Lean Six Sigma Green Belt Certification

CORPORATE COLLEGE SEMINAR SERIES

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Date: October 14 – November 22

Presented by: Lone Star Corporate College

Format: Instructor-led hybrid (mainly online with some classroom instruction) Virtual Sessions 10/14/13, 10/17/13, 10/24/13, 10/31/13, 11/7/13, 11/14/13 and 11/21/13 from 7:00 – 9:00 p.m. / Capstone held Monday – Wednesday November, 18-20 from 8:00 a.m. – 4:00 p.m.

Course: BUSXC 500010

Location: LSC-University Park
20515 State Highway 249 (at Louetta Rd.)
Houston, TX 77070

Description: This course blends the Lean process improvement tools with the problem-solving tools of Six Sigma following the DMAIC (Define, Measure, Analyze, Improve, and Control) model. Learn to play a major role in process improvement projects as a team member or leader of projects within your functional areas. During this training, you will learn to apply problem solving tools and basic statistical techniques to contribute to your organization’s success.

This certification requires participation in a capstone project, which will give you the opportunity to apply the knowledge and skills acquired in your courses to specific problems and issues.

This series of courses prepares the student to become a quality Six Sigma Green Belt or Project Team Leader. As a Green Belt or Project Lead, you will master the skills necessary to lead a complex process improvement project that produces bottom line results.

Objective: Participants will gain a solid general knowledge of the theory, composition and implementation of Six Sigma initiatives. In addition, students will learn team leadership and project management skills. At the end of study, students will be prepared to take the nationally recognized American Society of Quality (ASQ) Green Belt exam.

Hours: 57 Cost: $1,931.00

Optional Administration and ASQ Exam Fee: $500

**Participants required to register with ASQ; LSC does not administer certification test**
Welcome to the Green Belt Certification class offered by Lone Star College System

Overview

The Lean Six Sigma Blended Green Belt course artfully blends the process improvement tools of Lean with the problem-solving tools of Six Sigma following the DMAIC (Define, Measure, Analyze, Improve, and Control) model. Green Belt certification will help the participant play a major role in process improvement projects as a team member or leader of projects within his or her functional areas. During this training you will learn to apply some very powerful problem solving tools and basic statistical techniques which will allow you to contribute to the success of your organization.

The Green Belt certification also requires the student to attain actual project experience through participation in a Capstone Project. The purpose of the Capstone Project is to provide students with the opportunity to apply the knowledge and skills acquired in their courses to a specific problem or issue.

There are no prerequisites for the Green Belt certification course. Basic math skills and a previous course in basic statistics would be helpful.

Blended Learning

In today’s tight economic times, companies are looking for ways to save travel and training expenses. With blended learning, which is a combination of online e-Learning and classroom instruction, the goal is to save time, and reduce costs and improve outcomes. An experienced member of our Master Champion Network will be assigned to you to serve as a mentor and coach through the training.
Course Content
Approximately 24 e-Learning hours, nine hours live, virtual class presented in six 90-minute sessions, followed by a three-day, on-site Capstone Project.

The course will follow the Define – Measure – Analyze – Improve – Control (DMAIC) methodology:

**DEFINE** - participants will be taught tools to identify and/or validate their improvement project, illustrate their business processes, define customer requirements and prepare themselves to lead project teams.

**MEASURE** - participants will learn and practice employing tools to determine critical measures necessary to satisfy customer requirements and develop a measurement plan to document process performance.

**ANALYZE** - participants will learn how to analyze the data to identify root causes, and clearly identify opportunities for improvement. They will learn how to determine the causes of variation as well as customer dissatisfaction.

**IMPROVE** - participants will learn how to create solutions to eliminate root causes, how to apply various methods of solution identification, prioritization, and implementation and how to gain approval for the solution and plan for impacts the changes will have on the organization.

**CONTROL** - participants will learn how to develop and utilize a control plan to ensure the sustained achievement of targeted results, how to share lessons learned, identify standardization methodologies, and encourage continuous process improvement.

Online Access
Each participant will be provided access to the e-learning portal. This is where you will take your online courses and certification exam. The portal contains several features which will help you in your certification journey. They include student guides for each on the online courses, lean six sigma virtual toolkit, and several examples, spreadsheets, and forms to assist you in your project and enhance your learning experience. Your project coach may also provide additional information and tools to meet specific needs and help you on your lean six sigma journey. For detailed instructions see the section titled *GETTING STARTERD with Online Learning*, below.
## E-Learning Courses

### Session 1 - Introduction

| Course Introduction | Lean Introduction | 3 hrs |

### Session 2 - Define Phase

| Voice of the Customer | Managing the Project - Teamwork | 3 hrs |
| SIPOC | Eight Wastes | |

### Session 3 - Measure Phase

| Process Mapping | Current State Value Stream Mapping | 3 hrs |
| Future State Value Stream Mapping | Validating the Measurement System | |

### Session 4 - Measure Phase

| Introduction to Process Capability | Process Capability Assessments | What is Statistics? | 6 hrs |
| Process Capability | Organizing and Presenting Data | Data and Graphical Analysis | |
| Pareto Analysis | Scatter Diagrams | Organizing and Presenting Data | |
| Measures of Central Tendency | Measures of Dispersion | Process Capability | |

### Session 5 - Analyze / Improve Phase

| Calculating Process-Based Costs | Cause and Effect Diagram | Failure Mode and Effect Analysis | 4 hrs |
| Kaizen Event | Maximizing ROI | SS | |
| Visual Management | Standard Work | Calculating Process-Based Costs | |

### Session 6 - Improve Phase / Control

| Error Proofing | Changeover Reduction | Workplace Design and Layout | 3 hrs |
| Flow and Pull Systems | Total Productive Maintenance | Types of Control Charts | |
| Sustaining ROI | Error Proofing | Changeover Reduction | |
| Workplace Design and Layout | Flow and Pull Systems | Total Productive Maintenance | |
| Types of Control Charts | Sustaining ROI | |

### Capstone Project

| Project Simulation | 3 days |

### Certification Exam

| Green Belt Certification Exam | 2 hrs |
Laptop Computer

It is necessary for you to bring your own laptop computer with Microsoft Excel 2007 (minimum).

Statistical Software

Minitab is required for the course. Version 16.0 will be used but older versions are acceptable. The student may purchase a license or download a free 30-day trial copy from: http://www.minitab.com/. The software will be needed from session 4 through the Capstone Project. For students who are intending to use the 30-day trial version it is suggested that the software be downloaded and installed just prior to week 4.

Class Materials

You will be provided files for downloading and use in class. These will include Student Guides for the six virtual sessions and various worksheets, spreadsheets and forms to be used during the class. Each student is responsible for downloading and printing the materials as required.

If you have questions, please contact:

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Online courses and instruction provided by The Quality Group.