



## Six Sigma Green Belt (english)

Level 2

Do you want to be able to successfully complete Six Sigma projects with measurable results?

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# Six Sigma Green Belt

## **Become the competent Six Sigma project manager for DMAIC optimization projects**

Lean Akademiet's Six Sigma Green Belt training is an internationally recognized training. You will both get tools and methods to create efficient workflows, achieve greater customer satisfaction and improve employee well-being.

All managers should have a DMAIC understanding as a scientific approach to process optimization. In our Six Sigma Green Belt training, it is no longer enough to believe in differences in performance - they must be substantiated mathematically and statistically, to show whether the difference is coincidental or significant.

### **Get new tools for your toolbox**

On this training we work with Measurement System Analyzes, Six Sigma Statistics, Hypothesis testing, Regression, Statistical Process Control and Control plans. In addition to this, you will work with your own project, where you will create results during the education.

The course is very practically oriented, and we don't just give you concepts, but also concrete tools and exercises you can use at home.

### **Is this training for you?**

The Six Sigma Green Belt training is aimed at those who want the skills to carry out a Six Sigma implementation in a defined area, with measurable results. The typical course participant who participates in this training is passionate about the structured optimization approach and runs larger optimization projects.

# Content of the education

The Six Sigma Green Belt training consists of an intensive training course where you work with various statistical tools and methods for process optimization. During the training, you will work on your own Six Sigma project, and you will be able to have online support during the course. This training package includes both the Six Sigma Yellow Belt and Six Sigma Green Belt modules, which together make up the Six Sigma Green Belt training - 7 days including an exam date. Besides this we offer you online support during education.

## Six Sigma Yellow Belt

### Introduction to Six Sigma

- Introduction to what Six Sigma is and an understanding of the background for Six Sigma as a data-based method for optimization and efficiency. In addition to this, you will be thoroughly introduced to the basic structure of Six Sigma.
- Presentation of Six Sigma project work and the different possible roles in working with Six Sigma - focusing on the DMAIC structure as an approach to Six Sigma Project work.
- Review of selected Six Sigma tools, among others: SIPOC, project charter, FMEA.
- Introduction to Six Sigma mathematics. You will gain an understanding of what it means to work with data and will be introduced to graphical analysis and how you can present your data graphically so that it is easy to understand for the recipients.
- Understanding what a Measurement System Analysis (MSA) is and why the MSA is an important element in working with Six Sigma and data.
- Through an introduction to capability and stability, you gain an understanding of how to measure whether one's processes meet given expectations or specifications.
- Finally, you are presented with how to work with control and create lasting changes. This is further elaborated on the Six Sigma Green Belt module, where you will get to work with it in practice.

### Practical exercises

- On the course you work with small exercises that give an understanding of how Six Sigma can be

used in practice. Among other things, you work with COPQ (Cost of Poor Quality) based on a business case.

- You work in smaller teams on your business case, and you learn to make a SIPOC analysis. Through this, you get a deeper understanding of how SIPOC can be used in practice and as a high-level flowchart.
- During the course, you will also be introduced to Six Sigma XL software, and you will learn to use this software to analyze various data.

### Examination

The programme ends with a multiple-choice test consisting of 35 questions.



## Six Sigma Green Belt

### Six Sigma in practice – Project manager

- The module begins with a recap on the DMAIC structure as an approach to Six Sigma Project work from the Yellow Belt.
- Basic understanding of Six Sigma Statistics and how to work statistically in practice. Including understanding of data collection (sampling) and important elements of data collection.
- Hereafter, we dive into Hypothesis testing as a statistical method. You will be introduced to different types of hypothesis testing with a particular focus on hypothesis testing of normally distributed data. As well as what errors that can occur when working with hypothesis testing. You will be introduced to various statistical tools.
- Introduction to regression and regression analysis, which is included as an analysis element in Six Sigma's DMAIC structure and is one of the most important elements in the Six Sigma project. You will gain an understanding of why regression analysis is such an important tool and how it is used in practice - and on your project(s).
- Presentation of the tool: Statistical Process Control (SPC), as a statistical method to follow performance. You are presented with how it can be used in practice and how you transfer this knowledge to your own project work. In addition to this, you will be introduced to the work with Six Sigma control plans, as a management and planning tool.

