



مركز الوقت للتدريب
Time Training Center

7QC TOOLS WORKSHOP



Introduction

This intensive 5-day workshop provides comprehensive training on the Seven Quality Control (7QC) Tools—fundamental techniques for problem-solving, process improvement, and quality assurance. Participants will learn not only how to construct and interpret each tool but also how to apply them effectively in real-world scenarios using hands-on activities, group work, and case studies relevant to various industries.

Learning Objectives

- Understand the principles and importance of the 7QC tools in quality management
- Construct, interpret, and apply each tool to solve practical quality problems
- Use data-driven methods to identify root causes and monitor process performance
- Integrate QC tools within broader continuous improvement initiatives
- Develop and present improvement action plans using real-world data

Course Details

Mode of Training	Classroom or Online
Duration	5 Days

Who Should Attend

- Quality Assurance and Control Engineers
- Manufacturing and Production Supervisors
- Process Improvement Specialists
- Six Sigma Green and Black Belts
- Quality Inspectors and Analysts
- Operations and Maintenance Managers
- Anyone involved in problem-solving or continuous improvement initiatives

Certificate(s)

Participants who complete a minimum of 80% of the total training hours will receive a **Certificate of Completion** issued by **Time Training Center**. This certificate reflects their active participation and commitment to professional development in the relevant field.



Course Outline

Module 1: Introduction to Quality Control and the 7QC Tools

- Evolution of quality control and continuous improvement
- The significance of data-driven decision-making
- Overview of the 7QC tools and their integration into PDCA/TQM/Lean
- Identifying appropriate tools for different problem types

Module 2: Check Sheets

- Purpose and types of check sheets
- Guidelines for designing effective check sheets
- Techniques for structured and efficient data collection
- Practical exercise: Developing and applying check sheets to sample data

Module 3: Pareto Charts

- Understanding the Pareto Principle (80/20 Rule)
- Constructing Pareto charts from check sheet data
- Interpreting results to identify major causes of quality issues
- Case study: Using Pareto analysis for prioritizing customer complaints

Module 4: Cause and Effect Diagrams (Fishbone)

- Purpose and structure of Fishbone (Ishikawa) diagrams
- Categorizing potential causes using the 6Ms (Man, Machine, Method, etc.)
- Root cause analysis strategies
- Group exercise: Developing cause and effect diagrams for real-world problems

Module 5: Histograms

- Understanding data distribution and variation
- Constructing and interpreting histograms
- Using histograms for process analysis and capability evaluation
- Hands-on activity: Create and analyze histograms from sample datasets

Module 6: Scatter Diagrams

- Exploring relationships between two variables
- Identifying trends, clusters, and correlations
- Differentiating between correlation and causation
- Practical exercise: Plotting and analyzing scatter diagrams



Module 7: Control Charts

- Introduction to statistical process control (SPC)
- Types of control charts (X-R, p, c, etc.)
- Determining control limits and rules for interpretation
- Distinguishing common vs. special cause variation
- Application: Creating control charts using spreadsheet tools

Module 8: Stratification Techniques

- Concept and objective of stratification
- Methods for separating and categorizing data
- Identifying patterns and sources of variability
- Exercise: Stratifying data by shift, operator, machine, or location

Module 9: Practical Application and Case Studies

- Industry-specific case studies demonstrating tool integration
- Group activity: End-to-end problem-solving using all 7QC tools
- Developing structured improvement action plans
- Group presentations and feedback
- Summary, review quiz, and open Q&A



Methodology

We employ a comprehensive and applied learning strategy, integrating theory with real-world implementation:

- ❖ **Conceptual Learning:** Expert-led sessions on catalytic theory and engineering principles
- ❖ **Interactive Workshops:** Group exercises, presentations, and technical discussion forums
- ❖ **Case-Based Learning:** Industry-specific examples and troubleshooting scenarios
- ❖ **Technology Integration:** Digital tools, simulations, and catalyst modeling applications
- ❖ **Assessment:** Pre-tests, post-tests, and Competence Validation Exams for Certified courses to ensure knowledge transfer and skills validation

Note: Instructors may adjust the training approach to fit technical requirements or participant engagement levels.

Instructors

Our instructors are experienced Quality Management Professionals and Continuous Improvement Specialists with over a decade of experience in manufacturing, services, and industrial sectors. They combine deep technical expertise with practical, hands-on approaches to ensure learning outcomes are both impactful and immediately usable. Detailed trainer profiles will be shared upon request.

About Time Training Center

Time Training Center is a leading professional training institute in Abu Dhabi that provides students and professionals with quality education and skill development programs. Time Training Center is accredited by the Abu Dhabi Center for Technical Vocational Education & Training (ACTVET) with a specialization in Computer and Management Training programs and certified by QA QC with ISO 9001:2015.

Operating in Abu Dhabi for over 3 decades, Time Training Center has established brand value as a high-quality Management & Technical Training Center in Abu Dhabi. We have also secured strong loyalty from corporate companies and associations with our holistic and practical teaching approach.

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