

Lean Six Sigma Black Belt

Overview

The accelerated lean Six Sigma Black Belt program and methodology allows students to complete certification requirements faster than traditional Six Sigma and Lean training programs. Successful candidates will be awarded the Lean Six Sigma Black Belt certification from Lean Sigma Corporation after passing the included Practicum certification exam. The certification exam is included in this course and you can take the exam at your convenience after passing section quizzes. You must complete the exam within 6 months of class. The exam requires the use of the MiniTab application. A free 30 day trial is available for student usage.

Prerequisites

- Lean Six Sigma Green Belt Boot Camp

Target Audience

This course is designed for business professionals with a college degree or those professionals who have significant experience in business operations. This course is also the next step for those who have earned the Lean Six Sigma Green Belt Certification. Also invited to attend are students who have completed a Green Belt program through an external vendor or through an in-house program.

Course Outline

1 - Lean Six Sigma Overview

Review Lean Six Sigma
DMAIC Model
Black Belt Roles and Responsibilities

2 - Lean Six Sigma Leadership

Stakeholder Management
Tollgate Reviews
Leading Teams
Change Management
Project Selection Strategies

3 - Measure Phase

Introduction to SPC XL software
Measurement 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

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

5 - Improve Phase

Lean Solution Concepts
Design of 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 - Black Belt Test