Lean Six Sigma Green Belt Training

Improving bottom-line business results

Presented by

Seattle Pacific University & ETI Group

Commences January 27, 2015
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Green Belt Program Overview

Lean Six Sigma is a business and data-driven, disciplined approach to reducing waste and minimizing defects in any type of process (be it manufacturing or services). Lean Six Sigma focuses on reduction of waste, increased profitability, and customer satisfaction. It is a method of integrated management used by organizations to more effectively and efficiently meet the needs of their customers. Green Belts learn the comprehensive elements of Lean Six Sigma in order to assist staff in using the process and facilitate team efforts. They collect data, make initial interpretations and begin to formulate recommendations that are fed to Black Belts or the sponsoring managers.

Participants in this course will learn the theory and the application of tools and methods for successful completion of improvement projects using the Lean Six Sigma DMAIC (Define-Measure-Analyze-Improve-Control) improvement strategy. Introduced with hands-on exercises and tutorials to ensure rapid learning and knowledge retention, the training style is tell-show-do, with a strong emphasis on individual hands-on exercises and team-based activities. The interactive classroom experience emphasizes strategic thinking, flexibility, teamwork and communication skills. Each student will create specific plans for their organizations using these Lean Six Sigma concepts. Participants should plan on spending 2-3 hours a week outside of scheduled class time for reading, homework and team project work where they apply Lean Six Sigma concepts and tools to improve a real business process. Training workbooks are comprehensive, self-contained, and serve as excellent references for learning and review. **On completion of this course participants will be able to:**

- Apply benefit-feasibility analysis to identify improvement projects aligned with your organization’s priorities for quality, delivery, customer satisfaction, and profitability.
- Successfully apply appropriate Lean Six Sigma Green Belt tools to future projects
- Perform basic statistical analyses using SigmaXL.
- Develop, evaluate, and implement improvements that can reduce scrap, rework, complexity, defects, delays, and other forms of waste in manufacturing and transactional processes.
- Translate Lean Six Sigma analyses into recommendations for improving workplace processes
- Apply statistical and/or non-statistical control tools to sustain the gains from improvement projects

Program Duration and Dates

The Green Belt program will take 60-hours to complete and will be presented in a series of 3-hour training sessions presented over a ten week time frame. Training sessions start at 5:30PM and conclude at 8:30PM on the following dates:

