

## **Course Title: CQE-Certified Quality Engineer**

**Duration: 8 days**

**Mode of Delivery: Online/ Classroom/ Onsite**

### **Course Overview**

A professional having training and certification in quality engineering principles, as well as experience in areas like risk management, product and process quality, and reliability, is known as a Certified Quality Engineer (CQE). The American Society for Quality (ASQ) offers the CQE certification, which is a widely accepted credential that attests to a professional's application of best practices in quality management.

Statistical techniques, continuous improvement, and quality management systems are all covered in the demanding coursework and exam required for this certification. CQEs are essential for guaranteeing that processes and goods fulfill strict requirements for efficiency, safety, and quality. They also help a business succeed by cutting expenses and raising customer satisfaction.

### **Course Objectives**

1. Clearly explain the concepts and procedures of quality engineering.
2. Give participants the tools they need to recognize and resolve problems with product and process quality.
3. Covering every important subject in the ASQ Body of Knowledge will help learners become ready for the CQE certification exam.
4. Develop your practical application of statistical techniques and quality control technologies.

### **Course Outline**

#### **1. Management and Leadership**

- Quality Philosophies and Foundations
- The Quality Management System (QMS)
- ASQ Code of Ethics for Professional Conduct
- Leadership Principles and Techniques
- Facilitation Principles and Techniques
- Communication Skills
- Customer Relations
- Supplier Management
- Barriers to Quality Improvement

## **2. The Quality System**

- Elements of a Quality System
- Documentation of the Quality System
- Quality Standards and Other Guidelines
- Quality Audits
- Cost of Quality (COQ)
- Quality Training

## **3. Product and Process Design**

- Classification of Quality Characteristics
- Design Inputs and Review
- Technical Drawings and Specifications
- Design Verification
- Reliability and Maintainability

## **4. Product and Process Control**

- Tools
- Material Control
- Acceptance Sampling
- Measurement and Test
- Metrology
- Measurement System Analysis (MSA)

## **5. Continuous Improvement**

- Quality Control Tools
- Quality Management and Planning Tools
- Continuous Improvement Techniques
- Corrective Action
- Preventive Action

## **6. Quantitative Methods and Tools**

- Collecting and Summarizing Data
- Quantitative Concepts
- Probability Distributions
- Statistical Decision-Making
- Relationships Between Variables
- Statistical Process Control (SPC)
- Process and Performance Capability
- Design and Analysis of Experiments

## 7. Risk Management

- Risk Oversight
- Risk Assessment
- Risk Control