

# Lean Six Sigma Expert

Masters Program

The Lean Six Sigma Masters Program is designed to help you master two important methodologies- Lean and Six Sigma- that have been brought together to accelerate business improvement. Fast track your career with this course that will give you the management qualities business look for and become the go-to professional for quality management projects.

## Who should enroll for this program?

Lean Six Sigma is a framework that is not limited to a particular industry. Any professional looking to learn how to improve organizational efficiency can become a Lean Six Sigma expert. Specific professionals who typically take this course include:

- Quality Control supervisors/ Engineers/ Managers
- IT analysts
- Project Managers
- Enthusiasts of Lean Management
- Six Sigma Professionals

## About the Program

The Lean Six Sigma Expert Masters Program is aimed at helping you master Lean and Six Sigma principles and methodologies. As organizations strive for continuous improvement, they seek management professionals that can employ problem solving and business know-how to enhance internal processes. This course positions you to take the lead in quality management projects.

The Lean Management course is the foundation for this master's program and shows you how to optimize end-to-end processes to increase quality and drive maximum value in any business. The next stage focuses on the Lean Six Sigma Green Belt, which explains the core principles of Lean Six Sigma, how to implement quality projects and specific industry applications. You'll also learn to use the statistical Minitab tool to enable effective statistical analysis for projects.

After completing these three courses, you will be prepared for becoming a Lean Six Sigma Black Belt, which is the final step to becoming a Lean Six Sigma expert and validating your ability. We also suggest taking courses in Lean Six Sigma in IT/Healthcare based on your domain.

## Program features

- 10 Simulation exams,9 Case Studies to ace the certification exams
- Acquire hands-on knowledge and expertise by completing 4 Industry-specific projects
- Start from the basics and become an expert in Lean Six Sigma

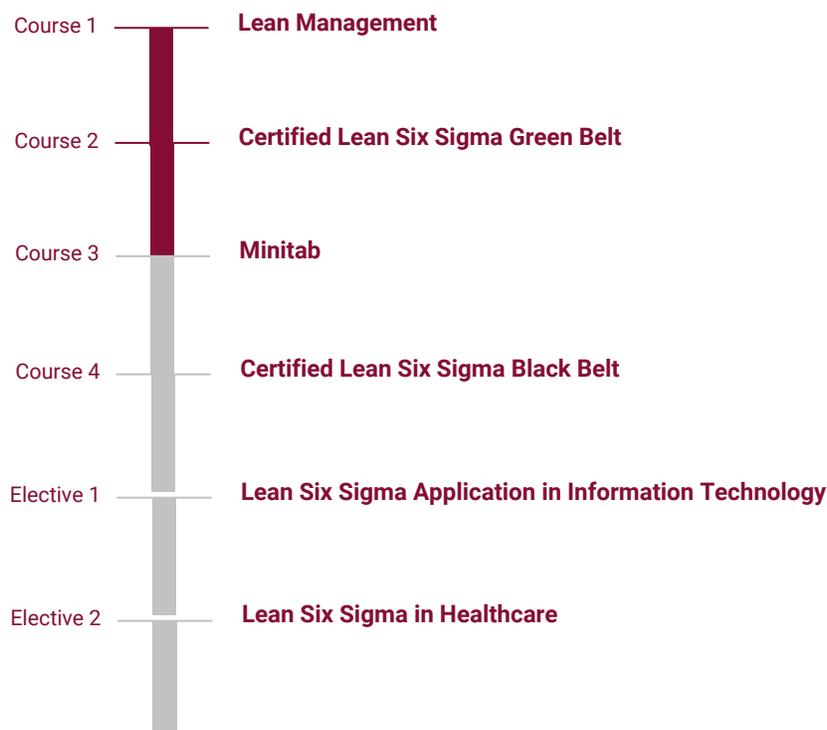
## Benefits of this program

40% of the managers in top companies are Lean certified, and Lean Six Sigma Experts earn 40% more than their non-certified peers. Lean Six Sigma Experts generally work in the following profiles:

- Quality Supervisor
- Quality Manager
- Quality Engineer
- Quality Director
- Lean Six Sigma Expert

You'll learn how to apply Lean Six Sigma tools, techniques and concepts to improve efficiency, reduce waste, increase throughput, and standardize complex business/technical processes in your organization.

