

IMPLEMENTATION OF BEST PRACTICES IN ENGINEERING MAINTENANCE PROGRAMS

““Enhancing Reliability and Performance through Effective Maintenance Practices””

Schedule		
Date	Venue	Fees (Face-to-Face)
01 – 05 Mar 2026	Manama, Bahrain	USD 3495 per delegate
► Available delivery methods: In-House Training		

Introduction

Effective maintenance management is key to achieving operational efficiency, minimizing downtime, and optimizing the life cycle of equipment and assets. This 5-day course covers the best practices for engineering maintenance programs, providing participants with the necessary knowledge and tools to enhance their maintenance strategies. Topics include preventive maintenance, reliability-centered maintenance (RCM), total productive maintenance (TPM), and the role of technology in modern maintenance practices. Participants will gain practical insights into how to implement and sustain world-class maintenance programs that drive reliability and cost savings.

- Objectives
- By the end of this course, participants will be able to:
- Understand the importance of engineering maintenance and its impact on asset management
 - Implement best practices in maintenance management, including preventive maintenance, RCM, and TPM
 - Develop and optimize maintenance strategies to improve operational reliability and reduce costs
 - Apply key performance indicators (KPIs) to monitor and evaluate maintenance performance
 - Use technology and automation tools to enhance the efficiency of maintenance operations

Why Attend

- Gain a deep understanding of best practices in maintenance management for engineering systems
- Learn how to implement and maintain preventive, reliability-centered, and total productive maintenance practices
- Understand how to improve equipment reliability and extend asset life through effective maintenance strategies
- Develop the ability to evaluate and enhance maintenance performance using KPIs
- Explore the role of technology and automation in modern maintenance programs for greater efficiency and cost-effectiveness

Target Audience

This program is designed for:

- Maintenance managers and engineers
- Reliability engineers and asset managers
- Operations and production managers
- Maintenance planners and schedulers
- Professionals involved in managing and improving maintenance processes

Individual Benefits

Key competencies that will be developed include:

- Advanced understanding of engineering maintenance practices and strategies
- Skills in implementing preventive maintenance, RCM, and TPM in operations
- Proficiency in using KPIs to measure and optimize maintenance performance
- Knowledge of how to integrate technology and automation tools into maintenance processes
- Expertise in improving equipment reliability and reducing downtime through best practices

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- The ability to lead and implement best practices in maintenance management for improved operational efficiency
- Enhanced capability to reduce downtime, extend asset life, and improve overall reliability
- Stronger management of maintenance costs and increased profitability through optimized maintenance strategies
- Improved use of technology and automation to streamline maintenance operations
- A culture of continuous improvement in maintenance performance across the organization

Instructional Methodology

- Lectures on the principles of engineering maintenance and best practices
- Case studies to explore successful examples of maintenance program implementations
- Interactive discussions on the challenges and solutions in modern maintenance management
- Group exercises to develop maintenance strategies and action plans
- Workshops to practice applying best practices in real-world maintenance scenarios

Course Outline

Training Hours: 07:30 AM - 03:30 PM Daily Format: 3-4 Learning Modules | Coffee Breaks: 09:30 & 11:15 | Lunch Break: 01:00 - 02:00

Day 1: Introduction to Best Practices in Engineering Maintenance

- Module 1: The Role of Maintenance in Engineering Operations (07:30 - 09:30) • Importance of effective maintenance management • The impact of maintenance on asset life cycle, production efficiency, and costs • Understanding the different types of maintenance strategies
- Module 2: Preventive Maintenance Best Practices (09:45 - 11:15) • Developing a preventive maintenance program • Key principles of preventive maintenance and its benefits • Scheduling and planning preventive maintenance tasks
- Module 3: Workshop - Developing a Preventive Maintenance Plan (11:30 - 01:00) • Participants will design a preventive maintenance plan for a sample operation

Day 2: Reliability-Centered Maintenance (RCM)

- Module 4: Introduction to Reliability-Centered Maintenance (07:30 - 09:30) • Key principles of RCM and its importance for improving asset reliability • Steps for implementing an RCM program in your organization • How RCM helps in identifying failure modes and prioritizing maintenance efforts
- Module 5: Failure Modes, Effects, and Criticality Analysis (09:45 - 11:15) • Performing failure modes and effects analysis (FMEA) • Using FMEA to determine criticality and prioritize maintenance activities • Assessing risks and implementing maintenance actions based on analysis
- Module 6: Workshop - RCM and FMEA Application (11:30 - 01:00) • Hands-on session to apply RCM principles and FMEA techniques to a sample system

Day 3: Total Productive Maintenance (TPM)

- Module 7: Introduction to Total Productive Maintenance (07:30 - 09:30) • Understanding TPM and its role in optimizing equipment efficiency • Key pillars of TPM: autonomous maintenance, planned maintenance, and continuous improvement • Creating a TPM program tailored to your organization's needs
- Module 8: Implementing TPM in Your Organization (09:45 - 11:15) • Best practices for introducing TPM and achieving employee buy-in • Measuring TPM success through key performance indicators (KPIs) • Overcoming challenges and barriers to TPM implementation
- Module 9: Workshop - Developing a TPM Program (11:30 - 01:00) • Participants will develop a TPM program for a sample facility

Day 4: Key Performance Indicators (KPIs) for Maintenance Management

- Module 10: Identifying and Implementing Maintenance KPIs (07:30 - 09:30) • The role of KPIs in evaluating maintenance performance • Common KPIs for maintenance operations: uptime, downtime, MTTR, MTBF, etc. • Setting realistic targets and measuring success
- Module 11: Continuous Improvement in Maintenance (09:45 - 11:15) • Continuous improvement strategies for maintenance management • Tools for continuous improvement: PDCA, root cause analysis, 5S, Kaizen • Involving employees in continuous improvement efforts
- Module 12: Workshop - Setting KPIs and Improvement Plans (11:30 - 01:00) • Participants will define maintenance KPIs and create improvement action plans for their facility

Day 5: Technology and Automation in Maintenance Management

- Module 13: Leveraging Technology for Maintenance Optimization (07:30 - 09:30) • Introduction to maintenance management software (CMMS/EAM systems) • Benefits of automation in maintenance: predictive maintenance, remote monitoring, IoT • Integrating technology into preventive and corrective maintenance strategies
- Module 14: Building a Maintenance Excellence Culture (09:45 - 11:15) • Developing leadership and organizational support for maintenance excellence • Strategies for fostering a culture of continuous improvement in maintenance • Measuring and sustaining maintenance excellence in the long term
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