

Snead State Community College
Workforce Development



Quality Assurance for Manufacturing Systems

Self-Paced Online Training
Students will have six weeks to complete

\$100.00 per student

This training course provides an introduction to quality assurance practices used in manufacturing systems. Learners will cover concepts such as S.I. Measurement, U.S. Customary Measurements, Tape Measure and Measurement Conversion. Applications taught include using a dial caliper, digital caliper, English micrometer, and metric micrometer. Dimensional Gauging will include an introduction to gauging as well as indicator measurement and data collection. Measurement Tools provides an overview of concepts in control chart analysis and operation, geometric dimensioning and tolerance, and location, orientation, and form tolerances.

- Basic Measurement
- Precision Measurement Tools
- Dimensional Gauging
- Introduction to Statistical Process Control
- Control Chart Operation
- Control Chart Analysis
- Geometric Dimensioning and Tolerancing
- Location Tolerances
- Orientation Tolerances
- Form Tolerances
- Calibrating and Mastering Gauges
- Variable Gauges and Micrometers
- Plug Gauges, Thread Gauges, and Attribute Gauges
- Surface Plates
- Gauge Blocks
- Test Indicators
- Height Gauges
- Introduction to Optical Comparators
- Comparative Bore Gauges
- Introduction to Air Gauging
- Specialty Micrometers
- Surface Texture and Hardness Testing
- Quality Systems Overview
- Quality Tools



Register Here: www.snead.edu/tbiregistration

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Quality Assurance for Manufacturing Systems

This training course provides an introduction to quality assurance practices used in manufacturing systems. Learners will cover concepts such as S.I. measurement, U.S. customary measurements, tape measurement and measurement conversion. Applications taught include using a dial caliper, digital caliper, English micrometer, and metric micrometer. Dimensional gauging will include an introduction to gauging, as well as indicator measurement and data collection. Measurement Tools 1 provides an overview of concepts in control chart analysis and operation, geometric dimensioning and tolerance, and location, orientation and form tolerances.

Outline

1. Basic Measurement

Segment 1 - SI Measurement

Objective 1 - Define Dimensional Measurement and Explain Its Importance

Objective 2 - Describe Two Systems of Dimensional Measurement: US Customary and SI Metric

Activity 1 - Identification of Quality Assurance Workstation Components

Objective 3 - Describe the Function and Construction of a Machinist's Rule

Objective 4 - Describe How to Use a Metric Machinist's Rule

Skill 1 - Use a Metric Machinist's Rule to Measure an Outside Length of a Part

Self Review 1

Segment 2 - US Customary Measurement

Objective 5 - Define Measurement Accuracy and Explain Its Importance

Objective 6 - Define Resolution and Explain Its Effect on Accuracy

Objective 7 - Describe How to Use a Decimal-Inch Machinist's Rule

Skill 2 - Use a Decimal-Inch Machinist Rule to Measure a Length

Objective 8 - Describe How to Use a Machinist's Rule with a Common Fraction-Inch Scale

Skill 3 - Use a Machinist's Rule Graduated in Common Fractions of an Inch to Measure a Dimension

Self Review 2

Segment 3 - Tape Measure

Objective 9 - Describe the Function and Construction of a Tape Measure

Objective 10 - Describe How to Use a Tape Measure to Measure a Length

Skill 4 - Use a Tape Measure to Measure a Length

Objective 11 - Describe Four Sources of Measurement Error

Self Review 3

Segment 4 - Measurement Conversion

Objective 12 - Describe How to Convert Measurements Made in Common Fractions to Decimal Inches

Skill 5 - Convert between Common Fraction Inches and Decimals

Objective 13 - Describe How to Convert between the US Customary System and the SI Metric System

Skill 6 - Convert between US Customary Units and SI Metric Units

Self Review 4

2. Precision Measurement Tools

Segment 1 - Dial Caliper

Objective 1 - Describe the Function of a Precision Measurement Tool and Give an Example

Objective 2 - Describe the Function of a Dial Caliper and Give an Application
Objective 3 - Describe How to Use a Dial Caliper
Activity 1 - Dial Caliper Operation
Skill 1 - Calibrate a Dial Caliper
Skill 2 - Use a Dial Caliper to Measure an Outside Dimension of a Part
Skill 3 - Use a Dial Caliper to Measure an Inside Dimension of a Part
Objective 4 - State the Typical Accuracy of a Dial Caliper Measurement and Explain What Affects It
Self Review 1