- January 27 and 29, 2015
- February 3, 5, 10, 12, 17, 19, 24, 2015
- March 3, 5, 10, 12, 17, 19, 24, 26 and 31, 2015
- April 2, 7, 2015
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<tr>
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<tr>
<td>Jan 27, 2015</td>
<td><strong>Session 1 – Lean Six Sigma Overview</strong></td>
<td>Introduce the background and structure of Lean Six Sigma methodology. Create a common understanding of the unique attributes and their implications for practicing effective use of process improvement tools that advance value-based corporate and company goals. Eliminating waste and variation is the key focus of Lean Six Sigma.</td>
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<td>Jan 29, 2015</td>
<td><strong>Session 2 – The Lean Six Sigma Team; change management, project identification, roles and responsibilities</strong></td>
<td>Businesses rarely succeed with sustainable transformation initiatives unless they are led from the top. There is a direct link between the success of change programs and leadership capabilities. Introducing Lean Six Sigma “Belt” candidates to the concepts of change and understanding of tools to lead change, using resistance as a feedback for improvement is a key step to effective leadership of the project team.</td>
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<td>Feb 3, 2015</td>
<td><strong>Session 3 – The DEFINE Phase – Part 1</strong></td>
<td>Introduce participants to the DEFINE phase of the Lean Six Sigma methodology. The goal of the DEFINE phase is to build the business case for projects and initiate data collection with voice of the customer and process mapping the process. Participants understand how multi-generation project planning helps manage project scope and introduce the process to establish project purpose, scope and financial goals.</td>
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<td>Feb 5, 2015</td>
<td><strong>Session 4 – The DEFINE Phase – Part 2</strong></td>
<td>Continue the discussion of the DEFINE concepts and tools of Lean Six Sigma methodology discussing the concepts and tools of process mapping. Participants understand the importance of knowing the process as-is state.</td>
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<td>Feb 10, 2015</td>
<td><strong>Session 5 – The Measure Phase – Part 1</strong></td>
<td>Introduce participants to the MEASURE phase of the Lean Six Sigma methodology. The Measure phase gathers baseline information about a process or product, defines the defect(s), and validates improvement goals. Participants understand that a measure is a quantifiable description of a characteristic of any object or activity.</td>
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<td>Feb 12, 2015</td>
<td><strong>Session 6 – The Measure Phase – Part 2</strong></td>
<td>Continue the discussion of the MEASURE concepts and tools of Lean Six Sigma methodology to provide an understanding of the concepts and tools of value stream analysis and data collection. Participants understand the tools to develop and interpret a value stream process map; complete a value stream analysis; explain the concepts of data and where it is used in the DMAIC methodology; identify the different types of data.</td>
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<td>Feb 17, 2015</td>
<td><strong>Session 7 – The Measure Phase – Part 3</strong></td>
<td>Continue the discussion of the MEASURE concepts and tools of Lean Six Sigma methodology to provide understanding of the concepts and tools of Measurement System Analysis (MSA). MSA is an important element of Six Sigma methodology and of other quality measure systems. Participants understand the concepts and tools to develop and interpret Measure Systems Analysis.</td>
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<td>Feb 19, 2015</td>
<td><strong>Session 8 – The Measure Phase – Part 4</strong></td>
<td>Continue the discussion of the MEASURE concepts and tools of Lean Six Sigma methodology introducing the concepts and tools of statistical analysis of process performance. Introduce the application of SigmaXL statistical software and learn how descriptive statistics provides information for use in data-driven decision making and applying the tools to make a long-term impact to process improvement.</td>
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<td>Date</td>
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<td>Feb 24, 2015</td>
<td><strong>Session 9 – The Measure Phase – Part 5</strong></td>
<td><strong>Objective:</strong> Continue the discussion of the MEASURE concepts and tools of Lean Six Sigma methodology introducing the concepts and measure tools of process capability. Process Capability is a measurable property of a process to the specification, expressed as a process capability index (e.g., Cpk or Cpm) or as a process performance index (e.g., Ppk or Ppm). Process capability is also defined as the capability of a process to meet its purpose as managed by an organization’s management and process definition structures. Participants learn how process capability measures if a process is capable of meeting customer requirements.</td>
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<td>Mar 3, 2015</td>
<td><strong>Session 10 – The Analyze Phase – Part 1</strong></td>
<td><strong>Objective:</strong> The Analyze phase will provide concepts and tools for participants to study all the critical variables in a process to determine which process improvements to focus on in the Improve phase. Participants learn how to develop root cause theories; confirm theories with statistical tests, identify the cause(s) of the problem, and form basis for the test of solutions in the Improve Phase.</td>
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<td>Mar 5, 2015</td>
<td><strong>Session 11 – The Analyze Phase – Part 2</strong></td>
<td><strong>Objective:</strong> Continue the discussion of the ANALYZE concepts and tools of Lean Six Sigma methodology introducing the concepts and tools of multi-vari analysis and hypothesis testing. Participants will be able to complete a Multi-Vari analysis with SigmaXL© Statistical Software to identify possible families of causes of variation and also understand the concepts of the methods of hypothesis testing for attribute and discrete data as well as determine the right statistical tools for the data type.</td>
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<td>Mar 10, 2015</td>
<td><strong>Session 12 – The Analyze Phase – Part 3</strong></td>
<td><strong>Objective:</strong> Continue the discussion of the ANALYZE concepts and tools of Lean Six Sigma methodology introducing the concepts and tools of analysis of variance (ANOVA). Participants will understand how to apply the tools of ANOVA to determine the statistical significance of the relationship between a continuous dependent variable, Y, and single or multiple independent variables, X’s, that have been organized into two or more discrete groups.</td>
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<td>Mar 12, 2015</td>
<td><strong>Session 13 – The Analyze Phase – Part 4</strong></td>
<td><strong>Objective:</strong> Continue the discussion of the ANALYZE concepts and tools of Lean Six Sigma methodology introducing the concepts and tools for goodness of fit tests, root cause analysis, Five Whys and Analyze phase gate review. Participants will understand the requirements of the Analyze phase gate review to confirm that the right root causes have been identified and the project is ready to move into the Improve phase to determine the actions to implement process improvements.</td>
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<td>Mar 17, 2015</td>
<td><strong>Session 14 – The Improve Phase – Part 1</strong></td>
<td><strong>Objective:</strong> The objective of Improve Phase is to identify improvement break through, identify high gain alternatives, select preferred approach, design the future state, determine the new Sigma level, perform cost/benefit analysis, design dashboards/ scorecards, and create a preliminary implementation plan.</td>
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<td>Mar 19, 2015</td>
<td><strong>Session 15 – The Improve Phase – Part 2</strong></td>
<td><strong>Objective:</strong> Enhance the participants understanding of risk analysis by learning the concepts and use of Failure Modes and Effects Analysis. Failure modes and effects analysis (FMEA) is a step-by-step approach for identifying all possible failures in a design, a manufacturing or assembly process, or a product or service. “Failure modes” means the ways, or modes, in which something might fail. Failures are any errors or defects, especially ones that affect the customer, and can be potential or actual. “Effects analysis” refers to studying the consequences of those failures.</td>
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Computing Requirements

