

Course No. 1604

Quality Assurance & Quality Control Training Course

**QUALITY ENGINEERING & QUALITY MANAGEMENT
INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS**

DURATION

5 Days

DELIVERY

Classroom



Course Overview

Quality Assurance and Quality Control are essential components of an effective quality management system, ensuring that products, services, and processes consistently meet defined requirements and organizational standards. While Quality Assurance focuses on preventing defects through systematic processes, Quality Control focuses on identifying and controlling deviations through inspection, testing, measurement, and monitoring.

Effective integration between Quality Assurance and Quality Control enables organizations to move from reactive defect detection toward proactive quality prevention. It helps reduce rework, waste, customer complaints, operational failures, and quality-related costs while improving process stability and product or service reliability.

This course provides a practical and structured approach to Quality Assurance and Quality Control, covering quality planning, inspection and testing, process control, quality standards, documentation, nonconformity management, root cause analysis, corrective actions, supplier quality, and performance measurement.

Participants will develop practical capabilities to establish effective quality controls, conduct inspections and testing, identify and analyze quality problems, manage nonconformities, and support continuous improvement across operational and production environments.

Objectives

- By the end of this course, participants will be able to:
- Understand the principles and roles of Quality Assurance and Quality Control.
- Distinguish between preventive Quality Assurance and corrective Quality Control activities.
- Develop effective quality planning and control approaches.
- Establish appropriate inspection and testing requirements.
- Apply process control techniques to maintain consistent quality.
- Identify and evaluate quality deviations and nonconformities.
- Apply structured root cause analysis methods.
- Develop and monitor corrective and preventive actions.

- Improve documentation and quality records.
- Evaluate supplier and incoming material quality.
- Develop effective quality performance indicators.
- Reduce defects, rework, waste, and quality-related costs.
- Strengthen communication between quality and operational teams.
- Support continuous improvement and quality performance enhancement.

Who Should Attend

This course is designed for Quality Assurance Managers, Quality Control Managers, Quality Engineers, Quality Inspectors, Quality Supervisors, Production Managers, Process Engineers, and professionals responsible for maintaining product, service, and process quality.

It is also suitable for operations managers, manufacturing professionals, laboratory personnel, project teams, maintenance professionals, procurement and supplier management specialists, and technical personnel involved in inspection, testing, and quality control.

The course is particularly valuable for professionals seeking to strengthen their practical understanding of quality assurance and quality control systems and improve their ability to prevent, detect, analyze, and resolve quality problems.

Learning Outcomes

- Upon successful completion of this course, participants will be able to:
- Explain the roles and responsibilities of Quality Assurance and Quality Control.
- Distinguish between quality prevention, inspection, testing, and corrective action.
- Develop practical quality plans and control requirements.
- Establish effective inspection and testing procedures.
- Monitor process performance and identify quality deviations.
- Identify, document, and manage nonconformities.
- Apply root cause analysis to recurring quality problems.
- Develop effective corrective and preventive actions.

- Evaluate the effectiveness of quality controls.
- Improve supplier and incoming material quality.
- Maintain accurate quality documentation and records.
- Develop meaningful quality performance indicators.
- Reduce defects, rework, waste, and customer complaints.
- Support continuous improvement and sustainable quality performance.
- Targeted Competencies
- Quality Assurance.
- Quality Control.
- Quality Planning.
- Inspection and Testing.
- Process Quality Control.
- Nonconformity Management.
- Root Cause Analysis.
- Corrective and Preventive Actions.
- Quality Documentation.
- Supplier Quality.
- Quality Performance Measurement.
- Defect Prevention.
- Quality Risk Management.
- Continuous Improvement.
- Quality Problem-Solving.

Course Outline

DAY 01

Quality Assurance and Quality Control Fundamentals

- Understanding Quality Assurance and Quality Control.
- Key differences between Quality Assurance and Quality Control.
- Prevention versus detection of quality problems.
- Principles of effective quality management.

DAY 01 — CONTINUED

- Quality requirements, specifications, and acceptance criteria.
- Roles and responsibilities of quality and operational teams.
- Quality planning and quality objectives.
- Developing a quality-focused organizational culture.
- Quality responsibilities across the operational lifecycle.
- Identifying critical quality characteristics.

PRACTICAL APPLICATION

Reviewing a process and identifying Quality Assurance and Quality Control requirements.

DAY 02

Quality Planning, Inspection and Testing

- Developing effective quality plans.
- Defining inspection and testing requirements.
- Inspection stages and control points.
- Incoming, in-process, and final inspection.
- Sampling principles and inspection methods.
- Testing requirements and acceptance criteria.
- Inspection equipment and measurement controls.
- Handling inspection results and quality records.
- Managing rejected and nonconforming outputs.
- Improving inspection effectiveness.

PRACTICAL APPLICATION

Developing an inspection and testing plan for a selected process or product.

DAY 03

Process Control, Nonconformity and Root Cause Analysis

- Monitoring and controlling process performance.
- Identifying process variation and quality deviations.
- Quality control charts and process monitoring.
- Identifying and documenting nonconformities.
- Classification and prioritization of quality problems.
- Root cause analysis methodologies.
- Cause-and-effect analysis.
- Applying the Five Whys technique.
- Developing corrective and preventive actions.
- Verifying corrective action effectiveness.

PRACTICAL APPLICATION

Analyzing a quality nonconformity and developing a complete corrective action plan.

DAY 04

Supplier Quality and Quality Performance Management

- Principles of Supplier Quality Management.
- Supplier qualification and evaluation.
- Quality requirements for suppliers and contractors.
- Incoming material and service quality control.
- Monitoring supplier performance.
- Managing recurring supplier quality problems.
- Quality Key Performance Indicators.
- Measuring defect rates, rejection rates, rework, and customer complaints.
- Quality reporting and performance dashboards.
- Using quality data to support management decisions.

DAY 04 — CONTINUED

PRACTICAL APPLICATION

Developing a supplier quality evaluation and performance monitoring framework.

DAY 05

Quality Improvement and Integrated QA/QC Systems

- Integrating Quality Assurance and Quality Control.
- Building an effective quality control framework.
- Risk-based quality planning.
- Preventing recurring quality problems.
- Continuous improvement in quality performance.
- Reducing defects, rework, waste, and quality-related costs.
- Improving communication between quality and operational functions.
- Benchmarking quality performance and best practices.
- Developing quality improvement initiatives.
- Sustaining quality performance and control effectiveness.
- Building a roadmap for strengthening the QA/QC system.

PRACTICAL APPLICATION

Developing a 90-day action plan to improve Quality Assurance and Quality Control performance.

Register or Request More Information

Course page: <https://quest-training.com/courses/quality-assurance-quality-control-training-course>

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