

RELIABILITY FOR CAPITAL PROJECTS MANAGEMENT

“Ensuring Project Success through Effective Reliability Management”

Schedule

Date	Venue	Fees (Face-to-Face)
29 - 30 Apr 2026	Dubai, UAE	USD 1995 per delegate

► Available delivery methods: Face-to-Face & Online Training

Introduction

Capital projects are high-investment ventures that require meticulous planning and management to ensure their success. One of the key factors in capital project success is reliability management, which ensures that assets are designed, built, and maintained to perform optimally throughout their life cycle. This 2-day course provides an in-depth understanding of how reliability practices can be integrated into the management of capital projects, from the initial design phase to post-project operations.

Participants will explore the key concepts of reliability engineering, risk management, and asset management, and learn how to apply these principles to enhance project performance, reduce downtime, and lower operational costs. Through case studies, hands-on exercises, and expert-led discussions, this course provides practical tools and strategies for improving reliability in capital projects.

Objectives

By the end of this course, participants will be able to:

- Understand the core principles of reliability engineering and their application in capital projects.
- Apply reliability-centered maintenance (RCM) and failure mode analysis in project design and execution.
- Integrate risk management strategies into capital project planning and execution.
- Develop strategies to ensure operational reliability and reduce project lifecycle costs.
- Implement asset management practices to enhance the long-term performance of capital projects.

Why Attend

- Gain comprehensive knowledge of reliability practices essential for successful capital projects.
- Learn how to integrate reliability principles into the project lifecycle to ensure minimal downtime and reduced costs.
- Develop practical skills in using tools like RCM and failure mode analysis to enhance project success.
- Understand how to manage risks effectively and prevent costly failures during the project lifecycle.
- Acquire expertise in asset management practices that ensure long-term reliability and performance of project assets.

Target Audience

This program is designed for:

- Project managers
- Reliability engineers
- Operations managers
- Asset managers
- Engineers and professionals involved in capital project management and execution
- Professionals interested in enhancing the reliability of their capital projects

Individual Benefits

Key competencies that will be developed include:

- Knowledge of reliability engineering and its application to capital project management.
- Ability to integrate reliability-centered maintenance (RCM) and risk management into project execution.
- Enhanced skills in identifying potential risks and implementing strategies to mitigate them.
- Proficiency in asset management and its role in ensuring long-term project reliability.
- Ability to drive operational improvements and cost reductions through effective reliability management.

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved reliability and performance of capital projects.
- Reduced operational and maintenance costs through effective reliability management.
- Enhanced risk management capabilities, leading to more predictable project outcomes.
- Ability to integrate asset management practices that improve long-term project success.
- Increased project efficiency by applying reliability principles to the project lifecycle.

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – In-depth discussions on reliability principles, risk management, and asset management.
- Case Studies – Real-world examples of capital projects where reliability practices were successfully implemented.
- Workshops – Hands-on exercises focusing on practical application of reliability-centered maintenance (RCM) and failure mode analysis.
- Peer Exchange – Group discussions and knowledge sharing on managing reliability in capital projects.
- Tools – Practical tools and techniques for integrating reliability and risk management into capital project management.

Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to Reliability in Capital Projects

- Module 1: Understanding Reliability Engineering and Its Role in Capital Projects (07:30 – 09:30)
- Overview of reliability engineering principles and their importance in capital project management
- Key reliability concepts: RCM, failure modes, risk analysis, and maintenance strategies
- Integrating reliability practices into project design and planning phases
- Module 2: Risk Management in Capital Projects (09:45 – 11:15)
- Identifying and managing risks during the capital project lifecycle
- Techniques for assessing and mitigating risks
- Case studies of risk management in capital projects
- Module 3: Reliability-Centered Maintenance (RCM) and Failure Mode Analysis (11:30 – 01:00)
- Principles of RCM and its application in capital projects
- Conducting failure mode effects analysis (FMEA) to identify potential project failures
- Strategies for improving reliability and reducing failure rates

Day 2: Enhancing Asset Management and Project Performance

- Module 1: Asset Management Strategies for Capital Projects (07:30 – 09:30)
- The importance of asset management in the context of capital projects
- Implementing asset management strategies to ensure long-term reliability
- Tools and techniques for monitoring and maintaining asset performance
- Module 2: Long-Term Reliability and Project Lifecycle Management (09:45 – 11:15)
- Managing reliability throughout the entire project lifecycle, from design to post-project operations
- Developing and maintaining reliability-focused performance metrics
- Optimizing asset lifecycle costs through effective reliability management
- Module 3: Integrating Reliability Practices into Project Execution (11:30 – 01:00)
- Applying reliability principles to the execution phase of capital projects
- Managing stakeholder expectations and project performance with reliability in focus
- Case studies and practical exercises on reliability integration

Certification

Upon completing the training course, participants will receive a Certificate of Completion in Reliability for Capital Projects Management, validating their expertise in applying reliability engineering, risk management, and asset management practices to enhance the success and performance of capital projects.

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