
Lean Six Sigma Black Belt Boot Camp

Course Content

This five-day course is designed for business professionals with a college degree or those professionals who have significant experience in business operations. Also invited to attend are students who have completed a Green Belt program through an external vendor or through an in-house program.

This boot camp is an accelerated Lean Six Sigma Black Belt program and methodology that allows students to complete certification faster than traditional Six Sigma and Lean training programs.

Course Outline

1. Lean Six Sigma Introduction

- Introduction to Lean Six Sigma
- DMAIC Model
- Black Belt Roles & Responsibilities

2. Lean Six Sigma Leadership

- Stakeholder Management
- Tollgate Reviews
- Leading Teams
- Change Management
- Project Selection Strategies

3. Measure Phase

- Introduction to SPX XL software
- Measure Systems Analysis
- Sampling Strategies and Calculations
- Process Capability; DPMO Calculations
- Rolled Throughput Yield
- Charts: Histogram, Pareto, Box Plot and Scatter Plot
- Lean Metrics

4. Analyze Phase

- Generate Root Cause Hypothesis
- Validating Hypothesis
- Scientific Method and P-Values
- Statistical Testing: T-Tests, ANOVA
- Statistical Testing: Proportion Tests, Chi-Square
- Statistical Testing: Correlations and Regression

5. Improve Phase

- Lean Solutions Concepts
- Design and Experiments (DOE)
- Failure Modes and Effects Analysis (FMEA)
- Capturing Improvement Data

6. Control Phase

- Statistical Process Control
- Control Charts: C Chart, P Chart, X-bar & R Chart
- Project Communication and Replication

7. Your Black Belt Test