



Maintenance & Reliability Management

## Risk Based Maintenance

## Course Introduction

---

This course focuses on the principles and practices of Risk-Based Maintenance (RBM) as a proactive approach to maintenance management. Participants will learn how to assess risks associated with assets, prioritize maintenance activities, and develop strategies to optimize asset performance while minimizing costs and downtime. The course will emphasize the integration of risk management into maintenance practices and decision-making.

## Target Audience

---

- Maintenance managers and engineers.
- Reliability professionals.
- Asset management teams.
- Operations personnel involved in maintenance planning and execution.

## Learning Objectives

---

- Understand the principles and benefits of Risk-Based Maintenance.
- Conduct risk assessments for maintenance activities and assets.
- Develop and implement risk-based maintenance strategies.
- Utilize tools and techniques to improve maintenance effectiveness and efficiency.

# Course Outline

---

## • 01 DAY ONE

### Introduction to Risk-Based Maintenance

#### Session 1: Overview of Maintenance Strategies

- Traditional vs. modern maintenance approaches.
- Importance of maintenance in asset management.

#### Session 2: Fundamentals of Risk Management

- Definition of risk in the context of maintenance.
- Key concepts: risk assessment, risk analysis, and risk control.

#### Session 3: Risk-Based Maintenance Principles

- Introduction to Risk-Based Maintenance concepts.
- Benefits of implementing RBM in organizations.

#### Session 4: Risk Assessment Process

- Identifying assets and their failure modes.
- Conducting risk assessments: qualitative vs. quantitative methods.

#### Session 5: Group Activity: Risk Assessment Exercise

- Participants will work in groups to perform a risk assessment on a selected asset.
- Presentation of findings and discussion.

## • 02 DAY TWO

### Implementing Risk-Based Maintenance

#### Session 1: Developing Risk-Based Maintenance Plans

- Prioritizing maintenance tasks based on risk assessment results.
- Creating maintenance strategies tailored to asset risk profiles.

#### Session 2: Tools and Techniques for Risk-Based Maintenance

- Introduction to risk assessment tools (e.g., FMEA, RCA).
- Techniques for integrating RBM into maintenance planning.

### **Session 3: Performance Metrics and KPIs**

- Identifying key performance indicators for RBM.
- Monitoring and measuring the effectiveness of maintenance activities.

### **Session 4: Change Management and Implementation Challenges**

- Understanding the cultural impact of transitioning to RBM.
- Strategies for overcoming resistance to change.

### **Session 5: Case Study: Successful Implementation of RBM**

- Review of a real-world case study demonstrating RBM implementation.
- Discussion of lessons learned and best practices.

## **• 03 DAY THREE**

### **Continuous Improvement and Future Trends**

#### **Session 1: Continuous Improvement in Risk-Based Maintenance**

- Establishing a framework for continuous improvement.
- Incorporating feedback loops into the maintenance process.

#### **Session 2: Advanced Risk Management Techniques**

- Exploring advanced methodologies: Bayesian analysis, Monte Carlo simulations.
- Understanding their application in maintenance contexts.

#### **Session 3: Future Trends in Maintenance Management**

- The role of technology in RBM (IoT, predictive analytics).
- Emerging trends and their impact on maintenance strategies.

#### **Session 4: Developing an Action Plan for RBM Implementation**

- Participants will create a personal action plan for implementing RBM in their organization.
- Sharing action plans and receiving feedback from peers.

#### **Session 5: Course Summary and Evaluation**

- Recap of key concepts covered throughout the course.
- Course evaluation and feedback session.
- Issuance of completion certificates.

# Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
May 12, 2025	May 14, 2025	3 days	3250.00 \$	UAE - Dubai
Sept. 8, 2025	Sept. 10, 2025	3 days	3250.00 \$	UAE - Dubai
Dec. 8, 2025	Dec. 10, 2025	3 days	4950.00 \$	USA - Texas