

# F-MF006 Maintenance Optimization & Best Practices

*Course dates: TBA @ Dubai, UAE*

This course is designed to assist maintenance management personnel responsible for delivering maximum maintenance, reliability and availability of equipment at the lowermost potential cost. The course will present reliability methods designed to improve the effectiveness of maintenance management activities, to ensure that physical assets perform their required functions, operate reliably, and support corporate goals.

## Why Attend

The course will focus on the modern methods and techniques on the most critical aspects of Maintenance Management & Reliability Analysis such as Failure Patterns, Pareto Analysis, Root Cause Analysis (RCA), Failure Mode and Effect Analysis (FMEA), Reliability Centered Maintenance (RCM), Criticality Assessments, Life Cycle Cost Analysis, Life Data Analysis, Recurrent Event Data Analysis.

The delegate will also be introduced to Reliability in Design of new production units and also effect human reliability has on plant availability.

## Course Objectives

By the end of the course, among various achievements, participants will get specialist insight into:

- ◇ Achieve excellence in mechanical integrity and reliability management and establish the environment for improvement.
- ◇ Recognize the aspects of maintenance today through the various types of maintenance including maintenance strategy development and productive maintenance
- ◇ Determine the process of developing maintenance objectives in accordance to the business plan, R&M policy and maintenance strategy, discuss the significance of equipment plans in maintenance planning and identify several equipment plans development, approaches and plan options
- ◇ Recognize the purpose of work execution and job completion and characterize its advantages and disadvantages, implement the methods of maintenance quality assurance and continuous improvement and employ the method of Root Cause Failure Analysis (RCFA)
- ◇ Apply the various stewardship and performance metrics including performance work management, KPIs, maintenance effectiveness metrics and work force utilization metrics

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- ◇ Distinguish the factors of human reliability through classification of human error and human reliability analysis, familiarize the different reliability tools using life cycle cost analysis and life data analysis and discuss the key elements of reliability engineering and how to manage assets in projects

## Who should attend

This course covers systematic techniques in maintenance and reliability management to assist maintenance management team in delivering maximum reliability and availability of equipment at the lowest possible cost. The course will present techniques designed to improve the effectiveness of maintenance management activities, to ensure that physical assets perform their required functions, operate reliably, and support corporate goals. It is essential for all maintenance and reliability management staff.

## Course Outline

### **Maintenance Excellence**

Framework for Maintenance Excellence, Overall Philosophy, Maintenance Principles , Work Environment , Equipment , Information Systems , Elements for Effective Maintenance , Establishing the Environment for Improvement

### **Modern Maintenance**

Types of Maintenance , Maintenance Strategy Development , Productive Maintenance

### **Equipment Failure Patterns**

Equipment Failure Types, Reasons for Equipment Failure , Failure Analysis & Root Cause

### **Maintenance Management**

Managing Maintenance , Basic Principles , Maintenance Business Model, Business Elements , Maintenance Organization Maintenance Objective Setting

### **Equipment Plans**

Equipment Plans Development , Plan Options , Approaches

### **Advanced Maintenance Management:**

Stewardship and Performance Metrics & KPIs , Performance Indicator Characteristics , Business Results Indicators , Process Unit Run-Length Goals , Work Management KPIs , Maintenance Effectiveness Metrics , Analytic Hierarchy Process (AHP)

### **Quality Assurance & Continuous Improvement**

Objectives and Implementation , Data to be Screened , Bad Actors and RCFA

### **Human Reliability**

Classification of Human Error , Human Reliability Analysis

### **Reliability Tools & Approaches**

Pareto Analysis, Root Cause Analysis (RCA), Failure Mode and Effect Analysis (FMEA), Reliability Centered Maintenance (RCM), Criticality Assessments, Life Cycle Cost Analysis, Life Data Analysis,

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Recurrent Event Data Analysis

### **The Reliability Engineer & Asset Management of Projects**

Key Elements of Reliability , Establish Reliability During Design , Why Build Reliability into a Project , Work Process for implementing , Overall Reliability Goals

### **The workshop**

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures
- 30% Workshops & Work Presentations
- 20% Case Studies & Practical Exercises
- 20% Videos, Software & General Discussions

The course instructor may modify the above training methodology before or during the course for technical reasons with no prior notice to participants

**Falcon Consulting Professionals** established in Greece for the last 15 years in the areas of technical consulting and professional training for the local industries. **Falcon** is expanding in GCC, aiming to provide the best consulting and training solutions to the industries of the region. **Falcon's instructors are accredited trainers and highly experienced in their fields, as well as adult training.** We aspire to build our business relationships on mutual trust. The achievement of results with an emphasis on innovation and sustainability, quality, cost analysis and time scheduling are non-negotiable from the conceptual phase of the training sessions to their successful closure.



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