



Six Sigma Black Belt Certification Prep

MSB109 / 130 Hours / 12 Months / Self-Paced / Materials Included

Course Overview:

The Six Sigma Management System has evolved to become an integration of business best practices that unleashes the power of the Six Sigma tools and methods in a way that fosters focused execution and breakthrough improvements. Using the Six Sigma Management System as the overall context for driving business improvement, this course provides unique insight for Black Belts, Six Sigma leaders, and all Six Sigma practitioners for how to apply the wide variety of tools and methods that sit inside of the Six Sigma tool set.

After completing this course, students will be able to:

- Communicate using Six Sigma concepts.
- Think about the organization as a collection of processes, with inputs that determine the output.
- Relate 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 DMAIC model as a framework to organize process improvement activity.
- Employ a wide range of process improvement techniques, including design of experiments, within the DMAIC model.
- Recognize the organizational factors that are necessary groundwork for a successful Six Sigma effort.
- Employ your Six Sigma skills to lead a successful process improvement project and deliver meaningful results to the organization.

About ProTrain:

ProTrain is committed to offering world class interactive online courses that provide training and learning support for the student in a number of ways during their experience. The ProTrain course structure has been developed to provide activities to guide students throughout the entire process of learning. Learning activities include hands-on assignments that allow students to use what they are learning to allow better transferable skills within their work environments; and collaborative assignments, like wikis and discussion groups that allow them to share what they have learned with others in the same course.

While a student learns, they are not alone. Each student will receive guidance and support from his or her assigned Training Assessment Manager (TAM) and Student Services Specialist (SSS) representative. In addition, we will offer live monthly webinars and feedback sessions for various subject categories. Throughout the entire course, students are monitored by the SSS representative using progress reporting from the ProTrain Registration System (PRS).

ProTrain will provide Students who successfully complete their online certification programs and pass their industry level certification exams the access to the new ProTrain Education-2-Employment Career Tracker system. The Career Tracker will allow our students who pass exams to load their own resumes at no additional cost, and letting industry employers find their talent through the same database.

Curriculum Developer Biography:

Willow Nolland is an expert in education and eLearning, with more than ten years of experience in curriculum development and instructional design. She has worked in higher education for over twelve years, and has developed numerous courses and has been involved in curriculum development across disciplines. She has experience with academic program development and coordination, curriculum development, student learning outcomes, educational partnerships, and student development. In addition, she has developed and administered professional development programs for various groups, including teachers, counselors, healthcare workers and members of private industry. She is a certified Quality Matters Reviewer and has taken graduate courses in online course development. She designs and teaches online courses at the college level and is proficient in a variety of course management

systems. She has helped educators redesign their courses to transition them from a face-to-face format to an online format, and has provided course editing assistance to others. As a freelance instructional designer and curriculum developer, her projects have included course editing and redesign of online continuing education courses for nurses, CEU curriculum development for healthcare workers and teachers, and course review and editing for various colleges and universities.

Course Outline:

Lesson 1: The Six Sigma Management System

This lesson focuses on the extension of Six Sigma into a management system that encompasses all levels of an organization. While implementing Six Sigma through individual projects has produced significant results in many organizations, sustainable, breakthrough improvements are realized by those organizations whose leadership has embraced Six Sigma and incorporated it into their vision, strategies, and business objectives - in short, adopted Six Sigma as the system for managing their organizations. The Six Sigma Management System enables a leadership team to align on their strategic objectives, establish their critical operational measures, and determine their organizational performance drivers and then use those to implement, drive, monitor, and sustain their Six Sigma effort. Six Sigma has been labeled as a metric, a methodology, and now, a management system. While Green Belts, Black Belts, Master Black Belts, Champions and Sponsors have all had training on Six Sigma as a metric and as a methodology, few have had exposure to Six Sigma as an overall management system. Reviewing the metric and the methodology will help create a context for beginning to understand Six Sigma as a management system.

Lesson 2: Six Sigma and Lean

Many different approaches have been taken to improve business performance over the last several decades. Like anything in life, each approach has its own set of strengths and weaknesses. Each one also offers a slightly different perspective on how to improve performance. Some of these different perspectives may be beneficial to organizations trying to implement broad based improvement efforts.

Lesson 3: Process Improvement Teams and Tools

When an organization adopts the Six Sigma Management System as their business process improvement model, it becomes an umbrella business strategy that should include a variety of team-based initiatives. The purpose of this lesson is to address various team approaches that have been proven to be successful as part of a Six Sigma system, to present management's varying roles and responsibilities with each team approach, and to illustrate the common tools used by teams to implement improvements and types of measurements that drive performance.

Lesson 4: Six Sigma Teams, Methodology and Tools

This lesson is dedicated to the power of Six Sigma teams that apply a deeper level of analysis and statistical rigor to reduce variation, stabilize and optimize business processes - all for the purpose of bottom-line impact for the organization.

Lesson 5: Six Sigma Impact Measurement

This lesson focuses on measuring the results of a Six Sigma campaign. It will first review the importance of metrics and measurement to all improvement activities. Then it will focus on the need to have a selected, few critical strategic metrics to drive the Six Sigma campaign. It will discuss some historical difficulties with metrics and improvement campaigns, and suggest guidelines for selecting meaningful metrics and goals for organizational performance improvement. The discussion will not be limited to financial goals and metrics. Business objectives that drive Six Sigma Campaigns must be multifaceted.

Lesson 6: Supplemental Information

This lesson will provide supplemental information on two specific topics: Innovation and Measurement System Analysis. Achieving a dramatic improvement is a defining attribute of Six Sigma. Without realizing an innovative or breakthrough solution, one misses the main tenet of Six Sigma and lessens the opportunity to succeed. Six Sigma implies lots of improvement very fast. Incremental improvements are not sufficient to achieve Six Sigma performance. It is not just the current performance; instead, the rate of improvement equally matters. The power of Six Sigma lies in its disciplined, structured approach to identifying and solving process issues. The biggest potential pitfall of the Six Sigma approach is failing to adhere to that discipline. It is in the area of Measurement System Analysis (MSA) that discipline often falls by the wayside. When considering measurements for non-manufacturing processes, MSA often becomes the most neglected step.

All necessary materials are included.

Certifications:

This course prepares students to take the **ASQ Six Sigma Black Belt** certification exam. **The cost of the course includes the cost of the ASQ Six**

Sigma Black Belt certification exam.**System Requirements:****Internet Connectivity Requirements:**

- Cable and DSL internet connections are recommended.

Hardware Requirements:

- Minimum Pentium 400 Mhz CPU or G3 Macintosh. 1 GHz or greater CPU recommended.
- 256MB RAM minimum. 1 GB RAM recommended.
- 800x600 video resolution minimum. 1025x768 recommended.
- Speakers/Headphones to listen to Dialogue steaming audio sessions.
- A microphone to speak in Dialogue streaming audio sessions.

Operating System Requirements:

- Windows Vista, 7, 8, 8.1, 9, 10
- Mac OSX 10 or higher.
- OpenSUSE Linux 9.2 or higher.

Web Browser Requirements:

- Google Chrome is recommended.
- Firefox 13.x or greater.
- Internet Explorer 6.x or greater.
- Safari 3.2.2 or greater.

Software Requirements:

- Adobe Flash Player 6 or greater.
- Oracle Java 7 or greater.
- Adobe Reader 7 or greater.

Web Browser Settings:

- Accept Cookies
- Disable Pop-up Blocker.

****Outlines are subject to change, as courses and materials are updated.****