

## Six Sigma Black Belt Certification

### Step 1. Is this the right certification for you?

Here are the minimum expectations, requirements, experience and exam specifics for a Six Sigma Black Belt. If you already know that this is the certification you want to pursue, move on to exam preparation.

### Required Experience

Six Sigma Black Belt requires two completed 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.

### Minimum Expectations of a Six Sigma Black Belt

- \* Will be able to explain six sigma philosophies and principles, including related systems and tools (lean, quality, process/continuous improvement, etc.), and will be able to describe their impact on various business processes throughout the organization.
- \* Will understand the various leadership and six sigma roles and responsibilities. Will recognize organization roadblocks and be able to use change management techniques to manage organizational change.
- \* Will be able to define benchmarking and will understand various financial and other business performance measures. Will be able to identify customer requirements and describe the impact that six sigma projects can have on various types of customers.
- \* Will have a fundamental understanding of the components and techniques used in managing teams, including time management, planning and decision-making tools, team formation, and performance evaluation and reward. Will know how to use appropriate techniques to overcome various group dynamics challenges.
- \* Will understand the elements of a project charter (problem statement, scope, goals, etc.) and be able to use various tools to track the project progress.
- \* Will be able to use customer feedback to determine customer requirements.
- \* Will have a basic understanding of data collection techniques, process elements, and process analysis tools.
- \* Will have a basic understanding of measurement systems.
- \* Will have a basic understanding of probability concepts and distributions.
- \* Will be able to perform statistical and process capability calculations.
- \* Will be able to analyze the results of correlation and regression. analyses. Will be able to interpret multi-vari study results and interpret attributes data to find sources of variation.
- \* Will be able to define multivariate tools.
- \* Will be able to perform hypothesis testing and analyze their results.
- \* Will understand the elements and purpose of FMEA and be able to use root cause analysis tools.
- \* Will be able to identify and interpret the 7 classic wastes.
- \* Will be able to use gap analysis tools.
- \* Will be able to plan design of experiments (DOE) and be able to analyze their results.
- \* Will be able to use various tools to eliminate waste and reduce cycle-time.
- \* Will be able to define kaizen, kaizen blitz, and theory of constraints.
- \* Will have a fundamental understanding of how to implement an improved process and how to analyze and interpret risk studies.

- \* Will be able to implement statistical process control (SPC).
- \* Will understand total productive maintenance (TPM) and visual factory concepts.
- \* Will be able to develop control plans and use various tools to maintain and sustain improvements.
- \* Will understand common DFSS and DFX methodologies, robust design and processes, and techniques for strategic and tactical design.

#### Examination

Each certification candidate is required to pass a written examination that consists of multiple-choice questions that measure comprehension of the Body of Knowledge. The Six Sigma Black Belt Certification is a four-hour, 150 multiple-choice question examination. It is offered in English.

Examinations are conducted twice a year, in March and October, by local ASQ sections and international organizations. All examinations are open-book. Each participant must bring his or her own reference materials. Use of reference materials and calculators is explained in the seating letter provided to applicants.

Please Note: The Body of Knowledge for certification is affected by new technologies, policies, and the changing dynamics of manufacturing and service industries. Changed versions of the examination based on the current Body of Knowledge are used at each offering.