

€ TRAINING

Reliability Availability and Maintainability
RAM

A group of four smiling professionals (two men and two women) in a meeting setting. They are wearing white shirts. The woman in the foreground is wearing a black top and a multi-strand necklace. The background is blurred, showing a modern office environment.

26 - 30 January 2025
Dubai (UAE)



Reliability Availability and Maintainability RAM

REF: O1705 DATE: 26 - 30 January 2025 Venue: Dubai (UAE) - Fee: 5830 Euro

Introduction:

This program is designed to prepare participants for the certification exam only.

This training program provides participants with the essential knowledge and skills required to assess and improve the reliability, availability, and maintainability RAM of systems. Through this training, participants will learn how to apply RAM analysis to optimize system performance, enhance uptime, and reduce costs.

Program Objectives:

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

- Understand the fundamental principles of reliability, availability, and maintainability.
- Apply RAM analysis techniques to improve system performance.
- Use predictive maintenance strategies to enhance system availability.
- Identify and mitigate reliability risks in complex systems.
- Prepare for the RAM certification exam.

Target Audience:

- Maintenance and Reliability Engineers.
- Operations Managers.
- System Designers.
- Quality Assurance Professionals.
- Technical Managers involved in asset management and maintenance.

Program Outline:

Unit 1:

Introduction to Reliability, Availability, and Maintainability:

- Overview of RAM principles and their importance in system performance.
- Key metrics for reliability, availability, and maintainability.

- Relationship between reliability, availability, and system downtime.
- Introduction to failure modes and failure rate calculations.
- Understanding the lifecycle approach to managing reliability and maintainability.

Unit 2:

Reliability Analysis Techniques:

- Reliability prediction methods Weibull analysis, FMEA, etc..
- Statistical tools for analyzing failure data.
- Application of reliability block diagrams RBD.
- Analyzing system performance using fault tree analysis FTA.
- Case study: Improving system reliability through analysis and prediction.

Unit 3:

Availability Modeling and Improvement Strategies:

- Different types of availability: inherent, operational, and achievable.
- Factors affecting system availability and uptime.
- Techniques to increase system availability redundancy, backups.
- Preventive and predictive maintenance for availability optimization.

Unit 4:

Maintainability and Maintenance Strategies:

- Key metrics and concepts in maintainability.
- Maintenance strategies: corrective, preventive, and predictive maintenance.
- How to reduce Mean Time to Repair MTTR.
- The role of condition-based maintenance CBM and reliability-centered maintenance RCM.
- Strategies for improving system maintainability through design and operations.

Unit 5:



RAM Certification Exam Preparation:

- Overview of the Certification Exam Structure.
- Key Topics and Areas of Focus for the Exam.
- Sample Questions and their Potential Answers.
- Resources and Materials for Effective Exam Preparation.

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