



Lean Six Sigma Black Belt Training

Develop the skills you need to be a competent, data-driven practitioner

Black Belts are a critical component of every Performance Excellence program. They are change agents and leaders, project managers and problem solvers. Often the best and the brightest employees of an organization, Black Belts work full-time to solve chronic problems that plague company performance. Because they can have such a profound impact on a deployment and ultimately drive a company's success, it is critical that Black Belts receive the most comprehensive training available.



"I am very impressed with the public Black Belt class. BMGI has proven to be every bit as good as I expected."

— Derek Smith
Black Belt
ABB

Course Description

Breakthrough Management Group's Lean Six Sigma Black Belt program is focused on building competent, data-driven practitioners who have the skills to execute complex projects and lead organizational change.

This program has a dual focus on Lean and Six Sigma, giving students the critical knowledge to lead a variety of project types. The combination of waste-reducing Lean tools with statistically-sound Six Sigma techniques gives students the ability to drive organizational change effectively and ensure both quick wins and long-term, high-yield success. Students are provided with a comprehensive education, including how to select the right approach for a given project, and how to properly define, scope, lead and execute projects. The course also includes change leadership skills training, giving students the added edge they need to effectively manage, support and motivate teams to achieve their desired goals.

BMGI combines lectures with experiential learning exercises to maximize student comprehension. Throughout training, each candidate works on an actual business issue and applies the skills taught in the classroom to this real-world project. The program is technically challenging to ensure that all graduates learn how to implement solutions that produce financial results.

AT A GLANCE

Course Length

25 days over five months.

Who Should Attend

Anyone desiring the skills of a Lean Six Sigma Black Belt. Previous statistical experience is helpful but not required.

Course Includes

- ❑ 1 yr. access to online learning portal The Wizard for curriculum and project support (see reverse)
- ❑ Minitab Software (\$1095 value)
- ❑ Instructor mentoring for certification and project guidance.
- ❑ Certification including exams.
- ❑ Sigma XL Software (\$150 value)

Course Requirements

A laptop running Microsoft Office.

Certification Requirements

A passing grade on four exams, and a completed project.

CEUs

BMGI is authorized by IACET to offer 18 CEUs for this program.

Experience Expert Classroom Facilitation

BMGI's instructors boast an average of ten years experience leading successful Lean and Six Sigma projects inside major corporations. Regarded as some of the very best trainers in the world, all BMGI Master Black Belts are required to complete a rigorous certification process to demonstrate mastery of both methodologies.

How BMGI's Black Belt Program Works

The Black Belt program consists of five week-long sessions spread over five months. In between sessions, candidates work on an actual business project and apply classroom techniques to the project. The program is technically challenging to ensure that all graduates learn how to implement solutions that can produce financial results. Instructors provide feedback to participants in each phase. Students are also encouraged to schedule one-on-one mentoring sessions with their instructors to discuss specific project hurdles.

KEY LEARNING OUTCOMES

On completion of this course participants will be able to:

- ❑ Understand their role in the Lean Six Sigma community
- ❑ Apply Lean concepts such as 5S, waste reduction, Process Mapping, Value Stream Mapping and mistake proofing
- ❑ Use the DMAIC methodology to scope, define and lead projects
- ❑ Apply DMAIC to business issues and be able to transition projects from phase to phase
- ❑ Apply statistical analysis 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

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Agenda

BMGI dedicates multiple days to the project scoping and project definition phases of Lean Six Sigma. Students learn the basics of DMAIC in weeks one and two, then learn to solve problems using the more complex tools over the following weeks. When training is complete, students have the skills to effectively lead teams, work with senior leaders and drive projects to completion.

