



**Smallpeice Enterprises**  
a division of GP Strategies Limited



# Lean Six Sigma Manufacturing Black Belt Upgrade

Manufacturing Focused Content

Virtual Training Delivery

Open Enrolment Calendar

Fully Accredited

[train@smallpeice.com](mailto:train@smallpeice.com)

# Introduction

The Black Belt Upgrade programme is designed for candidates who have already studied and qualified as a Green Belt. The 'Manufacturing' upgrade path focuses on the advanced tools and techniques to develop expert Lean Six Sigma practitioners who are able to:

- Assess improvement opportunities and have the skills to select the right approach problem solving methodology.
- Lead and deliver large-scale cross-company projects delivering significant and quantifiable operational benefits.
- Encourage the cascade of Lean Six Sigma by supporting Green & Yellow Belts, and liaising with key sponsors and stakeholders to provide input to the company improvement strategy.

## Programmes include:

- ▶ Open enrolment calendar with choice of live virtual training or classroom-based events at regional venues.
- ▶ In-company programmes for group training at your company site.
- ▶ Interactive delivery style with case study team exercises to bring alive the technical content and showcase applications to transactional projects.
- ▶ Extensive course materials hub including user-friendly Lean Six Sigma toolkit; consolidation learning via supplementary e-learning modules; dozens of templates and proformas ready to use for your project.
- ▶ Industry recognised accreditation standards via Smallpeice or our external partnership with the British Quality Foundation.
- ▶ Optional add-on coaching packages to guide and fast-track you through your project.

## Minitab Software:

During the Black Belt programme, you will learn how to use Minitab – which is the industry standard software for Lean Six Sigma. Whereas Green Belt level projects can be handled via Excel, the deeper level of data and graphical analysis at Black Belt needs the bespoke functionality of Minitab. If you do not have Minitab licenses in your company already – this is something you will need to explore before enrolling by visiting [www.minitab.com](http://www.minitab.com).



**For bookings & enquiries**  
**email [train@smallpeice.com](mailto:train@smallpeice.com)**

Tel +44 (0)1926 336423 • [www.smallpeice.com](http://www.smallpeice.com)

# 2025 Open Enrolment Classes

## Lean Six Sigma Manufacturing Black Belt Upgrade

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	DEFINE	MEASURE				
Feb 2025 course	February 7 (1 day)	February 12 (½ day)	February 13 (1 day)	February 19 (1 day)	February 26 (1 day)	February 27 (1 day)
Jun 2025 course	June 12 (1 day)	June 20 (½ day)	June 27 (1 day)	July 2 (1 day)	July 7 (1 day)	July 14 (1 day)
Oct 2025 course	October 6 (1 day)	October 7 (½ day)	October 13 (1 day)	October 20 (1 day)	October 28 (1 day)	Nov 3 (1 day)
	<b>SESSION 1:</b> 8.30am – 4.30pm <b>MANAGING &amp; DEFINING BLACK BELT PROJECTS</b> <ul style="list-style-type: none"> <li>• DMAIC versus DMADV projects</li> <li>• Scoping complex cross-functional projects</li> <li>• Value stream mapping as a scoping tool</li> <li>• Aligning the project to business strategy</li> <li>• Managing project reviews (tollgates)</li> <li>• Considering project risks</li> </ul>	<b>SESSION 2:</b> 8.30am – 12.30pm <b>VALUE STREAM MAPPING</b> <ul style="list-style-type: none"> <li>• Introduction to Value Stream Mapping</li> <li>• Creating a Current State Map</li> <li>• Using VSM as a Scoping Tool</li> <li>• Identifying the Opportunities</li> </ul>	<b>SESSION 3:</b> 8.30am – 4.30pm <b>DATA COLLECTION</b> <ul style="list-style-type: none"> <li>• The role of data collection planning throughout a DMAIC project</li> <li>• Use of Is/Is Not to find gaps in knowledge</li> <li>• Understanding variation</li> <li>• Selecting what to measure</li> <li>• Calculating sample size</li> <li>• Sampling considerations</li> <li>• Developing a robust data collection plan</li> <li>• Guidelines for survey sampling</li> </ul>	<b>SESSION 4:</b> 8.30am – 4.30pm <b>MEASUREMENT SYSTEM ANALYSIS</b> <ul style="list-style-type: none"> <li>• MSA fundamentals</li> <li>• Type I studies for repeatability</li> <li>• Type II studies (reproducibility)</li> <li>• Nested gauge R&amp;Rs for destructive tests</li> <li>• Assessing linearity &amp; bias aspects of calibration</li> <li>• Assessing stability (of bias during calibration)</li> <li>• Attribute agreement analysis for pass/fail judgements</li> </ul>	<b>SESSION 5:</b> 8.30am – 4.30pm <b>PROCESS CAPABILITY &amp; PROCESS CONTROL</b> <ul style="list-style-type: none"> <li>• Assessing process control</li> <li>• Use of control charts</li> <li>• Applications of SPC charts for variable and attribute data</li> <li>• Understanding process capability</li> <li>• Calculating process capability for continuous &amp; attribute data</li> <li>• Selecting appropriate capability metrics &amp; indices</li> </ul>	<b>SESSION 6:</b> 8.30am – 4.30pm <b>ADVANCED STATISTICAL APPROACHES</b> <ul style="list-style-type: none"> <li>• Understanding probability distributions for variable and attribute data</li> <li>• Dealing with non-normal data</li> <li>• Capability analysis for non-normal data</li> <li>• Statistical process control charts for non-normal data</li> <li>• The central limit theorem</li> <li>• Understanding and using data transformations</li> </ul>



