

Regional Center for Consulting & Training



5 Days External Training Course:

**Certified Oil and Gas Rotating &
Mechanical Maintenance Specialist**

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Regional Center for Training & Consulting Invite You To Participate With Us
Throw Our Special Training Course As Under Below Details:

Name	Certified Oil and Gas Rotating & Mechanical Maintenance Specialist			
Period	Start	End	Location	Fees
5 Days	05/01/2025	09/01/2025	Ramada Encore by Wyndham Muscat Al-Ghubra, Oman	1500 KD

Course Overview:

This course is tailored for maintenance professionals in the oil and gas sector, focusing on the essential skills, tools, and knowledge required to maintain rotating and mechanical equipment effectively. Participants will learn about diagnostics, troubleshooting, preventive maintenance, and reliability-centered approaches to ensure safe and efficient operations. The program combines theoretical knowledge with hands-on exercises for a comprehensive learning experience.

Course Objectives:

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

- Understand the operation and maintenance principles of rotating and mechanical equipment.
- Identify and diagnose common equipment issues using advanced tools.
- Develop and implement preventive and corrective maintenance strategies.
- Apply reliability-centered maintenance (RCM) and predictive maintenance techniques.
- Ensure compliance with safety and industry standards in equipment maintenance.

Target Audience:

Maintenance Engineers and Supervisors.

Mechanical Technicians.

Reliability and Asset Integrity Engineers.

Operations Personnel handling mechanical systems.

Professionals involved in oil and gas equipment maintenance.

Learning Methodology:

Lectures and Discussions: Core concepts and industry practices.

Workshops: Hands-on exercises with diagnostic tools.

Case Studies: Real-world examples to enhance understanding.



Course Outline:

Day 1: Fundamentals of Rotating and Mechanical Equipment

- Overview of rotating and mechanical equipment in oil and gas operations.
- Equipment components: Pumps, compressors, turbines, and motors.
- Basic mechanical principles: Bearings, seals, and lubrication systems.
- Key industry standards and guidelines (API, ISO, ASME).

Day 2: Failure Mechanisms and Troubleshooting Techniques

- Common failure modes: Cavitation, vibration, misalignment, and fatigue.
- Root cause analysis (RCA) for equipment failures.
- Hands-on exercise: Identifying failure causes using diagnostic tools.
- Troubleshooting techniques for rotating and mechanical systems.

Day 3: Maintenance Strategies for Rotating and Mechanical Systems

- Preventive maintenance (PM) best practices.
- Predictive maintenance (PdM) techniques: Vibration analysis, thermography, and oil analysis.
- Reliability-centered maintenance (RCM) applications in oil and gas.
- Hands-on session: Creating a maintenance schedule and task plan.

Day 4: Advanced Diagnostics and Monitoring

- Introduction to advanced diagnostic tools and software.
- Real-time condition monitoring using IoT and SCADA systems.
- Implementing data-driven decision-making for maintenance optimization.
- Workshop: Using monitoring data to predict and prevent failures.

Day 5: Safety, Compliance, and Continuous Improvement

- Ensuring safe maintenance practices in hazardous environments.
- Compliance with HSE and regulatory requirements.
- Performance measurement: Maintenance KPIs and continuous improvement.
- Capstone project: Developing a comprehensive maintenance plan for rotating and mechanical equipment.

Key Features:

Practical hands-on training with diagnostic tools and equipment.

Case studies and real-world applications from the oil and gas industry.

Interactive group exercises and workshops.

Access to maintenance templates, checklists, and best practices.



**Training Course Agenda : Certified Oil and Gas Rotating
& Mechanical Maintenance Specialist
Ramada Encore by Wyndham Muscat Al-Ghubra, Oman
05/01/2025 To 09/01/2025**

Day	Date	Topics of Training Day
Training Day Usually (Starting From 9:00 AM To 2:00 PM) First Break From 11:00 AM To 11:30 AM & Second Break From 1:00 PM To 1.15 PM End Training Day At 2:00 PM		
Sunday	05/01/2025	<u>Fundamentals of Rotating and Mechanical Equipment:</u> <ul style="list-style-type: none"> - Overview of rotating and mechanical equipment in oil and gas operations. - Equipment components: Pumps, compressors, turbines, and motors. - Basic mechanical principles: Bearings, seals, and lubrication systems. - Key industry standards and guidelines (API, ISO, ASME).
Monday	06/01/2025	<u>Failure Mechanisms and Troubleshooting Techniques:</u> <ul style="list-style-type: none"> - Common failure modes: Cavitation, vibration, misalignment, and fatigue. - Root cause analysis (RCA) for equipment failures. - Hands-on exercise: Identifying failure causes using diagnostic tools. - Troubleshooting techniques for rotating and mechanical systems.
Tuesday	07/01/2025	<u>Maintenance Strategies for Rotating and Mechanical Systems:</u> <ul style="list-style-type: none"> - Preventive maintenance (PM) best practices. - Predictive maintenance (PdM) techniques: Vibration analysis, thermography, and oil analysis. - Reliability-centered maintenance (RCM) applications in oil and gas. - Hands-on session: Creating a maintenance schedule and task plan.
Wednesday	08/01/2025	<u>Advanced Diagnostics and Monitoring:</u> <ul style="list-style-type: none"> - Introduction to advanced diagnostic tools and software. - Real-time condition monitoring using IoT and SCADA systems. - Implementing data-driven decision-making for maintenance optimization. - Workshop: Using monitoring data to predict and prevent failures.
Thuesday	09/01/2025	<u>Safety, Compliance, and Continuous Improvement:</u> <ul style="list-style-type: none"> - Ensuring safe maintenance practices in hazardous environments. - Compliance with HSE and regulatory requirements. - Performance measurement: Maintenance KPIs and continuous improvement. - Capstone project: Developing a comprehensive maintenance plan for rotating and mechanical equipment.