

(MRO) MATERIALS SPARE PARTS INVENTORY OPTIMIZATION AND COST REDUCTION

"Optimizing MRO Inventory to Reduce Costs, Improve Availability, and Enhance Asset Reliability"

Schedule

Date	Venue	Fees (Face-to-Face)
16 - 18 Nov 2026	Doha, Qatar	USD 2,495 per delegate

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

Introduction

Maintenance, Repair, and Operations (MRO) materials and spare parts represent a significant portion of operating costs while directly impacting asset availability and operational reliability. Poorly managed MRO inventories often result in excess stock, obsolescence, stockouts, and high carrying costs.

This intensive 3-day training provides participants with practical tools and proven methodologies to optimize MRO spare parts inventory, reduce costs, and improve service levels. The course focuses on demand analysis, criticality assessment, inventory optimization techniques, and best practices to balance cost efficiency with operational readiness.

Objectives

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

- Understand the characteristics and challenges of MRO spare parts inventory
- Classify spare parts based on criticality, usage, and risk
- Apply inventory optimization techniques for MRO materials
- Reduce excess stock, obsolescence, and inventory carrying costs
- Improve spare parts availability and service levels
- Integrate maintenance, reliability, and inventory planning
- Implement cost-effective spare parts management strategies

Why Attend

- Learn proven methods to optimize MRO inventory levels
- Reduce inventory investment without increasing operational risk
- Improve equipment uptime and maintenance efficiency
- Minimize emergency purchases and stockouts
- Enhance coordination between maintenance, procurement, and stores
- Gain practical tools applicable immediately at the workplace

Target Audience

This program is designed for:

- Maintenance and reliability engineers
- Inventory, warehouse, and materials management professionals
- Supply chain and logistics managers
- Procurement and purchasing professionals
- Asset management and operations professionals
- Planners and schedulers involved in maintenance activities

Individual Benefits

Key competencies that will be developed include:

- Ability to analyze and optimize MRO inventory levels
- Skills in spare parts criticality and risk assessment
- Improved understanding of maintenance-driven demand
- Enhanced cost-reduction and decision-making skills
- Better collaboration with maintenance and procurement teams

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Reduced inventory carrying and procurement costs
- Improved spare parts availability and service performance
- Lower risk of equipment downtime due to stockouts
- Optimized warehouse space and inventory turnover
- Improved alignment between maintenance and supply chain functions

Instructional Methodology

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

- Strategy Briefings - MRO inventory concepts, optimization models, and cost drivers
- Case Studies - Real-world examples of MRO inventory optimization and cost reduction
- Workshops - Hands-on exercises in spare parts classification, forecasting, and optimization
- Peer Exchange - Group discussions on MRO challenges and best practices
- Tools - Templates for criticality analysis, inventory segmentation, and KPI tracking

Course Outline

Detailed 3-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: Understanding MRO Inventory and Cost Drivers

Module 1: Introduction to MRO Materials Management (07:30 – 09:30)

- Characteristics of MRO spare parts
- Differences between MRO and production inventory

Module 2: Inventory Cost Components (09:45 – 11:15)

- Carrying, ordering, and shortage costs
- Impact on maintenance and operations

Module 3: Spare Parts Classification & Criticality (11:30 – 01:00)

- ABC, VED, FSN, and criticality analysis

Module 4: Data Quality & Master Data Management (02:00 – 03:30)

- Spare parts codification and data accuracy

Day 2: MRO Inventory Optimization Techniques

- Demand analysis for intermittent and lumpy demand
- Safety stock and service level optimization
- Reorder policies and stocking strategies
- Balancing risk, cost, and availability

Day 3: Implementation, KPIs & Continuous Improvement

- Integrating maintenance planning with inventory management
- Key performance indicators for MRO inventory
- Reducing obsolescence and surplus stock
- Implementation roadmap and best practices

Certification

Participants will receive a Certificate of Completion in MRO Materials and Spare Parts Inventory Optimization and Cost Reduction, validating their knowledge and practical skills in managing, optimizing, and controlling MRO inventory to achieve cost efficiency and operational reliability.

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Interested in running this course for your team?

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