

Course No. 1167

Preventive Maintenance Training Course

MAINTENANCE ENGINEERING
INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS

DURATION

5 Days

LOCATION

Barcelona, Spain

DELIVERY

Classroom

DATES

16 – 20 Nov 2026



Scheduled Event Details

CITY	Barcelona, Spain
DATE	16 – 20 Nov 2026
DELIVERY TYPE	Classroom
COURSE FEE	€6,000

Course Overview

The Preventive Maintenance Training Course is a comprehensive professional development program designed to equip engineers, maintenance professionals, supervisors, planners, reliability specialists, and operations personnel with the knowledge and practical skills required to develop, implement, evaluate, and continuously improve preventive maintenance programs across industrial facilities. Preventive maintenance is one of the most effective maintenance strategies for maximizing equipment availability, extending asset life, minimizing unexpected failures, reducing maintenance costs, and ensuring safe and reliable operations.

Modern organizations across government entities, public sector organizations, oil and gas companies, power generation facilities, manufacturing plants, transportation infrastructure, utilities, and large corporations rely on preventive maintenance to maintain critical assets and ensure operational continuity. A well-structured preventive maintenance program reduces emergency repairs, improves production efficiency, enhances equipment reliability, and supports long-term asset management objectives. This course provides participants with internationally recognized methodologies and industry best practices for planning, executing, monitoring, and optimizing preventive maintenance activities.

Throughout the program, participants will develop a comprehensive understanding of preventive maintenance principles, maintenance planning and scheduling, equipment criticality assessment, maintenance strategies, maintenance task development, inspection techniques, lubrication management, condition monitoring fundamentals, work order management, maintenance documentation, spare parts management, Computerized Maintenance Management Systems (CMMS), maintenance Key Performance Indicators (KPIs), reliability improvement, and continuous improvement methodologies. Practical exercises and real industrial case studies allow participants to apply preventive maintenance concepts to real operational environments while strengthening maintenance planning and technical decision-making skills.

The Preventive Maintenance Training Course also demonstrates how preventive maintenance supports reliability engineering, asset management, operational excellence, engineering safety, maintenance cost optimization, regulatory compliance, and business continuity. By completing this course, participants will be prepared to improve maintenance effectiveness, optimize maintenance resources, reduce equipment failures, strengthen organizational reliability, improve operational performance, and support sustainable asset management across government entities, ministries, public sector organizations, banks managing engineering infrastructure, oil and gas organizations, manufacturing industries, utilities, transportation sectors, mining operations, and multinational corporations.

Objectives

- Analyze preventive maintenance principles and their impact on asset reliability and operational performance.
- Develop structured preventive maintenance programs for industrial equipment and facilities.
- Evaluate equipment condition, maintenance requirements, and asset criticality to establish effective maintenance priorities.
- Apply preventive maintenance methodologies that improve equipment availability and reduce unplanned downtime.
- Design preventive maintenance schedules that optimize maintenance resources and operational efficiency.
- Improve maintenance performance through systematic inspections, servicing, and maintenance planning.
- Strengthen maintenance decision-making by utilizing equipment history, maintenance records, and performance data.
- Implement preventive maintenance activities using CMMS and standardized maintenance procedures.
- Assess maintenance effectiveness using Key Performance Indicators (KPIs) and continuous improvement methodologies.
- Align preventive maintenance programs with organizational objectives for safety, reliability, asset management, cost optimization, and operational excellence.

Who Should Attend

This course is designed for maintenance engineers, mechanical engineers, electrical engineers, instrumentation engineers, maintenance planners, maintenance supervisors, reliability engineers, operations engineers, plant engineers, asset management engineers, facility engineers, maintenance technicians, engineering technicians, CMMS administrators, inspection engineers, planning engineers, project engineers, and technical professionals responsible for maintaining industrial equipment and facilities.

The program is equally valuable for maintenance managers, engineering managers, operations managers, plant managers, facility managers, asset managers, reliability managers, project managers, procurement professionals, warehouse supervisors, HSE specialists, quality professionals, executive managers, engineering consultants, 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, manufacturing plants, power generation facilities, utility providers, mining operations, transportation authorities, airports, ports, water treatment facilities, infrastructure developers, and multinational engineering organizations will benefit significantly from the practical methodologies and internationally recognized preventive maintenance practices presented throughout the course.

Learning Outcomes

- By the end of this course, participants will be able to:
- Explain preventive maintenance principles and their role in asset reliability and operational excellence.
- Develop preventive maintenance programs for critical industrial equipment.
- Identify equipment maintenance requirements based on operating conditions and asset criticality.
- Prepare preventive maintenance schedules using structured planning methodologies.
- Perform inspections, servicing activities, and routine maintenance following industry best practices.
- Utilize CMMS to manage preventive maintenance plans, work orders, documentation, and maintenance records.

- Measure maintenance performance using maintenance KPIs and reliability indicators.
- Optimize spare parts management and maintenance resource utilization.
- Apply continuous improvement techniques to enhance preventive maintenance effectiveness.
- Support operational excellence by improving equipment reliability, reducing maintenance costs, increasing equipment availability, and strengthening long-term asset performance.

Course Outline

DAY 01

Fundamentals of Preventive Maintenance

- Principles and objectives of preventive maintenance
- Types of maintenance strategies and maintenance philosophies
- Asset criticality assessment and equipment classification
- Maintenance planning fundamentals

PRACTICAL

Practical workshop on developing preventive maintenance strategies

DAY 02

Preventive Maintenance Planning and Work Management

- Preventive maintenance planning and scheduling
- Maintenance task development and standard procedures
- Work order management and maintenance documentation
- Spare parts planning and inventory coordination

PRACTICAL EXERCISE ON PREPARING PREVENTIVE MAINTENANCE PLANS

DAY 03

Inspection, Servicing, and Equipment Care

- Equipment inspection techniques
- Lubrication management and servicing practices
- Basic condition monitoring principles
- Maintenance records and equipment history analysis

PRACTICAL

Practical workshop on equipment inspection and maintenance execution

DAY 04

Performance Measurement and Reliability Improvement

- Maintenance Key Performance Indicators (KPIs)
- Maintenance effectiveness evaluation
- Root cause analysis of recurring equipment failures
- Continuous improvement methodologies for maintenance performance

PRACTICAL APPLICATION

Practical application involving maintenance performance analysis and improvement planning

DAY 05

Advanced Preventive Maintenance and Asset Management

- Preventive maintenance within ISO 55000 asset management frameworks
- Integration of preventive, predictive, and reliability-centered maintenance
- CMMS optimization and digital maintenance management
- Maintenance governance, reporting, and strategic decision-making

DAY 05 — CONTINUED

FINAL WORKSHOP

Final workshop involving the development of a comprehensive Preventive Maintenance implementation plan integrating maintenance planning, inspection programs, work management, CMMS utilization, spare parts coordination, maintenance KPIs, reliability improvement, asset lifecycle management, cost optimization, and continuous improvement to maximize equipment availability, operational efficiency, asset reliability, and organizational excellence.

Register or Request More Information

Course page: <https://quest-training.com/courses/preventive-maintenance-training-course>

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