Internationally Accredited by:

Lean Six Sigma Certification Black Belt Level (8 Days) Online Instructor–Led Virtual Comprehensive Training Course

Price: $4,000 + GST (Includes Examination & Completion Certification)

Objectives

- The Black Belt Course is designed to improve process performance, deliver high impact projects and achieve significant cost savings.
- The Certified Lean Six Sigma Black Belt is a professional who can explain Lean Six Sigma philosophies and principles, including supporting systems and tools.
- Black Belts will demonstrate team leadership, understand team dynamics and assign team member roles and responsibilities.
- Black Belts will gain thorough understanding of all aspects of the DMAIC model in accordance with Six Sigma principles.
- Black Belts will gain knowledge of Lean enterprise concepts, are able to identify non value–added elements and activities.

Departments

Business Process Improvement, Change Management, Continuous Improvement, Project Management, Industrial Engineering, Production Management, Quality Management, Logistics, Contract Department, Innovation Department, Commercial Department, Business Development, Strategic Planning, Human Resource, Finance & Others.

Who Should Attend

Chief Executive Officers, Managing Directors, Executive Officers, General Managers, Managers, Executives, Engineers and Continuous Improvement Specialists & Others.

Course Content

Session 1: Define & Measure Phase (2 Days)

- Introduction & Overview of Six Sigma
- Cost of Poor Quality (COPQ)
- Drill Down Tree & Pareto Chart
- Project Charter Development
- Voice of Customers (VOC) & Kano Model

- SIPOC & Basic Process Mapping
- Financial Analysis & Cost Savings
- Root Cause Analysis (RCA) Tools
- Data Collection Plan
- Basic Statistics & Sampling Techniques

- Capability Analysis & Sigma Value
- Detailed Process Mapping
- Fishbone Diagram
- Failure Modes & Effects Analysis (FMEA)

Session 2: Analyze Phase (2 Days)

- Graphical & Value Analysis
- Hypothesis Testing
- Advanced Graphical Analysis
  - Sigma Value / Z–Bench, Graphical Tools for Statistics, Pareto Charts, Run Charts, Dot Plots, Scatter Plots, Matrix Plots, Histograms, Time Series Plots

- Regression Analysis
  - Correlation Analysis, Multiple Regression, Simple Linear Regression, Best Subset Regression
- Hypothesis Testing– P–Value & Statistical sample tests (overview)

- Type 1 & Type 2 Error, T–tests: 1 Sample & 2 Sample Tests incl. ANOVA, TOEV & Proportion Tests
- Value Stream Mapping (VSM)– Current State
- Summarizing Potential Factors & Potential Solutions

Session 3: Improve & Control Phase (2 Days)

- Generating Improvement Ideas
- Evaluating & Selecting Best Solutions
- Solution & Training Implementation Plan
- Develop & Execute Pilot Plan
- Lean Concepts & Error Proofing / Kaizen

- Cost & Benefit Analysis (ROI)
- Process Control Plan
- Standard Operating Procedures (SOP)

- Statistical Process Control (SPC)
- Best Practice & Replication Opportunities
- Process Ownership & Dashboards

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Course Content (Cont.)

Session 4: Advanced Define & Measure Phase (1 Day)
- Quality Function Deployment
- MGPP– Multi Generation Project Planning
- Advanced Value Stream Mapping
- Cause & Effect Matrix (X–Y Diagram)
- Measurement System Analysis (MSA)
- Lean Ways of Working
- Non–Normal Data Analysis

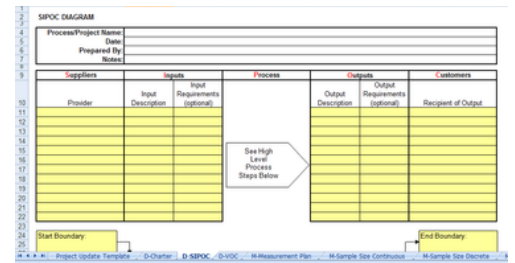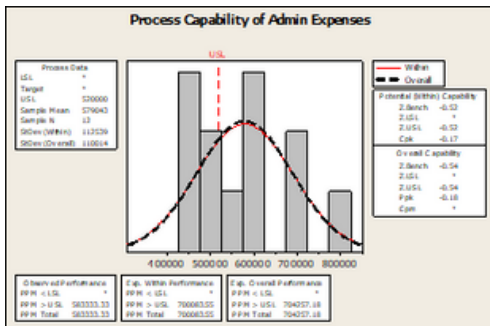**Session 5: Advanced Analyze, Improve & Control Phase (1 Day)**
- Advanced Statistical Root Cause Analysis Tools
  - Type 1 & Type 2 error, Degree of Freedom, Power & Sample Size, 1 Sample t–Test, 2 Sample t–Test, One way ANOVA, Test of Equal Variance (TOEV), 1 Proportion Test, 2 Proportion Test, Paired t–Test, Chi–Square Test, Non–Parametric Analysis & Two Way ANOVA, Best Subset Regression
- DOE or Digital Solutions
- Advanced Lean Enterprise Modules

Minitab During Black Belt Lean Six Sigma Training

Where applicable, during the training course, our consultants will provide the participants with training on how to analyse Quality data using the Minitab software which is widely used by Lean Six Sigma practitioners.

Example of Minitab Software:

Our consultants will also provide candidates with useful excel quality templates & tools

Examination & Certification : We will administer an examination for the participants upon completion of their training. The examination consists of the following (on last day of training):

LSS Black Belt Level (Internal Exam & Certification)

Exam Type:	Multiple Choice Questions
No. of Questions:	50 Questions
Examination:	Open Book Examination
Passing Rate:	70% and above
Duration of Exam:	2 Hours
Location of Exam:	Online
Cost:	Inclusive of training

For further enquiries:

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