### Live Training via MS Teams

This programme is designed for an interactive training experience delivered via MS Teams. Delegates will work in syndicate groups on case study exercises and learn from facilitators who are passionate about delivering an effective & enjoyable virtual Lean Six Sigma training experience.



### Accredited Training

To qualify as a Black Belt, delegates will take an online multi-choice exam plus complete and submit a project for assessment. Full guidance is provided on the project requirements. There is also an option to receive external accreditation via the British Quality Foundation (BQF) for an additional surcharge fee of £250+VAT.

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	ANALYSE					
Feb 2025 course	March 7 (1 day)	March 13 (1 day)	March 14 (½ day)	March 25 (1 day)	April 2 (1 day)	April 8 (1 day)
Jun 2025 course	July 21 (1 day)	July 22 (1 day)	August 11 (½ day)	August 12 (1 day)	August 18 (1 day)	August 19 (1 day)
Oct 2025 course	Nov 10 (1 day)	Nov 20 (1 day)	Nov 21 (½ day)	Nov 27 (1 day)	Nov 28 (1 day)	Dec 4 (1 day)
	<b>SESSION 7:</b> 8.30am – 4.30pm ANALYSE PHASE <ul style="list-style-type: none"> <li>Verifying the root cause</li> <li>Taking a structured approach to data analysis</li> <li>Links to the cause and effect diagram</li> <li>5 Why approach to problem solving</li> <li>Box plots &amp; scatter diagrams</li> <li>Significance testing approach</li> <li>Tips for summarising and presenting the analysis</li> </ul>	<b>SESSION 8:</b> 8.30am – 4.30pm HYPOTHESIS TESTING <ul style="list-style-type: none"> <li>Use of inferential statistics</li> <li>Writing a hypothesis statement</li> <li>Setting a confidence level</li> <li>Understanding the P-Value</li> <li>Tests for variable and attribute data</li> <li>Power &amp; sample size</li> <li>Non-parametric techniques</li> </ul>	<b>SESSION 9:</b> 8.30am – 12.30pm INTRO TO DOE <ul style="list-style-type: none"> <li>Overview of DOE techniques</li> <li>Optimisation challenge</li> <li>Applications of DOE techniques</li> </ul>	<b>SESSION 10:</b> 8.30am – 4.30pm OPTIMISING THE PROCESS <ul style="list-style-type: none"> <li>Regression analysis</li> <li>Understanding correlation</li> <li>Introduction to simple linear regression</li> <li>Introduction to multiple regression</li> </ul>	<b>SESSION 11:</b> 8.30am – 4.30pm SCREENING & TAGUCHI METHODS <ul style="list-style-type: none"> <li>Introduction to fractional factorial</li> <li>Screening designs</li> <li>Advanced techniques e.g. EVOP, RSM</li> <li>Taguchi loss function</li> <li>Taguchi designs that deliver robust solutions in the presence of noise</li> </ul>	<b>SESSION 12:</b> 8.30am – 4.30pm ADVANCED DOE TECHNIQUES <ul style="list-style-type: none"> <li>Mixed and multi-level designs</li> <li>Response surface designs</li> <li>Botched runs</li> <li>Randomisation and grey coding</li> <li>DOE with historical data</li> </ul>

