ASQ Certified Six Sigma Black Belt Refresher Course – FAQs

- What is Six Sigma?

  Six Sigma is a highly disciplined methodology that focuses on processes to improve growth and productivity. It is also a change initiative that aligns actions to strategy, drives operational discipline, and develops leaders.

- What is a Certified Six Sigma Black Belt?

  According to ASQ, a Certified Six Sigma Black Belt is a professional who can explain Six Sigma philosophies and principles, including supporting systems and tools. A Black Belt should demonstrate team leadership, understand team dynamics and assign team member roles and responsibilities. Black Belts have a thorough understanding of all aspects of the DMAIC model in accordance with Six Sigma principles. They have basic knowledge of Lean enterprise concepts, are able to identify non-value-added elements and activities and are able to use specific tools.

- Where can I find the ASQ Certified Six Sigma Black Belt Body of Knowledge?

  The ASQ Certified Six Sigma Black Belt may be found at: http://asq.org/certification/six-sigma/bok.html.

- What are the requirements for the ASQ Certified Six Sigma Black Belt?

  ASQ Six Sigma Black Belt Certification requires two completed Six Sigma projects with signed affidavits or one completed project with signed affidavit and three years of work experience in one or more areas of the Six Sigma Body of Knowledge. For more information, please see the list of Six Sigma Project Affidavit FAQs at http://asq.org/certification/faq/six-sigma-project-affidavit.html.

- What is a Six Sigma project?

  Six Sigma projects measure the cost benefit of improving processes that are producing substandard products or services. Whether in manufacturing or service industries, such projects quantify the effect of process changes on delays or rework. The goal of each successful Six Sigma project is to produce statistically significant improvements in a process: Over time, multiple Six Sigma projects produce virtually defect-free performance.

  The Six Sigma Black Belt project is one that uses appropriate tools within a Six Sigma approach to produce breakthrough performance and real financial benefit to an operating business or company.

  The tools are generic. It is the structure of the project and the associated process (improvement model) that distinguish a Black Belt project from other similar quality

improvement projects. Financial impact as an outcome is also a requirement within a Black Belt project when compared to other projects.

The following examples are not all-inclusive, but will provide examples of acceptable and unacceptable projects.

Examples of projects that qualify:

- Manufacturing product defect reduction.
- Human resources recruitment cycle time reduction.
- Reduced accounts payable processing costs.
- Reduced manufacturing machine setup time.

Projects that do not qualify**:**

- Prepackaged or classroom exercise that are mock, or simulated projects that were previously completed and/or that do not include actual "hands on" work.
- No real organization or business unit; no current problem or cost benefit.
- Basic product improvement projects not associated with process improvements.
- Software maintenance or remediation without detailed process measurements.
- Any project without measured before-and-after cost benefits.

- Do I need to be an ASQ Certified Six Sigma Green Belt to take the exam or the course?

  No, you do NOT need to be an ASQ Certified Six Sigma Green Belt. Green Belt knowledge, however, is a pre-requisite to attend the course. This includes knowledge of the fundamentals of Six Sigma (business value, roles and DMAIC roadmap), process characterization (process mapping), data collection, basic statistics and graphs, process capability, measurement systems, measuring and modeling relationships between variables, experimentation, and process control. The ASQ Six Sigma Green Belt Body of Knowledge may be found at: http://asq.org/certification/six-sigma-green-belt/bok.html.

  If a potential participant has specific questions about their knowledge and experience that the above does not answer, please have the individual contact Susan Schall at susan@soschall.com or 540-636-1418.

- What topics will the course cover?

  The primary objective the CSSBB Refresher course is to prepare individuals to pass the ASQ Certified Six Sigma Black Belt exam. The course will cover the nine main domains in the CSSBB Body of Knowledge:

  I. Enterprise-wide deployment
  II. Organizational process management and measures
  III. Team management

IV. Define
    a. Voice of the customer
    b. Project charter
    c. Project tracking
V. Measure
    a. Process characterization
    b. Data collection
    c. Measurement systems
    d. Basic statistics and probability
    e. Process capability
VI. Analyze
    a. Measuring and modeling relationships
    b. Hypothesis testing
    c. Failure mode and effects analysis
VII. Improve
    a. Design of experiments
    b. Waste and cycle time reduction
    c. Theory of constraints
    d. Implementation and risk management
VIII. Control
    a. Statistical process control
    b. Other control tools (TPM, visual factory)
    c. Control plan
IX. Design for Six Sigma
    a. Methodologies
    b. Robust design

Each topic will be reviewed through lecture and/or exercise, and practice exam questions. The course will NOT teach all the details of each of the major topics in the ASQ CSSBB Body of Knowledge.

- What textbook(s) are required for the course?

  Two texts are required for the course:

  1. *Certified Six Sigma Black Belt Primer* and *Solution Text*, Quality Council of Indiana
  2. Certified Six Sigma Black Belt *Solution Text*, Quality Council of Indiana

  It is also recommended that participants have access to one or more of the following:

  - *Implementing Six Sigma* by Forrest Breyfogle ($68.47 new/$33 used; earlier editions can be found for less)
  - Goal-QPC *Black Belt Memory Jogger* ($19.95, volume discounts available)
  - Engineering statistics book

- Statistical Process Control book such as *Introduction to Statistical Quality Control*, by Douglas C. Montgomery ($131 new/$109 used from Amazon; earlier editions can be found for less).
- Design of Experiments book such *Design and Analysis of Experiments* by Douglas C. Montgomery ($142 new/$110 used from Amazon; earlier edition can be found for less).

A copy of any review materials presented will also be provided to each participant.

- What homework or preparation is required between course sessions?

  Course participants will need to read assigned materials, complete practice exam questions, and prepare questions for discussion at the next training session.

- How will I know I am prepared to take the ASQ Certified Six Sigma Black Belt exam?

  The last session of the course will include a practice exam and opportunity to review and discuss the results with the instructor and rest of the class.