Basic SPC Course Outline

UNIT 1 STATISTICS PRIMER

Lesson 1 | Introduction to Variation

- What variation is and why it's a problem in manufacturing.

Lesson 2 | Measuring Variation

- Using a histogram to measure the variation in a process.

Lesson 3 | Patterns of Variation

- Types of patterns of variation, what they tell you, and what to do about them.

Lesson 4 | Measures of Variation

- Statistical measures of variation: Mean, range, and standard deviation.

Lesson 5 | Normal Curve

- Properties of the normal curve and the 68, 95, 99.7 rule.

Lesson 6 | Stability

- The importance of a stable process in manufacturing.

Unit Challenge

- An assessment of the learner's progress in this unit.

UNIT 2 USING CONTROL CHARTS

Lesson 1 | What are Control Charts

- What control charts are and why they are used.

Lesson 2 | What a Control Chart Looks Like

- Common elements of all control charts.

Lesson 3 | Interpreting Control Charts & Taking Action

- Out-of-control patterns and what to do when they occur.

Lesson 4 | Types of Control Charts

- Variable and attribute control charts: Which do you use when?

Lesson 5 | Using Variable Control Charts

- Calculating and plotting data on variable control charts and interpreting the chart.

Lesson 6 | Using Attribute Control Charts

- Calculating and plotting data on attribute control charts and interpreting the chart.

Unit Challenge

- An assessment of the learner's progress in this unit.

UNIT 3 PROCESS CAPABILITY BASICS

Lesson 1 | What is Process Capability

- What process capability means and why it's important.

Lesson 2 | Measuring Process Capability

- The capability ratio, process capability index, and Cpk.

Unit Challenge

- An assessment of the learner's progress in this unit.