

# MAINTENANCE PLANNING, SCHEDULING AND CONTROL

## MNE011

### COURSE DESCRIPTION

Maximizing asset availability and reliability at optimal cost are two conflicting goals that every maintenance department must achieve. Maintenance planning and scheduling is the first step needed to help you achieve these goals. Maintenance planning and scheduling isn't just about using project management software to schedule tasks. In addition to planning and scheduling tasks, the planner must ensure that all logistics are taken care of. The planner will also need to be involved in the financial evaluation of the maintenance initiatives. Once the planning has been done correctly, the next step is to ensure that all work orders are carried out according to plan and in compliance with all health, safety and environmental (HSE) guidelines, as well as policies and company procedures. This course will cover several techniques that will help you plan, schedule and control all your maintenance work orders in due time for maximum effectiveness.

### COURSE OBJECTIVES

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

- Explain the challenges and goals maintenance organizations face today.
- Demonstrate the importance of work order systems and use time estimation and prioritization techniques.
- Set up a preventive maintenance schedule.
- Apply project management techniques to effectively manage major maintenance tasks and shutdowns.
- Use capital budgeting techniques to estimate capital expenditures for maintenance.
- Demonstrate an understanding of how to maintain optimal spare parts inventory levels to ensure business continuity.
- Prepare appropriate key performance indicators (KPI) to evaluate and improve maintenance performance.

### WHO SHOULD ATTEND

Managers, supervisors and planners responsible for maintenance planning, scheduling and control activities.

### COURSE DURATION

5 Working Days

## COURSE OUTLINES

### 1. Objectives of Maintenance

- Definition of maintenance and asset management
- Challenges and objectives of maintenance
- Maintenance windows
- Maintenance methods
- Types of maintenance
- Classification of roles in maintenance
- Customer service in maintenance

### 2. The Work Order System

- Purpose of the Work Order (WO) system
- Information collected on a WO
- Job estimating methods
- Prioritizing maintenance work orders

### 3. Preventive Maintenance (PM)

- What is Preventive Maintenance
- The importance of implementing a PM program
- Establishing schedules
- Breaking a facility into logical parts
- Developing an equipment list
- Developing equipment manuals
- Setting up inventory
- Understanding risks associated with a PM program

### 4. Planning & Scheduling of Major Maintenance WOS & Shutdowns

- The unique challenge of maintenance shutdowns
- Work Breakdown Structure (WBS)
- Methods for building an effective maintenance database
- Critical Path Method (CPM)
- Work order crashing
- Resource scheduling and leveling

### 5. Planning & Controlling Maintenance Materials

- Identification of inventory costs

- Considerations in inventory decisions
- How much to order: Economic Order Quantity (EOQ)
- When to order (setting min and max levels)

## **6. Controlling Maintenance Work**

- Maintenance Key Performance Indicators (KPIs)
- Backlog indices
- Schedule compliance indices
- PM and emergency indices
- Generic maintenance indicators

## **7. The Role of Planning & Scheduling in Performance Improvement**

- Maintenance as a business process
- How scheduled maintenance can lock in waste and cost
- Drawing learning from recurring maintenance tasks
- Reviewing planned maintenance
- Dealing with the productivity challenge
- Refining maintenance policies
- Capturing learning from inspection work

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