Segment 2 - Digital Caliper

Objective 5 - Describe the Function of a Digital Caliper and Give an Application
Objective 6 - Describe How to Use a Digital Caliper
Activity 2 - Digital Caliper Operation
Objective 7 - State the Typical Accuracy of a Digital Caliper and Explain What Affects It
Skill 4 - Use a Digital Caliper to Measure an Outside Dimension of a Part
Skill 5 - Use a Digital Caliper to Measure an Inside Dimension of a Part
Self Review 2

Segment 3 - English Micrometer

Objective 8 - Describe the Function of a Micrometer and Give an Application
Objective 9 - Describe How to Use an Outside Micrometer
Activity 3 - Micrometer Operation
Skill 6 - Use an Outside Micrometer Graduated in English Units to Measure the Outside Dimension of a Part
Self Review 3

Segment 4 - Metric Micrometer

Skill 7 - Use an Outside Micrometer Graduated in Metric Units to Measure the Outside Dimension of a Part
Skill 8 - Use a Micrometer to Measure the Outside Diameter of a Cylindrical Part
Objective 10 - State the Typical Accuracy of an Outside Micrometer and Explain What Affects It
Activity 4 - Analysis of Measurement
Self Review 4

3. Dimensional Gauging

Segment 1 - Introduction to Gauging

Objective 1 - Define a Tolerance and Explain Its Importance
Objective 2 - Describe the Function of Two Methods of Gauging and Give an Application of Each
Objective 3 - Describe the Function of Two Types of Indicators and Give an Application of Each
Objective 4 - Describe How to Use a Dial Indicator to Measure a Dimension
Activity 1 - Dial Indicator Operation
Self Review 1

Segment 2 - Indicator Measurement

Objective 5 - Describe the Function of a Gauge Block
Activity 2 - 1-2-3 Gauge Block Inspection
Objective 6 - Describe the Function of Mastering
Skill 1 - Master a Dial Indicator
Skill 2 - Measure a Dimension Using a Dial Indicator
Objective 7 - Describe How to Use a Digital Indicator to Measure a Dimension
Objective 8 - Describe the Function of a Gauge Fixture and Give an Application
Self Review 2

Segment 3 - Data Collection

Objective 9 - Describe Three Ways to Collect Process Data and Give an Advantage of Each
Skill 3 - Collect and Display Data Using Data Acquisition Software
Skill 4 - Delete a File
Self Review 3

4. Introduction to SPC

Segment 1 - Basic Statistical Concepts

Objective 1 - Define the Function of Statistical Process Control and Give an Application

Objective 2 - Define Two Types of Variation and Explain Their Importance

Skill 1 - Identify the Type of Variation Given a Cause

Objective 3 - Define Central Tendency and Explain How It Is Used

Objective 4 - Define Three Statistical Process Control Measures

Skill 2 - Calculate the Mean of a Set of Data

Skill 3 - Calculate the Range of a Set of Data

Self Review 1

Segment 2 - Histogram Construction

Objective 5 - Describe the Function of a Histogram and Give an Application

Objective 6 - Describe How to Manually Construct a Histogram

Skill 4 - Manually Construct a Histogram Given a Set of Data

Self Review 2

Segment 3 - SPC Software

Objective 7 - Describe How to Create a Histogram Using SPC Software

Skill 5 - Construct a Histogram Using SPC Software

Objective 8 - Describe the Function of a Historical Data Set

Skill 6 - Open and View a Historical Data Set

Skill 7 - Delete a Product File Using SPC Software

Self Review 3

Segment 4 - Histogram Analysis

Objective 9 - Describe How to Analyze a Histogram

Skill 8 - Analyze a Histogram

Self Review 4

5. Control Chart Operation

Segment 1 - Introduction to Control Charts

Objective 1 - Describe the Function of a Control Chart and Explain Its Importance

Objective 2 - Define Two Types of Data

Skill 1 - Classify Types of Given Data

Self Review 1

Segment 2 - X-Bar and R Chart Operation

Objective 3 - Describe the Function of Two Types of Control Charts and Give an Application of Each

Objective 4 - Describe the Construction of an X-Bar and R Chart

Objective 5 - Describe How to Record Data on an X-Bar and R Chart

Skill 2 - Manually Record Process Data on an X-Bar and R Chart

Self Review 2

Segment 3 - SPC Software

Objective 6 - Describe How to Create a Control Chart Using SPC Software

Skill 3 - Use SPC Software to Record and Display Process Data on an X-Bar and R Chart

