

Lean Six Sigma Black Belt Course

What is the Lean Six Sigma Course:

The Lean Six Sigma methodology is the synthesis of two globally recognized approaches, Lean and Six Sigma, which aim respectively to remove whatever that does not create value for the Customer and reduce the variability of processes in order to not make defective performance/products.

Through a structured path articulated according to 5 phases "DMAIC" (Define-Measure-Analyse-Improve-Control), the approach provides that, for each problem, it is possible to identify and take action against triggers for effects, instead of, as more frequently happens in the traditional approach, wasting time and using useless efforts to try to eliminate effects without have first properly identified root causes.

Thanks to this methodology, many companies have achieved significant financial savings over the years, increasing the profitability of organizations.

What is the Black Belt certification :

The Lean Six Sigma Black Belt certification course offers a business management methodology with the aim of acquiring knowledge of strategies to create a plan to improve performances of key processes and related economic results.

The certification consists of a classroom training part (with practical and interactive activities) and a part of project development according to the methodology learned.

The certification is issued according to official standards of the organization "BQF British Quality Foundation" and is universally recognized.

Methodology goals:

- Optimization of process performance
- Implement a Lean Six Sigma governance system and
- Focus on critical business areas and key performance for the customer and the business
- Development of resources through creation, selection and coordination of improvement projects

Who is the course for:

This training course is suitable for who have already accomplished a Green Belt certification and for all company figures who want to manage improvement projects according to the Lean Six Sigma methodology:

- Directors, Manager
- Engineering and R&D Managers
- Marketing Managers
- Quality Managers
- Purchasing Managers
- Product Manager
- Project Manager
- Process Engineers
- Continuous Improvement Professionals

Complete certification path:

The course is designed according international ISO 13053 and BQF standards and consists of

- Training: 8 days of classroom
- Final test (minimum rate 80%): 1 day
- Coaching: 5 session of coaching for each project
- Development of a complete project (5/9 months long)
- Final project survey: 1 day
- Final certification with project review by a board of expert members

Project development:

Project development will be carried out in the participant's business context and supported by coaching activities. The Project Leader will learn the methodology and its applications through the different phases of the DMAIC road map and supported by the coaching of an expert Master Black Belt figure.

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Agenda classroom days (or via web):

DAY 1: Introduction to LSS - RECAP

DAY 2: Phase **Define** – Part I

DAY 3: Phase **Define** – Part 2

DAY 4: Phase **Measure**

DAY 5: Phase **Analyze**

DAY 6: Phase **Improve** – Part I

DAY 7: Phase **Improve** – Part II

DAY 8: Phase **Control**

Coaching and survey days:

5 days of coaching are available for the project and to be scheduled based on the project progress. At the end of the project there will be an additional day for the final survey and the closure of the project. Timetable and modalities of these days have to be agreed with course participants.

About the trainer:



Andrea Greco. Senior professional with extensive international experience in continuous process improvement, operational management, in monitoring and leading company KPI's and customer service levels.

Active in Lean Six-Sigma since 2003, Master Black Belt and "BQF Licensed Assessor, Master Trainer & coach".

Main topics:

- The customer: the voc collection, kano model
- From VOC to CTQ: requirements, CT-X, QFD
- From CTQ to project financials
- Projects' choice and project planning
- Stakeholder analysis, force field analysis
- Project communication plan
- Tollgate
- Process capability: for abnormal data
- Yield calculation: First Time Yield, Rolled Throughput Yield
- Policy deployment: alignment, accountability, L1-L2-L3 cascade, X-chart, Bowling chart - Maturity assessment
- OEE
- Probability: rules and calculation
- Central limit theorem
- Non-normal distribution: Poisson, binomial, Chi-Square, t-student, Hypergeometric, exponential, Weibull
- "Analyze" qualitative: hidden factory, gap analysis, matrix diagram, Interrelationship Digraphs (ID), Fault Tree Analysis (FTA), Activity Network Diagram (AND)
- Regression models: multiple, linear, complex, exponential, Michaelis-Menten, Asymptotic, Logistic
- Multivariate tools, Manova
- Multivariate studies, Anova,
- Non-parametric tests
- TPM: Pillars, 12 implementation step
- Lean material flow: the PFEP, the supermarket, routes, material presentation, wip market, level schedule
- Project management: Gantt charts, Work Breakdown Structure, RACI, Team management
- Advanced improve: DFSS (hints), DFX (hints), Robust Design (hints), Taguchi method
- Visual management and Managing daily improvement
- Layered audits: roles, modalities and Kamishibai cards
- Business analysis using control charts