



Lean Six Sigma for Production Operations “Measure”

4 Days

Audience and Purpose:

This course is designed for those individuals working directly on Six Sigma projects and serving as Black Belts or Green Belts. It is assumed they come from a variety of backgrounds and disciplines and will be working on a variety of projects across the company. Tools and examples are in direct support of manufacturing and production operations.

Course Objectives:

Upon completion of the course, the participants will be able to:

1. Establish metrics and performance standards for the Company's key business and production processes
2. Develop a data collection plan associated with the key metrics and project charter
3. Apply QFD analysis to measurement selection
4. Develop operational definitions for Xs and Ys and associated data tags
5. Determine appropriate sample sizes for the project
6. Validate the data collection plan and associated measurement method
7. Assess measurement, gauge and inspection capability
8. Use the data to establish performance baselines and capability

Course Outline:

Section I

Determine Critical Xs and Ys

Identify needed Project Metric(s)
Determine frequency of reporting
Normalization of the metric where needed
Determine critical Xs and Ys for root cause analysis
Link metrics to CTQ's and prioritize Xs and Ys

Section II

Determine Operational Definitions

List every project metric, X and Y
Determine Operational Definitions
Determine additional data tags required

Section III

Establish Performance Standards

List every project metric, X and Y
Determine the performance standards for all Xs and Ys
Define the Unit and Opportunity for defects

Section IV

Understand Foundation Statistics

Summary statistics



Confidence intervals

Section V

Develop Data Collection and Sampling Plan

Review and clarify data collection goals
Establish data collection method
Determine sampling plan
Finalize your data collection plan

Section VI

Conduct Measurement Systems Analysis

MSA for Variables
MSA for Attributes

Section VII

Determine Process Capability and Baseline

Collecting the data
Basic graphical summary tools
Measures of process capability
Evaluating performance goals

Section VIII

Process Modeling

Adding data to the process map
iGrafx Process Modeler for Six Sigma