

ROOT CAUSE FAILURE ANALYSIS (RCFA) FOR ENGINEERS

Start Date:	23/11/2026	End Date:	27/11/2026
Categories:	Engineering & Maintenance	Venues:	London
Formats:	In Person	Instructors:	

OVERVIEW

This course provides in-depth techniques and structured approaches to identify the root causes of equipment and system failures. It equips engineers with the tools to investigate incidents and implement effective corrective actions.

OBJECTIVES

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

- Apply systematic root cause analysis methodologies (5 Whys, Fishbone, FMEA).
- Identify failure modes and their contributing factors.
- Analyze data and evidence to trace the root cause.
- Develop and implement sustainable corrective actions.
- Improve reliability and reduce repeat failures through lessons learned.

COURSE OUTLINE

1. Principles and Benefits of Root Cause Analysis
2. Failure Modes and Effects Analysis (FMEA)
3. Investigation Techniques and Evidence Gathering
4. Root Cause Identification Tools (Ishikawa, 5 Whys, Fault Tree)
5. Corrective Action Planning and Case Studies

TARGET AUDIENCE

Maintenance and reliability engineers, technical managers, and plant supervisors responsible for asset performance and failure prevention.

METHODOLOGY

Case studies, group investigations, RCA tools application workshops, and field data analysis.

CONCLUSION

Participants will be equipped to lead structured failure investigations and implement effective long-term solutions.

DAILY AGENDA

Day 1: Introduction to RCFA Principles

Understanding failures, RCA frameworks, and failure reporting practices.

Day 2: Failure Modes and Mechanisms

Learning mechanical, electrical, and process-related failure causes.

Day 3: RCFA Tools and Techniques

Using 5 Whys, Fishbone diagrams, and Fault Tree Analysis.

Day 4: Investigation and Documentation

Gathering evidence, analyzing trends, and team investigation.

Day 5: Developing Corrective Actions

Building action plans and verifying effectiveness of implemented solutions.

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