### Project work

- Right from the start of the Six Sigma Green Belt module, your project work begins. You work with a project, selected processes, flow etc. from your organization. So already before the start of the course, you should start thinking about a topic for your project.
- You will be working on the project during all course days. You must therefore bring a computer to all classes. You get access to Six Sigma XL software through Lean Akademiet, and we are ready to guide, coach and help you throughout

the training. In addition to this, you will have online support on your project work.

- It must be expected that you will spend some extra time outside the course days for homework on the project. This may involve data collection and/or workshops for your colleagues, etc.

### Online support

As part of your Six Sigma Green Belt education, time is set aside for online support and coaching on your project.

### Examination

The Six Sigma Green Belt education concludes with an oral project defense. During the exam, the student must either digitally or physically present his project. 45 minutes are set aside for project review, and a grade is assigned according to the Danish grading scale. If you are several participants from the same company, it is possible for you to take exam together. There can be a maximum of 3 people per project.



## Subject areas

- **Data-based approach** – how to substantiate claims with data.
- **Measurement System Analyzes** - how to test and ensure that the data quality is present, so that we can trust our measurement system.
- **Capability** - how do you document the ability of the process to stably deliver to the customer's expectations.
- **Sig Sigma Statistics** – how (and why) we derive information about the whole of our process from a subset (sample).
- **Hypothesis testing** – how do we test whether the differences we find in our data are random or significant – and how do we work with different types of data.
- **Control** – how do we ensure that the process remains in control after the optimization and utilize Statistical Process Control (SPC) to visualize continuous stability.
- **Own project** - where you create results during the education.

## Qualifications

There are no prerequisites for participating in this training. We take you by the hand and guide you through the Six Sigma universe, so that you gain the skills to carry out a Six Sigma implementation.

## Gains

After completing this training, the student will be able to run pilots and local optimization initiatives themselves. The student can run, set up and work with a full DMAIC project and will be able to work independently with process data analysis, carry out sampling, hypothesis testing and build control plans with associated statistical process control.

## Examination

This education is concluded with an oral project defense. Post examination you will be assigned a grade according to the Danish grading scale. If you are several participants from the same company, it is possible for you to take exam together. There can be a maximum of 3 people per project.rløbet.

## Software

Lean Akademiet grants you a full license for SigmaXL, which will be the primary tool on this training. Bring your own laptop with SigmaXL installed in full version. Software license, information and instructions are sent in the startup information.

## Homework

There is no preparation before education starts. Between teaching days, you must expect to read through teaching material and solve small exercises - and in addition you must work on your own project in preparation for the exam.

## Price

[See the price here. Included is full catering and handed-out training material](#)

## Practical information

### **We are doing everything to ensure that you'll get a good experience**

A perfect course is not only a result of good teaching. The physical environment surrounding that course should give you, as a student, the best conditions for learning new.

[We have collected all practical information here.](#)

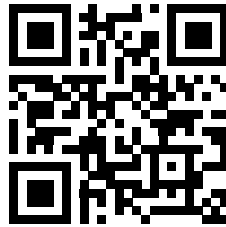
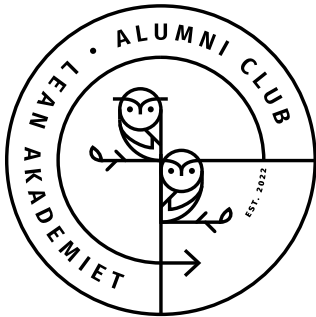
## LA Alumni Club

### Med et Green Belt certifikat får du mulighed for at deltage i fagligt inspirerende events

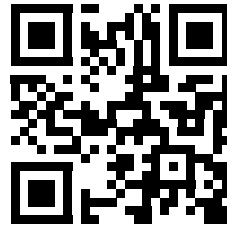
Lean Akademiets Alumni Club er vores lukkede netværksgruppe hvor tidligere kursister med bestået Green Belt eksamen inviteres til at deltage i fagligt inspirerende events.

#### Vi mødes to gange om året.

Samtidig med at vi mødes to gange årligt, så tilbyder vi ligeledes et rum for netværk, inspiration og sparring på vores lukkede LA Alumni Club gruppe på LinkedIn. Her er du velkommen til at dele spændende og relevant indhold.



LA Alumni Club



LinkedIn