

MAINTENANCE MANAGEMENT BEST PRACTICES & RELIABILITY IMPROVEMENT

““Boosting Asset Performance through Strategic Maintenance and Reliability Programs””

Schedule

Date	Venue	Fees (Face-to-Face)
15 – 19 Feb 2026	Manama, Bahrain	USD 3495 per delegate

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

Introduction

In today’s asset-intensive industries, maintenance is no longer just about fixing equipment—it’s a strategic function aimed at improving reliability, minimizing downtime, and maximizing return on assets. Organizations that implement best practices in maintenance management and reliability engineering gain a distinct operational advantage.

This comprehensive five-day course introduces participants to globally recognized maintenance strategies, from preventive and predictive maintenance to condition monitoring and root cause analysis. It equips professionals with tools to optimize planning, enhance reliability, reduce lifecycle costs, and align maintenance activities with business objectives.

Objectives

- By the end of this course, participants will be able to:
- Implement maintenance strategies based on reliability, criticality, and risk
 - Optimize planning, scheduling, and execution of maintenance activities
 - Utilize condition-based and predictive maintenance techniques
 - Apply key performance indicators (KPIs) to track and improve performance
 - Conduct root cause analysis (RCA) to eliminate recurring failures

Why Attend

- Improve equipment uptime and reduce unplanned outages
- Learn how to move from reactive to proactive maintenance practices
- Apply industry-proven tools and methodologies (RCM, FMEA, TPM)
- Enhance maintenance productivity, safety, and cost-effectiveness
- Align maintenance goals with overall plant reliability objectives

Target Audience

This program is designed for:

- Maintenance managers and engineers
- Reliability engineers and plant engineers
- Operations and production supervisors
- Asset and facility management personnel
- Planners, schedulers, and CMMS users

Individual Benefits

Key competencies that will be developed include:

- Maintenance strategy development and prioritization
- Reliability-centered maintenance (RCM) planning
- Predictive maintenance technologies and applications
- KPI analysis and performance-based maintenance decision-making
- Problem-solving and failure prevention through RCA

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved asset performance and reliability
- Reduced downtime and lower maintenance costs
- Better planning and coordination of maintenance tasks
- Standardized maintenance procedures and documentation
- Data-driven decision-making and performance monitoring

Instructional Methodology

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

- Strategy Briefings – Maintenance management principles and global best practices
- Case Studies – Real-world applications and reliability challenges
- Workshops – Failure analysis, planning optimization, and KPI development
- Peer Exchange – Interactive discussions on industry-specific experiences
- Tools – Templates for maintenance strategy, RCA, and performance tracking

Course Outline

Detailed 5-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: Maintenance as a Strategic Function

- Module 1: Introduction to Maintenance Management (07:30 – 09:30) • Evolution of maintenance practices • Roles and responsibilities in maintenance organizations
- Module 2: Maintenance Strategies and Classifications (09:45 – 11:15) • Reactive, preventive, predictive, and proactive maintenance • Risk-based and reliability-based approaches
- Module 3: Maintenance Planning and Scheduling Fundamentals (11:30 – 01:00) • Work order systems and backlog management • Planning tools and Gantt charting basics
- Module 4: Workshop – Strategy Assessment Exercise (02:00 – 03:30) • Evaluate current maintenance strategy maturity

Day 2: Reliability Engineering Principles

- Module 1: Introduction to Reliability Concepts (07:30 – 09:30) • Failure modes, MTTR, MTBF, and availability calculations • Criticality analysis and equipment prioritization
- Module 2: Reliability-Centered Maintenance (RCM) Methodology (09:45 – 11:15) • RCM principles and implementation steps • Functional failures and consequence analysis
- Module 3: Failure Modes and Effects Analysis (FMEA) (11:30 – 01:00) • Identifying failure modes and ranking severity • Preventive actions and review cycles
- Module 4: Workshop – FMEA Application on Plant Equipment (02:00 – 03:30) • Conduct a simplified FMEA for a rotating machine

Day 3: Condition Monitoring and Predictive Maintenance

- Module 1: Predictive Maintenance Techniques (07:30 – 09:30) • Vibration analysis, thermography, ultrasonics • Oil analysis and motor current monitoring
- Module 2: Integrating CM into Maintenance Strategy (09:45 – 11:15) • Triggering maintenance using data and trend analysis • Selecting the right tools and frequencies
- Module 3: Digital Tools and CMMS Utilization (11:30 – 01:00) • Features and benefits of CMMS/EAM platforms • Using data for asset health dashboards
- Module 4: Workshop – Interpreting Predictive Data (02:00 – 03:30) • Analyze sample reports and make maintenance decisions

Day 4: Performance Measurement and Continuous Improvement

- Module 1: Maintenance KPIs and Metrics (07:30 – 09:30) • OEE, wrench time, schedule compliance, backlog • KPI dashboards and scorecards
- Module 2: Cost Control and Resource Optimization (09:45 – 11:15) • Budgeting, inventory management, and outsourcing decisions • Cost vs reliability trade-offs
- Module 3: Root Cause Failure Analysis (RCFA) (11:30 – 01:00) • RCA tools: 5 Whys, fishbone diagram, fault tree analysis
- Module 4: Workshop – Conducting a Root Cause Analysis (02:00 – 03:30) • Analyze a recurring equipment failure using RCA techniques

Day 5: Implementation Planning and Certification

- Module 1: Building a Maintenance Improvement Roadmap (07:30 – 09:30) • Gap analysis, goal setting, and change management
- Module 2: Leadership and Team Development (09:45 – 11:15) • Building a reliability culture • Training, communication, and stakeholder alignment
- Module 3: Final Review and Action Planning (11:30 – 01:00) • Recap of tools and concepts • Individual action planning for site implementation
- Module 4: Certification and Wrap-Up (02:00 – 03:30) • Final discussion and certificate distribution

Certification

Participants will receive a Certificate of Completion in Maintenance Management Best Practices & Reliability Improvement, validating their ability to implement maintenance strategies that improve reliability, reduce cost, and enhance overall asset performance.

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