



**Maintenance Planning, Process  
Engineering & Instrumentation**



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# Course: Implementing Effective Preventive & Predictive Maintenance Programmes

Code	City	hotel	Start	End	price	Hours
561	Barcelona (Spain)	Hotel Meeting Room	2024-09-23	2024-09-27	5450 €	25

## Introduction

Effective Planned & Predictive Maintenance are critical for a successful company and an integral part of maintenance management strategies such as RCM, RBM TPM, and even 6-Sigma. This comprehensive 5-day programme has been designed to benefit both qualified new professionals as well as experienced professionals who may be involved in the rollout of a comprehensive Maintenance system or auditing an existing system. It covers all the steps required in developing a successful Planning & Predictive Maintenance programme from system development until a well-managed Maintenance system is in place and operational.

## Seminar Objectives

Leading industrial organizations are evolving away from reactive ("fix-it-when-it-breaks") management into predictive, productive management ("anticipating, planning, and fix-it-before-it-breaks"). This evolution requires well-planned and executed actions on several fronts.

- Understand how world-class organizations solve common planning problems
- Improve productivity through use of better, more timely information
- Implement a practical and effective predictive maintenance effort
- Improve consistency and reliability of asset information
- Achieve more productive turnarounds
- Optimize preventive and predictive maintenance strategies

## Training Methodology

The seminar will be conducted along workshop principles with formal lectures, case studies and interactive worked examples. Relevant case studies will be provided to illustrate the application of each tool in an operations environment. Each learning point will be re-enforced with practical exercises. There will be ample opportunities for discussion and sharing experiences.

## Organisational Impact

- Select the most appropriate planning and predictive tools for Effective Maintenance



- Integrate Predictive Maintenance into the Planning function
- Introduce Critical Decision-Making Topics
- Develop an effective system for controlling maintenance
- Optimisation of the maintenance effort
- Manage full and effective control of the maintenance budget

## Personal Impact

### The participants will:

- Know and identify which equipment components should be part of your preventive maintenance plan
- Know how to establish the most appropriate failure finding interval for protective devices – and how to come up with the failure risk of equipment that's subject to condition-based maintenance
- Know the right way to establish the optimal inspection frequency for equipment in continuous operation
- Give you the tools needed to make data-driven decisions, which you can apply in your own environment and upon which you can rely to help you in developing appropriate programs
- Know how to arrive at the economic life of an asset where its utilization declines as it ages

## Who Should Attend?

Delegates should represent a wide range of personnel in the organization who are involved in, or dependent on, effective maintenance planning, scheduling and work control. These should include:

- Maintenance Managers & Supervisors
- Personnel designated as planners, or identified to become planners
- Predictive Maintenance Technicians & Supervisors
- Key leaders from each Maintenance craft
- Key Operations Supervisors
- Materials Management Managers/Supervisors
- CMMS Administrator or key users

## Programme Outline

### Day 1 - The Need for Maintenance

- **Failure Mode Effect & Criticality Analysis (FMECA)**
  - Causes of Failures
  - Likelihood & Severity of Failure – Risk Analysis
  - Reliability Centred Maintenance (RCM)



- **Optimisation of Maintenance Decisions**

- Failure Pattern Identification
- Statistical Analysis of Failures
- Weibull Analysis

- **Zero Base Budgeting**

- Define the production requirement
- Define the maintenance requirement

## **Day 2 - Developing the CMMS**

- **Database Construction**

- Installed Asset Base
- Hierarchical Structure
- Procedures and Plans

- **Resources**

- Dedicated Manpower
- Contractors
- Specialist Tools

- **Maintenance Strategies**

- Centralised/Decentralised
- Life/Emergency/Corrective/Planned
- Planned & Predictive

## **Day 3 - The Planning Function**

- **Roles & Responsibilities**

- **The Planners**

- Job Initiators
- Maintenance Trades

- **Job Planning**



- Planning Corrective Work
- Integrate Planning with Procedures
- Resource Levelling

- **Scheduling**

- Long Term Scheduling with Production
- Medium & Short Term Scheduling
- Planning Department Interfaces

#### **Day 4 - Predictive Maintenance**

- **Potential Failure Analysis (PFA)**

- Integration of PFA with FMECA & RCM
- Understanding the P-F Interval
- Decide which Technologies to Apply

- **Vibration Analysis**

- Detectable Faults
- Setup Parameters
- Monitoring & Protection
- On-Line or Off-Line

- **Supporting Technologies**

- Infrared Thermography
- Passive Ultrasonics
- Oil Analysis

#### **Day 5 - Control of the Maintenance Process**

- **CMMS Integration**

- Predictive Maintenance Interface
- Optimising PM Kit Usage with PdM
- Operational planning

- **Reporting**

- Monthly PM & PdM reports for Management
- Financial Feedback Reports



- Budget Control

- **Key Performance Indicators**

- Reliability & statistics - MTBF, Reliability etc.
- Work request backlog analysis
- Customer feedback analysis



**The Scandinavian Academy employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:**

- **Theoretical Lectures:**
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- **Scientific Assessment:**
  - We evaluate trainees skills before and after the course to ensure their progress.
- **Brainstorming and Interaction:**
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- **Practical Cases:**
  - We provide practical cases that align with the scientific content and the participants specific needs.
- **Examinations:**
  - Tests are conducted at the end of the program to assess knowledge retention.
- **Educational Materials:**
  - We provide both printed and digital scientific and practical materials to participants.
- **Attendance and Final Result Reports:**
  - We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- **Professionals and Experts:**
  - The programs scientific content is prepared by the best professors and trainers in various fields.
- **Professional Completion Certificate:**
  - Participants receive a professional completion certificate issued by the Scandinavian Academy for Training and Development in the Kingdom of Sweden, with the option for international authentication.
- **Program Timings:**
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.