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## **Statistics for Engineers (Control Charts, Gauge R&R, DOE, SPC, six-sigma, Cp/Cpk)**

### **Course Overview**

This course introduces attendees to the basic toolkit for applying statistical techniques to their engineering projects and problems. As well as covering the fundamental theory of how and when to apply statistical descriptions to distributions, it also discusses using worked case studies the application of statistical methods to manufacturing issues to determine process capability, excursion prevention, corrective action and other responses. This course serves both as a good introduction for new engineering hires and equally as a refresher for experienced manufacturing engineers looking for ways to improve their key operational metrics using a statistical approach.

### **Topics Covered**

Precision vs. Accuracy vs. Resolution; Basic Charting; Control Charts; Confidence Levels; Hypothesis Testing; Specification Limit vs. Statistical Limit; Standard Deviation & Process Capability; Types of Distributions; SPC vs. Maverick Control Implementation (Outlier Elimination); Gauge R&R; Components of Variance; Design of Experiments; Multifactorials; Correlation & Regression Analysis.

### **Who Should Attend**

Manufacturing Engineering Staff  
Product/Test Engineers  
Quality & Reliability Engineers  
Design Engineers  
Engineering Managers

### **Course Duration**

1-2 days (tailored to suit)