

Management and Strategy Institute, LLC.

Six Sigma Lean Green Belt in Education (LGBE)

Course of Study

Introduction

The Six Sigma Lean Green Belt Certification in Education is designed for those who work in the education sector. It's the perfect certification for teachers, school administrators, and operational leaders to learn how to eliminate waste within education. You'll learn how to define "value" for the education sector and how it is perceived by different stakeholders. Educators serve more than just students, they must also think about parents, governing bodies, and even taxpayers.

Six Sigma Lean Green Belts should have a good understanding of the DMAIC process and an understanding of how process changes can be implemented. They work directly with Black Belts to define processes within their organization. Help your educational organization reduce waste and streamline internal processes by getting your Six Sigma Lean Green belt in Education.

Our Six Sigma Green Belt certification exam will test your fundamental understanding of these concepts. The exam is completed online and can be done from home or work. The study material is completely self-paced, so you can take the exam as soon as you feel you're ready.

The LGBE exam is a 2-hour timed, online exam. It consists of approximately 55 questions and has a required passing score of 70%.

Competencies

This course of study covers the following competencies:

What is Lean

- Lean focuses on eliminating waste in processes or systems
 - Learning Outcome: Have a general understanding of Lean

Value & Value Streams

- How do you define "value" in the education sector?
 - Learning Outcome: Gain a general understanding of "value" and a value stream.

What is Education

- Define the meaning of education.
 - Learning Outcome: Education is just another “process”. Have an understanding of the process of education.

Lean Education

- Putting Lean and Education together.
 - Learning Outcome: Understand how Lean creates value for different segments of education. Value for Students, value for the organization. Understanding the transfer of knowledge.

Applying Lean to Education

- Lean Six Sigma looks at all aspects of a process, from identifying and quantifying problems, to analyzing, improving and finally controlling a process.
 - Learning Outcome: Have a general understanding of tools being used in the education section. A3 Problem Solving, Kaizen Events.

History of Six Sigma

- Why is Six Sigma used in business, and where did it come from.
 - Learning Outcome: The Student will be able to define Six Sigma

$y = f(x)$

- It all begins with a simple equation. Although Six Sigma talks a lot about statistical analysis and measurements and various other mathematical applications, at the core of the process is one simple equation.
 - Learning Outcome: Understand the basic function of $y=f(x)$

Process Variances

- Identify where variances are occurring in a function
 - Learning Outcome: Basic understanding of Identifying where variances are occurring in a function.

TQM & others

- Discuss other process improvement methodologies
 - Learning Outcome: Have an understanding of the other process improvement methodologies and how they differ from Six Sigma.

Recognizing opportunities

- Fundamentally, the training and use of Six Sigma philosophies and principles will allow employees and project teams to understand how systems interrelate and how to use the application of quality improvement methodologies which complement Six Sigma, such as Lean.
 - Learning Outcome: Understand Six Sigma philosophies and how to recognize opportunity.

Managing Quality

- Quality is not about what you produce being accurate as you see it, but rather as the customer sees it.
 - Learning Outcome: Understand how to frame quality into what is important to the customer.

Deciding to start a Six Sigma project

- Six Sigma is a top-down methodology – that means that the decision to implement comes from the top – whether that is the top of the business, your division of the business, or some other production unit.
 - Learning Outcome: The student understands the "how and why" regarding a company launching a quality improvement initiative like Six Sigma.

Organizational Roles and Responsibilities

- How Six Sigma team are organized and understanding the role of each "belt"
 - Learning Outcome: Understand how team are formed and the role of each belt level within the Six Sigma project.

The DMAIC Method

- Every Six Sigma project will follow the same process in a systematic and uniform method known as DMAIC, an acronym made up from the first letters of each element – Define, Measure, Analyze, Improve, Control.
 - Learning Outcome: Understand and define DMAIC

Why is DMAIC used

- DMAIC is a formalized problem-solving method which is designed to improve the effectiveness and ultimate efficiency of the organization.
 - Learning Outcome: Understand why the DMAIC process is utilized.

DMADV variation

- DMADV is an acronym for Define, Measure, Analyze, Design and Verify.
 - Learning Outcome: Understand the basis of DMADV when you do not have an existing system or process to improve upon.

