MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

OPERATIONS AND MAINTENANCE – OIL AND GAS PROCESSING FACILITIES FOR OPERATIONS AND MAINTENANCE

"Maximizing Efficiency, Reliability, and Safety in Oil & Gas Processing Operations"

Schedule

Date	Venue	Fees (Face-to-Face)
07 – 11 Dec 2026	London, UK	USD 3495 per delegate

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

Introduction

Oil and gas processing facilities operate under intense technical, safety, and environmental pressures. Ensuring the smooth operation and effective maintenance of such facilities is crucial for production continuity, asset longevity, and safety compliance. This course is designed to empower operations and maintenance personnel with practical knowledge to run processing units efficiently while minimizing downtime and maintaining the highest safety standards.

Over five days, participants will gain a deep understanding of processing plant operations, maintenance strategies, safety systems, equipment troubleshooting, and performance optimization. Real-world case studies and exercises ensure participants walk away with hands-on insights applicable to both upstream and downstream oil & gas environments.

Objectives

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

- Understand key processes and equipment used in oil and gas processing facilities
- Apply effective operations management and maintenance practices
- Troubleshoot and resolve common plant and equipment failures
- Enhance safety, reliability, and regulatory compliance across operations
- Optimize maintenance planning, inspection, and asset care strategies

MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

Why Attend

- To improve operational reliability and reduce unplanned shutdowns
- To gain hands-on knowledge of equipment used in oil and gas plants
- To build stronger coordination between operations and maintenance teams
- To reduce operational risk while improving asset utilization
- To align maintenance strategies with production goals and safety standards

Target Audience

This program is designed for:

- Plant operators and process technicians
- Maintenance engineers and supervisors
- Reliability and asset integrity engineers
- Field service technicians and instrumentation professionals
- HSE, inspection, and plant operations managers in oil & gas

Individual Benefits

Key competencies that will be developed include:

- Technical understanding of processing systems and major equipment
- Maintenance planning, condition monitoring, and fault diagnosis
- Risk-based inspection and preventive maintenance
- Root cause analysis for plant failures
- Communication and collaboration skills in multi-disciplinary teams

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Enhanced facility uptime and asset performance
- Improved safety culture and emergency preparedness
- Reduced maintenance costs and production losses
- Standardized maintenance and operating procedures
- Better compliance with international standards and local regulations

Instructional Methodology

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

- Strategy Briefings: Process plant operations, maintenance systems, and industry best practices
- Case Studies: Equipment failures, shutdowns, and maintenance turnarounds
- Workshops: Troubleshooting, maintenance scheduling, and safety systems analysis
- Peer Exchange: Group problem-solving and experience sharing
- Tools: Maintenance checklists, inspection templates, CMMS examples, and RCA frameworks

MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

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: Introduction to Oil & Gas Processing Operations

- Module 1: Overview of Oil and Gas Processing Systems (07:30 – 09:30) • Separation, dehydration, compression, gas sweetening, and storage
- Module 2: Key Equipment and Operating Principles (09:45 – 11:15) • Vessels, pumps, compressors, heat exchangers, and instrumentation
- Module 3: Workshop – Process Flow Diagram (PFD) Review (11:30 – 01:00) • Understanding plant layout and critical paths
- Module 4: Roles and Responsibilities of Operations & Maintenance Teams (02:00 – 03:30) • Interface management and coordination practices

Day 2: Equipment Maintenance and Reliability

- Module 5: Preventive, Predictive, and Condition-Based Maintenance (07:30 – 09:30) • Techniques, advantages, and selection criteria
- Module 6: Equipment Failure Modes and Troubleshooting (09:45 – 11:15) • Pumps, compressors, valves, and rotating equipment
- Module 7: Workshop – Maintenance Strategy Planning (11:30 – 01:00) • Developing a schedule based on criticality and history
- Module 8: Spare Parts Management and CMMS (02:00 – 03:30) • Inventory optimization and software tools

Day 3: Process Safety and Emergency Preparedness

- Module 9: Process Safety Fundamentals (07:30 – 09:30) • Layers of protection, HAZOP, and safety barriers
- Module 10: Emergency Shutdown (ESD) and Control Systems (09:45 – 11:15) • ESD valves, logic systems, and instrumentation
- Module 11: Workshop – Analyzing a Plant Safety Incident (11:30 – 01:00) • Root cause and lessons learned
- Module 12: Permit to Work (PTW) and Safety Procedures (02:00 – 03:30) • Lockout-tagout, hot work, and confined space entry

Day 4: Asset Integrity and Inspection Techniques

- Module 13: Mechanical Integrity and RBI (07:30 – 09:30) • Inspection strategies for pressure vessels and piping
- Module 14: Non-Destructive Testing (NDT) and Monitoring Tools (09:45 – 11:15) • Ultrasonic, radiographic, vibration, and thermographic techniques
- Module 15: Workshop – Interpreting Inspection Reports (11:30 – 01:00) • Making maintenance decisions from inspection data
- Module 16: Corrosion Management in Oil & Gas Facilities (02:00 – 03:30) • Types, causes, and mitigation techniques

Day 5: Optimization and Performance Improvement

- Module 17: Key Performance Indicators (KPIs) and Maintenance Metrics (07:30 – 09:30) • MTBF, OEE, downtime analysis, and availability
- Module 18: Continuous Improvement in Operations (09:45 – 11:15) • Lean maintenance, RCA, and Six Sigma principles
- Module 19: Workshop – Developing a Facility Optimization Plan (11:30 – 01:00) • Identifying performance improvement areas
- Module 20: Wrap-Up and Certification (02:00 – 03:30) • Review, action plans, and participant presentations

Certification

Participants will receive a Certificate of Completion in Operations and Maintenance – Oil and Gas Processing Facilities, validating their expertise in managing safe, efficient, and reliable operations across oil and gas production environments.

MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation's unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**