Personal computing skills are essential to every Lean Six Sigma Green Belt and Black Belt. Participants in this course should be equipped with a laptop computer loaded with MS Excel (version 2007 or later). A copy of SigmaXL statistical analysis software will be provided for each participant. Participants should also be able to use the Windows operating system, especially file management.

Who Should Attend

This course is designed for Engineers, Quality Analysts, Process Improvement Specialists, Program Managers, Project Leaders, and others who want to learn the Lean Six Sigma Green Belt methodology and apply it to make breakthrough improvements in performance within their organization.
**Course Prerequisites**

Preferably participants in this course be assigned an improvement project to work on during and between the training sessions. Improvement project selection information will be sent to you before the program commences. The instructor will also be available to assist in improvement project selection and to consult on challenges presented by this project.

**Green Belt Certification**

Participants who complete the Green Belt training and pass the Green Belt Exam will be awarded a Green Belt Certification of Completion. On completion of one improvement project for their company participants will be awarded a Certified Green Belt certificate.

Details of Green Belt improvement project must be reviewed and approved by the instructor prior to the Certified Green Belt award.

**Training Materials**

Participants in the Green Belt training program will be provided with a copy of SigmaXL statistical analysis software, workbooks and electronic copies of data sets and templates.

**Training Course Fees**

Your cost to attend this comprehensive training program, including a copy of SigmaXL statistical analysis software, and all of the necessary workbooks and templates is $2,950 per person.

**More Information**

Please Contact:

- Jack Benham, ETI Group: (503) 484-5979 / jbenham@etigroupusa.com
- Jared Wymer: Tel 206-281-2621 / wymer@spu.edu

**Training Venue Directions**

COMING FROM THE SOUTH ON I-5 (NORTHBOUND)

Due to significant delays off Exit 167 (Mercer Street) from South I-5, you may want to avoid Exit 167/Mercer Street. Instead:

- Take Exit 166 (Olive Way), making a slight right onto Olive Way.
- Turn left onto E. Denny Way (0.6 mi.)
- Turn right onto Westlake Ave. N. (2.1 mi.)
- Westlake becomes Nickerson Street.

