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What is Lean Six Sigma Black Belt Training?

If you already have Six Sigma Green Belt - our Lean Six Sigma Black Belt course will take you to the next level, providing you with the in-depth statistical knowledge you required to manage Six Sigma projects across your organisation.

In most organisations, there is recognition that employees who are trained Green Belts are capable of moving up to Black Belt level. It is important that this opportunity is available without having to complete the full Black Belt course.

This programme has been designed to incorporate those elements from the Black Belt training course that are additional to the Green Belt course.

Black Belts are individuals that apply intensive and diversified process improvement techniques to achieve greater efficiency and effectiveness. A Black Belt provides training, facilitation, direction, analysis and advises on product and process improvement.

We are pleased to announce that we have introduced accreditation for our Black Belt course based on the following:

Written Exam

- Exam 1 completed at the end of week 1 - based on the principles and application of Lean Six Sigma taught on the training course
- Exam 2 completed at the end of week 2 - based on the analysis from using the statistical software package Minitab as demonstrated and taught on the training course

Work Based Project

- Delegate must complete a work-based project that follows the Lean Six Sigma DMAICT approach that saves your organisation in excess of £250k or two smaller projects that saves in excess of £100k
- Evidence should be provided by the delegate that quantifies the benefits in terms of product/service quality, reduced cost and improved service to the customer (internal or external)

For both the exams and project a mark in excess of 50% is required to gain accreditation.

All examinations and projects will be assessed by our Master Black Belt trainer who has a PhD in Lean Six Sigma.

Rather than using case studies, during this two-week programme delegates are invited to bring real project data along with them - this helps to relate the training to real problems, and maximises the value of time spent away from the office.

This Six Sigma Black Belt Conversion training course is the second module in our Six Sigma

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Six Sigma project before attending.

We also provide private and in-company Six Sigma Black Belt courses. Call +44 (0) 1273 622272 to discuss.

For more information about belt levels, download our free Six Sigma eBook.

Course Objectives

At the end of the intensive ten-day programme delegates will understand and be able to:

- Apply the principles of the Six Sigma DMAIC performance improvement model
- Establish the “Voice of the Customer” in defining the required performance standard
- Use a number of measurement approaches and tools to establish current performance
- Appropriately apply a number of advanced statistical analysis tools and techniques to establish the root cause of a problem
- Recognise the difference in approach and techniques for incremental and redesign improvement strategies and know how to decide on the correct approach
- Establish ongoing process controls and process governance structures
- Use Minitab to provide data analysis and process capability

Define - Week 1

- Understanding Variability
- Project Charter
- Basic Statistics
- QFD/VOC
- COPQ
- Process Maps

Measure - Week 1

- Measurement Basics
- Histograms
- Equipment R & R/MSA
- Scatter Plots
- Sigma Levels & DPMO
- Process Capability
- Yield Calculation
- Sampling Techniques
- Confidence Intervals
- Gauge R&R
- Implementing the measurement
- Data Collection
- Brainstorming
- FMEA

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- Data Analysis Pareto charts Frequency charts Run charts Variation
- Process Mapping and Analysis Value Stream Analysis Complexity
- Cause-Effect Diagram & 5 Why's
- Central Limit Theorem
- Confidence Intervals
- Capability Studies
- Correlation
- Regression
- Design of Experiments (DoE) Full Factorial 2k Fractional Fractional Multi-Vari Correlation/Regression ANOVA Stratification Box Plots

Improve - Week 2

- Hypothesis Testing T-Tests F-Tests ANOVA Chi Square
- Selecting solutions
- Developing solution options
- FMEA risk analysis
- DoE in Optimisation
- Simulation
- Remedy Selection Matrix

Control - Week 2

- Mistake Proofing
- Statistical Control
- Variation
- Control Charts
- I, X Bar and R Charts
- Response Charts
- Process Scorecards

This Lean Six Sigma Black Belt training course forms the second part of our Six Sigma Black Belt Training Package following on from our 10-day Lean Six Sigma Green Belt training course.

Delegates should bring a well-defined project with them to the course, including DMAIC, Process Map and Data. You will be able to undertake live project work during the training course and in the month's gap between the two weeks of training.