Self Review 3

6. Control Chart Analysis

Segment 1 - Control Chart Setup

Objective 1 - Describe How to Construct an X-Bar and R Chart

Skill 1 - Manually Construct an X-Bar and R Chart

Skill 2 - Construct an X-Bar and R Chart Using SPC Software with Keyboard Entry

Self Review 1

Segment 2 - Data Import

Skill 3 - Construct an X-Bar and R Chart Using SPC Software with Gauge Input

Self Review 2

Segment 3 - Control Chart Analysis

Objective 2 - Describe How to Apply Control Charts to Process Operation

Objective 3 - Describe How to Analyze a Control Chart

Objective 4 - Describe How to Analyze an X-Bar and R Chart

Skill 4 - Analyze an X-Bar and R Chart

Self Review 3

7. Geometric Dimensioning and Tolerancing

Segment 1 - General Tolerancing

Objective 1 - Define Two Types of Conventional Tolerances and Explain How They Are Shown on a Drawing

Skill 1 - Determine If a Part Dimension Is within Tolerance Using Conventional Tolerancing

Objective 2 - Define a Maximum Material Condition

Objective 3 - Define a Least Material Condition

Objective 4 - Explain How Tolerance Notes Are Used

Skill 2 - Calculate the Limits of a Dimension Given Its Tolerance

Self Review 1

Segment 2 - Assembly Tolerances

Objective 5 - Define Two Types of Fits

Skill 3 - Determine the Type of Fit between Two Mating Parts

Objective 6 - Define Baseline Dimensioning and Give an Advantage

Skill 4 - Identify Baseline Dimensions

Objective 7 - Define a Feature

Objective 8 - Define a Feature of Size

Self Review 2

Segment 3 - Fundamentals of Geometric Dimensioning and Tolerancing

Objective 9 - Define Geometric Dimensioning and Tolerancing

Objective 10 - Define Five Types of Geometric Features

Objective 11 - Define a Datum and a Datum Feature and Explain Their Importance

Objective 12 - Define a Datum Reference and Give Its Symbol

Objective 13 - Describe How to Place a Datum Feature Symbol on a Drawing

Skill 5 - Identify the Correct Datum to Use as a Reference Point

Self Review 3

Segment 4 - Feature Control Frames

Objective 14 - Describe the Functions of the Three Parts of a Feature Control Frame

Objective 15 - Describe How to Place a Feature Control Frame on a Part Drawing

Skill 6 - Select a Feature Control Frame for a Part Drawing

Objective 16 - Describe Four Reasons Why GD&T Is Used

Self Review 4

8. Location Tolerances

Segment 1 - Introduction to Location Tolerances

Objective 1 - Define a Location Tolerance and List Three Types

Objective 2 - Define Conventional Position Tolerancing and Give a Disadvantage

Objective 3 - Define a Position Tolerance and Give Its Geometric Symbol

Objective 4 - Define a Basic Dimension and Explain How It Is Used

Objective 5 - Describe How to Interpret a Position Tolerance and Give an Application

Objective 6 - Describe How to Interpret a Material Condition Modifier Used in a Feature Control Frame

Objective 7 - Describe How to Convert a Drawing from Conventional Tolerancing to Position Tolerancing

Skill 1 - Convert a Drawing with a Conventional Tolerance to a Drawing with a Position Tolerance

Objective 8 - Describe How to Use Position Tolerances for the Location of Multiple Features

Self Review 1

Segment 2 - Calculating Position Tolerances

Objective 9 - Describe How a Bonus Tolerance Is Created with Position Tolerancing

Objective 10 - Describe How to Calculate a Position Tolerance

Skill 2 - Calculate the Actual Position Tolerance of a Feature

Objective 11 - Describe How to Determine If a Produced Hole Is within Tolerance

Skill 3 - Determine If a Produced Hole Is within Tolerance Given Data

Self Review 2

Segment 3 - Measuring Hole Locations

Objective 12 - Explain How the Datum Precedence Is Used

Objective 13 - Describe How to Measure Hole Location
Skill 4 - Use a Small-Hole Gauge to Measure the Diameter of a Hole
Skill 5 - Determine If a Hole Meets Position Tolerance
Self Review 3

9. Orientation Tolerances

Segment 1 - Parallelism Tolerances

Objective 1 - Define an Orientation Tolerance and List Three Types
Objective 2 - Define a Parallelism Tolerance and Give Its Geometric Symbol
Objective 3 - Describe How to Interpret a Parallelism Tolerance of a Surface
Objective 4 - Describe an Application Where the Control of Parallelism Is Important
Self Review 1

