Lean Six Sigma Black Belt Online
Become an expert, professional problem-solver

LEAN METHODS GROUP

Course At-A-Glance

Appropriate For: Anyone desiring the skills of a Lean Six Sigma Black Belt, and those who seek to become professional problem solvers

Length: 1 year to complete course at own pace, 120 hours of instruction

Cost: $2,000

Software*: Minitab 1-year $550, Full $1,495

Minitab is required for this course.

CEUs: 12

About Lean Six Sigma Black Belt Online

Lean Six Sigma Black Belt training gives you the skills you need to lead teams through breakthrough improvements and achieve strategic objectives in any function or department of any organization.

Featuring the same world-class curriculum as the Lean Method Group's classroom version, this online course prepares future Black Belts to solve a wide variety of difficult problems across a wide spectrum of industries, including transactional, service, manufacturing and healthcare—drawing on both quantitative and qualitative methods from the complementary domains of Lean and Six Sigma and including creative-thinking modules for when out-of-the box thinking is required.

The Lean Six Sigma (LSS) Black Belt Online course is delivered through the Lean Method Group's interactive, HTML-based eLearning system, offering accessibility and ease of use across both desktop and mobile devices (closed captioning is available). Courses are complete with engaging visual content and animated modules, as well as activities and real-world case studies. Students master the learning modules at their own pace and in their own time.

> *"I like having the luxury of doing things at my own pace so eLearning is very convenient for me. I also like having the ability to review specific portions of the training to reinforce my understanding."*
>
> **–Robert Gray, Senior Analyst, Business Excellence, Turner Broadcasting Systems**

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Learning Objectives

Upon completion of this course, participants will be able to:

- Apply such Lean concepts as 5S, waste reduction, process mapping, value stream mapping and mistake proofing.

- Define, scope and execute DMAIC projects.

- Apply the DMAIC methodology to business issues and transition projects from phase to phase.

- Apply basic and more advanced statistical analyses to determine the relationship between key inputs and process outputs.

- Effectively manage team dynamics and understand how to work with multiple levels of leadership to remove barriers and achieve project success.

- Close projects and hand over control to process owners.

- Present projects to instructors, peers and managers.

Agenda

Define
Introduction to Lean Six Sigma
Introduction to Lean
Five Principles of Lean
Project Scoping
High Level Process Maps
Six Sigma Metrics
Project Definition
Creating Pareto Charts
Preparing to Manage Change
Introduction to Minitab
Introduction to Statistics
Building Teams
Six Sigma Roles and Phases
Six Sigma Literally Speaking (Optional)
Kano Analysis (Optional)
Job-To-Be-Done (Optional)
Outcome Expectations (Optional)
Job Scoping (Optional)

Measure
Leading and Communicating Change
Creating Awareness
Creating a Shared Need
Data Collection
Attribute Measurement Systems + Validation Checklist
Variable Measurement Systems - Level 2 + Validation Checklist
Mid-Level Process Maps
Current State Value Stream Maps
The Eight Types of Waste
Capability Analysis
Common Probability Distributions - Normal, Continuous, Discrete
Understanding Process Stability
Process Analysis Tools (Optional)

Analyze
Shaping a Vision/Mission
Building Commitment

Fishbone Diagrams
Building a C&E Matrix
Building a FMEA (Failure Modes & Effects Analysis)
5S
Flow
Spaghetti Diagrams
Understanding Graphs
Confidence Intervals
Hypothesis Testing
Simple Linear Regression & Correlation
Basic Tests of Hypothesis
Sample Size for Estimation
Sample Size for Hypothesis Testing - Theory, Practical
ANOVA - Analysis Variance
Contingency Tables & Chi-Square
Central Limit Theorem (Optional)
Mean & Variance Testing Supplement (Optional)

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Agenda - Continued

Improve

Keeping Change Momentum

Future State Value Stream Maps

Brainstorming Techniques

Mistake Proofing

Preventing Human Error

Pull

Kanban

Introduction to Design of Experiments (DOE)

Basic Factorial Experiments

Fractional Factorial Theory

Fractional Factorial Practical

Designed Experiments with Attribution Responses

Advanced Regression

Evaluating Solution Ideas

Creating a Pilot Plan

Generating Solution Ideas (Optional)

Introduction to Innovation (Optional)

Provocation and Movement (Optional)

Triz (Optional)

Control

Making Change Last

Building a Control Plan

Control Methods

Introduction to SPC

Constructing Control Charts

Plan-Do-Study-Act (PDSA)

Survey Design and Analysis

Project Closure

To register for this course, visit leanmethods.com/black-belt-online
or call +1 (303) 827-0010.