



Lean Six Sigma Black Belt Certification Program



Black Belts are at the core of every Six Sigma Implementation. “Black Belt” is the term to describe “an individual who has developed a synergistic proficiency between his or her technical discipline and the Six Sigma strategies, tactics, and tools.” These individuals will continually work towards institutionalizing the effective use of these tools throughout the corporation, its customers, and its suppliers.

Week One – Define & Measure

- Mature Learning Process
- Six Sigma Introduction
- Blueprint for Breakthrough
- Project Scoping Tools
- Project Definition
- Introduction to Lean
- Lean & Six Sigma Synergy
- Familiarization with Minitab
- Introduction to Basic Statistics
- Project Planning & Deliverables
- Rolled Throughput Yield (RTY)
- Process Mapping
- Process C&E
- Measurement Systems Analysis (MSA)
- Capability Analysis
- Homework Review
- Project Reviews

Week Two – Measure-Analyze

- Project Reviews
- Week 1 Review
- Value Stream Mapping
- Process FMEA
- Graphical Data Analysis
- Central Limit Theorem
- Confidence Intervals
- Hypothesis Testing
- Sample Size Selection
- Correlation and Regression
- One-way ANOVA
- Hypothesis Test for Variance
- Chi Square Contingency Table & Goodness of Fit
- General Linear Method (GLM)
- Project Planning & Deliverable
- Homework Review

Week Three – Analyze-Improve

- Project Reviews
- Week 2 review
- Future VSM (Value Stream Mapping) and related Techniques like Push Pull Production, Takt-Time, Changeover Time, Kanban
- Introduction to DOE
- Full Factorial Elements
- 2K Factorials
- Fractional Factorials
- DOE Sample Size Selection
- DOE Centre point & Blocking
- Statapult Exercise
- Project Planning & Deliverables
- Homework Review

Week Four – Improve-Control

- Project Reviews
- DOE Review
- Binary Logistic regression
- Multiple Regression
- Rational Tolerancing
- Survey Design & Analysis
- Intro to Control Methods
- Intro to Statistical Process Control
- Process Control Plans
- Change Management Program
- Individual MR chart
- Short Term Charts
- Project Planning & Deliverables
- Homework Review

Pivotal’s Master Black Belt instructors are regarded as being among the very best in the world. They have been teaching Six Sigma for an average of Eight years and have previous experience as Black Belts and Master Black Belts within major corporations. In addition to providing outstanding training, Pivotal offers innovative solutions to ensure the very best results for its clients.

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