Once you are on Nickerson, turn south onto Third Avenue West. You are now on campus. (0.8 mi.). Remain on Third for three blocks, then turn right onto W. Dravus Street, and right again into the tiered parking lot, #45 on the SPU Campus Map (PDF).
COMING FROM THE NORTH ON I-5 (SOUTHBOUND)

- Take Exit 169 (N. 50th Street), marked “Seattle Pacific University.”
- Stay straight to go onto 5th Ave. NE. (0.4 mi.)
- Turn west onto N. 50th (0.8 mi.)
- Turn slight left onto Green Lake Way N. (0.3 mi.)
- Turn slight right onto N 46th St. (0.2)
- Turn left onto Fremont and cross the Fremont Bridge. (1.0 mi.)
- Turn right immediately after the bridge onto Florentia Street.
- Go one block and turn right onto Nickerson Street. (0.7 mi.)

Once you are on Nickerson, turn south onto Third Avenue West. You are now on campus. (0.8 mi.).

Remain on Third for three blocks, then turn right onto W. Dravus Street, and right again into the tiered parking lot, #45 on the SPU Campus Map (PDF).

TRAFFIC ALERTS

Visit Washington State Travel Alerts for the latest construction, closures, and weather advisories.

IF YOU COME BY BUS

King County Metro serves Seattle Pacific University via city bus routes Route 13, Route 31 and Route 32, and Route 62.

- Routes 13 and 62 travel between downtown Seattle and Seattle Pacific.
- Route 31 and 32 travel between the University District and Seattle Pacific.

Lead Instructor

Clint Adams has a distinguished management career with thirty-years of executive level experience in both manufacturing and service organizations. For the past ten years, his work has been focused solely in a Lean Six Sigma environment providing Lean Six Sigma Operational Excellence training for executives, managers and Green Belt/Black Belt candidates as well as mentoring enterprise-wide improvement projects. Clint’s ETI Group clients include B-Line LLC, Expedia.com, Hewlett Packard Company, Symetra Financial, World Airways, and various US governmental organizations. Prior to joining ETI Group, Clint was Assistant Vice President, Corporate Operational Excellence (Lean Six Sigma) Services at Washington Mutual Bank. A Master Lean Six Sigma Black Belt, he has also served as Director of Value-Based Six Sigma Services for ITT Industries, Night Vision Company where he was responsible for implementing and managing the Lean Six Sigma program which achieved savings of $14.7 million in 2002 and $21.5 million in 2003. A retired USN Captain, Clint holds a BS in Naval Engineering from the, U.S. Naval Academy and an MS in Management (Operational Analysis) from the U.S. Naval Postgraduate School.
Lean Six Sigma - Client Comments

ETI Group’s Lean Six Sigma training is the best combination of theory and applied solutions that I have seen. The learning format was easy to follow and the instructors outstanding. They brought a wealth of practical experience to the program.

Anders Ohlsson
Operations Manager, Boise Cascade

The program content was great. I learned many great tools for analyzing data quickly and making better, more informed decisions. The instructor did a great job of articulating concepts and giving real world examples. This has been a great course!

Ken Fisher
QE Manager, Pathway Medical

This was a total awakening as to how crude our current tools and methods for analyzing data are. I feel confident the new tools I have learned will be used to the benefit of my organization. The instructors were just great, knowledge levels are extremely high and they communicate and interact well.

John Stackpole,
Operations Manager, ESI Klamath Falls

The program content was great. I learned many great tools for analyzing data quickly and making better, more informed decisions. The instructor did a great job of articulating concepts and giving real world examples. This has been a great course!

Ken Fisher
QE Manager, Pathway Medical

The Lean Six Sigma program provided extremely valuable tools and a new perspective for enhancement and improvement in healthcare. The instructor’s was able to inspire, lead and provide the guidance needed to launch this process in the new frontier of healthcare.

Mary Spiering,
Oregon Health Sciences and University

The Black Belt program content, training delivery, and level of class participation were great. The instructor keyed in on the important points, gave good explanations and lightened things up with good humor and provided great project support during and between in-class sessions.

David Baublits
CEO, Precision Machine Works

This training program exceeded my expectations. It provided us with information and tools of great value. The instructor was very knowledgeable and presented the material in a clear manner and explained things in a way everyone could understand.

Phillip Patterson
QA Manager, Compass Aerospace

The Six Sigma tools I learned from your course have helped ESI and my career. They helped me start up a new group and deliver effective and sustainable results. Thanks again for the class; it has served me well.