Project Communication

- Maintaining regular communications throughout the process from the outset of the project.
 - Learning Outcome: Understand why continual communication is critical to the success of the project.

Supporting Delivery

- The role of the Yellow Belt.
 - Learning Outcome: Understand the critical role that a Yellow Belt, or "Subject Matter Expert" plays within the Six Sigma team.

Defining a process

- Defining a process can be difficult at times, but it is important to determine which parts of a work task or tasks you are trying to measure.
 - Learning Outcome: Determine how to define a process. Process owners, scope and boundaries.

Critical to Quality Characteristics

- There may be several Critical to Quality characteristics for a Six Sigma project team.
 - Learning Outcome: Understand Critical to Quality (CTQ) measures.

Cost of Poor Quality (COPQ)

- The Cost of Poor Quality is the sum of internal and external failures.
 - Learning Outcome: Understand the cost of poor quality.

Six Sigma Metrics

- For Six Sigma projects, the goal is to maintain statistical process control.
 - Learning Outcome: Understand the Sigma level, RTY, DPU, DPMO, FPY. Consequential metrics, Quality Metrics, Cost Metrics, Scheduling Metrics.

Estimating the Baseline

- It's important to do this to provide an accurate metric to measure the analyzed and agreed upon improvements against.
 - Learning Outcome: Understand the process to estimate the baseline.

The Define Stage

- This unit provides information on the activities that would normally be expected at the initial Define stage of a Six Sigma Project.
 - Learning Outcome: The Project Definition and scoping of goals and objectives are discussed, how the process is defined in terms of stakeholders, and the functionalities of the process.

The Measure Phase

- This unit provides information on the activities that would normally be expected at the measure stage of a Six Sigma Project.
 - Learning Outcome: Getting more detail into the process, what metrics and measurements are involved as well as estimating the baseline of the current "as is" process.

Six Sigma Tools

- This unit provides information on a number of different tools that may be useful throughout the many parts of the Six Sigma project.
 - Learning Outcome: This unit has a slightly different look than others in that it does not necessarily flow from one page to the next but is a series of factually presented pieces of information.

The Analyze Phase

- This unit provides information on the activities that would normally be expected at the Analyze stage of a Six Sigma project.
 - Learning Outcome: The value stream proposition and analysis are examined as well as determination of the factors that influence the process output.

The Improve Stage

- This unit provides information on the activities that would normally be expected at the Improve stage of a Six Sigma project.
 - Learning Outcome: The new process is defined, potential benefits examined and verification of the new process determined.

The Control Stage

- This unit provides information on the activities that would normally be expected at the final control stage of a Six Sigma project.
 - Learning Outcome: We discuss the standardization of new practice, verifying the impacts /savings, and how to document lessons learned.

Valuing Six Sigma

- This unit concludes the overview understanding to the level of a Six Sigma Green Belt.
 - Learning Outcome: The unit covers some more detail about the role, like activities of a Green Belt and how that differs from a Black Belt. It also covers the communications project task that a Green Belt will likely be asked to undertake.

Learning Resources

Recommended:

Material included with your purchase is recommended reading.

- Free online training material provided by MSI. The material includes everything you will need to learn to pass the exam. This material is included for free with the purchase of your exam. It is in digital form, and available immediately after payment.

Optional:

This material is not required, however it will assist you in becoming Six Sigma Certified.

- Gitlow, Howard S. and Levine, David M (2004) Six Sigma for Green Belts and Champions: Foundations, DMAIC, Tools, Cases, and Certification, ISBN-13: 978-0131172623
- Nawaz, Mohamed B., Ramu, Govindarajan, Zrymiak, Daniel J. and Munro, Roderick A. (Jan 2, 2008), The Certified Six Sigma Green Belt Handbook, ISBN-13: 978-0873896986

Preparing for Success

In order to successfully complete the LGBE exam, you will need to make sure you have the appropriate resources to support your learning.

- A quiet location, free from distraction.
- Internet access.
- Current (newest) version of Internet Explorer, Firefox, or Chrome browser.
- Take study notes while going through the training.
- When you are ready to take the exam, you should allot 2-hours of time.

Frequently Asked Questions

What happens if I fail the exam?

- You are given two additional attempts to pass the exam at no additional cost.