Segment 2 - Perpendicularity Tolerances

Objective 5 - Define a Perpendicularity Tolerance and Give Its Geometric Symbol
Objective 6 - Describe How to Interpret a Perpendicularity Tolerance of a Surface
Objective 7 - Describe How to Measure the Perpendicularity of a Rectangular Part
Skill 1 - Measure the Perpendicularity of a Rectangular Part
Skill 2 - Determine If a Rectangular Part Meets a Perpendicularity Tolerance
Objective 8 - Describe an Application Where the Control of Perpendicularity Is Important
Self Review 2

Segment 3 - Full Indicator Movement Measurement

Objective 9 - Define Full Indicator Movement and Explain How It Is Used
Skill 3 - Measure Full Indicator Movement of a Shaft Surface
Objective 10 - Describe How to Measure Parallelism of a Rectangular Part
Skill 4 - Measure Parallelism of a Rectangular Part
Skill 5 - Determine If a Rectangular Part Meets a Parallelism Tolerance
Self Review 3

10. Form Tolerances

Segment 1 - Straightness Tolerances

Objective 1 - Define a Form Tolerance and List Four Types
Objective 2 - Define a Straightness Tolerance and Give Its Geometric Symbol
Objective 3 - Describe How to Interpret a Straightness Tolerance of a Surface and Give an Application
Objective 4 - Describe How the Surface Straightness of a Shaft Is Measured
Skill 1 - Measure the Straightness of a Shaft Using an Indicator
Skill 2 - Determine If a Part Meets a Surface Straightness Tolerance Given a Specification
Self Review 1

Segment 2 - Circularity Tolerances

Objective 5 - Define a Circularity Tolerance and Give Its Geometric Symbol
Objective 6 - Describe How to Interpret a Circularity Tolerance and Give an Application
Objective 7 - Describe How Circularity of a Shaft Is Measured
Skill 3 - Measure the Circularity of a Shaft Using an Indicator
Skill 4 - Determine If a Part Meets a Circularity Tolerance Given a Specification
Self Review 2

Segment 3 - Cylindricity Tolerances

Objective 8 - Define a Cylindricity Tolerance and Give Its Geometric Symbol
Objective 9 - Describe How to Interpret a Cylindricity Tolerance and Give an Application
Objective 10 - Describe How to Measure Cylindricity of a Shaft
Skill 5 - Measure the Cylindricity of a Shaft Using an Indicator
Skill 6 - Determine If a Part Meets a Cylindricity Tolerance Given a Specification
Self Review 3

11. Calibrating and Mastering Gauges

Segment 1 - The Purpose of Gauges

Objective 1 - Define Gauges and Give Examples
Objective 2 - Describe the Purpose of Gauges in Manufacturing

