

Root Cause Analysis - ASQ

COURSE ID SPRCA2022ASQ

FORMAT E-Learning

Learning Objectives:

- Understand RCA terminology, goals, benefits, and stakeholders.
- Investigate root causes with cause-and-effect analysis, 5 Whys, FMEA, and other analytical tools.
- Assess and work with various data collection plans and methods, as well as data charts and control charts.
- Define problem-solving models used for root cause analysis, including 8D, PDCA, and DMAIC. Implement problem-solving techniques (poka-yoke, multi-voting, etc.) and plan, manage, and verify change.
- Build and manage RCA project teams successfully.

Prerequisites:

Anyone with a desire to improve problem solving in their organization can take this course, regardless of your role or experience.

Who Should Attend:

This Root Cause Analysis e-learning course by ASQ is relevant for any quality professional, and contains practical and relevant examples for all industries—with special consideration given to manufacturing and engineering.

Format

This e-learning, self-paced course is designed to be studied from any internet-connected device and includes interactive microlearning lessons with a fresh look-and-feel that you can start, stop, and resume at your convenience.

Internet-based, self-paced training modules, which may involve combinations of text, visuals, audio, interactive simulations and quizzes (see specific courses for features and tools). These web-based courses require a computer and Internet access.

Course Outline

- I. RCA and Problem-Solving Fundamentals
 - a. Basic foundational terms
 - b. Goals of root cause analysis
 - c. RCA scope and context
 - d. Organizational structure and culture
 - e. Metrics for RCA
 - f. Problem-solving models for RCA

- g. Problem solving using 8D (eight disciplines)
- h. Value-added vs. non-value-added activities
- i. Defining the problem statement
- II. Data Fundamentals
 - a. Types of data
 - b. Data sources
 - c. Planning data collection
 - d. Collecting empirical data
- III. Data Analysis
 - a. Cause-and-effect analysis
 - b. 5 Whys analysis
 - c. Cause-and-effect analysis and 5 Whys
 - d. Force field and barrier-and-aids analysis
 - e. Data charts
 - f. Control charts
 - g. Failure Mode and Effects Analysis (FMEA)
 - h. Fault tree analysis
 - i. Logic trees
 - j. Brainstorming and decision-making tools
 - k. Selecting the most likely cause
- IV. Project Management
 - a. Preparing for an RCA project
 - b. Staffing an RCA project
 - c. Establishing a successful RCA team
 - d. Facilitation skills
 - e. Managing an improvement team
- V. Maintaining and Sustaining Improvements
 - a. Corrective and Preventive Action (CAPA)
 - b. Recommending a solution
 - c. Implementation planning and change management
 - d. Verifying implementation and effectiveness
 - e. Standardizing the change
 - f. Audit planning
 - g. Identifying opportunities for continuous improvement
 - h. Recognition of success