Lean Six Sigma Training
Green Belt

Course Description

The Six Sigma methodology is a systematic application that is focused on achieving significant financial results and increasing customer satisfaction. When properly deployed on carefully selected business projects, this methodology can lead to a significant reduction—and in many cases, elimination—of defects, process waste, and out-of-control processes, which translate into dramatic business gains. Learned skills are practiced and applied through individual and team exercises, as well as to the individual projects. Participants will be able to apply the concepts learned in the class to a business improvement project assigned to them by their management sponsor.

Green Belts provide value within the organization's Lean Six Sigma framework in a variety of ways. They serve on Black Belt project teams to help collect and analyze data, develop process maps, assist the Black Belt in certain levels of statistical analysis, and develop experimental designs for a particular project. These activities serve to support and accelerate progress in every project—which helps to maximize the organization's return on its investment and adds capacity to deliver even greater numbers of breakthrough improvement projects throughout the company.

Green Belts are also assigned specific improvement projects to conduct on their own—projects that would not require the statistical rigor demonstrated by the Black Belt. Green Belts are able to conduct these projects within the scope of their normal daily roles. Attendees will learn how to direct Lean Six Sigma projects and obtain the maximum improvements from the learned techniques and skills. Learned skills are practices and applied through individual and team exercises. These techniques are also applied to the individual projects. Participants will be able to apply the concepts learned in the class to a business improvement project assigned to them by their management sponsor. Upon completion of the course, students will receive a certificate of completion and are prepared to sit for the ASQ Six Sigma Green Belt Certification Exam.

Who Should Attend

This course is designed for individuals from diverse organizational functions-operations, quality, logistics, finance, production, engineering and other staff functions. Participants are normally process owners or leaders and are well versed in technical aspects of their jobs and have worked on project teams.

Learning Objectives

- Function as a 'tools application' member of a Six Sigma project team
- Lead and execute process-level improvement projects
- Collect process data and develop process maps
- Develop statistical hypotheses using simple statistical tools
- Design simple experiments and/or implementation plans that help validate improvement options
- Apply problem solving and quantifiable tools to an improvement project you will bring to class on the first day
- Eliminate waste and defects by applying lean and Six Sigma principles
- Collect, analyze, and quantify data that enable process improvements
- Learn how to execute the Six Sigma methodology
- Work with process owners to ensure process gains are held

Duration

Overall, the course takes 67 hours to complete and is designed for two 1-week sessions (8-hours per day, 5-days per week) with a few weeks off between the first session for students to work on their respective projects. However, the exact course schedule can be customized to best serve clients' needs.

Mode of Delivery

Live Virtual or In-person options are available

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Course Outline

Week 1

- Overview and Foundation of Lean and Six Sigma
- Drivers and Metrics
- Projects
- Theory of Constraints
- Customer Data
- Project Planning Tools
- Project Documentation
- Basic Lean Six Sigma Metrics
- Team Dynamics and Performance
- Overview of Measure
- Introduction to Minitab
- Process Mapping
- Cause and Effect Analysis
- FMEA
- Probability and Statistics
- Measurement Systems Analysis
- Data Collection and Summary
- Process Capability

Week 2

- Analyze Phase Overview
- Hypothesis Testing
- ANOVA
- Regression
- Chi-square
- Graphical Analysis
- Lean Analysis Tools
- Analyze Phase Transition
- Improve Overview
- Lean Improvement Tools
- Introduction to Design of Experiments
- DOE Golf Experiment
- Implementation and Validation Solutions
- Control Phase Overview
- Standard Work
- Control Charting
- Control Plans
- Control Phase Transition