MERCURY

Reliability-Centered Maintenance (RCM) Training Course

19 – 23 July 2027
Rome (Italy)



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Reliability-Centered Maintenance (RCM) Training Course

Ref: 15297_253587 **Date:** 19 – 23 July 2027 **Location:** Rome (Italy) **Fees:** 7200 Euro

Introduction:

This reliability-centered maintenance RCM training course is your guide to understanding how to prevent equipment problems, select an appropriate maintenance strategy for your equipment, leverage maintenance history to improve operations, and effectively implement strategies and plans. Gaining proficiency in RMC isn't solely about improving maintenance routines; it's a strategic approach that tackles how we maintain and operate complex systems and addresses the challenge of preventing system failure.

This reliability-centered maintenance RCM course offers an in-depth introduction to the RCM process. It applies to industries that depend on their assets' safe, reliable, and cost-efficient functionality. These industries include Defense, Aerospace, Maritime, Transportation, and many more. A robust RCM strategy empowers stakeholders to focus on the correct assets with the right tactics, timing, and resources, all while minimizing costs and maintaining a competitive edge.

This reliability-centered maintenance RCM course will delve into the fundamentals of RCM, how to implement it, the iterative RCM analysis process, and the various tools and steps involved for Engineering, Maintenance, and Reliability personnel. Its primary goal is to equip you with the skills to understand, learn, establish, and manage a Modern-Day World-Class RCM Program.

What is RCM Reliability-Centered Maintenance?

Reliability-centered maintenance RCM is a strategic approach emphasizing reliability's importance in maintenance management decisions. The RCM process usually includes a detailed analysis, often referred to as an RCM reliability-centered maintenance analysis, which considers the most effective maintenance techniques to ensure the reliability and safety of equipment while optimizing costs.

The reliability-centered maintenance RCM program participants will understand the system's functions, identify failure modes, analyze their effects, and implement specific risk management maintenance strategies. By adopting reliability-centered maintenance principles, organizations can reap the benefits of extended asset life, reduced downtime, and increased safety, thus aligning with the benefits of reliability-centered maintenance.

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Targeted Groups:

- Reliability Engineers.
- Corporate and Government leaders.
- Middle Managers.
- Maintenance Managers.
- Production and Plant Leadership.
- Maintenance Technicians and Operators.
- Logisticians.
- Design and Systems Engineers.
- OEMs.
- Tech Reps.
- In-service Engineers.

Course Objectives:

Upon the end of this reliability-centered maintenance RCM course, the participants will be able to:

- Grasp the processes required to implement and manage a Reliability-Centered Maintenance Program.
- Analyze and devise action plans from a systematic evaluation of the maintenance program.
- Perform audits on operational and maintenance performances to discover areas for improvement.
- Design optimal maintenance strategies for in-the-field plant and equipment.
- Utilize RCM results to achieve the enhanced maintenance performance stakeholders desire.
- Outline a clear approach for reliability improvement for both stationary and mobile equipment.
- Choose appropriate technologies for Condition Monitoring and Predictive Maintenance.
- Learn how to leverage failure data industry standards and databases.
- Introduce reliability growth principles to new, existing, or aging equipment, combining the principles of reliability-centered maintenance with practical, real-world applications.
- Make informed risk-based decisions regarding spare holdings.
- Strategically address failure modes by correctly selecting primary and secondary maintenance actions.

Targeted Competencies:

At the end of this reliability-centered maintenance RCM training, the target competencies will be able to:

- Understand RCM principles and methodologies.
- Analyze equipment criticality and failure modes.
- Develop preventive maintenance strategies based on RCM.
- Implement RCM in diverse industrial settings.
- Evaluate the effectiveness of RCM implementations.

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RCM Case Studies and Real-World Applications:

Examining reliability-centered maintenance case studies can give participants a practical understanding of how RCM concepts are applied in real-world scenarios. These case studies typically illustrate diverse types of reliability-centered maintenance applications across various industries, showcasing how enhanced reliability-centered maintenance approaches have led to measurable improvements in maintenance efficiency, asset performance, and organizational profitability.

By integrating theory with practice, course participants can better grasp how the principles of reliability-centered maintenance can be translated into tangible results. Success stories often serve as powerful learning tools, helping participants understand the implementation challenges and the benefits of adopting a reliability-centered maintenance program.

Course Outline:

Unit 1: Introduction:

- What is maintenance?
- Why maintain?
- Traditional maintenance methods.
- History of RCM.
- Definitions of reliability-centered maintenance.
- Exploring the seven questions of RCM.

Unit 2: RCM Programme Activities:

- Formation of RCM review groups.
- The role of the RCM facilitator.
- Implementation strategies for a reliability-centered maintenance program.
- Steps to begin reliability-centered maintenance.

Unit 3: Foundation Knowledge and Actions:

- Failures types, frequencies, physics, early detection.
- External interfaces safety, environmental, supply.
- Availability and reliability-centered maintenance principles.
- Cost-benefit analysis within the RCM process.
- Functional analysis in reliability-centered maintenance.

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Unit 4: Defining the Problem and Gathering Information:

- Define functions and desired performance standards.
- Capture functional failures in reliability-centered maintenance.
- Establish the root causes of failure failure modes.
- Examine what happens when failures occur failure effects.

Unit 5: Failure Mode and Effects Analysis FMEA:

- Techniques for Conducting a Physical FMEA.
- Functional FMEA approaches within the context of RCM.

Unit 6: Risk Management:

- Understand the components of risk.
- Measure risk in the context of reliability-centered maintenance.
- Deploy protective and warning devices within an RCM framework.
- Address failures that threaten the safety of the environment.
- Manage failures that affect production/operations.
- Deal with failures that only entail the direct cost of repair.

Unit 7: Managing the RCM Process:

- Plan the maintenance schedule for reliability-centered maintenance.
- Detail the tasking involved in RCM.
- Implement RCM strategies and principles.

Unit 8: In-Service Systems:

- Review Service Maintenance Organisations ISMO and their role in RCM.

Conclusion:

A reliability-centered maintenance RCM certification can be a valuable asset for individuals seeking to solidify their expertise and recognition in the maintenance field. It often covers many topics, including RCM principles, RCM program development, analysis techniques, and various reliability-centered maintenance tools. Those who complete the training will enhance their career prospects and ability to contribute effectively to their organization's maintenance management and strategy.