Lean Six Sigma Green Belt

[4.0 CEUs/ 40 PDUs]

Course Description

In just six weeks, you will learn how to conduct a Lean Six Sigma project to improve performance for your customers and your business. You will learn the DMAIC (Define, Measure, Analyze, Improve, Control) methodology and data tools of Six Sigma, as well as the flexible and practical visual tools from Lean. You will learn how to identify waste, gather and graphically represent data, conduct statistical tests, facilitate effective teams, understand customer needs and requirements, measure performance, implement Lean improvements, monitor performance and implement visual management tools.

Certification

This course prepares participants for the Lean Six Sigma Certified Green Belt (LSSCGB) certification exam offered through Florida Tech.

Course Outcomes

Upon the successful completion of this course, participants will be able to:

- Define the Lean Six Sigma methodology and the DMAIC approach to process improvement
- Implement the DMAIC methodology to optimize process improvement
- Apply the Six Sigma tools to improve quality and the Lean tools to remove waste

Included eBook

Thomsett, M. C. (2005). Getting started in Six Sigma. Hoboken, NJ: John Wiley & Sons, Inc.

Discussion Board

Share your experience with fellow participants and your course facilitator in weekly discussion board posts.

VIEW CURRICULUM

*Curriculum is subject to change. Please contact an enrollment representative for more information.

	Module	Learning Objectives	Assignments/Activities	Live Session Topic	Quiz
Week 1	Module 1: Lean Six Sigma	□ Define the Lean Six Sigma terminology □ Define the five Lean principles □ Explain the benefits of Lean Six Sigma □ Identify commonly used Lean Six Sigma tools □ Define the roles of Lean Six Sigma participants □ Describe the expectations and involvement of a Lean Six Sigma Green Belt □ Describe the DMAIC approach to process improvement	Self-Assessment Activity: Lean Methodology Self-Assessment Activity: Lean Six Sigma Roles and Responsibilities	□ Lean Six Sigma terminology, benefits, and tools □ Six Sigma organizational roles and expectations □ DMAIC approach to process improvement □ Questions and answers	N/A

	Module	Learning Objectives	Assignments/Activities	Live Session Topic	Quiz
Week 2	Module 2: Define Phase	□ Identify a high-potential process improvement project □ Define a business case □ Examine the voice of the customer (VOC) □ Create a process map □ Create a project charter	Self-Assessment Activity: Project Charter Project Assignment: Project Charter	□ High-potential projects □ Business case (problem statements and goal statements) □ Voice of the customer (VOC) □ Process maps □ Project charters □ Questions and answers	Quiz 1

	Module	Learning Objectives	Assignments/Activities	Live Session Topic	Quiz
Week 3	Module 3: Analyze Phase	□ Develop process measures □ Create a data collection plan □ Check the quality and reliability of the collected data □ Create a baseline measure	Self-Assessment Activity: Control Charts Project Assignment: Data Collection Plan	□ Process measures □ Data collection plans □ Basic statistics □ Measure System Analysis (MSA) □ Questions and answers	N/A

	Module	Learning Objectives	Assignments/Activities	Live Session Topic	Quiz
Week 4	Module 4: Measure Phase	☐ Conduct root cause analysis ☐ Graphically display collected data	Self-Assessment Activity: Graphical Charts Project Assignment: Root Cause Analysis	☐ Root cause analysis ☐ Graphical representation of data ☐ Hypothesis testing ☐ Root cause verification ☐ Questions and answers	Quiz 2

	Module	Learning Objectives	Assignments/Activities	Live Session Topic	Quiz
Week 5	Module 5: Improve Phase	☐ Brainstorm potential solutions ☐ Select practical solutions ☐ Develop process maps for new processes ☐ Define how to select the best solutions ☐ Describe how to implement solutions ☐ Measure process improvements	Self-Assessment Activity: Implement Solutions Project Assignment: Solution Selection	☐ Brainstorming ☐ Solution evaluation and selection ☐ Risk assessment ☐ Solution implementation ☐ Questions and answers	N/A

	Module	Learning Objectives	Assignments/Activities	Live Session Topic	Quiz
Week 6	Module 6: Control Phase	☐ Create a control plan ☐ Define the benefits of applying solution standardization ☐ Describe how to apply control charts to new processes ☐ Identify ways to celebrate success with the project team	Self-Assessment Activity: Control Plan Project Assignment: Control Plan	☐ Control plan ☐ Standardization ☐ Project closure documentation ☐ Questions and answers	Quiz 3