## Learning Path



## Course 1

# Lean Management

This Lean Management Certification Training will expose you to the concepts and principles of Lean Management to help you optimize processes, increase quality and drive maximum value in any business. You'll learn to create more value for customers with fewer resources, reduce unwanted activities and adopt continuous process improvement, where small changes are implemented systematically. The course will guide you in implementing Lean tools, techniques and metrics in your organization.

### Learning Outcomes:

In simple terms, Lean Management creates more value with fewer resources, reducing unwanted activities or process that do not add value to a product or service for a customer. Lean management is an approach to running an organization that encourages continuous improvement, a long-term process where small changes are implemented systematically. Changes to processes are incremental and increases quality and efficiency. This training will provide you with the concepts of Lean Management and how you can use them in your organization.

### Course Content:

- Introduction
- Types of Waste
- Tools
- Lean in Manufacturing
- Lean in Service
- Lean in Office
- Lean Metrics
- Other Methodologies that Complement Lean
- Lean Maturity Matrix

## Course 2

### Certified Lean Six Sigma Green Belt

The Lean Six Sigma Green Belt Certification program is the second stage in the Lean Six Sigma Masters program. You'll learn the core principles of Lean Six Sigma, how to implement quality projects and applications, and how to use the Minitab tool for effective statistical analysis. The course is aligned to ASQ and IASSC exams, integrates lean and DMAIC methodologies using case studies and real-life examples, and will give you the skills to empower your organization for continuous improvement.

#### Learning Outcomes:

At the end of the Six Sigma Green Belt training, you will be able to:

- Become a key stakeholder in leading and implementing Lean Six Sigma projects in your organization
- Describe how to identify an improvement project in the Define phase
- Explain how to measure process and product in the Measure phase
- Perform data analysis and hypothesis testing in the Analyze phase
- Identify possible improvement actions for the performance of variations in the Improve phase
- Define efficient operating levels for inputs and outputs in the Control phase
- Use DFSS Tools such as Quality Function Deployment (QFD), Failure Mode and Effects Analysis (FMEA), and Risk Priority Number (RPN)

#### Course Content:

- Course Introduction
- Six Sigma and Organizational Goals
- Define Phase
- Measure Phase
- Analyze Phase
- Improve Phase
- Control Phase
- Tips and Tricks
- Lean Six Sigma Green Belt(LSSGB)

## Course 3

### Minitab

This course ensures that you learn the practical applications of the latest version of the statistical tool, Minitab® 17 and excel at the tools used by both Lean Six Sigma Green Belt and Black Belt professionals. The course covers 9 case studies in the domains of Healthcare, IT and IT Services, and Manufacturing, and each case study describes a problem and its solution using Minitab® 17.

#### Learning Outcomes:

By the end of Minitab training you will be able to:

- Process key statistical data operations using Minitab
- Export data to various MS office applications
- Understand and apply various statistical tools in various quality projects
- Understand and remove common pitfalls in data analysis
- Master all statistical tools/topics needed for Green/Black belt projects

#### Course Content:

- Introduction to MINITAB
- Interoperability in Minitab
- Lean Six Sigma Green Belt case study
- Case Study on Lean Six Sigma Green Belt
- Gage R and R Analysis and Attribute R and R Analysis
- Case Study on Lean Six Sigma Black Belt
- Regression Analysis in Minitab
- Hypothesis Tests for Non-Normally Distributed Data
- Analysis of Variance
- Chi Square Test for Association
- Design of Experiments
- Common Pitfalls while Analyzing Data

## Course 4

# Certified Lean Six Sigma Black Belt

The Lean Six Sigma Black Belt training is the most exclusive certification for the Lean Six Sigma quality management methodology. This Six Sigma Black Belt certification course is the final stage of the Masters program that will position you as an expert in implementing Lean, Design for Six Sigma (DFSS), Six Sigma Define, Measure, Analyze, Improve and Control (DMAIC) and Total Productive Maintenance (TPM). Join this exclusive worldwide group of 4000 certified Lean Six Sigma Black Belts today.

