



Arabian Institute For Training

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# Maintenance Planning, Scheduling and Control

## Why Attend

- Maximizing assets availability and reliability with the optimal cost are two conflicting objectives that each maintenance department needs to achieve. Maintenance planning and scheduling is the first step needed to assist you in achieving these objectives. Maintenance planning and scheduling is not only about using project management software to schedule tasks. Beside planning and scheduling activities the planner needs to ensure that all logistics are provided for. The planner will also need to be engaged in the financial evaluation of maintenance initiatives. Once the planning is done right, the next step will be to ensure that all the work orders are executed as per the plan and in compliance with all Health, Safety and Environment (HSE) guidelines as well as company policies and procedures. In this course various techniques will be discussed that will assist you in due course to plan, schedule and control all your maintenance work orders for maximum effectiveness.

## Course Methodology

- The course uses a mix of interactive and hands-on techniques. Beside the brief presentations by the consultant and the participants, the thrust will be on real life work related situations to develop maintenance schedules for preventive and breakdown jobs, calculate re-order points and optimal quantities of spare parts, evaluate maintenance initiatives, and develop the right maintenance KPIs.

## Course Objectives

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

- Explain the challenges and objectives facing maintenance organizations today
  - Demonstrate the importance of work order systems and use techniques for time estimations and priority assignments
  - Prepare a preventive maintenance program
  - Apply project management techniques to effectively manage major maintenance activities and shut downs
  - Use capital budgeting techniques to evaluate maintenance capital expenditures
  - Demonstrate understanding of how to maintain the optimal stock levels of spare parts to ensure operational continuity
  - Prepare the right Key Performance Indicators (KPIs) s to evaluate and improve performance in maintenance
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## Target Audience

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

## Target Competencies

- Maintenance theory and practice
- Maintenance work processes
- Project management
- Financial evaluation
- Planning and logistics theory and practice
- Performance management
- Adaptability

### Objectives of maintenance

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

### The Work Order System

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

### 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
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## Planning and scheduling of major maintenance WOS and shutdowns

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

## Planning and 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)

## Controlling maintenance work

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

## The role of planning and 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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