

## MAINTENANCE SCHEDULING & COST OPTIMIZATION

*“Maximizing Equipment Reliability and Operational Efficiency through Strategic Scheduling and Cost Management”*

### Schedule

Date	Venue	Fees (Face-to-Face)
07 - 10 Dec 2026	Manama - Bahrain	USD 2995 per delegate

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

### Introduction

In the world of asset management and plant operations, efficient maintenance scheduling and cost control are essential for ensuring maximum uptime, productivity, and safety while minimizing unnecessary expenditures. Strategic planning and optimization of maintenance processes enable organizations to improve equipment reliability, reduce downtime, and extend asset life, all while keeping costs under control.

This 4-day intensive course focuses on developing the skills needed to schedule maintenance effectively, apply cost-saving techniques, and implement data-driven approaches to achieve optimal performance and minimize disruptions. Participants will learn how to strike a balance between scheduled maintenance, reactive repairs, and capital expenditures to enhance overall plant efficiency.

### Objectives

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

- Understand the key principles of maintenance scheduling and its role in asset management
- Develop and implement effective maintenance schedules for various types of assets
- Optimize maintenance costs while ensuring operational reliability and safety
- Use data and performance indicators to assess maintenance effectiveness
- Apply best practices and tools for cost-effective asset management and maintenance operations

## Why Attend

- Improve your ability to schedule maintenance tasks efficiently to minimize downtime
- Learn how to balance preventative maintenance with cost optimization
- Enhance your knowledge of cost management in maintenance and asset management
- Develop the skills to implement best practices for predictive and condition-based maintenance
- Gain confidence in using data and analytics to drive better decision-making in maintenance planning

## Target Audience

### This program is designed for:

- Maintenance planners and schedulers
- Maintenance managers and supervisors
- Reliability engineers and asset managers
- Operations managers and coordinators
- Cost control and finance professionals in industrial settings

## Individual Benefits

### Key competencies that will be developed include:

- Efficient maintenance scheduling and prioritization skills
- Cost optimization techniques in maintenance operations
- Understanding of maintenance cost drivers and budget management
- Decision-making based on data and performance metrics
- Strategies for improving plant reliability and reducing operational costs

## Organizational Benefits

### Upon completing the training course, participants will demonstrate:

- Reduced maintenance downtime and increased asset availability
- Improved cost efficiency in maintenance activities and budget management
- Enhanced ability to allocate resources effectively for both scheduled and unscheduled maintenance
- Stronger alignment between maintenance operations and organizational goals
- A more proactive approach to reliability and asset management

## Instructional Methodology

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

- **Strategy Briefings** - Maintenance scheduling theories, tools, and cost management frameworks
- **Case Studies** - Real-world examples of effective maintenance scheduling and cost-saving strategies
- **Workshops** - Hands-on exercises in creating maintenance schedules and performing cost analysis
- **Peer Exchange** - Group discussions on common maintenance scheduling challenges and solutions
- **Tools** - Templates for maintenance scheduling, cost optimization analysis, and performance tracking

## MAWA EVENTS

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## Course Outline

### DETAILED 4-DAY COURSE OUTLINE

#### **Training Hours: 7:30 AM - 3:30 PM**

Daily Format: 3-4 Learning Modules | Coffee Breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 - 02:00

#### **Day 1: Introduction to Maintenance Scheduling and Planning**

##### **Module 1: Fundamentals of Maintenance Scheduling (07:30 - 09:30)**

- The role of maintenance scheduling in asset management
- Types of maintenance: preventive, corrective, predictive, and condition-based
- Benefits of effective maintenance scheduling in operations

##### **Module 2: Tools and Techniques for Scheduling Maintenance (09:45 - 11:15)**

- Gantt charts, critical path analysis, and maintenance management software
- Time-based vs. usage-based scheduling approaches
- Resource allocation and planning tools

##### **Module 3: Key Performance Indicators (KPIs) for Maintenance (11:30 - 01:00)**

- Understanding maintenance KPIs: OEE, MTTR, MTBF, downtime, backlog
- Setting and tracking KPIs for scheduling effectiveness
- Analyzing KPIs to improve scheduling decisions

##### **Workshop - Develop a Sample Maintenance Schedule (02:00 - 03:30)**

- Participants develop a maintenance schedule using tools provided
- Group critique and feedback

#### **Day 2: Cost Management in Maintenance**

##### **Module 1: Understanding Maintenance Costs (07:30 - 09:30)**

- Breakdown of maintenance cost categories: labor, parts, downtime, and overheads
- Analyzing direct and indirect costs
- Cost allocation methods and budget management

##### **Module 2: Cost Optimization Strategies (09:45 - 11:15)**

- Preventive maintenance vs. corrective maintenance cost comparison
- Optimizing inventory, spare parts management, and procurement costs
- Outsourcing and in-house cost considerations

##### **Module 3: Asset Life Cycle Costing (11:30 - 01:00)**

- Total cost of ownership (TCO) and its role in decision-making
- Developing a cost-effective maintenance strategy through asset life cycle analysis
- Capital vs. operational expenditure and their impacts on cost optimization

##### **Workshop - Cost Optimization Case Study (02:00 - 03:30)**

- Analyze a maintenance budget and identify cost-saving opportunities
- Develop a cost-effective maintenance plan based on the case study

#### **Day 3: Predictive and Preventive Maintenance Strategies**

##### **Module 1: Preventive vs. Predictive Maintenance (07:30 - 09:30)**

- Benefits and challenges of preventive and predictive maintenance
- Predictive maintenance tools: vibration analysis, thermography, ultrasound
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Cost and risk considerations in both approaches

**Module 2: Condition Monitoring and Diagnostics (09:45 - 11:15)**

- Using data to monitor asset health and predict failures
- Integration of IoT and AI in predictive maintenance
- Best practices for diagnostics and condition-based maintenance

**Module 3: Implementing Predictive and Preventive Programs (11:30 - 01:00)**

- Developing a preventive and predictive maintenance program
- Aligning with maintenance scheduling for efficiency
- Performance tracking and continuous improvement

**Workshop - Designing a Predictive Maintenance Program (02:00 - 03:30)**

- Build a predictive maintenance program for a sample asset
- Group review and suggestions for optimization

**Day 4: Maintenance Performance Evaluation and Continuous Improvement****Module 1: Evaluating Maintenance Performance (07:30 - 09:30)**

- Measuring the effectiveness of maintenance schedules
- Analyzing failures, root causes, and corrective actions
- Post-maintenance review and performance audits

**Module 2: Continuous Improvement in Maintenance (09:45 - 11:15)**

- Implementing lean maintenance and Six Sigma methodologies
- Tools for continuous improvement: Kaizen, PDCA, Root Cause Analysis (RCA)
- Developing a culture of continuous improvement in maintenance

**Module 3: Automation and Technology in Maintenance Scheduling (11:30 - 01:00)**

- Automation tools for scheduling and reporting
- Integrating maintenance management software (CMMS/EAM)
- Leveraging data and analytics for improved decision-making

**Final Workshop - Comprehensive Maintenance Scheduling and Cost Optimization Plan (02:00 - 03:30)**

- Develop a comprehensive maintenance scheduling and cost optimization plan
- Group presentations and feedback from peers and instructors

**Certification**

Participants will receive a **Certificate of Completion in Maintenance Scheduling & Cost Optimization**, validating their ability to develop and manage effective maintenance schedules and cost-effective strategies for industrial assets.

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