

## ROOT CAUSE FAILURE ANALYSIS

*“Identify, Analyze, and Eliminate the Root Causes of Equipment and Process Failures to Ensure Operational Reliability.”*

### Schedule

Venue (In-house)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

### Introduction

Unexpected equipment or process failures can cause production losses, safety hazards, and increased maintenance costs. Simply fixing the symptoms is not enough; organizations must identify the underlying root causes to prevent recurrence.

The Root Cause Failure Analysis (RCFA) course provides participants with structured methodologies, tools, and techniques to systematically analyze failures, determine their root causes, and implement effective corrective actions. Participants will learn to improve equipment reliability, reduce downtime, and enhance operational efficiency through practical, real-world case studies and exercises.

### Objectives

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

- Understand the principles and importance of root cause failure analysis.
- Apply structured RCFA methodologies to identify and resolve failures.
- Utilize various problem-solving and analysis tools such as Fishbone Diagrams, 5 Whys, and FMEA.
- Conduct effective data collection and failure investigation.
- Develop actionable corrective and preventive measures.
- Reduce recurrence of failures and improve equipment reliability.
- Communicate findings effectively to technical and management teams.
- Integrate RCFA into continuous improvement and maintenance programs.

## Why Attend

Failures in equipment and processes can lead to significant financial losses, safety incidents, and operational inefficiencies. This course equips participants with practical problem-solving techniques and proven methodologies to address failures at their source, ensuring long-term reliability, safety, and performance improvements.

## Target Audience

This course is suitable for:

- Maintenance and Reliability Engineers
- Plant and Facility Managers
- Operations and Production Supervisors
- Mechanical, Electrical, and Process Engineers
- Quality and Safety Professionals
- Industrial Consultants and Technical Teams

## Individual Benefits

- Gain hands-on skills in identifying root causes of failures.
- Learn structured approaches to solve complex technical problems.
- Improve decision-making and problem-solving capabilities.
- Enhance confidence in applying RCFA to real-world scenarios.
- Increase professional value and expertise in failure analysis and reliability improvement.

## Organizational Benefits

- Reduce downtime and prevent recurring failures.
- Improve equipment reliability, safety, and operational performance.
- Optimize maintenance and repair costs.
- Foster a culture of systematic problem-solving and continuous improvement.
- Build in-house expertise for effective failure analysis and corrective action implementation.

## Instructional Methodology

The training employs a practical, interactive approach:

- Instructor-led sessions on RCFA principles and techniques
- Case studies of equipment and process failures
- Hands-on exercises using tools like 5 Whys, Fishbone Diagrams, and FMEA
- Group workshops and failure investigation simulations
- Practical exercises for data collection, analysis, and solution development
- Continuous feedback, discussions, and Q&A sessions

## Course Outline

- Module 1: Introduction to Root Cause Failure Analysis and Its Importance
- Module 2: Principles of Failure Investigation and Data Collection
- Module 3: Structured Problem-Solving Methodologies – 5 Whys, Fishbone Diagram, FMEA
- Module 4: Human Factors and Organizational Influences on Failures
- Module 5: Equipment and Process Failure Analysis Techniques
- Module 6: Developing Corrective and Preventive Actions
- Module 7: Case Studies – Real-World Failure Investigations
- Module 8: Implementing RCFA in Maintenance and Reliability Programs
- Module 9: Performance Metrics and Monitoring Effectiveness of Corrective Actions
- Module 10: Practical Exercises – Conducting a Complete RCFA on a Sample Failure

## Certification

Upon successful completion, participants will receive a Certificate in Root Cause Failure Analysis, acknowledging their expertise in identifying, analyzing, and preventing equipment and process failures to improve reliability, safety, and operational efficiency.

## Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

### In-House / Customized Training

Interested in running this course for your team?

Please contact us:

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