

ASSET OPERATIONS & MAINTENANCE - OIL & GAS PROCESSING FACILITIES

"Optimize performance and reliability through best practices in asset operations and maintenance for oil & gas processing facilities."

Schedule

Date	Venue	Fees (Face-to-Face)
20 - 24 Jul 2026	London, UK	USD 3495 per delegate

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

Introduction

Efficient asset operations and maintenance are critical to sustaining production and safety standards in oil & gas processing facilities. Poor asset management not only impacts profitability but also poses environmental and safety risks.

This 5-day intensive course delivers comprehensive knowledge and practical skills to enhance the performance, reliability, and lifespan of assets in oil & gas operations. It emphasizes global standards, risk-based maintenance, condition monitoring, and integrity assurance across complex systems and infrastructure.

Objectives

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

- Apply international best practices in asset operations and maintenance.
- Identify critical equipment and plan condition-based maintenance.
- Utilize reliability-centered maintenance (RCM) and failure mode analysis techniques.
- Develop strategies for minimizing downtime and optimizing lifecycle costs.
- Enhance asset integrity, reliability, and safety compliance.

Why Attend

- Gain deep insight into the asset lifecycle and maintenance optimization techniques.
- Learn how to reduce operational costs through predictive and preventive maintenance.
- Understand how to manage aging assets and extend their operational life.
- Get hands-on exposure to industry tools and maintenance planning methodologies.
- Benchmark your facility's performance with global standards and KPIs.

Target Audience

This program is designed for:

- Maintenance and operations engineers in oil & gas
- Asset integrity engineers and inspectors
- Reliability engineers and planners
- Facility and plant managers
- Technical personnel involved in asset lifecycle management
- HSE professionals concerned with asset-related safety risks

Individual Benefits

Key competencies that will be developed include:

- Strong foundation in asset maintenance and integrity management
- Skills to implement RCM, CBM, and TPM strategies effectively
- Ability to use failure data to optimize operational plans
- Proficiency in cost-effective maintenance planning
- Knowledge of regulatory and safety compliance in asset operations

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved asset utilization and availability
- Reduced maintenance costs and downtime
- Higher safety and environmental compliance
- Enhanced production efficiency and operational continuity
- Better decision-making based on asset condition and performance data

Instructional Methodology

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

- Strategy Briefings – Explore asset management frameworks and maintenance optimization principles
- Case Studies – Review real-world oil & gas asset maintenance scenarios
- Workshops – Develop customized maintenance strategies and failure mode analysis
- Peer Exchange – Share experiences and challenges in managing complex processing facilities
- Tools – Templates and software guidance for asset planning and reliability tracking

MAWA EVENTS

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Course Outline

Detailed 5-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: Fundamentals of Asset Operations in Oil & Gas Facilities

- Module 1: Asset Lifecycle and Operations Framework (07:30 – 09:30)
 - Understanding the asset lifecycle in oil & gas
 - Key performance indicators and value drivers
 - Asset strategy formulation and alignment
- Module 2: Types of Maintenance Strategies
 - Reactive, preventive, predictive, and condition-based maintenance
 - Selecting the right strategy for critical assets
- Module 3: Introduction to Reliability-Centered Maintenance (RCM)
 - RCM concepts and failure mode analysis
 - Planning maintenance tasks based on risk and criticality

Day 2: Maintenance Planning and Scheduling

- Module 1: Maintenance Work Planning
 - Work order systems, backlog control, and priority setting
 - Maintenance workflow and coordination
- Module 2: Scheduling and Resource Optimization
 - Scheduling techniques using Gantt charts and CMMS
 - Coordination with operations for minimum downtime
- Module 3: Spare Parts and Inventory Management
 - Critical spares identification
 - Inventory optimization and procurement planning

Day 3: Reliability and Condition Monitoring

- Module 1: Reliability Engineering Principles
 - Failure analysis, MTBF, MTTR, and reliability modeling
 - Decision-making using reliability data
- Module 2: Condition Monitoring Techniques
 - Vibration analysis, thermography, oil analysis, and ultrasonic testing
 - Data interpretation and maintenance triggers
- Module 3: Root Cause Analysis (RCA)
 - RCA process and tools (Fishbone, 5 Whys)
 - Applying RCA to recurring failures

Day 4: Asset Integrity and Risk-Based Maintenance

- Module 1: Asset Integrity Management Systems (AIMS)
 - Regulatory compliance and industry best practices
 - Asset criticality and degradation mechanisms
- Module 2: Risk-Based Inspection (RBI)
 - Developing an RBI plan
 - Prioritization of inspections based on risk
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Module 3: Managing Aging Assets

- Assessing end-of-life risk
- Strategies for life extension and retirement planning

Day 5: Performance Management and Continuous Improvement

- Module 1: Maintenance Performance Metrics
- KPIs: availability, reliability, OEE
- Data visualization and dashboard design
- Module 2: Digital Tools and CMMS Utilization
- Using CMMS for reporting, analytics, and planning
- Integration with IoT and predictive systems
- Module 3: Continuous Improvement Framework
- Lessons learned, audits, and feedback systems
- Creating a culture of reliability

Certification

Participants will receive a Certificate of Completion in Asset Operations & Maintenance – Oil & Gas Processing Facilities, certifying their knowledge and capabilities in applying best practices to manage and maintain assets within the oil & gas sector.

Why Choose MAWA Events

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