BOOST
THE LEADING TRAINING PROVIDER

Maintenance & Reliability Management

Maintenance & Reliability Professional (CMRP)

Course Introduction

Effective Maintenance Management is the hub of a well-functioning maintenance organization. In order for maintenance to work, many other systems need to work well. This comprehensive 5-day program is designed based on the SMRP Book of Knowledge to benefit both new and experienced professionals. The SMRP Book is based on 5 pillars that build vertical and horizontal knowledge of the 21st-century maintenance professional. It covers advanced best maintenance practices that a qualified professional would require to carry out his duty starting with the first steps and building up knowledge and experience to a fully functional maintenance organization.

The program is built on two parallel tracks:

the first is learning applicable concepts that can benefit participants immediately after the session, and the second is providing a roadmap to pass the CMRP certification exam. This program is designed to transfer knowledge and to be a stimulating experience. It is highly interactive with many discussions, group activities, and case studies.

This certification program (CMRP) provides a unique skill set by going beyond textbook knowledge and testing real-world experiences and abilities. SMRP values data-driven excellence, sharing/collaboration, membership focus, continuous improvement, accountability, trust and respect, integrity, and social responsibility.

Target Audience

- Maintenance Engineers, Supervisors, Managers, Planners, Schedulers, and Asset Management professionals.
- Also, we recommend it for Operation Engineers.
- This training program is a great preparation for the CMRP exam together with your accumulated practical experience.

Learning Objectives

- The 5 Pillars of SMRP Book.
- Leading their Organization and Management into Planned Maintenance effectiveness.
- Understand new maintenance methodologies and their application.
- Identify and plan best practices for an effective maintenance and reliability program.
- Improve the use of information and communication tools between related parties and/or departments in Maintenance and Reliability.
- Improve consistency and reliability of asset management.
- Utilize leadership and personal skills to achieve maintenance and reliability excellence.
- Optimize preventive and predictive maintenance strategies to maximize returns.

Course Outline

- **01 DAY ONE**

Introduction:

- Definitions in Maintenance
- Evolution of Maintenance Methodologies
- What is SMRP
- Why CMRP
- Maintenance types: Reactive / Periodical / Condition Based / Proactive
- The P-F / DIPF Curves: understanding Maintenance over Asset Lifecycle.
- The universal Maintenance Management process

Pillar 1 – Business and Management

- Provide Vision, Mission, and measurable goals
- Organizational structure
- Key Performance Indicators,

- KPIs development cycle
- KPI Examples from SMRP Best Practices
- Stakeholder analysis
- Maintenance coordination with EHS

Pillar 2 – Manufacturing Process Reliability

- Understanding Process and its parameters
- Flow diagrams: SIPOC / VSM
- What is Process Improvement?
- Understanding waste and variability – Lean Six Sigma
- Wastes Analysis
- Understanding and studying variability: Six sigma
- DMAIC process
- Total Productive Maintenance – TPM and Overall Equipment Effectiveness (OEE)
- Total Effective Equipment Performance (TEEP)
- Uptime, Idle Time, and Utilization Time
- Change Management

• **02 DAY TWO**

Pillar 3 – Equipment Reliability

- Visual Management and 5S Methodology
- Systems Covered by Criticality Analysis
- Root Cause Analysis – RCA – techniques
- 5 Whys
- FMEA
- Ishikawa Diagram
- FTA
- Pareto Analysis
- Main Case study for RCA based on client industry
- Essential Data Analysis and Visualization
- Data Management Cycle
- Data Integrity
- Essential Statistics
- Data Charting and visualization
- Cost Benefit Analysis, CBA
- Reliability of Series and Parallel Systems

• **03 DAY THREE**

Pillar 4 – Organization and Leadership

- Skills Gap Analysis
- Inventory staff skills, determine performance gaps
- Leadership role
- Situational Leadership
- Basic motivation theories
- Avoiding the blame culture
- The cycle of decision making
- Understanding team development phases

• 04 DAY FOUR

Pillar 5 – Work Management

- What is a Prioritization System?
- Reliability Centered Maintenance, RCM
- Basic Planning parameters for effective maintenance job and work order
- Essential Maintenance Planning skills
- Essential Maintenance Scheduling skills
- Maintenance Shutdown Costs
- Actual Cost to Planning Estimate
- Planning Variance Index
- Planned Backlog /Ready Backlog
- Stores Management essentials
- The ABC store Management
- Determining different store levels (Reorder, Minimum, Maximum, Danger) and the spare part life cycle
- Economic reorder quantity, EOQ

• 05 DAY FIVE

Extra topics (according to time availability or client preferences)

- Review of Lubrication basics
- Essential Computerized maintenance management System (CMMS) functions and development phases
- Technical Report Writing Basics
- Life Cycle Costing - LCC

The following KPIs will be discussed through the session in their relative locations and according to time availability:

- Mean Time Between Failures (MTBF)

- Mean Time to Repair or Replace (MTTR)
- Mean Time Between Maintenance (MTBM)
- Mean Downtime (MDT)
- Mean Time to Failure (MTTF)
- Ratio of Replacement Asset Value (RAV) to Craft-Wage Head Count
- Stocked Maintenance, Repair, and Operating (MRO) Inventory Value as a Percent of Replacement Value
- Total Maintenance Cost as a Percent of Replacement Asset Value
- Maintenance Training Cost /hours
- Maintenance Training Return on Investment (ROI)
- Preventive Maintenance (PM) & Predictive Maintenance (PdM) Work Orders Overdue
- PM & PdM Yield and Compliance
- Craft Worker to Supervisor / to Planner ratios
- Direct to Indirect Maintenance Personnel Ratio
- Overtime Maintenance Cost

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 13, 2025	April 17, 2025	5 days	4250.00 $	KSA - El Dammam
July 14, 2025	July 18, 2025	5 days	4950.00 $	Netherlands - Amsterdam
Dec. 22, 2025	Dec. 26, 2025	5 days	2150.00 $	Virtual - Online