



Six Sigma Way for Making Business Decisions with Statistical Inference

Objectives

Participants will learn the concept of statistical inference, that is, how we draw a business decision and conclusion about an unknown population based on evidence from a sample (such as survey data, customer data, product quality information, etc.), and how we incorporate the uncertainty inherent whenever a sample is used.

Course Contents

This program covers the different elements of statistical inference including random sampling, sampling error, normal populations, confidence intervals, and hypothesis testing.

We develop confidence intervals for proportions, means and the difference between two means. Lastly, we see how hypothesis testing may be used as an alternative to confidence intervals to provide valid statistical inferences from a sample. Data analysis software will be used to solve and analyze problems.



Course Outlines

1. Population, Variable, Parameter, Sample, and Estimate.
2. Simple Random Sample.
3. Normal Population Model.
4. NORMDIST and NORMINV
5. Uncertainty in a Point Estimate.
6. Confidence Interval and its Meaning.
7. Hypothesis Testing: Confidence Intervals, p-values and its business applications.

Designed For

Managers, supervisors and professionals involved in data analysis, forecasting & planning, quality assessment or process improvements.

When first introduced at Motorola, Six Sigma was used extensively to improve product quality, mostly in manufacturing settings. The New Six Sigma is a management system for running the business on a day-to-day basis (Source: Motorola University). For the common purpose, this training is open for every manager and professional from different departments, businesses and industries as we will exercise the six sigma tools in a variety of business application scenarios.