

AMERICAN GLOBAL INSTITUTE
FOR PRIVATE TRAINING



External Training Course

Certified Oil and Gas Maintenance Engineer

From 16 Dec. To 20 Dec. 2024

From 13 Jan. To 17 Jan. 2025

From 10 Feb. To 14 Feb. 2025

London, UK

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Course Overview:

This comprehensive 5-day training program is designed for engineers and maintenance professionals in the oil and gas industry. It provides in-depth knowledge of maintenance strategies, tools, and best practices required to ensure operational efficiency, equipment reliability, and asset integrity. The course integrates technical concepts with practical applications tailored to oil and gas facilities.

Course Objectives:

By the end of the course, participants will:

- Understand key maintenance principles specific to oil and gas operations.
- Implement advanced maintenance strategies, including predictive and condition-based approaches.
- Develop and manage maintenance plans for rotating and static equipment.
- Enhance equipment reliability while minimizing downtime and costs.
- Ensure compliance with health, safety, and environmental (HSE) standards.

Target Audience:

Maintenance Engineers.

Reliability Engineers.

Maintenance Supervisors and Planners.

Operations and Field Engineers.

Technicians involved in oil and gas equipment maintenance.

Training Methodology:

The course will be given through classroom lectures, sharing of experiences, and real-life case studies. Expert presentations on core topics Group workshops and discussions.

Course Outline:

Day 1: Fundamentals of Maintenance Engineering in Oil and Gas

- Role of maintenance in oil and gas operations.
- Maintenance approaches: Preventive, corrective, predictive, and condition-based.
- Introduction to asset integrity management.
- Common failure modes in oilfield equipment.

Day 2: Rotating and Static Equipment Maintenance

- Rotating Equipment: Maintenance of pumps, compressors, and turbines.
 - Vibration analysis and lubrication practices.
 - Troubleshooting common issues.
- Static Equipment: Inspection and maintenance of pipelines, tanks, and pressure vessels.
 - Leak detection and corrosion monitoring.
 - Repair techniques for static assets.

Day 3: Predictive and Reliability-Centered Maintenance (RCM)

- Principles of reliability-centered maintenance (RCM).
- Failure Modes, Effects, and Criticality Analysis (FMECA).
- Predictive maintenance technologies: Thermography, oil analysis, and ultrasonic testing.
- Integration of IoT and machine learning in maintenance practices.

Day 4: Maintenance Planning, Scheduling, and Cost Optimization

- Developing maintenance plans and schedules for critical assets.
- Resource allocation and inventory management.
- Use of Computerized Maintenance Management Systems (CMMS).
- Life-cycle cost analysis for maintenance optimization.

Day 5: HSE and Maintenance Excellence

- Ensuring safe maintenance practices in hazardous environments.
- Compliance with industry standards (API, ISO, OSHA).
- Emergency response planning during maintenance activities.
- Case studies: Successful maintenance programs in oil and gas.
- Final assessment and group discussion.