

Lean Six Sigma Black Belt

Certificate: IASSC - Lean Six Sigma Green Belt

Duration: 5 days (40 hours)

Course Delivery: Classroom

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

The comprehensive curriculum takes a practical and problem solving approach to cover the data driven D-M-A-I-C improvement cycle as defined in the International Lean Six Sigma Body Of Knowledge (ILSSBOK). Various Statistical and Business Improvement tools help you to understand the flow and process of the methodology. There are two options for this course, one with Minitab or another version with SigmaXL as the featured statistical analysis package.

Audience:

This course is suitable for professionals seeking Six Sigma Black Belt certification and 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

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 Lean 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

Prerequisites:

None

Course Materials:

Participants will receive the following as part of this course:

- A course book
- Handouts

Examination:

IASSC Certified Lean Six Sigma Black Belt™ (ICBB™)

Course Outline:

Define Phase

- Understanding Six Sigma
- Six Sigma Fundamentals
- Selecting Projects
- Elements of Waste
- Wrap Up and Action Items

Measure Phase

- Welcome to Measure
- Process Discovery
- Six Sigma Statistics
- Measurement System Analysis
- Process Capability
- Wrap Up and Action Items

Analyze Phase

- Welcome to Analyze
- “X” Sifting
- Inferential Statistics
- Introduction to Hypothesis Testing
- Hypothesis Testing Normal Data Part 1
- Hypothesis Testing Normal Data Part 2
- Hypothesis Testing Non-Normal Data Part 1
- Hypothesis Testing Non-Normal Data Part 2
- Wrap Up and Action Items

Improve Phase

- Welcome to Improve

- Process Modeling Regression
- Advanced Process Modeling
- Designing Experiments
- Experimental Methods
- Full Factorial Experiments
- Fractional Factorial Experiments
- Wrap Up and Action Items

Control Phase

- Welcome to Control
- Advanced Experiments
- Capability Analysis
- Lean Controls
- Defect Controls
- Statistical Process Control (SPC)
- Six Sigma Control Plans
- Wrap Up and Action Items



Certification Testing

The IASSC Certified Lean Six Sigma Black Belt Exam™ is a 150 question, closed book, proctored exam with a 4 hour allotted time. The Exam contains approximately 30 multiple-choice and true/false questions from each major section of the IASSC Lean Six Sigma Black Belt Body of Knowledge and is administered in more than 8,000 Testing Centers located within 165 countries throughout the world and through the IASSC Web-Based On-Demand testing system and by hundreds of IASSC Accredited Providers.

Requirements

In order to achieve the professional designation of IASSC Certified Black Belt (IASSC-CBB™) from the International Association for Six Sigma Certification, candidates must sit for the IASSC Certified Lean Six Sigma Black Belt Exam and achieve a minimum score of 580 points out of a total potential of 750 points.

There are no prerequisites required in order to sit for the IASSC Certified Lean Six Sigma Black Belt Exam. For more about this see FAQ's and the IASSC position on knowledge and application. Purchase a Black Belt Exam Voucher for \$395 USD through the link provided below.