



Business Statistics & Data Analysis

(24 hours)

Audience and Purpose:

Course is for Marketing, Sales, HR, Business Analysis, and Managers who routinely analyze data for business application. Areas of focus include statistics, distribution analysis, capability assessment, graphing, trend analysis, comparison tests, sample size selection and pareto analysis.

Software: JMP

Prerequisites: None

Course Objectives:

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

1. Use data to solve business and transactional problems
2. Understand the ideas associated with sampling and data collection
3. Demonstrate the ability to evaluate distributions
4. Select appropriate sample sizes for performance evaluation
5. Conduct comparative tests using data
6. Use regression techniques in order to analyze the data and make business process improvements
7. Select appropriate analysis technique based on type of data

Course Outline:

Section I: Introduction to the Analytical Software (JMP)

Table commands
Column commands
Row commands
Subset, Stack and Join commands
Saving data and graphs

Section II: Statistics Foundations & Distribution Analysis

Measures of center and spread
Standard error and central limit theorem
Normal distribution
Process capability (normal)
Non-normal distribution fitting and process capability
Trend analysis



Section III: Nominal X, Continuous Y

Sample size for the mean
t test - one sample
t test - two sample
One-way ANOVA
Customer satisfaction and non-parametric data analysis

Section IV: Continuous X, Continuous Y

Simple linear regression, correlation

Section V: Nominal X, Nominal Y

Test for proportion data
Contingency analysis for proportion data
Pareto graphs and analysis

Section VI: Continuous X, Nominal Y

Logistic regression