Lean Six Sigma Green Belt to Black Belt Upgrade
Streamlined Black Belt training for Green Belt practitioners

LEAN METHODS GROUP

Course At-A-Glance

Appropriate For: Green Belts who want to upgrade their skills and become Black Belts.

Length: 3 weeks (1 full week each month for 3 months), 108 hours of instruction

Cost: $7,500, €7,485, £6,590

CEUs: 10.8

Materials Included: Minitab statistical software license, access to eLearning content, including quizzes, exams, tools and templates.

Prerequisites: Green Belt status with basic knowledge of Lean and Six Sigma concepts and techniques, recommended reading

About Lean Six Sigma Green Belt to Black Belt Upgrade

This course develops Lean Six Sigma Green Belts into Black Belts who can solve more challenging problems and lead improvement teams across a wider spectrum of processes in any environment, including transactional, service, manufacturing, healthcare and financial.

Drawing on both quantitative and qualitative methods from the complementary domains of Lean and Six Sigma, this course prepares Lean Six Sigma (LSS) Black Belts for their role as change agents in training and mentoring Green Belts and other resources, facilitating and leading projects, supporting broader performance excellence efforts, and serving as internal consultants.

A differentiating aspect of this course is the inclusion of creative-thinking modules that can be used when out-of-the-box solutions are needed, as well as a focus on change leadership skills to drive and facilitate change.

Throughout the course, expert instructors with re-

"This course enabled me to upgrade from a Green Belt to a Black Belt with great proficiency and speed. The classroom experience and instructors were absolutely terrific, directly enabling me to apply what I learned to get immediate results on a project, and to keep solving process problems on an ongoing basis."

–Karry Kirchner, Siemens Industry, Inc.

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al-world experience vigorously challenge candidates. They transfer knowledge and skills through interactive lectures, group exercises, process and tool simulations, and individual exercises and the application of learning to a real improvement project in the workplace.

This upgrade course is purposefully spread out over a three-month time frame to give future Black Belts the time they need to achieve certification. Lean Methods Group master instructors are available via phone and email throughout the course to provide individualized coaching and mentoring as you apply the tools and skills in your organization.

Learning Objectives

Upon completion of this course, you'll 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 a variety of DMAIC tools 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

- Close projects and hand over control to process owners

- Present projects to instructors, peers and managers

Agenda

Week One
Review of Lean Six Sigma Green Belt
Project Charters/Workshop
Jobs to be Done
Outcome Expectations
Introduction to Minitab
Basic Statistics 2
Project Report Outs
Daily Teachbacks
Change Management
Project Report Outs
Value Stream Mapping Exercise
Project Management
Measurement System Analysis – Attribute Agreement Analysis
Measurement System Analysis – Continuous Data

Capability Analysis (1) – Attribute Data
Capability Analysis (2) – Continuous Normal Data
Capability Analysis (3) – Continuous Non-normal Data
Minitab Part 2
Preparation for Week 2

Week Two
Project Reviews
Hypothesis Testing Review
Minitab Graphical Techniques
Flow Review
Central Limit Theorem
Confidence Intervals
Pull Review

Mean & Variance Tests
Proportions Testing
Contingency Tables GOF
Sample Size Selection
Correlation/Linear Regression
One Way ANOVA
Improve Phase Roadmap
Intro to Design of Experiments (DOE)
Full Factorial Designs
Next Steps

Agenda (Continued)

Week Three

2K Factorial Designs

Attribute DOE

Project Reviews

2K Fractional DOE Designs

Simulation Exercise DMAIC / DOE

Introduction to Logistic Regression

Advanced Regression

Introduction to Control Charts

Variable SPC Techniques

Attribute SPC Techniques

Control Methods

Introduction to Surveys

DMAIC Review & Final Reports

Certification Requirements

To achieve certification, students must complete all coursework, pass all quizzes and exams, and complete one workplace improvement project.

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