maintenance Planning & Scheduling Training Course is a comprehensive professional development program designed to equip maintenance engineers, planners, supervisors, reliability professionals, operations personnel, and engineering managers with the knowledge and practical skills required to establish, implement, and continuously improve effective maintenance planning and scheduling processes. Efficient maintenance planning and scheduling are fundamental to maximizing equipment availability, reducing maintenance costs, minimizing unplanned downtime, and supporting long-term operational excellence across asset-intensive industries.

Organizations in manufacturing, oil and gas, power generation, utilities, transportation, mining, infrastructure, and public sector operations depend on structured maintenance planning to ensure that maintenance work is completed safely, efficiently, and with minimal disruption to production. Poor planning often results in excessive downtime, inefficient resource utilization, delayed maintenance activities, increased inventory costs, and reduced asset reliability. This course provides participants with internationally recognized methodologies and industry best practices for planning, scheduling, coordinating, and controlling maintenance activities to achieve optimal asset performance.

Throughout the program, participants will develop a comprehensive understanding of maintenance planning principles, work management processes, preventive maintenance, predictive maintenance, corrective maintenance, backlog management, shutdown and turnaround planning, work order management, labor planning, spare parts coordination, maintenance scheduling techniques, Key Performance Indicators (KPIs), Computerized Maintenance Management Systems (CMMS), resource optimization, risk-based maintenance planning, and continuous improvement strategies. Practical exercises and real industrial case studies enable participants to apply structured maintenance planning techniques to real operational environments while strengthening coordination between maintenance, operations, procurement, and engineering teams.

The Maintenance Planning & Scheduling Training Course also demonstrates how effective planning and scheduling support reliability engineering, asset management, operational excellence, maintenance cost optimization, engineering safety, business continuity, and organizational performance. By completing this course, participants will be prepared to improve maintenance productivity, optimize workforce utilization, reduce equipment failures, strengthen planning accuracy, enhance maintenance performance, and support sustainable asset management across government entities, ministries, public sector organizations, financial institutions managing

engineering infrastructure, oil and gas companies, power generation facilities, manufacturing industries, mining operations, transportation infrastructure, and multinational corporations.

Objectives

- Analyze maintenance planning and scheduling principles used in modern asset management.
- Develop effective maintenance planning processes that improve equipment reliability and maintenance efficiency.
- Evaluate maintenance workloads, priorities, and resource requirements using structured planning methodologies.
- Apply preventive, predictive, and corrective maintenance planning techniques.
- Design maintenance schedules that optimize workforce utilization and equipment availability.
- Improve maintenance performance through effective work order management and scheduling practices.
- Strengthen coordination between maintenance, operations, engineering, procurement, and warehouse functions.
- Implement maintenance planning strategies using CMMS and maintenance performance indicators.
- Assess maintenance backlogs, shutdown activities, and resource allocation for continuous improvement.
- Align maintenance planning and scheduling practices with organizational objectives for safety, reliability, asset management, cost optimization, and operational excellence.

Who Should Attend

This course is designed for maintenance engineers, maintenance planners, maintenance schedulers, reliability engineers, asset management engineers, operations engineers, mechanical engineers, electrical engineers, instrumentation engineers, project engineers, maintenance supervisors, operations supervisors, shutdown coordinators, planning engineers, CMMS administrators, maintenance technicians, engineering consultants, and technical professionals responsible for maintenance planning and execution.

The program is equally valuable for maintenance managers, engineering managers, operations managers, plant managers, facility managers, asset managers, project managers, reliability

managers, procurement professionals, warehouse supervisors, HSE specialists, quality professionals, executive managers, technical advisors, and decision makers responsible for maintenance performance, operational continuity, engineering asset management, and productivity improvement.

Professionals working within government entities, ministries, public sector organizations, financial institutions managing engineering infrastructure, oil and gas companies, petrochemical industries, power generation facilities, utility providers, manufacturing plants, mining operations, transportation authorities, airports, ports, water treatment facilities, infrastructure developers, and multinational engineering organizations will benefit significantly from the practical maintenance planning methodologies and internationally recognized scheduling practices presented throughout the course.

Learning Outcomes

- By the end of this course, participants will be able to:
- Explain the principles and best practices of maintenance planning and scheduling.
- Develop structured maintenance plans that improve asset reliability and operational performance.
- Prioritize maintenance work orders based on criticality, risk, and operational requirements.
- Coordinate maintenance resources, labor, materials, tools, and contractor activities effectively.
- Create efficient preventive, predictive, corrective, and shutdown maintenance schedules.
- Utilize CMMS to manage maintenance planning, scheduling, reporting, and performance monitoring.
- Measure maintenance effectiveness using Key Performance Indicators (KPIs) and performance dashboards.
- Analyze maintenance backlogs and identify opportunities for workflow optimization.
- Apply risk-based planning techniques to improve maintenance decision-making and resource utilization.
- Support operational excellence through continuous improvement of maintenance planning, scheduling, and asset management processes.

Course Outline

DAY 01

Fundamentals of Maintenance Planning and Scheduling

- Principles of maintenance planning and scheduling
- Maintenance work management processes
- Roles and responsibilities of planners and schedulers
- Maintenance planning workflow and documentation

PRACTICAL

Practical workshop on maintenance work order planning and prioritization

DAY 02

Maintenance Planning Methodologies

- Preventive, predictive, and corrective maintenance planning
- Resource planning and labor allocation
- Spare parts planning and inventory coordination
- Risk-based maintenance planning and prioritization

PRACTICAL EXERCISE

Practical exercise on developing maintenance plans for critical assets

DAY 03

Maintenance Scheduling and Work Execution

- Maintenance scheduling principles and techniques
- Weekly, monthly, and annual maintenance scheduling
- Shutdown, turnaround, and outage planning
- CMMS applications for scheduling and work management

DAY 03 — CONTINUED

PRACTICAL

Practical workshop on preparing integrated maintenance schedules

DAY 04

Performance Measurement and Continuous Improvement

- Maintenance Key Performance Indicators (KPIs)
- Backlog management and work order analysis
- Maintenance cost control and productivity improvement
- Continuous improvement methodologies for maintenance performance

PRACTICAL APPLICATION

Practical application involving maintenance performance analysis and improvement planning

DAY 05

Advanced Maintenance Planning, Asset Management, and Operational Excellence

- Maintenance planning within ISO 55000 asset management frameworks
- Reliability-centered planning and lifecycle maintenance strategies
- Cross-functional coordination between maintenance, operations, procurement, and engineering
- Maintenance governance, reporting, and strategic decision-making

FINAL WORKSHOP

Final workshop involving the development of a comprehensive Maintenance Planning & Scheduling implementation plan integrating work management, resource optimization, CMMS utilization, preventive and predictive maintenance, shutdown planning, KPI monitoring, risk management, asset reliability improvement, cost optimization, and continuous improvement to maximize equipment availability, operational efficiency, and organizational excellence.



Register or Request More Information

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