

CERTIFIED QUALITY ENGINEER



This program aims to certify participants as professional quality practitioners capable of leading quality initiatives in manufacturing and service organizations.

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

- Develop and implement robust quality management systems aligned with international standards.
- Apply statistical and analytical tools to improve process capability and product performance.
- Design and manage quality improvement and risk management programs.
- Apply reliability and product safety engineering principles across the product lifecycle.
- Perform professional quality engineering roles with confidence and industry-recognized certification credentials.

Objectives

Duration

3 weekdays (Monday, Wednesday, Friday) | 7pm to 10pm | 5 months | 161 hours

This program is suitable for:

Who should attend

- Engineers and Technical Professionals
- Quality Engineers, QA / QC Personnel, and Quality Managers
- Manufacturing, Process, and Service Professionals involved in quality improvement
- Professionals seeking internationally recognized quality certification

Entry Requirement

- Diploma or Degree in Engineering, Science, or related disciplines
- Minimum 1–2 years of working experience in a quality-related field

Course Fees

Member: S\$5,363.32
Non-Member: S\$5,933.09

All fees stated are inclusive Registration and Exam Fees & 9% GST

Assessment Method

- Written Examination conducted approximately 4 weeks after course completion
- Participants must pass the examination to obtain CQE certification



**SINGAPORE
QUALITY
INSTITUTE**



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Course Contents

Course Modules and Content

Module 1: Quality Practices and Applications

- 1.1 Quality Concepts, Principles, Systems, and Standards (ISO, ATF, Industry Standards)
- 1.2 Product, Process, and Material Control Techniques
Quality Audit Principles, Planning, and Execution
- 1.3 Quality Improvement Tools: Cost of Quality, PDCA, Kaizen, Continuous Improvement
- 1.4 Quality Planning and Management Tools (FMEA, Control Plans, Quality Planning)
- 1.5 Lean and Six Sigma Fundamentals, Organisational Culture, Human Resource Quality Roles
- 1.6 Supplier Quality Management and Supplier Performance Evaluation

Module 3: Measurement Systems and Testing

- 3.1 Fundamentals of Metrology and Measurement Principles
- 3.2 Measurement System Analysis (MSA) and Gauge R&R Studies
- 3.3 Calibration Systems, Traceability, and Control of Measurement Standards
- 3.4 Non-Destructive and Destructive Testing Concepts and Applications
- 3.5 Inspection Methods and Acceptance Sampling

Module 2: Statistical Principles and Applications (Six Sigma)

- 2.1 Basic Statistical Concepts and Data Types
- 2.2 Statistical Inference, Hypothesis Testing, and Confidence Intervals
- 2.3 Correlation and Regression Analysis
- 2.4 Statistical Process Control (SPC) and Control Charts
- 2.5 Process Capability and Performance Indices (Cp, Cpk, Pp, Ppk)
- 2.6 Design of Experiments (DOE) for Process Optimisation
- 2.7 Application of Minitab and AI Tools for Quality Analysis

Module 4: Reliability Engineering and Product Safety

- 4.1 Basic Reliability Concepts and Terminology
- 4.2 Product Design, Development, and Quality in Production
- 4.3 Maintainability Engineering and Lifecycle Cost Considerations
- 4.4 Product Safety, Risk Assessment, and Compliance
- 4.5 Reliability Modelling and Failure Analysis Techniques



Please refer to this URL
<https://www.sqi.org.sg/courses/>
or QR Code for soft copy and
updated training schedule

Key Benefits

- Professional Certification Credential – Enhance career recognition and credibility
- Practical Quality Engineering Skills – Apply real-world tools and techniques immediately
- Advanced Statistical & Data Analysis Skills – Improve process and product performance
- Quality Leadership Capability – Drive organizational quality initiatives
- Industry-Relevant Knowledge – Reliability, Safety, Risk Management and Six Sigma
- Career Advancement – Increase employability and promotion potential

Membership Application

Register membership online at www.sqi.org.sg/membership-join/ or contact us to get the membership application form.

Membership Categories:

- ~ Organisation membership
- ~ Individual membership

Singapore Quality Institute (SQI) operates as a non-profit professional institute that promotes and advances excellence in the field of quality in Singapore; and actively champions quality initiatives in the region and around the world through networking and collaborating with other international quality organisations.

SQI is a World Partner of the American Society for Quality (ASQ); and a Board Member of both the Asian Network for Quality (ANQ) and the World Alliance for Chinese Quality (WACQ).

