



# LSSBB CERTIFICATION ONLINE COURSE AND EXAM

## ✓ Course Description

- Lean Six Sigma Black Belt online course focuses on providing students with comprehensive understanding of both the complementary domains of Lean and Six Sigma. It covers tools and techniques useful to improve the production process, reduce waste and minimize defects in the end product with a greater focus on the practical implementation of these tool and techniques in the organization. The participants will definitely be able to use the knowledge gained in this course in leading various critical projects in their respective organizations.

## ✓ Course Objective

This course aims to:

- Provide comprehensive knowledge to participants about the tool and techniques, advantages, and challenges of the Six Sigma and Lean methodologies.
- Teach students both quantitative and qualitative methods from the complementary domains of Lean and Six Sigma.
- Provide knowledge to students to form and effectively lead a six sigma project team.
- Provide knowledge to students to apply DMAIC (Define, Measure, Analyze, Improve, and Control) and various six sigma tools in process and quality improvement.
- Provide knowledge of Kaizen projects to equip students with knowledge to communicate using Six Sigma and Lean concepts equip students with knowledge to avoid pitfalls in implementing six sigma.

## ✓ Audience Profile

- This course is for employees and organizations requiring a standardized approach to problem solving for the purpose of continuous improvement. This would include team leaders, supervisors, associates, Quality Assurance Engineers, Project Managers, Software Professionals, Practitioners, Quality Assurance team members, Working Executives and Senior Management that will dedicate a small portion of their time applying the DMAIC and Kaizen tools to their natural work area.
- People who want to lead improvement projects, typically in a full-time role
- Individuals seeking to significantly improve business processes
- Functional managers seeking to bring significant business results to their organizations.
- Managers and employees who want to get certified as Black Belt in Six Sigma.
- Any other professional members who are doing research, innovations or consulting in process improvement practices.

## ONLINE SELF STUDY DURATION 180 DAYS



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### ✓ Course Outline

- **Introduction to Six Sigma**
  - A brief history of Quality
  - What is Quality (Definitions) and service or product
  - Quality Gurus & their contribution to Quality
  - Enterprise wide View
  - Leadership
  - Six Sigma Roles and Responsibilities
  - Team Formation
  - Team Facilitation
  - Team Dynamics
  - Time Management For Teams
  - Team Decision making Tools
  - Management and Planning Tools
  - Team Performance Evaluation And Rewards
  - Overview of DMAIC
- **Six Sigma Methodology – Define**
  - Important Stakeholders
  - Impact On Stakeholders
  - Critical To Requirements
  - Benchmarking
  - Business performance measures
  - Financial measures
  - VOC
  - Kano's Customer Satisfaction Levels
  - Juran's Customer Needs
  - Market Research
  - CTQ Flowdown
  - QFD
  - Performance Metrics
  - Project Charter
  - Charter Negotiation
  - Project management plan and Baselines
  - Project Tracking
- **Six Sigma Methodology – Measure**
  - Processes, Process characteristics,
- **Six Sigma Methodology – Analyze**
  - process flow metrics, inputs and outputs
  - Process maps and Flow chart
  - SIPOC
  - Data Type & Measurement scale
  - Data Collection
  - Sampling strategies
  - Fishbone Diagram
  - Relational Matrices/Prioritization Matrix
  - Basic Statistics
  - Analytical Statistics
  - Gauge R & R
  - Process Capability Analysis
- **Six Sigma Methodology – Improve**
  - DOE
  - Poka-yoke
  - 5S
  - SMED
  - •Continuous Flow Manufacturing
  - Kaizen
  - Kanban
  - Theory of constraints
  - Risk analysis
- **Six Sigma Methodology – Control**
  - Statistical Process Control
  - Other Control Tools
  - Maintain Controls
  - Sustaining Improvements
- **More to Learn**
  - A Value Stream Map
  - Lean is Speed
  - Total Supply Chain
  - Lean Six Sigma Logistics
- **DFSS**
  - DFSS
- **Case Study 1**
  - Case Study 1 Part 1
  - Case Study 1 Part 2
- **Case Study 2**
  - Case Study 2 Part 1
  - Case Study 2 Part 2

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