Objective 3 - Discuss Two Types of Gauges Used in Manufacturing

Segment 2 - Calibrating and Mastering Gauges

Objective 4 - Describe the Three Components of the Measurement System Cycle

Objective 5 - Describe the Importance of Gauge Calibration

Objective 6 - Describe the Employee's Role in the Calibration Process

Objective 7 - Describe the Importance of Gauge Mastering

Objective 8 - Describe the Importance of Product Measurement

12. Variable Gauges and Micrometers

Segment 1 - Using Variable Analog Gauges

Objective 1 - Describe the Construction of a Variable Analog Gauge

Objective 2 - Describe the Components of an Analog Indicator

Objective 3 - Describe How to Read an Analog Indicator Primary Needle

Objective 4 - Describe How to Read Analog Indicator Secondary Needles

Objective 5 - Describe Two Analog Indicator Measurement Scale Styles

Objective 6 - Describe How to Measure a Part with an Analog Indicator

Segment 2 - Using Variable Digital Gauges

Objective 7 - Describe the Common Components of Digital Variable Gauges

Objective 8 - Describe How to Use a Digital Indicator

Objective 9 - Describe How to Use Digital Calipers

Segment 3 - Using Micrometers

Objective 10 - Define Micrometer and List Two Types

Objective 11 - Describe the Construction of an Outside Micrometer

Objective 12 - Describe How to Read a Micrometer

Objective 13 - Describe How to Use a Micrometer to Measure a Part

Objective 14 - Describe the Construction of a Depth Micrometer

Objective 15 - Describe How to Read a Depth Micrometer

13. Plug Gauges, Thread Gauges and Attribute Gauges

Segment 1 - Using Go / No-Go Plug Gauges

Objective 1 - Define Go/No-Go Plug Gauges

Objective 2 - Describe the Components of a Go/No-Go Plug Gauge

Objective 3 - Demonstrate How to Use Diameter and Depth, and No-Go Plugs

Objective 4 - Describe the Function of a Go/No-Go Plug Handle

Objective 5 - Describe the Proper Care of Go/No-Go Gauges

Segment 2 - Using Thread Gauges

Objective 6 - Describe a Go/No-Go Thread Gauge and Explain Its Function

Objective 7 - Describe the Components of a Thread

Objective 8 - Describe the Major Components of a Go/No-Go Thread Gauge

Objective 9 - Describe a Go/No-Go Thread Gauge with Variable Depth Measurement

Segment 3 - Using Attribute Gauges

Objective 10 - Describe the Function of an Attribute Gauge and List Three Types

Objective 11 - Describe the Construction and Operation of a Flush Pin Gauge

Objective 12 - Describe the Function and Operation of a Functional Gauge

Objective 13 - Describe the Function and Operation of a Snap Gauge

Objective 14 - Describe the Proper Care of Functional Gauges

Objective 15 - Proper Care and Storage of Gauges

14. Surface Plates

Objective 1 - Describe a Surface Plate and Explain Its Importance

Objective 2 - Describe the Materials Used to Make Surface Plates

Objective 3 - Describe How Surface Plates Are Specified

Objective 4 - Describe Four Styles of Surface Plates

Objective 5 - Describe How Surface Plates Are Supported

Objective 6 - Describe How Surface Plates Are Calibrated

Objective 7 - Describe How to Use and Maintain a Surface Plate

15. Gauge Blocks

- Objective 1 - Define Gauge Blocks and Explain Their Use
- Objective 2 - Describe Common Gauge Block Shapes and Materials
- Objective 3 - Explain Gauge Block Specifications
- Objective 4 - Describe the Characteristics of Gauge Block Sets
- Objective 5 - Describe Five Types of Gauge Block Sets
- Objective 6 - Describe Wear Blocks and Other Gauge Block Accessories
- Objective 7 - Describe the Gauge Block Wringing Process
- Objective 8 - Describe How to Build a Gauge Block Stack

16. Test Indicators

- Objective 1 - Describe a Test Indicator and Explain Its Use
- Objective 2 - Describe Test Indicator Components and Construction
- Objective 3 - Describe How to Set Test Indicator and Contact Tip Angles
- Objective 4 - Describe How to Read a Test Indicator Face
- Objective 5 - Describe How to Select the Proper Test Indicator for an Application
- Objective 6 - Describe How to Set a Test Indicator
- Objective 7 - Describe How to Minimize Test Indicator Measurement Errors

17. Height Gauges

- Objective 1 - Describe the Components of a Height Gauge
- Objective 2 - Describe Three Types of Height Gauge Indicators
- Objective 3 - Describe Two Height Gauge Measurement Methods
- Objective 4 - Describe Four Types of Height Gauge Accessories
- Objective 5 - Describe How to Read a Vernier Scale

18. Introduction to Optical Comparators

Segment 1 - Introduction to Optical Comparators

- Objective 1 - Define an Optical Comparator and Explain Its Function
- Objective 2 - Provide a Brief History of Optical Comparators
- Objective 3 - Describe the Operation of an Optical Comparator
- Objective 4 - Describe Two Types of Optical Comparators
- Objective 5 - Explain the Advantages and Disadvantages of an Optical Comparator

Segment 2 - Optical Comparator Components and Use

- Objective 6 - Describe the Components of an Optical Comparator
- Objective 7 - Describe Lens Magnification and Field of View
- Objective 8 - Describe Optional Equipment Used with Optical Comparators
- Objective 9 - Describe the Uses of an Optical Comparator

19. Comparative Bore Gauges

Segment 1 - Types of Bore Gauges

- Objective 1 - Describe Bores and Cylinders
- Objective 2 - Describe Bore Gauge Uses, Accuracy, and Measurement Methods
- Objective 3 - Describe Two Styles of Comparative Bore Gauges

Segment 2 - Comparative Bore Gauge Construction and Setting Masters

- Objective 4 - Describe the Construction of Comparative Bore Gauges
- Objective 5 - Describe a Setting Master and Discuss Four Types
- Objective 6 - Describe Proper Care and Maintenance for Bore Gauges

