

# Lean Six Sigma Green to Black Belt Upgrade

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## *Course Code TGLS004*

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 Black 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 Six-Sigma Black Belt (exam fee additional). Course details are as follows:

## *Course Duration*

- 5 days classroom or 8 x 2.5-hour live Zoom video sessions.

## *Entry Requirements*

- **Candidates must have been trained to Green Belt level prior to attending** (this will require verification prior to attendance).
- Candidates must have a knowledge of algebra and be used to analysing numerical data (i.e. Green Belt).
- Candidates should ideally have the authority to work on a project in their organisation as this will improve the credibility with prospective employers. 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 training course (but not essential).

Our Black Belt training provides all that is required for Lean Six Sigma implementation and project leadership. Whilst building on the central DMAIC and Lean principles, the focus is on team and project management along with advanced statistical tools and data management.

Thornley Group Black Belt training is targeted at people who run business improvement projects and/or have responsibility for managing improvement teams. Using their practical experience of improvement programmes, our trainers can take candidates through the process of applying the tools and techniques that they learn.

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## *Programme Structure*

### *Business Methods*

- The Integration of Lean and Six Sigma
- Business Processes and Systems
- Six Sigma and Lean Applications
- Organisational Strategy
- Strategic Risk Analysis
- Enterprise Leadership Responsibilities
- Organisational Roadblocks
- Change Management

### *Project Methods*

- Critical to X
- Translating Voice of Customer to CTX Requirements
- Financial Measures
- Team Types and Constraints
- Team Roles
- Team Motivation
- Time Management for Teams
- Team Decision-Making Tools
- Management and Planning Tools
- Team Performance Evaluation and Reward
- Project Tracking
- Measurement Systems in the Enterprise

### *Data Methods*

- Metrology – The Science of Measurement
- Measurement System Re-analysis
- Central Limit Theorem
- Probability Concepts
- Commonly Used Distributions
- Some Other Useful Distributions
- Process Capability
- Multivariate Tools
- Contingency Tables
- Non-Parametric Tests
- Design of Experiments

### *Design and Process Methods*

- Kaizen and Kaizen Blitz
- The Theory of Constraints
- Flexible Production and Levelling Demand
- Failure Mode and Effects Analysis
- Control Charts
- Common DFSS Methodologies
- Design for X (DFS)
- Statistical Tolerance in DFX
- Tactical Approaches to Design