



Maintenance & Reliability Management

Maintenance and Reliability Management

Course Introduction

Maintenance Planning and Scheduling is the hub of a well-functioning maintenance organization. In order for maintenance planning and scheduling to work many other systems need to work well. Most importantly work identification and prioritization. Effective maintenance is vital to provide reliable plant capacity.

Scheduling procedures

The application of maintenance planning and scheduling makes possible dramatic improvement in maintenance productivity. Moreover, the aspects of planning and scheduling must be understood to avoid the frustrations of many companies that have tried planning without success. This comprehensive 5-day program has been designed to benefit both new professionals as well as experienced professionals. It covers best maintenance Planning practices that a qualified professional would require to carry out his duty starting with the first steps and building up to a fully functional maintenance organization. Focus is directed on concepts of maintenance management, reliability, establishing a healthy maintenance programs, and to maintenance planning and scheduling procedures. We will focus on various aspects of analytical techniques, which proved to be valuable in maintenance planning and scheduling.

Target Audience

- Facilities Engineer
- Facilities Engineering Manager
- Facilities Manager
- Facilities Specialist / Coordinator
- Health and Safety Engineer
- Maintenance Group Leader
- Maintenance Helper / Assistant
- Maintenance Manager
- Maintenance Superintendent
- Maintenance Supervisor

- Mechanical Reliability Engineer
- Network Reliability Engineer
- Operations and Maintenance Specialist
- Reliability Engineer

Learning Objectives

- Understand new maintenance methodologies and their application.
- How to perform work identification using different tools
- Identify and use planning best practices.
- Identify and use scheduling best practices.
- Improve the use of information and Communication Tools.
- Improve consistency and reliability of asset management.
- Optimize planned maintenance strategies (preventive, predictive, and proactive).
- Using Key Performance Indicators to control and measure maintenance activities

Course Outline

• 01 DAY ONE

Introduction

- 1.1. Evolving of Maintenance through industrial age
- 1.2. Specific Maintenance Definitions
- 1.3. Identification of Maintenance type according to response and effect
- 1.4. Basic Effective Maintenance Management cycle

Assessment and continuous improvement through Key Performance Indicators, KPIs

- 2.1. What cannot be measured, cannot be controlled
- 2.2. The development cycle for choosing and using KPIs
- 2.3. Understanding the important concept of Dashboards
- 2.4. Designing your maintenance Dashboard

- 2.5. Essential Maintenance and Reliability KPIs as per SMRP

• 02 DAY TWO

Work identification and prioritization: Machine failure and Root Cause Analysis

- 3.1. Why Machine Failure?
- 3.2. Understanding and identification of Failure Modes
- 3.3. Understanding the importance and effect of prioritization of work
- 3.4. Why Root Cause Analysis techniques are building blocks of a successful Maintenance Organization
- 3.5. Failures Modes and Effects Analysis Methodology – FMEA
- 3.6. Other RCA tools
- 3.7. Case Studies

Basic tools for Maintenance Program success

- 4.1. Technical report writing – what is not documented is lost!
- 4.2. The basic concepts of outsourcing a maintenance task
- 4.3. Basics of Data Analysis and representation
 - 4.3.1. Using your data to get information – Data filtering, sorting, and credibility
 - 4.3.2. Using your information to build knowledge – Knowledge base
 - 4.3.3. Basics of Statistical analysis in maintenance

• 03 DAY THREE

What is your Maintenance Management System?

- 5.1. Principles of Maintenance Management
- 5.2. Reliability Centered Maintenance, RCM
 - 5.2.1. Basic concept
 - 5.2.2. Application
- 5.3. Total Productive Maintenance, TPM
 - 5.3.1. Basic concept
 - 5.3.2. Application
- 5.4. Visual Management and
- 5S: A base for effectiveness, efficiency, and success
- 5.5. What is Overall Equipment Effectiveness (OEE)?
- 5.6. Applying Risk Management to assist in work prioritization
- 5.7. Computerized Maintenance Management System, CMMS
 - 5.7.1. Basic concepts of CMMS
 - 5.7.2. Choosing the suitable CMMS for your organization needs

Maintenance Planning

- 6.1. Identifying and Measuring workload and the concepts of resources allocation
- 6.2. Control Absenteeism, tardiness and overtime
- 6.3. Planning Principles
 - 6.3.1. The tasks to be implemented
 - 6.3.2. The tools of performing the tasks
 - 6.3.3. The working environment
 - 6.3.4. Authorization of works/tools/accessibility
- 6.4. Role of Planner
 - 6.4.1. The characteristics of the person
 - 6.4.2. The needed skills of the planner
 - 6.4.3. The inputs and the outputs
- 6.5. Creating and managing the Maintenance Plan based on multiple time segments (Annual, monthly, weekly, Daily)
- 6.6. Understanding and using of Work Orders Management System

• 04 DAY FOUR

Maintenance scheduling

- 7.1. Understanding the difference between Planning and scheduling
- 7.2. Scheduling Principles
 - 7.2.1. The tasks to be implemented
 - 7.2.2. The tools of performing the tasks
 - 7.2.3. The working environment
 - 7.2.4. Authorization of works/tools/accessibility
- 7.3. Scheduling techniques based on specific parameters (urgency – criticality – cost – internal client requirements – resource allocation – etc.)
- 7.4. Periodic Maintenance Scheduling (Daily – weekly – other)
- 7.5. Role of Scheduler
 - 7.5.1. The characteristics of the person
 - 7.5.2. The needed skills of the planner
- 7.6. Maintenance schedule compliance
- 7.7. Effective methodologies of backlog management

Continuous improvement in Maintenance Management

- 8.1. Learning from past to improve future in Planning and Scheduling
- 8.2. Losses in a system: The Lean manufacturing methodology
- 8.3. Inconsistency in performance: The 6 Sigma methodology
- 8.4. Lean Six Sigma and its application in maintenance and reliability

• 05 DAY FIVE

Understanding Cost in Maintenance (according to time availability)

- 9.1. Elements of Cost in owning and operating machinery and production lines
- 9.2. Life Cycle Costing, LCC and Total Cost of Ownership, TCO
- 9.3. Managing your spare parts through the effective ABC Stock Analysis process

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
May 19, 2025	May 23, 2025	5 days	4250.00 \$	UAE - Dubai
Aug. 11, 2025	Aug. 15, 2025	5 days	4950.00 \$	England - London
Dec. 22, 2025	Dec. 26, 2025	5 days	4250.00 \$	UAE - Dubai