

Lean Six Sigma Practitioners Black Belt - week 1

Learn via: **Classroom / Virtual Classroom / Online**

Duration: **5 Day**

Overview

This ten day course (delivered over two weeks - LSSBBWK1 & LSSBBWK2) provides the experienced Green Belt with the necessary tools and techniques to manage improvement resources to deliver major projects.

This hand-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 delegates have the confidence and capability to deliver more complex business improvement projects and transformations.

Lean and Six Sigma, both proven business improvement approaches, provide businesses with the ability to maximise customer, employee and shareholder value by minimising process variation and waste.

Examination

A lean Six Sigma Black Belt examination will be taken on the last day of week two - LSSBBWK2. It is open book.

If a delegate fails the exam (70% pass mark) they will be able to re-sit the examination.

Data analysis questions will be used during both weeks to assess competency in statistical analysis using Minitab.

Accreditation

Once a delegate has completed the course and passed the examination they will be required to demonstrate the application of their learning in an appropriate improvement project.

Prerequisites

- Delegates must have completed a Lean Six Sigma Green Belt course with either (LSSGBP) or other organisation.
- Delegates should ideally, have a project identified to complete post-training. This is required for accreditation

Suggested pre-reading

- Lean Six Sigma and Minitab by Quinten Brook
- Statistics without tears by Derek Rowntree

Who Should Attend

Experienced Green Belts who want to enhance and apply their skills to larger more complex projects and be recognised as a Lean Six Sigma Black Belt.

What You Will Learn

This ten day course ran as two 5 day sessions, (week 1 and week 2), will enable delegates to become self-sufficient process improvement practitioners with the capability to analyse opportunities and deliver solutions.

Outline

Week One (LSSBBWK1) 5 days

- Review of Green Belt learning
- Project selection
- Project risks
- Team leadership
- Force Field Analysis

Define

- Quality Function Deployment

Measure

- Balanced scorecards
- Introduction to Minitab
- Basic statistical concepts
- Central limit theorem
- Measurement Systems analysis (MSA)
- Continuous data MSA
- Discrete data (MSA)
- MSA demonstration
- Standardised Normal distribution
- Capability Cp and Cpk
- Process Efficiency calculations

Analyse

- Graphs using Minitab
- Statistical tests using Minitab
- Hypothesis testing
- Continuous data
- One sample t-test
- Two sample t-test
- Homogeneity of variance
- Analysis of variance
- Discrete data
- One and two proportion tests
- Chi-squared
- Non-Normal data
- Mann Whitney U
- Moods Median