



Six Sigma Black Belt Certification For Qualified Green Belts**

Description

Six Sigma is a disciplined, data-driven methodology for reducing variation in any process. The Six Sigma methodology--driven by the DMAIC (define, measure, analyze, improve, control) process--is executed by Six Sigma green belts, Six Sigma black belts, and overseen by Six Sigma master black belts. The black belt course has two distinct parts: the in-class portion and a project. The in-class portion consists of **THREE** full weeks of lectures, exercises and team-learning competitions. All of the statistical and quality tools needed to successfully complete a black belt project will be thoroughly presented so the student can return to his/her facility and readily apply them. (This course is Black Belt coursework only).

****Qualified Green Belts** – Attendee must have graduated from UAH-ATN Green Belt training OR must have Instructor permission. Contact Six Sigma Black Belt Instructor [Dr. Sampson Gholston](#)– before registering. 256.824.7310.

Objectives/Topics

- **Week One – For Qualified Green Belts**
 - Probability and Statistics
 - Properties and Applications of Prob. Dist.
 - Hypothesis Testing
 - Levels of Significance, Power, Type I & II Errors
 - Point and Interval Estimation
 - Correlation Analysis
 - Simple Linear and Multiple Regression

- **Week Two – For Qualified Green Belts**
 - Design of Experiments (DOE)
 - Randomized Blocks
 - Full Factorial Experiments
 - 2-Level Fractional Factorial Experiments
 - Mixture Experiments
 - Response Surface Methodology
 - DOE Exercises and Competition

- **Week Three – For Qualified Green Belts**
 - Apply Financial Benefits
 - Advanced SPC
 - Analysis of Control Charts
 - Implementation of Control Charts
 - Lean Enterprise/Lean Tools
 - Design for Six Sigma
 - Managing Change in the Organization

Simulations/Exercises/Application Techniques

In addition to lecture material, this course utilizes various forms of hands-on simulations, exercises, and case studies to demonstrate Six Sigma concepts. The course also utilizes and demonstrates the use of Minitab software applications for statistical analysis.

Certification

Six Sigma Black Belt Certification requires the successful completion of a project in a real-world environment. The project must be approved by the instructor, will be implemented over the course of the training, and should demonstrate the application of black belt-level Six Sigma tools.

Course Length

3 weeks (1 week per month spread out over 3-6 month timeframe)

Class Size

6-20 Classes that do not meet the minimum attendee requirements may be cancelled or rescheduled.

Cost

Open Enrollment training: \$4000 per person + \$85 materials fee (Total = \$4085)

Plus: Minitab Statistical Software is required. If you do not own this software, a student version may be purchased for \$189.00 through our offices by contacting [Dr. Sampson Gholston](#).

For more information about Six Sigma services, contact [Dr. Sampson Gholston](#) at 256.824.7310.