

Statistical Process Control (SPC)

“Understanding variation is the key to success in quality and business.” –Dr. W. Edwards Deming

Statistical Process Control (SPC) is a tool to help us understand what type of variation is present in our processes and how we should react to it. SPC can help us eliminate special causes of variation in order to make a processes stable and therefore, predictable. A predictable process can be evaluated against customer requirements and determined to be capable of meeting requirements or identified as requiring improvement. We can determine this need before the customer ever sees a nonconforming product. Monitoring and controlling processes with SPC can ensure conformance to customer requirements. Using this tool can help us better understand our processes and the sources of variation present in order to satisfy our internal and external customers.

This class will teach participants to:

- Understand why control charts are an essential tool to understand variation.
- Apply SPC charts to monitor and control processes
- Evaluate capability of a process and calculate capability indexes.
- Calculate % out of specification using the standard normal distribution table.

Workshop Content:

- Quality as defined by the Customer
- Process Focus
- Variation and Its Sources
- Prevention vs. Detection
- Control Chart Approach to Variation
- Common and Special Causes
- Measures of Central Tendency & Variation
- Interpretation of Control Charts
- 3 Sigma Limits
- In-Control (Stable) vs. Out of Control
- Tests for Out-of-Control conditions
- Process Capability
- Calculating Cp, Cpk, Pp, Ppk & % Out-Of-Specification
- Interpretation of results