Hypothesis Testing

Course Description

This 1-day Hypothesis Testing course equips participants with the knowledge and skills to apply statistical hypothesis tests for making informed, data-driven decisions. Participants will learn how to select the appropriate test, interpret results, and draw valid conclusions that drive process improvements and business results.

Through practical exercises, case studies, and real-world examples, attendees will understand how hypothesis testing reduces guesswork, validates assumptions, and supports fact-based decision-making. The course emphasizes the financial benefits of hypothesis testing, including reducing costly trial-and-error approaches, improving process yields, eliminating unnecessary changes, and ensuring resources are invested in solutions with proven impact.

Course Objectives

Understand Hypothesis Testing Principles:
– Define hypothesis testing and its role in statistical analysis.
– Recognize key terms such as null hypothesis, alternative hypothesis, p-value, and significance level.

Select the Appropriate Test:
– Match the correct hypothesis test to data type and business question.
– Understand the difference between one-tailed and two-tailed tests.

Conduct and Interpret Tests:
– Perform common tests such as t-tests, chi-square, and proportion tests.
– Interpret results to make data-driven decisions.

Link Hypothesis Testing to Financial Performance:
– Quantify savings from avoiding ineffective solutions.
– Demonstrate ROI from fact-based process improvements.

Apply Hypothesis Testing in Continuous Improvement:
– Integrate testing into Lean Six Sigma and problem-solving projects.
– Use results to build business cases for change.

Training Format

– Day 1: Introduction to hypothesis testing concepts, selection of appropriate tests, conducting analyses, interpreting results, and linking findings to financial benefits.