

Fact Sheet: Lean Six Sigma Black Belt (Quality Management)

Course Description:

A Lean Six Sigma Black belt plays a critical role in six sigma projects. Black Belts are responsible as project managers for the ultimate result of these projects. Lean and Six Sigma, both proven business improvement approaches, provide businesses with the ability to maximize customer, employee and shareholder value by minimizing process variation and waste.

This intensive Lean Six Sigma Black Belt course trains you to perform the role of Lean Six Sigma Black Belt and successfully execute Six Sigma projects.

This hands-on learning experience develops both the delegate's technical knowledge and personal skills. The course uses a blend of theory and practical exercises to ensure that participants have the confidence and capability to deliver more complex business improvement projects and transformations.

Learning Objectives:

Individuals certified at this level will have demonstrated their understanding of:

- Simultaneously improve both quality and speed by combining Lean with Six Sigma.
- Understand the Lean Six Sigma methodology and improvement processes.
- Properly define scope and work on Lean Six Sigma projects.
- Gather voice of the customer and analyze survey data.
- Construct a value Stream Map and apply the map to identify improvement opportunity.
- Learn to recognize waste
- Apply learn tools to analyze process flow and delay times and focus on the separation of "value-added" from "non-value-added" and work with tools to eliminate the root causes of non-value-added activities.
- Incorporate a comprehensive set of statistical analysis tools to problem solving.
- Provide a means for quantifying and eliminating the cost of complexity.
- Investigate basic queuing problems.
- Implement quick improvements using a structured Kaizen Event.
- Learn to mistake-proof a process to reduce rework.

Course Outline:

Define & Measure (Introduction to Statistical Analysis & Minitab)

- Quality Functional Deployments & Kano Analysis
- Statistical Concepts

- Introduction to Minitab I & Data Manipulation
- Introduction to Minitab II
- Linking customer requirements to CTQs
- Review the basic statistical concepts
- Review the Minitab Environment
- Using Minitab for Analysis

Analyze (Analysis of Variance)

ANOVA

SPAN

Lean Metrics, value, Value Stream Analysis, Flow and Pull

Measure (Measurement Systems Analysis)

Rational Sub grouping & Data Collection

Measurement Systems Analysis

Discrete Data Measurement & Application

Practical MSA

Stratify customers and determine what to measure

Minimize measurement error Statapult & GRR

Inspection Efficiency and Card drop Exercise

Exercises in Minitab and more Statapult

Analyze (Regression Analysis)

Introduction to Regression

Multiple Linear Regression

Logistic Linear Regression

Regression Issues

Measure (Sample Size and Confidence Intervals)

Focusing the Problem, Cause and Effect and FMEA

Determining Appropriate Business Measures

Sample Size & Confidence Intervals

Methods to focus the problem

What to measure?

Measurement essentials

Improve (Designs of Experiments)

Introduction to Designs of Experiments

2 by n Full Factorial Design of Experiments

Fractional Factorial Design of Experiments

Planning Designs

Analyze (Hypothesis Testing)

Hypothesis Testing Continuous Data
Hypothesis Testing Discrete Data
Hypothesis Testing Non Normal Data

Improve and Control (Selecting Solutions and Control Charting)

Creative Thinking
Solution Selection
Lean Solutions
Piloting Solutions
Control Chart Theory
Creating Control Charts
Specialty Control Charts

Improve and Control (Optimization of Solution)

Response Surface Analysis
Review and Close
Examination

Measure (Sample Size and Confidence Intervals)

Focusing the Problem, Cause and Effect and FMEA
Determining Appropriate Business Measures
Sample Size & Confidence Intervals
Methods to focus the problem
What to measure?
Measurement essentials

Target Audience:

This course is suitable for professionals seeking Six Sigma Black Belt certification who are charged with responsibility for improving quality and processes at the organizational or departmental level.

- Process owners
- Quality professionals
- Engineers
- Production Managers
- Frontline Supervisors

Prerequisites:

Delegates must also complete a Lean Six Sigma project within 6 months after completing the training program. The project needs to adequately test their knowledge and application of the Lean Six Sigma methodology and relevant tools. Delegates must lead the project and not just be a team member. Black Belt projects are more demanding hence the project should demonstrate and represent significant improvement & benefits (please discuss your proposed project with your course instructor.)

After completing the project the delegates are expected to submit the project for a review, of which an Independent assessment will be done to ensure that the required objectives are met and the definitive benefits and improvements have been derived from the project. For Black belt certification delegates will also have a telephone interview with a Master Black Belt about their project.

When you have completed all of the above you will receive a certificate from Maestro Intelligence Lab confirming that the delegates are now a Certified Lean Six Sigma Black Belt.

Examination:

Certificate:	Lean Six Sigma Black Belt
Duration:	5 Days
Course Delivery:	Classroom, Live Virtual Classroom
Language:	English

For more details contact

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