

Lean Six Sigma Master Black Belt

10 Days (2 blocks) – Open Access Training



Maximise the results of your business improvement effort

Successful business improvement is dependent on the people involved and the methods they employ. SigmaPro's acclaimed Master Black Belt programme has been specifically designed to provide the highest level of technical expertise and leadership skills across all aspects of Lean Six Sigma. Dr Douglas Mader SigmaPro's CEO, developed the first Master Black Belt curriculum at Motorola in 1991, and continual development has resulted in a programme today that allows students to obtain a detailed understanding of the true meaning of Lean Six Sigma and the results it can deliver for individuals and their organisations.

Course purpose & aims

The programme enables students to become effective Lean Six Sigma Master Black Belts capable of running improvement projects in both service and industrial organisations that enhance organisation performance. As a SigmaPro Lean Six Sigma Master Black Belt you will learn how to:

- ✓ Link improvement projects to organisation strategy and performance gaps
- ✓ Calculate the financial impact of improvement programmes and projects
- ✓ Integrate DMADV and DMAIC into an overall improvement approach for the organisation
- ✓ Capture and analyse qualitative VOC data using an integrated toolset
- ✓ Use advanced tools to eliminate waste and reduce variability
- ✓ Use forecasting and queuing theory to drive down process cycle times
- ✓ Use TRIZ to generate alternative design concepts
- ✓ Identify critical design elements and variables in new products and processes
- ✓ Optimise design performance by using transfer function analysis, modelling & simulation
- ✓ Predict system and product performance using reliability analysis

Who is this course for?

Master Black Belts will be outstanding individuals with the drive to deliver breakthrough results across all areas of an organisation. They will be adept at influencing others in the process of delivering organisational change. Master Black Belts act as internal coaches to Black Belts, Green Belts and Champions by mentoring, assisting and training on technical methods during project selection, launch and operation. They represent the interface between management and project execution.

As well as having excellent communication and leadership skills, Master Black Belts must have a detailed technical understanding of Lean Six Sigma tools. They work with senior management to identify and prioritise improvement projects that are strategically aligned, and quantify the impact to the organisation for both DfSS and DMAIC projects.

As an important 'change agent' within their organisation, Master Black Belts foster a corporate culture of improvement and have the ability to lead teams to deliver business and profitability objectives.

This intensive programme is designed for individuals who have completed Lean Six Sigma Black Belt training and already have experience of leading cross functional improvement projects.

“The course exceeded even my highest expectations. The course was intense. It was thorough. And it gave me a great deal more confidence in applying the Six Sigma Tools”



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What does the programme cover?

The course consists of 40 modules, taught over 10 days spread across 2 weeks (5 & 5 days). It covers how to successfully implement both DMAIC and DfSS in service and industrial organisations and how to coach technical practitioners on statistical and other quantitative methods. It also covers how to lead and facilitate training on DMAIC and DfSS topics. Expert support is provided by one of SigmaPro's International Master Black Belts during the programme.

Programme includes:

Deploying Lean Six Sigma in industrial and service organisations

- Linking strategy and Lean Six Sigma
- Deployment models for industrial and service organisations
- Financial analysis for LSS projects
- LSS project identification in different environments
- Portfolio management to select the best mix of project

Integrated toolsets for Lean Six Sigma

- Voice of the Customer capture
- Qualitative and quantitative VOC analysis methods
- Value Stream mapping
- Process decomposition and analysis
- Survey design and validation methods
- Categorical data analysis
- Forecasting methods and queuing theory
- Lean tools and methods in DMAIC

Design for Six Sigma

- The DMADV methodology
- Generating & selecting design concepts
- Defining architecture & critical design elements
- Identifying critical design variables
- Univariate analysis of variance
- Non parametrics
- Advanced transfer modelling & experimentation
- Simulation and optimising of design systems and processes
- Advanced reliability analysis

Software

- Advanced use of Minitab™ 16, - Introduction to SigmaWorks™ & ProcessModel™

Course structure

The programme is a mix of classroom teaching, individual and group exercises, case studies and real world examples. Accelerated Learning approaches are extensively used to ensure rapid learning and maximum knowledge retention. During the course students actively practice the application of the tools and methods and use the software. Students are encouraged to share experiences from their own projects with the training group.

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Active group work and the exploration of the soft skills required to ensure Master Black Belts can successfully apply the techniques learnt is a key component of the programme.

Some course tuition is on state-of-the-art statistical and analytical software packages including Minitab™ 16, SigmaWorks™ and ProcessModel™. Trial versions are provided during training and full licenses can be purchased through SigmaPro.

Master Black Belt certification

Not everyone can become a SigmaPro Master Black Belt. Potential candidates need to apply for the programme in advance and give details of their previous experience and Lean Six Sigma training. The application is reviewed and successful candidates are offered a place on the programme. Candidate performance is reviewed during the training and upon successful completion students are added to the SigmaPro register of certified Master Black Belts.

Benefits to the organisation

- ✓ Six Sigma originated with Motorola, and started out as a quality improvement programme in the early 1980's. Motorola won the Malcolm Baldrige award for Excellence in 1988 and by the mid 1990's they had 60% of the mobile phone market, shareholder growth of 54% and were outperforming the NASDAQ index by 4:1
- ✓ GE adapted Six Sigma in 1995, and the annual report in 1997 quoted that "Six Sigma has spread like wildfire across the company, and it is transforming everything we do." After 10 years GE claimed savings of over \$10Bn for their programme and in May 2009 were listed in number 1 slot on the Forbes list of the world's biggest companies. Between 1996 and 2005 the GE stock price has outperformed the NASDAQ index by almost 2:1
- ✓ Toyota Motor Corporation developed the Toyota production system. The same approach has been adopted in many organisations in different sectors, and has become known today as Lean. A UK study looked at 500 lean projects across a variety of industries over 5 years, and calculated the average benefit to the organisation of £150K per lean event. A global study of 3,000 six sigma projects by Mikel Harry showed the average value per project to be £100K%

Prices

First delegate - **£4,250 + VAT**

Second delegate - **£3,825 + VAT**

Third & subsequent delegates - **£3,400 + VAT**

“My goal in attending Master Black Belt training was to go to the next level of understanding and SigmaPro exceeded all my expectations”

“The tutor was extremely professional and adapted to the specific requirements of the class, excellent facilitator. Overall an excellent course”