

Certified Lean Six Sigma Green Belt

Course Code TGLS003P

Lean and Six Sigma deliver business goals and objectives through the rigorous application of proven improvement methodologies. Combining both these methodologies eliminates waste, increases value and reduces variation. By focusing on the customer and delivering benefits quickly it is possible to improve quality performance and profitability simultaneously.

Thornley Group Green Belt training is carried out by professional trainers who are experienced as senior management practitioners in both Six-Sigma and Lean. After completion of the training you will be equipped and eligible to sit the exam for certification as a Lean Six-Sigma Green Belt (exam fee additional). Course details are as follows:

Course Duration

- 5 days classroom

Entry Requirements

- Candidates must have a basic working knowledge of algebra and be used to working with numerical data (See separate maths skills test on our [resources page](#)). A familiarity with spreadsheets is also required.
- Candidates must have the authority to work on a project in their organisation as this is a mandatory requirement for certification. This should be a cost saving, defect reduction or other customer impact project.

Equipment Needed by Candidates

- Scientific Calculator.
- A lap-top computer loaded with Minitab software will be beneficial during the second module of the course (but not essential).

Course Contents

Our Green Belt training gives an extensive grounding in Lean Six-Sigma which covers in detail: Lean tools and techniques and business benefits, project set-up, DMAIC and all the associated statistical tools and techniques. Thornley Group Green Belt training is targeted at people who spend a significant amount of time involved in process improvement. This could either be as a process owner or a member of a team working on an improvement project. The Green Belt can be upgraded to a Black Belt certificate with only a further 5 days of training.

Using their practical experience of improvement programmes, along with simulation exercises, our trainers can take candidates through the process of applying the tools and techniques that they learn.

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Course Contents

Introducing Six Sigma Thinking

- The History of Continuous Improvement
- Introduction to the Six-Sigma DMAIC Project Process
- Six-Sigma Roles

The Define Phase

- Forming the Team
- Team Selection
- The Team Charter
- Developing the Business Case
- Project Management Fundamentals
- SIPOC
- Customer Requirements
- Building the Case for Change

The Measure Phase

- Introduction to Variation and the Normal Distribution
- Data Non-Normality
- Understanding Data
- Sampling Theory
- Central Limit Theorem
- Data Collection Planning
- Cause & Effect Diagrams
- Affinity Diagrams
- Failure Modes and Effects Analysis
- X-Y Diagram
- Gauge R&R
- Statistical Process Control (SPC)
- Process Capability
- Measuring Yield

The Analyse Phase

- Focused Problems with Pareto
- Process Mapping and Charting
- 5 Whys
- Multi-Vari Studies
- Hypothesis Tests - Normal Data
- Hypothesis Tests - Non-Parametric
- Hypothesis Tests - Proportion Data
- Regression Analysis
- Introducing Design of Experiments

The Improve Phase

- Brainstorming Methods
- Benchmarking
- Selecting the Solution
- Promoting the Solution
- Piloting the Solution
- Implementing the Solution

The Control Phase

- Process Control Planning
- Process Mistake Proofing
- Control Chart Selection
- Control Charts - Normal Data
- Control Charts - Non-Normal Data
- Control Charts - Discrete & Attribute Data
- Other Control Charts
- Sustaining the Improvement
- Sharing the Knowledge Gained
- DMAIC Project Review

Lean Thinking

- The Lean Toolkit
- 5 Steps in the Creation of a Lean Organisation
- Understanding Value
- Identifying the Value Stream
- Eliminating Waste
- Value Stream Mapping
- The Three Elements of Effort
- The Seven Wastes
- Barriers to Flow.
- Workplace Organisation - The 5S
- Setup/Changeover Improvement
- Total Productive Maintenance (TPM)
- Creating a Pull System
- Takt Time and Cycle Time
- Bottlenecks
- Visual Management
- Strive for Perfection
- Kaizen Blitz
- Sustainability of Improvements

See the [Thornley Group](#) website for details of Public Lean Six Sigma Green Belt course dates and costs.