

## Lean Six Sigma Black Belt Training

*A 16-day course*

**Description:**

This is a 16-day training programme and is designed to lead the attendees through the Lean Six Sigma methodology focusing on DMAIC (Define, Measure, Analyse, Improve and Control), with particular emphasis on the tools that are most frequently used in Lean Six Sigma projects.

The training aims to pass on Lean Six Sigma skills, knowledge and attitude.

**Audience:**

This Six Sigma Black Belt Training Course is recommended for all those in an organisation who will lead medium or large projects and who will act as coaches or mentors to Green Belts and Yellow Belts.

It is suitable for managers, internal consultants, change agents, project managers, team leaders, business improvement leaders or facilitators.

It is likely, though not essential, that participants will hold a Six Sigma Green Belt or Yellow Belt.

**Duration:**

*Sixteen days - 4 X 4 consecutive days over a four-month period - four days in a row per month*

**Objectives:**

By the end of this training programme the attendees will be able to:

1. Understand Lean Six Sigma methodology and DMAIC.
2. Understand how to use the most important tools in DMAIC phases.
3. Identify sources of waste and variation within the business.
4. Execute complex projects successfully.
5. Use Lean Six Sigma as an efficient and effective cost reduction strategy.

Successful attainment of Black Belt certification requires two completed projects with signed affidavits or one completed project with signed affidavit and three years of work experience in one or more areas of the Six Sigma Body of Knowledge.

Each certification candidate is required to pass a written examination that consists of multiple-choice questions that measure comprehension of the Body of Knowledge. The Six Sigma Black Belt Certification is a four-hour, 150 multiple-choice question examination.



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### Minimum Expectations of a Six Sigma Black Belt on Completion of the Training Course

- ✧ Will be able to explain six sigma philosophies and principles, including related systems and tools (lean, quality, process/continuous improvement, etc.), and will be able to describe their impact on various business processes throughout the organization.
- ✧ Will understand the various leadership and six sigma roles and responsibilities. Will recognise organisation roadblocks and be able to use change management techniques to manage organizational change.
- ✧ Will be able to define benchmarking and will understand various financial and other business performance measures. Will be able to identify customer requirements and describe the impact that six sigma projects can have on various types of customers.
- ✧ Will have a fundamental understanding of the components and techniques used in managing teams, including time management, planning and decision-making tools, team formation, and performance evaluation and reward. Will know how to use appropriate techniques to overcome various group dynamics challenges.
- ✧ Will understand the elements of a project charter (problem statement, scope, goals, etc.) and be able to use various tools to track the project progress.
- ✧ Will be able to use customer feedback to determine customer requirements.
- ✧ Will have a good understanding of data collection techniques, process elements, and process analysis tools.
- ✧ Will have a good understanding of measurement systems.
- ✧ Will have a basic understanding of probability concepts and distributions.
- ✧ Will be able to perform statistical and process capability calculations.
- ✧ Will be able to analyse the results of correlation and regression analyses. Will be able to interpret multi-variant study results and interpret attribute data to find sources of variation.
- ✧ Will be able to define multivariate tools.
- ✧ Will be able to perform hypothesis testing and analyse their results.
- ✧ Will understand the elements and purpose of FMEA and be able to use root cause analysis tools.
- ✧ Will be able to identify and interpret the seven classic wastes.
- ✧ Will be able to use gap analysis tools.
- ✧ Will be able to plan design of experiments (DOE) and be able to analyse their results.
- ✧ Will be able to use various tools to eliminate waste and reduce cycle-time.
- ✧ Will be able to define kaizen, kaizen blitz, and theory of constraints.
- ✧ Will have a fundamental understanding of how to implement an improved process and how to analyse and interpret risk studies.
- ✧ Will be able to implement statistical process control (SPC).
- ✧ Will understand total productive maintenance (TPM) and visual factory concepts.
- ✧ Will be able to develop control plans and use various tools to maintain and sustain improvements.
- ✧ Will understand common DFSS and DFX methodologies, robust design and processes, and techniques for strategic and tactical design.



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