

ADVANCED PREVENTIVE & PREDICTIVE MAINTENANCE

““Enhancing Equipment Reliability through Proactive Maintenance Strategies and Predictive Technologies””

Schedule

Date	Venue	Fees (Face-to-Face)
24 - 26 Feb 2026	Muscat, Oman	USD 2,495 per delegate
05 - 07 Jul 2026	Manama, Bahrain	USD 2,495 per delegate
10 - 12 Aug 2026	Doha, Qatar	USD 2,495 per delegate
13 - 15 Oct 2026	Kuwait	USD 2,495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

As industries push toward operational excellence and asset reliability, maintenance strategies must evolve beyond reactive fixes. Advanced preventive and predictive maintenance (PPM) offers organizations a structured, data-driven way to extend equipment life, avoid unexpected failures, and optimize maintenance resources.

This intensive three-day training program delves into advanced methodologies, tools, and technologies to strengthen your maintenance planning, condition monitoring, and decision-making capabilities. It is designed to equip professionals with both strategic and technical skills to drive reliability-centered maintenance in their organizations.

Objectives

By the end of this course, participants will be able to:

- Develop advanced preventive maintenance programs based on asset criticality
- Integrate predictive tools such as vibration analysis, thermography, and oil diagnostics
- Interpret condition monitoring data to drive timely interventions
- Reduce downtime, maintenance cost, and failure rates through proactive planning
- Align maintenance strategies with business risk and reliability goals

Why Attend

- Reduce unplanned equipment failures and production interruptions
- Gain practical knowledge of modern predictive maintenance technologies
- Improve maintenance planning, scheduling, and execution discipline
- Support reliability-centered maintenance and asset management initiatives
- Build internal capability to shift from reactive to proactive maintenance

Target Audience

This program is designed for:

- Maintenance engineers and supervisors
- Reliability professionals and planners
- Mechanical, electrical, and instrumentation technicians
- CMMS users and asset management teams
- Operations and plant managers focused on performance and uptime

Individual Benefits

Key competencies that will be developed include:

- Development of PM/PdM tasks based on failure modes and asset risk
- Use of condition monitoring techniques to diagnose early failures
- Data analysis and decision-making using maintenance indicators
- Application of risk-based and reliability-centered maintenance principles
- Hands-on troubleshooting using predictive technology case examples

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Lower corrective maintenance frequency and associated costs
- Increased availability, uptime, and reliability of key assets
- Optimized maintenance resource allocation and task scheduling
- Stronger alignment with ISO 55000 and world-class maintenance frameworks
- Enhanced safety and operational resilience through equipment integrity

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - Best practices in proactive and predictive maintenance
- Case Studies - Equipment failure analysis and predictive maintenance applications
- Workshops - PM/PdM program development and condition monitoring exercises
- Peer Exchange - Discussion of real plant scenarios and lessons learned
- Tools - Templates for maintenance task lists, monitoring logs, and fault trees

Course Outline

Detailed 3-Day Course Outline

Training Hours: 07:30 AM – 3:30 PM **Daily Format:** 3-4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Strategy and Planning for Proactive Maintenance

- Module 1: Advanced Preventive Maintenance Planning (07:30 – 09:30) • Criticality analysis and maintenance task selection • Work order management and CMMS integration
- Module 2: Maintenance Optimization and Scheduling (09:45 – 11:15) • Balancing preventive workload with operational priorities • Maintenance backlog and scheduling strategies
- Module 3: Risk-Based Maintenance (11:30 – 01:00) • Using failure history and asset risk to prioritize tasks
- Module 4: Workshop – Building a Risk-Based PM Plan (02:00 – 03:30)

Day 2: Predictive Tools and Technologies

- Module 1: Vibration Monitoring and Analysis (07:30 – 09:30) • Fault signatures, frequencies, and trending
- Module 2: Thermography and Ultrasonic Inspection (09:45 – 11:15) • Identifying electrical, thermal, and leakage faults
- Module 3: Lubrication and Oil Condition Monitoring (11:30 – 01:00) • Wear metals, viscosity, contamination, and degradation
- Module 4: Workshop – Interpreting Predictive Maintenance Data (02:00 – 03:30)

Day 3: Implementation, KPI Tracking & Continuous Improvement

- Module 1: CMMS Reporting and Data Utilization (07:30 – 09:30) • Maintenance KPIs: MTBF, MTTR, PM compliance
- Module 2: RCA and Failure Elimination (09:45 – 11:15) • Linking PdM data with RCFA to improve asset design and operations
- Module 3: Building a Maintenance Excellence Roadmap (11:30 – 01:00) • Implementation phases, training, and change management
- Module 4: Certification and Wrap-Up (02:00 – 03:30) • Final Q&A, course summary, and certificate distribution

Certification

Participants will receive a Certificate of Completion in Advanced Preventive & Predictive Maintenance, validating their expertise in implementing proactive strategies that drive equipment reliability, operational efficiency, and maintenance excellence.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
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