



Maintenance & Reliability Management

Mechanical Maintenance Planning and Implementation

Course Introduction

Industry today is in a fight to survive, Competition is on international levels. All forms of production analysis, product reviews, and material reviews are made and periodically checked; statistical process control is only one of the new methods used to reduce operational costs. However one area many industries are now turning their attention toward is the maintenance function.

Maintenance Planning and Management is one of the fastest and most effective investments an organization can make to improve productivity and availability.

Equipment reliability

The processes participants learn in this class will allow for planning, control and implementation of maintenance. Equipment reliability is increased. Costs and availability of maintenance stores are improved. Waiting times, unnecessary parts and inaccurate information are eliminated. Budgeting is easier and more accurate. Maintenance tasks are as much as 50% more efficient in terms of costs and time.

This three-day course teaches proven processes that are fundamental to effective and efficient maintenance management and successful CMMS/EAMS deployment. Participants engage in hands-on activities that build systems-independent process knowledge and skills they will be able to apply immediately.

Target Audience

Engineers or technicians who are directly involved with:

- Planning and Scheduling
 - Maintenance Management
 - Maintenance
 - Integrity and Inspection
 - Tech. Support
-
- Section Leaders, Supervisors, Planning Engineers, Planning Officers and Schedulers, Maintenance Supervisors, Engineers and Technicians.

Learning Objectives

- Define maintenance and maintenance management.
- Classify the different maintenance policies.
- Practice maintenance planning and scheduling.
- Identify planning best practices and key elements for taking action on them.
- Identification & Prioritization of work.
- Creating Maintenance work requests.
- Validation of work requests.
- Preparation of job packages.
- Planning and development of weekly schedules.
- Material reservation.
- Logistics.
- Scheduling of work orders in CMMS.
- Daily/Weekly scheduling meetings.
- Interdepartmental coordination.
- Effective utilization of resources.
- Executing the job with safety and quality.
- Work order history reporting & close out of completed WOs.
- Backlog Cost performance measures.
- Business close out of work orders.
- Develop skills on resource management.
- Acquire knowledge about repair, inspection, and diagnosis
- Identify RCM and Pdm techniques.
- Demonstrate RCFA as a business improvement proactive technique.
- Understand how to prioritize failure events to analyses, preserve failure data, and order a failure analysis.

Course Outline

- **01 DAY ONE**

- **Module1: Maintenance Introduction**

- Industry revolution and maintenance evolution
 - The role of maintenance in organization productivity

- Maintenance and Profitability
- RAMS Modeling
- Modern Maintenance cycle
- Maintenance definition
- Types of maintenance
- Maintenance organization “Classification of Roles in Maintenance”
- Role of Maintenance Planner
- Role of Maintenance Supervisor
- Maintenance goals and objectives
- Maintenance vision and mission
- Maintenance policies and strategies
- Maintenance planning and management

Group Quiz "Maintenance Policies"

• Module 2: Preventive Maintenance (PM):

- PM Concept
- Steps for implementing a PM program
- PM tasks clarifications and intervals
- PM action plan pattern
- Maintenance procedures
- Maintenance tasks and frequencies
- Element of maintenance cost
- Size of maintenance labor force
- Annual downtime cost losses
- Maintenance resource profile
- Annual PM plan
- Monthly PM plans
- Establish scheduling
- Availability and reliability

Group Workshop "Centrifugal Pump PM planning"

• 02 DAY TWO

Module 3: Predictive Maintenance (PdM):

- Definition of PdM
- PdM focuses
- Advantages and disadvantages
- Plant equipment classification

- P-F Curve and PdM Planning
- PdM process cycle
- The mortality of machinery
- Condition based management
- Condition based trend and limits
- Condition based maintenance process
- PdM planning
- PdM techniques.

Group Quiz "Rotating equipment fault detection"

Module 4: Job plan and maintenance procedure

- Objective
- Layout
- Contents

Discussion Session "Concepts and techniques for effectively planning, scheduling and implementing mechanical maintenance activities".

Topics review, Q&A & daily assessment

• 03 DAY THREE

Module 5 : Maintenance Work Management:

- Introduction: The Work Order System
- Work request
- Work order (type, priority, status, cycle, forms)
- WO life cycle
- WO preparation
- WO scheduling
- Flow of work requests
- Determination of priority
- WO execution and close out

• 04 DAY FOUR

Module 5 : Maintenance Work Management:

- Introduction: The Work Order System
- Work request
- Work order (type, priority, status, cycle, forms)
- WO life cycle
- WO preparation
- WO scheduling
- Flow of work requests
- Determination of priority
- WO execution and close out

• 05 DAY FIVE

Module 6 : Maintenance Planning and Scheduling:

- Planning fundamentals
- Equipment identification structures
- Structures for planning
- Anatomy of a planned job
- Work planning and control
- Goals of Maintenance Planning (Wrench time improvement)
- Planning procedures
- Master schedule
- Maintenance level and job priority
- Scheduling process
- Backlog management

Module 7 : Controlling Maintenance Work

- Measuring Performance
- Schedule compliance
- PM and Emergency indices
- Wrench time
- MTBF

Post course assessment

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
June 1, 2025	June 5, 2025	5 days	4250.00 \$	KSA - El Dammam
Aug. 18, 2025	Aug. 22, 2025	5 days	4950.00 \$	Spain - Barcelona
Nov. 2, 2025	Nov. 6, 2025	5 days	4250.00 \$	Morocco - Marakesh
May 25, 2025	May 29, 2025	5 days	4250.00 \$	Oman - Muscat