Lean Six Sigma®, Black Belt: Certification

Hands-on course of 5 days - 35h
Ref.: BEL - Price 2025: 4 070 (excl. taxes)

Black Belts typically engage in complex projects that yield significant financial benefits for the company. This course will prepare you for the Black Belt certification, enabling you to master advanced Lean Six Sigma methods and tools and apply them effectively to your projects.

EDUCATIONAL OBJECTIVES

At the end of the training, the trainee will be able to:

Be proficient in the DMAIC model

Be able to select appropriate Lean Six Sigma tools

Know how to carry out a large-scale Lean Six Sigma project

Coach Green Belts

Achieve Black Belt certification

TEACHING METHODS

The course is organized around the five phases of the DMAIC model (Define, Measure, Analyze, Improve, Control) through a case study and group work.

CASE STUDY

Objectives are achieved through a case study (Muscle Cars) and the use of statistical tools.

CERTIFICATION

Training provided in French, with materials in English. The exam is taken on the last day, online and in English. It is 240 minutes (4 hours) with 150 multiple-choice questions.

PARTICIPANTS

Any manager (certified Green Belt) looking to take charge of complex, large-scale improvement projects.

PREREQUISITES

Must hold a Green Belt certification and have led at least two improvement projects.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@ORSYS.fr to review your request and its feasibility.

THE PROGRAMME

last updated: 03/2025

1) Introduction

- Knowledge test to identify the participants' levels.
- Correcting the knowledge test.
- Overview of the case study.
- Project launch.
- Setting up the production line.
- Launching the assembly line.
- Feedback (each group presents its results).

Case study : "Muscle Cars" project: Organizing a production line to build two models of cars in as little time as possible, with no defects.

2) "Define" and "Measure" phases of the DMAIC model

- Estimating the Gap Analysis between actual performance and the customer's goal.
- Creating the "Voice Of Customer" (VOC).
- Turning the VOC into "Critical To Quality" (CTQ).
- Making a SIPOC diagram (Suppliers, Inputs, Processes, Outputs, Customers).
- Creating the project charter.
- Drawing the "As Is" process.
- Feedback (each group presents its results).

Case study : Applying the "Define" and "Measure" phases to the "Muscle Cars" project.

3) "Measure" and "Analysis" phases of the DMAIC model
- Creating the Value Stream Map.
- Identifying the steps of the process to be measured.
- Knowing how to calculate the process' performance.
- Retaking the measurements if necessary.
- Using MINITAB (hypothesis testing, regression line, one- and two-way Anova).
- Feedback (each group presents its results).
Case study : Applying the "Measure" and "Analyze" phases to the "Muscle Cars" project.

4) "Analyze", "Improve", and "Control" phases of the DMAIC model
- Finalizing the analysis and finding the Root Cause.
- Finding solutions: Brainstorming, experiment design with MINITAB.
- Creating KPIs and control charts with MINITAB.
- Feedback (each group presents its results).
Case study : Applying the "Analyze", "Improve", and "Control" phases to the "Muscle Cars" project.

5) Preparing to take the IASSC Black Belt exam.
- Review of vocabulary and concepts.
- Mock test (100 questions).
- Correcting the mock test.

DATES

REMOTE CLASS
2025 : 21 juil., 27 oct.