



Course ID: P2165

GENERAL DESCRIPTION:

Provide a basic understanding of a measuring system analysis, and how it can be used and what are the benefits. Understanding the major changes associated with MSA 3rd Edition manual by AIAG. How the MSA program integrates with the APQP process.

CONTENT OVERVIEW:

- **The Measurement Process**
 - SPC and the measurement system
 - Sources of variation and their effect
- **Measurement, Strategy and Planning**
 - Effect of decisions; Product, Process, Acceptance and Control
- **Measurement Source Development**
 - Datum's, prerequisites and assumptions
 - Gauge source selection process
 - Evaluations; Quotations, documentation, deliverables, suppliers, customer and delivery
- **Measurement Issues**
 - Variation; Types, location & sources
- **Measurement Uncertainty**
 - Traceability
- **Measurement Problem Analysis**
- **Practices for Simple Measurement Systems**
 - Guidelines
 - Variable Measurement Systems
 - Types of charts
 - Attribute Measurement Systems
 - Risk Analysis

MSA 3rd Edition (AIAG)
Introduction to Measurement System Analysis
– a 1-day Workshop



- **Practices for Complex Measurement Systems**
 - Stability Studies
 - Variable studies
 - GR&R Studies
- **Other Measurement Concepts**
 - Effect of excessive within part variation
 - Gauge performance
 - Reducing variation
 - Impact of GR&R on capability

DURATION/SCHEDULE:

- 1 day of instruction, discussion, and assignments/workshops
- Classroom hours are typically 8:00 a.m. - 12:00 p.m. and 1:00 p.m. - 5:00 p.m.

STUDENT MATERIALS:

- AIAG Reference Manual: Measurement System Analysis
- Student workbook
- Additional handouts as appropriate