



**ASQ**

AMERICAN SOCIETY  
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# Lean Six Sigma Black Belt – Minitab Supported

## *Course Overview and Learning Objectives*

**Note:** This overview is identical for the Healthcare, Financial Services, and Services versions. The difference for each course lies in the customized case studies, examples and exercises.

This course requires you to use statistical software Minitab®. Software not included with this course.

### **SUMMARY**

This Lean Six Sigma Black Belt course is comprised of separate sessions, or units. Each session is a collection of related lessons, and includes an interactive quiz at the end of the session. Individual lessons also include simulations and interactive practice exercises. All course material is available online, and sessions may be started and stopped at any point - content is delivered on-demand according to your schedule. The course is instructor supported if you need help.

By completing this course of study, you will gain a solid general knowledge of the theory, composition and implementation of a Lean Six Sigma initiative. You will also become proficient in all of the analytical tools necessary to define, measure, analyze, improve, and control Six Sigma improvement projects, including the design and analysis of general and fractional factorial experiments. You will learn team leadership and project management skills. In short, as a Black Belt you will master the skills necessary to lead a complex process improvement project that produces bottom-line results.

### **LEARNING OBJECTIVES**

The overarching learning objective of the Lean Six Sigma Black Belt course is to develop a comprehensive set of skills that will allow you to function effectively as a Lean Six Sigma Black Belt. The Lean Six Sigma Black Belt body of knowledge includes techniques for both quantitative and non-quantitative analysis, as well as the team leadership skills necessary to get projects across the goal line.

After completing this course, you should be able to DO the following:

- Communicate using Lean Six Sigma concepts.
- Think about your organization as a collection of processes, with inputs that determine the output.
- Relate Lean Six Sigma concepts to the overall business mission and objectives.
- Use the concept of a Sigma Level to evaluate the capability of a process or organization.
- Understand and apply the five step D-M-A-I-C model as a framework to organize process improvement activity.
- Employ a wide range of process improvement techniques, including Design of Experiments, within the D-M-A-I-C model.
- Recognize the organizational factors that are necessary groundwork for a successful Lean Six Sigma effort.

- Employ your Lean Six Sigma skills to lead a successful process improvement project delivering meaningful results to the organization.

## COURSE STRUCTURE AND REQUIREMENTS

MoreSteam courses provide content-on-demand to offer the highest degree of student flexibility. You can set your own schedule and progress at your own speed, terminating and re-entering sessions whenever you wish.

All course sessions use a mix of multimedia to present material, including text, synchronized audio slide shows, diagrams, charts, audio lectures, and simulations. Links to outside research resources are provided to explore chosen subjects in greater detail. Course access is provided for **365 days** beginning at the time of enrollment.

As you work through the course you will be asked to demonstrate knowledge and understanding in four ways:

- Interactive **Practice Exercises** will be presented throughout each session so that you can try your new skills and get immediate feedback.
- **Supplemental Exercises** will be presented at the end of every session to practice new concepts. Supplemental Exercises are self-graded and may be shared in the Virtual Classroom Discussion area.
- **Quizzes** will be conducted at the end of every session. Quizzes are interactive, and provide immediate feedback to close the learning loop.
- **Black Belt Project:** We strongly suggest that a meaningful project should accompany this coursework. The learning experience will be enhanced significantly if concepts and tools are practiced on a real-world project as the course is completed. Successful project work is also required for any certification process.

## COURSE SEQUENCE

The course is presented in a logical sequence to follow the Six Sigma DMAIC improvement process. We believe that you will learn most efficiently by following the sequence presented. In particular, the first session presents an overview of Six Sigma, which will be helpful to put the remaining sessions in proper context.

However, the sessions are modular, and we encourage you to explore the material. You are free to move forward and backward throughout the course. You can skip ahead or go back and review material that you already covered. The course map feature allows you to move point to point, from anywhere to anywhere. The course map status column will tell you which pages you have visited.

## CERTIFICATE OF COMPLETION

Upon completion of this course (review of all lessons and completion of quiz modules) a certificate of completion will be provided.

## **COURSE MATERIALS**

### **Materials Provided by MoreSteam**

- The course content includes a host of reference materials, video tutorials, practice data sets for engaging in statistical analysis, and an easily printed workbook for both note taking and additional exercises.
- Online Minitab® tutorials in simulation format.

### **Materials Provided by Student/Company**

- You must have a selected the Minitab-supported version of this course, which will require a separately purchase, valid license to Minitab® (version 15 or higher). System requirements for Minitab® software should be reviewed at Minitab.com.
- MoreSteam eLearning is provided entirely online, all you need to access and make use of the course content is an internet connection, a modern browser and spreadsheet software.
- The course content requires that any pop-up blockers be disabled.

## **SUPPORT**

- Use the on-screen help features (e.g., glossary of terms and site search) for information.
- You can contact the course Instructor by emailing during regular business hours to request assistance.
- For general technical support, visit our support page under the “My Account” link.

## **CERTIFICATION**

This course does not include certification unless it is purchased separately.

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