Segment 3 - How to Use Comparative Bore Gauges

- Objective 7 - Describe How to Measure a Part with a Fixed Size Indicating Bore Gauge
- Objective 8 - Describe How to Measure a Part with an Adjustable Size Indicating Bore Gauge

20. Introduction to Air Gauging

Segment 1 - Introduction to Air Gauging

- Objective 1 - Define Air Gauging and Describe How It Operates
- Objective 2 - Provide a Brief History of Air Gauging
- Objective 3 - Describe Four Types of Air Gauging Systems
- Objective 4 - Describe Eight Measurement Types Performed with Air Gauging

Segment 2 - Air Gauge Components, Use, and Calibration

Objective 5 - Describe the Major Components of an Edmunds Accusetter Air Gauge

Objective 6 - Describe the Components of an Air Plug

Objective 7 - Describe the Components of a Measurement Console

Objective 8 - Describe How an Air Gauge Takes a Measurement

Objective 9 - Describe How to Calibrate an Accusetter Air Gauge

21. Specialty Micrometers**Segment 1 - Specialty Micrometer Components and Calibration**

Objective 1 - Describe the Components of Specialty Micrometers

Objective 2 - Describe the Calibration Process for Specialty Micrometers

Segment 2 - Micrometers Classified by Special Anvils or Spindles

Objective 3 - Describe the Use and Care of Spherical-Face Micrometers

Objective 4 - Describe the Use and Care of Blade Micrometers

Objective 5 - Describe the Use and Care of Point Micrometers

Objective 6 - Describe the Use and Care of Disc Micrometers

Objective 7 - Describe the Use and Care of Spline Micrometers

Objective 8 - Describe the Use and Care of Tubing Micrometers

Objective 9 - Describe the Use and Care of Thread Micrometers

Objective 10 - Describe the Use and Care of V-Anvil Micrometers

Segment 3 - Micrometers Classified by Shape or Special Features

Objective 11 - Describe Two Types of Micrometers Classified by Shape

Objective 12 - Describe Two Types of Special Feature Micrometers

22. Surface Texture and Hardness Testing**Segment 1 - Surface Texture**

Objective 1 - Define Surface Texture and Explain Its Importance

Objective 2 - Describe Four Characteristics of Surface Texture

Objective 3 - Describe Five Types of Surface Texture Symbols

Segment 2 - Profilometers

Objective 4 - Describe a Profilometer and Explain its Use

Objective 5 - Describe the Construction of a Profilometer

Objective 6 - Describe Two Types of Profilometers

Objective 7 - Describe the Operation of a Profilometer

Segment 3 - Hardness Testing

Objective 8 - Define Hardness and Provide Application Examples

Objective 9 - Describe Four Types of Hardness Testing

Objective 10 - Describe Three Common Methods of Indentation Testing

Objective 11 - Describe the Construction of a Rockwell Hardness Tester

23. Quality Systems Overview

Define the terms quality and quality management system

Understand the history of quality management systems

Identify the benefits of quality management systems to your company, you and your customers

24. Quality Tools**Segment 1 - Introduction to Quality Tools**

Objective 1 - List and Describe the Function of the Seven Quality Tools

Objective 2 - Describe the Function and Construction of Three Types of Cause and Effect Diagrams

Objective 3 - Describe How to Construct a C&E Diagram

Skill 1 - Construct a C&E Diagram Given a Set of Causes

Segment 2 - Brainstorming

Objective 4 - Define Brainstorming and Explain How It Is Related to Cause and Effect Diagrams

Objective 5 - Describe the Six Basic Steps of the Brainstorming Process

Objective 6 - Describe Six Methods to Improve the Results of the Brainstorming Process

Skill 2 - Create a Cause and Effect Diagram as Part of a Brainstorming Process

Segment 3 - Pareto Diagram

Objective 7 - Identify and Describe the Function of the Two Parts of a Pareto Diagram

Objective 8 - Define Pareto Analysis

Objective 9 - Describe the Five Steps Used to Manually Construct a Pareto Diagram

Skill 3 - Manually Construct a Pareto Diagram

Segment 4 - Introduction to Six Sigma

Objective 10 - Describe the Six Sigma Quality System

Objective 11 - Describe How to Handle a Non-Conforming Product

Segment 5 - Quality Audits

Objective 12 - Describe a Quality Audit

Objective 13 - Describe the Function of a Product Quality Audit

Objective 14 - Describe the Function of a Process Quality Audit

Objective 15 - Describe the Function of a Quality System Audit