Philip Cardwell
NPI Engineering Manager, ESI
The program content was great. I learned many great tools for analyzing data quickly and making better, more informed decisions. The instructor did a great job of articulating concepts and giving real world examples. This has been a great course!
Ken Fisher
QE Manager, Pathway Medical

This was a total awakening as to how crude our current tools and methods for analyzing data are. I feel confident the new tools I have learned will be used to the benefit of my organization. The instructors were just great, knowledge levels are extremely high and they communicate and interact well.
John Stackpole,
Operations Manager, ESI Klamath Falls

The real world examples helped me understand the concepts and methods. The templates made it easy to apply what we learned without having to worry about the mechanics. It was very helpful to work on projects specific to our own business during, between and after the class sessions. The instructor made us feel comfortable asking questions of any kind.
Peter Harvey
IT Manager, NW Cancer Specialists

The program gave us tools for identifying, prioritizing, and implementing process improvement projects. The instructor was willing to work one-on-one with participants who needed more time or had additional questions. I never felt overloaded.
Christa Finney,
Clinical Operations, Vancouver Radiologists

The instructor covered the material in a systematic way without overwhelming the participants. He gave clear examples and walked us through them, and gave us exercises for practice on our own. He made the class very interesting.
Rosanne Ponzetti, VP, Human Resources, St. John Medical Center

There were good discussions in class and the instructor made us comfortable with asking questions. I learned a lot about Lean Six Sigma — many valuable takeaways.
Shari Johnson, Assistant Director
SW Washington Medical Center

I would like to "thank you" for providing an outstanding week of Lean Six Sigma Training. Your exceptional professionalism and wealth of knowledge made the week educational and exciting. World Class!!
LCDR Delmas Whittaker, Lean Coordinator,
Naval Magazine Indian Island

The value of this training was very high. I’m very happy with the results and would give this program a rating of 10 out of 10!
Bob Siamro,
Director of Process Management, ESI

I received very positive feedback not only on the materials but on the trainer as well. Comments included: “I never knew how complex Quality is”, “this course was the best training I’ve ever had”, “The instructor was not only knowledgeable but makes the class fun as well.”
Kimberly Felix
Quality Assurance Analyst, Astronics AES
ETI Group - Client Improvement Project Results

Examples of recent improvement projects worked on during and between ETI Group Lean Six Sigma training sessions produced the following results for our clients:

**Manufacturing Companies**

- A Semiconductor Manufacturer reduced failure rates by 50% with an annual cost saving of $3,600,000.
- A Plastic Molding company saved $700,000 per year by solving a problem of parts failing final inspection for cosmetic damage.
- A Metalworking company saved $230,000 per year by reducing the number of damaged or contaminated parts at final inspection.
- A Laser Diode Manufacturer developed and implemented solutions to reduce wavelength variation resulting in annual savings of between $150,000.
- A project team determined the major causes of chiplet test failures. They developed and implemented solutions resulting in an annual savings of $115,000.

**Healthcare Organizations**

- A project team identified the major causes of “ED on divert.” They developed and implemented a “divert mitigation action plan.” Results: they reduced the daily hours of ED divert from 6 to 0.6, an annual revenue increase of $2,900,000.
- A project team reduced the average time lag from point of patient care to posting of patient charges from 5 days to 1 day. Daily charges for this organization are about $1,000,000.
- A project team redesigned Emergency Department procedures to reduce the percentage of patients who leave without being seen. Results: 2.2% reduced to 1.1%, an annual revenue increase of $400,000.

**Government and Service Organizations**

- A city government improved its court collections process, resulting in a $400,000 increase in annual revenue.
- A city government improved its petitioner-initiated annexation process and eliminated errors that could invalidate an election; reduced other errors by 60%; reduced overall lead time by 30%; reduced overall staff time by 25% and reduced the cost per case by $954.
- A logistics company improved its delivery processes for the highest volume categories. Late shipments, due to factors under the company’s control, were reduced by 43%.