



External Training Course

Maintenance Resource Management in Oil Sector

From 15 Dec. To 19 Dec. 2024

From 05 Jan. To 09 Jan. 2025

From 09 Feb. To 13 Feb. 2025

Royal Tulip Muscat Hotel, Oman

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External Training Course:

Maintenance Resource Management in Oil Sector

From 15 Dec. To 19 Dec. 2024

Fees: 1500 KD

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Course Description

Lower revenues due to lower oil and gas prices have placed equipment life-cycle costs under the Maintenance Resource Management spotlight like never before. Maintenance Managers & Leaders are faced with the challenge to deliver the same levels of equipment safety, reliability and availability with smaller budgets. This Maintenance Resource Management in Oil Sector introduces the practical tools and practices that Oil & Gas Industries need to adopt to drive down their equipment life-cycle costs in practical ways. This training course emphasizes the most effective strategies, policies, tactics and practices that are needed to ensure the reliability, integrity and durability of the physical assets through their life-cycle by proper planning and control of the Maintenance activities. This training course will highlight:

- Failure and Degradation characteristics of Oil and Gas assets.
- Oil and Gas asset classification into the criticality matrix for work identification.
- Failure and degradation of assets.
- Prioritization of activities and correlation of Organization Structural Domain with Work Breakdown structure.
- Schedule activities.
- Proactive Practices and Tools to Reduce Maintenance Costs.
- Failure Analysis to Focus Cost Reduction Efforts.
- Work Management to Improve Resource Efficiency.

Objectives

At the end of this training course, you will learn to:

- Understand the Failure mechanisms of Oil Sector Assets.
- Identify the necessary work for Assets life maximization.
- Apply the correct type of maintenance for each asset.
- Schedule work activities.
- Control time, budget and scope during maintenance.
- Assess performance of Maintenance.

Course Content & Outline

DAY 1: Maintenance Types and Asset Pairing

Definitions of Maintenance, Asset Management and Reliability.

Material Failure and Degradation.

Preventive-Predictive Maintenance.

Reliability Centered Maintenance and the Failure Rate Mathematics.

Life Cycle Costs and Maintenance.

DAY 2: Planning – WBS - OBS

Work Order System (WO) for Planning.

Work Breakdown Structure (WBs).

Organization Breakdown Structure (OBS).

Materials Planning.

Workforce Planning.

DAY 3: Scheduling Principles

Programmed Preventive Maintenance Intervals.

Condition-based Maintenance Intervals.

Optimization of General Overhauls and Maintenance Period in the Life Cycle of Plants.

Critical Path Method (CPM) – PERT Analysis.

DAY 4: Control of Time, Costs and Work Quality

Monitor Time Domain using Gantt Charts.

Techniques to Keep under Budget.

Contingency and Management Reserve.

Acceptance of Work Scope according to ISO/API Standards.

DAY 5: Maintenance Planning and Work Control Performance Analysis

Management of Information Flow.

Performance Indicators.

Workload Performance Indicators.

Planning Performance Indicators.

Effectiveness and Cost Performance Indicators.

Maintenance Data Archiving.

Reports to Management.

Course Agenda:

(1st Day) Agenda

8.30	9.00	Opening Remarks (30 Min.).
9.00	11.30	<u>DISCUSS COURSE OBJECTIVES:</u> <ul style="list-style-type: none"> • Maintenance Types and Asset Pairing. • Planning – WBS – OBS. • Scheduling Principles. • Control of Time, Costs and Work Quality. • Maintenance Planning and Work Control Performance Analysis.
11.30	12.00	Coffee Break
12.00	14.00	<u>Maintenance Types and Asset Pairing:</u> <ul style="list-style-type: none"> • Definitions of Maintenance, Asset Management and Reliability. • Material Failure and Degradation. • Preventive-Predictive Maintenance. • Reliability Centered Maintenance and the Failure Rate Mathematics. • Life Cycle Costs and Maintenance.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(2nd Day) Agenda

9.00	11.30	<u>Planning – WBS – OBS:</u> <ul style="list-style-type: none"> • Work Order System (WO) for Planning. • Work Breakdown Structure (WBs). • Organization Breakdown Structure (OBS).
11.30	12.00	Coffee Break
12.00	14.00	<u>Planning – WBS – OBS:</u> <ul style="list-style-type: none"> • Materials Planning. • Workforce Planning.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(3rd Day) Agenda

9.00	11.30	<u>Scheduling Principles:</u> <ul style="list-style-type: none"> • Programmed Preventive Maintenance Intervals. • Condition-based Maintenance Intervals.
11.30	12.00	Coffee Break
12.00	14.00	<u>Scheduling Principles:</u> <ul style="list-style-type: none"> • Optimization of General Overhauls and Maintenance Period in the Life Cycle of Plants. • Critical Path Method (CPM) – PERT Analysis.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(4th Day) Agenda

9.00	11.30	<u>Control of Time, Costs and Work Quality:</u> <ul style="list-style-type: none"> • Monitor Time Domain using Gantt Charts. • Techniques to Keep under Budget.
11.30	12.00	Coffee Break
12.00	14.00	<u>Control of Time, Costs and Work Quality:</u> <ul style="list-style-type: none"> • Contingency and Management Reserve. • Acceptance of Work Scope according to ISO/API Standards.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(5th Day) Agenda

9.00	11.30	<u>Maintenance Planning and Work Control Performance Analysis:</u> <ul style="list-style-type: none"> • Management of Information Flow. • Performance Indicators. • Workload Performance Indicators. • Planning Performance Indicators.
11.30	12.00	Coffee Break
12.00	14.00	<u>Maintenance Planning and Work Control Performance Analysis:</u> <ul style="list-style-type: none"> • Effectiveness and Cost Performance Indicators. • Maintenance Data Archiving. • Reports to Management.
14.00	14.30	Questions, Discussion & Conclusion Training Course.
14.30		Buffet Lunch