► Week One - DMA

- ❑ Lean Six Sigma Overview
- ❑ Lean Six Sigma Roadmap and Tools
- ❑ Selecting the Right Methodology
- ❑ Simulation Exercise (round 1)
- ❑ Project Definition and Scope
- ❑ Developing Project Objectives
- ❑ Developing Project Charters
- ❑ Defining Current State
- ❑ Process Mapping
- ❑ The 8 Types of Waste
- ❑ Identification of Value
- ❑ Value Stream Mapping
- ❑ Intro to Sigma XL
- ❑ Intro to Basic Statistics
- ❑ Delivery Simulation (round 2)
- ❑ Data Collection
- ❑ Measurement System Analysis
- ❑ Capability Analysis
- ❑ Meeting Facilitation Skills
- ❑ Project Planning

► Week Two - AIC

- ❑ Identify X's (Fishbone and C&E Matrix)
- ❑ Basic Process Analysis
- ❑ Graphical Data Analysis
- ❑ Statistical Data Analysis
- ❑ FMEA
- ❑ Generate and Evaluate Solutions
- ❑ Pilot and Implement Solutions
- ❑ Delivery Simulation (round 3)
- ❑ Control Plans
- ❑ Mistake Proofing
- ❑ Statistical Process Control
- ❑ Transition and Project Closure
- ❑ Change Leadership Fundamentals

► Week Three - Tools

- ❑ Assess your Learning Styles
- ❑ Review of LSS
- ❑ Review of LSS Roadmap & Tools
- ❑ Project Charters
- ❑ Advanced Basic Statistics

- ❑ Introduction to Minitab
- ❑ Define the "As Is" Process
- ❑ Measurement System Analysis
- ❑ Data Collection Methods
- ❑ Stability Analysis
- ❑ Capability Analysis
- ❑ Change Leadership

► Week Four - Tools

- ❑ Project Reviews
- ❑ Graphical Data Analysis
- ❑ Introduction to Hypothesis Testing
- ❑ Central Limit Theorem
- ❑ Confidence Intervals
- ❑ Means Testing
- ❑ Variance Testing
- ❑ Proportions Testing
- ❑ Contingency Tables
- ❑ Sample Size Selection
- ❑ One Way ANOVA
- ❑ Regression & Correlation
- ❑ Non-Normal Data Analysis Causes
- ❑ Non-Normal Solutions
- ❑ Non-Parametric Testing

► Week Five - Tools

- ❑ Project Reviews
- ❑ One Way ANOVA Review
- ❑ Introduction to Logistic Regression
- ❑ Advanced Regression
- ❑ Introduction to Design of Experiments (DOE)
- ❑ DOE - Full Factorials
- ❑ DOE - 2K Factorial Designs
- ❑ DOE - Randomized Block Design
- ❑ DOE - Center Points and Blocks
- ❑ DOE - Attribute DOE
- ❑ Solution Generation & Selection Review
- ❑ Control Charts
- ❑ Lean Tools Review
- ❑ Introduction to Statistical Process Control (SPC)
- ❑ Attribute SPC

Certification

Certification is awarded after students have completed five weeks of training, a qualifying project and has passed exams. For more information on this course and a schedule, visit us online.

The screenshot shows a 'Training Schedule' window with a list of activities. The activities include: Curriculum: Black Belt, Phase: Selection, Phase: Define, Module: Project Selection, Module: Project Definition, Lecture: Project Definition, Homework: Project Definition, Quiz: Project Definition, Module: Introduction to Minitab, Module: Introduction to Statistics, Module: Data Collection, Lecture: Define Phase, and Phase: Measure.

Ensure Black Belt Retention with the BMGI Wizard™

The BMGI Wizard is an online support portal featuring 25-hour access to templates, tools, project guidance and training materials.

Just log in to continue learning at any time to review material and chat live with a MBB. The Wizard is a complete online reference guide that includes:

- ❑ Lectures on any topic
- ❑ Sample homework, exercises and quizzes
- ❑ Case study materials and best practices information
- ❑ Training manuals and FAQs
- ❑ A chat room staffed with a live MBB for project guidance or training questions.

Only BMGI provides such robust support for its students!



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