KOENIG
step forward

KOENIG SOLUTIONS · COURSE OUTLINE

7 QC Tools: Pareto, Fishbone & Control Charts

Learn to apply the seven basic quality control tools, from check sheets and Pareto charts to fishbone diagrams and control charts, for root cause analysis.

4 Days	12	35	9
DURATION	MODULES	TOPICS	HANDS-ON ACTIVITIES

COURSE OVERVIEW

This 7 QC tools course uses a case study to describe all the tools of quality control and demonstrate their application. You will find out how the Q7 are linked to each other and how they interact from root cause analysis through to problem solving. And the best thing about it is that the online quality tools training session includes downloadable worksheets containing instructions and examples, enabling you to apply the 7 basic tools of quality in your own project with minimum effort.

WHO THIS COURSE IS FOR

- **Quality Control Analysts**
- **Process Improvement Engineers**
- **Quality Assurance Managers**
- **Manufacturing Engineers**
- **Six Sigma Practitioners**

LEARNING OBJECTIVES

- Explain the role of the seven basic QC tools in problem-solving
- Design check sheets for structured data collection
- Construct and interpret histograms for defect analysis
- Apply the 80/20 rule using Pareto charts
- Analyse relationships between variables with scatter diagrams
- Identify process instability using control charts
- Construct fishbone diagrams to identify root causes
- Map processes with flowcharts to find bottlenecks

COURSE SYLLABUS

12 Modules, 35 Topics

DAY 1 Introduction to Quality Tools & Data Collection

01

Session 1: Introduction to Quality Control & Problem-Solving

TOPICS

- Overview of Quality Control (QC) & Its Importance
- Role of the 7 Basic QC Tools in Problem-Solving
- **Case Study:** Real-World Quality Issues

02

Hands-on Exercise

Session 2: Tool 1 - Check Sheet

TOPICS

Definition & Purpose · Designing Effective Check Sheets

03

Session 3: Tool 2 - Histogram

TOPICS

- Understanding Data Distribution
- Constructing & Interpreting Histograms
- **Practical Example:** Using Histograms for Defect Analysis

2 Activities

DAY 2 Analyzing & Prioritizing Quality Issues

04

Session 1: Tool 3 - Pareto Chart

TOPICS

- 80/20 Rule & Its Importance
- Constructing a Pareto Chart
- Identifying the Most Significant Quality Issues

05

Session 2: Tool 4 - Scatter Diagram

TOPICS

- Identifying Relationships Between Variables
- Plotting & Analyzing Data Points
- Correlation vs. Causation in Quality Management

06

Session 3: Tool 5 - Control Charts

TOPICS

Understanding Variability & Process Stability · Types of Control Charts · Identifying Out-of-Control Situations

2 Activities

DAY 3 **Root Cause Analysis & Process Mapping**

07

Session 1: Tool 6 - Cause-and-Effect Diagram (Ishikawa/Fishbone Diagram)

TOPICS

- Identifying Root Causes of Problems
- Constructing the Fishbone Diagram
- Practical Application for Manufacturing & Service Industries

08

Session 2: Tool 7 - Flowchart

TOPICS

- Mapping Processes for Quality Improvement
- Identifying Bottlenecks & Inefficiencies
- Creating Process Flowcharts for Different Scenarios

09

Session 3: Interrelationship of Quality Tools

TOPICS

How the 7 Tools Complement Each Other · Sequential Application in Problem-Solving · **Case Study Analysis:** Real-World Application

2 Activities

DAY 4 **Practical Implementation & Assessment**

10

Session 1: Applying QC Tools to Real-World Problems

TOPICS

- **Group Exercise:** Identifying a Quality Issue & Selecting Appropriate Tools
- Step-by-Step Problem-Solving Using the 7 Tools
- Presenting Findings & Improvement Suggestions

11

Session 2: Assessment & Certification

TOPICS

Interactive Quiz on the 7 QC Tools · Evaluating Practical Exercises · Feedback & Discussion on Learning Outcomes

12

Session 3: Best Practices & Continuous Improvement

TOPICS

- Integrating QC Tools into Daily Workflows
- Common Pitfalls & How to Overcome Them
- Additional Resources & Further Learning Opportunities

2 Activities

NOTES

- Real-world scenario will be provided
- Participants must use at least 3 QC tools to analyze the problem

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
02	**Session 2: Tool 1 - Check Sheet**	**Hands-on Exercise:** Developing a Check Sheet
	Introduction to Quality Tools & Data Collection	ACTIVITIES ■ Group discussion on real-world quality problems ■ Practical exercise on check sheets & histograms
	Analyzing & Prioritizing Quality Issues	ACTIVITIES ■ **Hands-on exercise:** Constructing Pareto charts & scatter plots ■ Group discussion on case studies using control charts
	Root Cause Analysis & Process Mapping	ACTIVITIES ■ **Hands-on exercise:** Root cause analysis with Fishbone diagrams ■ **Practical exercise:** Creating flowcharts for a given process
	Practical Implementation & Assessment	ACTIVITIES ■ Real-world case study application ■ Final knowledge assessment & feedback session

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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