### Learning Outcomes:

The Lean Six Sigma Black Belt (LSSBB) Certification is designed to help you master the combined concepts of Lean and Six Sigma methodologies. Our Six Sigma Black Belt training and certification program is modeled on the Body of Knowledge (BOK) of the American Society of Quality (ASQ), with cutting-edge and real-life applications integrated with the training section. Once the Lean Six Sigma Black Belt training is complete, participants will be able to implement the concepts of Lean, Design for Six Sigma (DFSS), Six Sigma Define, Measure, Analyze, Improve and Control (DMAIC) and Total Productive Maintenance (TPM) using statistical tools and analysis. At the end of Simplilearn's Lean Six Sigma Black Belt training, you will gain knowledge of the following:

- Apply Lean concepts such as 5S, waste reduction, process mapping, value stream mapping and mistake proofing.
- Apply basic and more advanced statistical analyses to determine the relationship between key inputs and process outputs.
- Effectively manage team dynamics and understand how to work with multiple levels of leadership to remove barriers and achieve project success.
- Close projects and hand over control to process owners.
- Present projects to instructors, peers and managers.

### Course Content:

- Six Sigma Black Belt
- Overview
- DFSS, Pre-define and Define (DMAIC)
- Measure
- Analyze
- Improve
- Control

## Elective 1

### Lean Six Sigma Application in Information Technology

Lean Six Sigma Application in Information Technology is an industry-specific course on the application of Lean Six Sigma in Information Technology. This course emphasizes Lean Six Sigma concepts and tools to address challenges faced by IT organizations in implementing process improvements. It also highlights examples and case studies to reinforce and provide insight on the improvements that are possible by implementing Lean Six Sigma.

The course offered by Simplilearn includes only online training. The courseware includes case studies and relevant examples for better understanding of the key concepts.

#### Learning Outcomes:

At the end of Simplilearn's training in Lean Six Sigma Application in Information Technology, you will be able to:

- Discuss common IT challenges using the Lean Six Sigma framework
- Review voice of the customer techniques in the requirements gathering process
- Explain the uses of metrics to measure performance
- Describe the application of lean principles to remove wastes
- Describe the uses of metrics and control charts to ensure stability of IT processes

#### Course Content:

- Course Overview
- Basic Lean Six Sigma Concepts
- Application of Lean Six Sigma in IT
- Define
- Measure
- Analyze
- Improve
- Control
- DFSS in IT

## Elective 2

### Lean Six Sigma in Healthcare

Lean Six Sigma in Healthcare is an industry-specific course on the application of Lean Six Sigma in a Healthcare setting. This course will provide a practical understanding on how to effectively use the methodology and tools, to improve projects in a healthcare environment. It also highlights examples, case studies and a sample project to reinforce and provide insight on the enhancements that are possible by implementing Lean Six Sigma.

The course offered by Simplilearn includes only online training. The courseware includes case studies and relevant examples for better understanding of the key concepts.

#### Learning Outcomes:

At the end of Simplilearn's training in Lean Six Sigma in Healthcare, you will be able to:

- Discuss common challenges in Healthcare settings.
- Understand a sample project through the entire process of conducting an improvement project, from Define phase to Control phase.
- Demonstrate through the use of the relevant sample project how to apply the methodology and use some of the tools.

#### Course Content:

- Course Introduction
- Pre Project Steps
- Defining The Problem
- Measurement
- Analyze
- Improve
- Control
- Putting it All Together



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