SSBB Certification Online Course and Exam

Delivery Method : Online

Validity : 6 months

Course Description

Six Sigma Black Belt course focuses on providing students with comprehensive understanding of the various Six Sigma tools and techniques useful to improve the production process 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 you gained in this course in managing six sigma 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 methodology.
- 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.
- to equip students with knowledge to communicate using Six Sigma concepts
- familiarize participants on how to assess and manage project risk.
- equip students with knowledge to avoid pitfalls in implementing six sigma.

Course Outcome

- Participants will be able to relate Six Sigma concepts to the overall business mission and objectives.
- Participants will be equipped with the knowledge needed for production process improvement in their organizations and help their organizations adopt Six Sigma methodology.
- Participants will be able to play the role of a Black Belt and will be able to define, present and manage six sigma projects
- Participants have knowledge pertaining to and can anticipate issues related to the practical implementation of Six Sigma.
- Participants are armed with the proper tools to address, resolve, and take the lead on production issues in their organizations.
- Participants will develop superior problem solving skills that can be immediately applied in real world projects.

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 tools to their natural work area.
- Individuals seeking to significantly improve business processes
- 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.

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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, process flow metrics, inputs and outputs
- Process maps and Flow chart
- SIPOC
- Data Type & Measurement scale
- Data Collection
- Sampling strategies
- Fishbone Diagram
- Relational Matrices or Prioritization Matrix
- Basic Statistics
- Analytical Statistics
- Gauge R & R
- Process Capability Analysis

Six Sigma Methodology – Analyze

- Correlation and Regression Analysis
- Testing of Hypothesis
- FMEA
- Gap Analysis
- The Five Whys
- Pareto Diagram
- Tree Diagram
- Non value added activities
- Cost of poor Quality (COPQ)

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

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