



Maintenance & Reliability Management

Principles for Reliability Engineering

Course Introduction

Facility management (FM) encompasses multiple disciplines to ensure functionality, comfort, safety and efficiency of the built environment by integrating people, place, process and technology. It plays a significant role in the success of an industrial facility. The facility manager is responsible for positioning the facility for success in terms of operations, safety, functionality, technology and personnel management, etc. Facility management is a big-picture responsibility that must be able to focus on and synthesize operational details across every function of the facility. This training course is designed to provide students with designed a comprehensive and advanced concepts regarding facilities management within the engineering, production, facilities, and/or maintenance sectors, and the current trends in the different areas of facility management.

Target Audience

- Plant Reliability
- Planning
- Supervising
- Operations Engineers
- Maintenance Engineers
- Instrumentation Engineers
- whoever else wishing to improve their knowledge and standing of reliability Engineering.

Learning Objectives

- Have an overview of the concepts of facility management, and facilities needs assessment, and current trends in the FM world

- Apply concepts and best practices that help advance organizational sustainability and optimized operations
- Identify maintenance requirements, be able to plan and schedule the maintenance of property and assets, be able to carry out required maintenance activities
- Develop an effective Facility Management Plan • Improve service delivery and customer, supplier and staff relations
- Learn and utilize effective maintenance management systems • Identify and apply risk management techniques

Course Outline

• 01 DAY ONE

The Principle of Reliability Engineering

- Reliability Engineering- Goals and its importance
- Reliability Vs Quality & Safety
- Overview of Tools
- Reliability Models

• 02 DAY TWO

Introduction to Failures- Faults- Functions

Metallurgical Failure Analysis

Introduction to Condition Monitoring

Predictive Maintenance

Techniques of Condition Monitoring

Machinery Diagnosis & Failure Analysis

Determining when to prevent failure and when to allow failure to occur.

• 03 DAY THREE

Understanding RCM and the essential RCM Tools.

- Determining critical equipment and selecting the ones for RCM
- Calculating risks of failure to study the probability and severity of impact.

- Analyzing failure effects and accordingly deciding on the next action point
- Effective integration of RCM with equipment to ensure tangible results:
Improving reliability and maintenance outcomes.
- Converting RCM into continuous maintenance improvement

• 04 DAY FOUR

Benchmarking Maintenance Optimization Process to Overcome Gaps in your Maintenance Programmes.

- Operations Vs Maintenance: Aligning Operational Requirements with Maintenance Capabilities
- Managing high expectations and targets set by operations and supported by CRE techniques.
- The ultimate debate: Maintaining balance between equipment shutdown and continuing operations.
- Structuring innovative approaches to maximize equipment availability with effective CRE engineers.

• 05 DAY FIVE

Applying R.E Methods to Ensure that Maintenance Strategy Contributes to the company's Profit Margins

- Maintenance value: Adding business units in the organization.
- Ensuring maintenance contributes to revenue and profit generation by applying effective R.E.
- Allowing the flow of information between operations and maintenance to help decide on maintenance intervention.
- Outsource Maintenance Vs In-house maintenance, what works best for your organization.

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
May 11, 2025	May 15, 2025	5 days	4250.00 \$	KSA - Riyadh
July 20, 2025	July 24, 2025	5 days	2150.00 \$	Virtual - Online

FROM	TO	DURATION	FEES	LOCATION
Sept. 15, 2025	Sept. 19, 2025	5 days	4250.00 \$	UAE - Abu Dhabi
Nov. 3, 2025	Nov. 7, 2025	5 days	5950.00 \$	USA - Los Angeles