IMPROVE		CONTROL
April 9 (1 day)	April 28 (1 day)	April 29 (1 day)
Sept 3 (1 day)	Sept 15 (1 day)	Sept 16 (1 day)
Dec 5 (1 day)	Dec 15 (1 day)	Dec 16 (1 day)
<b>SESSION 13:</b> 8.30am – 4.30pm SITUATIONAL LEADERSHIP <ul style="list-style-type: none"> <li>Transformational leadership</li> <li>Influencing change</li> <li>Concepts and models for change</li> <li>Persuasion campaigning</li> </ul>	<b>SESSION 14:</b> 8.30am – 4.30pm COACHING IMPROVEMENT TEAMS <ul style="list-style-type: none"> <li>The key skills of coaching</li> <li>The coaching continuum expert to discovery</li> <li>Using the GROW model</li> </ul>	<b>SESSION 15:</b> 8.30am – 4.30pm IMPLEMENTING CONTROL <ul style="list-style-type: none"> <li>Key steps of the Control phase</li> <li>Confirming the improvement</li> <li>Developing a control plan</li> <li>Different types of process control</li> <li>The principle of mistake proofing</li> <li>Monitoring effectiveness</li> <li>Closing the improvement project</li> </ul>

### TRAINING FEE

The cost per participant is £2850+VAT. Fees are fully inclusive of:

- Live training via MS Teams
- Access to materials hub
- The full accreditation process: exam plus project assessment and certification

### HOW TO BOOK

Please email Smallpeice via [train@smallpeice.com](mailto:train@smallpeice.com) with your enquiry/requirements. Our experienced Lean Six Sigma booking team will then send you a booking form. Following enrolment, we will onboard participants to the programme platform which will provide a detailed menu of activities and preparation.

# How to Book

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## Options

### Coaching Support

This can be provided via a series of 3 x 1-hour 1-to-1 sessions, delivered via MS Teams. These can be scheduled to suit the progress of your project. The cost of the coaching package is £495+VAT.

### Accreditation via British Quality Foundation (BQF)

The option for accreditation via the internationally recognised body of the British Quality Foundation is available for an additional fee of £250+VAT.

## Booking Process

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### Payment Terms

- An invoice will be issued following receipt of a confirmed booking.
- Payment is due 30 days from the invoice date.
- Payment can be made via credit card or bank transfer. Payment details can be found on the invoice.

### Cancellation Terms

If you should have to cancel a registration, the following options are available:

- Send a substitute delegate at no additional charge
- Incur a cancellation fee based on the following timescales:
  - If you cancel prior to 30 working days before the course you will be charged a cancellation fee of 20% of the course fee
  - If you cancel less than 30 working days, but prior to 10 working days before the course, you will be charged a cancellation fee of 50% of the course fee
- We regret that we cannot accept cancellations that are received less than 10 working days before the course start date.
- Please confirm your cancellation in writing.

Smallpeice Enterprises reserves the right to cancel courses if necessary. Delegates will be given advance notice of any such changes. Please do not send payment with this form – an invoice will be despatched.



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