

MAINTENANCE AND ENGINEERING | ME-014

Root Cause Analysis for Maintenance and Operations

Contact

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Course content

Why Attend

Repeated equipment failures and process upsets cost money, time and safety. Root cause analysis helps maintenance and operations teams find and eliminate the real causes rather than repeatedly fixing symptoms.

This Aractech course teaches practical RCA methods for maintenance and operations: problem definition, data and evidence, five whys, cause-and-effect diagrams, fault tree and logic tree analysis, failure mode analysis, human and organisational factors, corrective actions and RCA programmes. Participants analyse real failure cases.

Course Methodology

- Failure case studies
- RCA technique workshops
- Evidence exercises
- Group analysis
- Action planning

Course Objectives

- Define problems and select RCA triggers
- Collect evidence and failure data
- Apply five whys, fishbone and logic tree techniques
- Analyse physical, human and latent causes
- Develop effective corrective actions
- Establish an RCA programme

Target Audience

- Maintenance engineers and supervisors

Course content

- Reliability engineers
- Operations engineers
- Plant managers

Course outline

Detailed course outline

Day-by-day outline for Root Cause Analysis for Maintenance and Operations.

Day 1 - RCA Fundamentals

- 09:00-09:45 | Why failures repeat
- 09:45-10:30 | RCA principles
- 10:30-11:00 | Triggers
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Triggers (continued)
- 11:45-12:30 | Team roles
- 12:30-14:00 | Exercise: Problem definition

Day 2 - Evidence and Data

- 09:00-09:45 | Evidence preservation
- 09:45-10:30 | Failure data
- 10:30-11:00 | Interviews
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Interviews (continued)
- 11:45-12:30 | Timelines
- 12:30-14:00 | Workshop: Evidence collection

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Day 3 - RCA Techniques

- 09:00-09:45 | Five whys
- 09:45-10:30 | Fishbone diagrams
- 10:30-11:00 | Logic and fault trees
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Logic and fault trees (continued)
- 11:45-12:30 | Failure mode analysis
- 12:30-14:00 | Lab: Logic tree

Day 4 - Causes and Actions

- 09:00-09:45 | Physical, human and latent roots
- 09:45-10:30 | Human factors
- 10:30-11:00 | Corrective actions
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Corrective actions (continued)
- 11:45-12:30 | Verification
- 12:30-14:00 | Case study: Pump failure RCA

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Day 5 - RCA Programmes

- 09:00-09:54 | Prioritising problems
- 09:54-10:48 | Tracking actions
- 10:48-11:00 | Metrics
- 11:00-11:30 | Coffee break
- 11:30-12:12 | Metrics (continued)
- 12:12-13:06 | Culture
- 13:06-14:00 | Capstone: RCA report

Seminar dates

Available seminar dates

Live dates and pricing for Root Cause Analysis for Maintenance and Operations generated from the course details page.

Date	Location	Format	Fee
2 - 6 November 2026	Barcelona	Classroom	€2,815
21 - 25 December 2026	Rome	Classroom	€3,460
18 - 22 January 2027	Istanbul	Classroom	€1,978
15 - 19 February 2027	Cape Town	Classroom	€1,625
15 - 19 March 2027	Barcelona	Classroom	€2,815
19 - 23 April 2027	Paris	Classroom	€3,825
17 - 21 May 2027	Frankfurt	Classroom	€1,875
21 - 25 June 2027	London	Classroom	€2,315
19 - 23 July 2027	Barcelona	Classroom	€2,815
16 - 20 August 2027	Rome	Classroom	€3,460

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