

Advanced Systems Consultants

Six Sigma Black Belt Training & Certification

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The Six Sigma Black Belt training is an intensive four-week course, with one-week training sessions followed by three to four weeks of application. This gives the Black Belt candidate the opportunity to apply the Six Sigma tools in their own business environment and complete an improvement project. Ideally, the project selection is done with the assistance of their organization's Six Sigma Champion to reap the rewards of the improvement savings and meet some critical business issues.

On the first day of each one-week session, the candidate presents the project's progress and all its deliverables in ASC's standard Six Sigma project format. The project will then be reviewed and a gap analysis will be conducted. The candidates will work on the same project throughout the training sessions. The Apply-and-Review format of training will give the candidate practical experience and strong confidence in problem-solving while learning the Six Sigma tools and DMAIC approach. Upon completion of the course, the candidates have a period of three months to finalize the project and present it for inclusion into the Certification process. In most situations, the first project's improvements and savings justifies the course fees of ten Six Sigma Black Belts.

Master Black Belt support is available and recommended during the Black Belt certification and Six Sigma implementation process.



Why Six Sigma?

- **Dramatically improve your professional skills by obtaining Six Sigma Black Belt training and certification.**
- **Apply a quantitative and disciplined approach to business improvement.**
- **It is an improvement model most supported by top management.**
- **Has the highest on record for big dollar impact in business improvement.**
- **Emphasis is on critical-to-quality metrics and customer satisfaction.**

Week One

Define

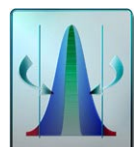
- Achieving Six Sigma - Orientation (A6S)
- Black Belts' Functions and Responsibilities
- Six Sigma Initiative Overview and Roadmap
- Team building and Project Definition
- Project & Process Classification
- Voice of the Customer
- Defining Process Boundaries
- Project Management
- Minitab Introduction
- Brainstorming
- Cause & Effect Diagrams
- Process Mapping
- Project Deliverables

ASC-Six Sigma

Scottsdale, Arizona 85252-1176

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Week Two

Measure

- Project Presentation & Review
- Fundamental Statistics
- Normal Distribution (Goodness of Fit)
- Minitab Data Analysis
- Measurement Systems Analysis
- DGR&R™ Studies, GR&R Studies
- Likert Scales (Attribute & Discrete Data)
- Failure Mode & Effect Analysis (FMEA)
- Process Capability Analysis (Cp, Cpk ...)
- Poisson Distribution & Binomial Distribution
- Six Sigma Metrics (Sigmas, PPM, DPMO ...)
- Hypothesis Testing (Variable and Attribute)
- Project Deliverables

Analyze

Week Three

Improve

- Project Presentation & Review
- Analysis of Variance
- Correlation and Regression
- Multi-Variable Analysis
- Design of Experiments (DOEx)
- Full Factorial Designs
- Fractional Factorial Designs
- Plackett-Burman Designs
- Taguchi's Orthogonal Arrays
- Nested / Hierarchical Designs
- Split Plot Designs
- Strip-Split Plot Designs
- Repeated-Measurement Designs
- Minitab DOE Analysis
- Project Deliverables

Week Four

Control

- Project Presentation & Review
- Functional Equilibrium
- Statistical Process Control (X&R, MR, p, np, c & u Charts)
- Cumulative Count Chart
- Exponential Weighted Moving Average Chart
- QSum Chart
- Multi-Vari Chart and Analysis (MVA)
- Positrol Plans and Traceability Logs
- WorkStandards
- Minitab SPC Analysis
- Project Deliverables & Final Documentation



Black Belt Benefits

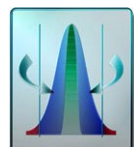
- **ASC's Six Sigma Black Belt Training and Certification provides the candidates with the DMAIC model plus the most robust curriculum available.**
- **It provides the problem-solving methodology necessary to improve business processes.**
- **Become a corporate change agent, identify improvement opportunities and manage multiple projects and Green Belts.**
- **Learn Minitab statistical software to analyze data.**

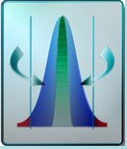
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How does our Training & Certification work?

Our Six Sigma training is based on a proven model that maximizes learning, i.e., Train, Demonstrate, Plan, Apply and Review. This gives the candidate the opportunity to learn and apply the Six Sigma tools in their own business environment.

Train:

Our sessions consist of focus and effective lectures, including real-life examples, individual & group exercises, quizzes and deliverables.

Demonstrate:

ASC's comprehensive number of successful projects (18 years) are shared and discussed, so the candidates can visualize what other successful candidates have achieved.

Plan:

At the conclusion of each session, project planning between the candidates and the Master Black Belt will take place.

Apply:

Each Black Belt candidate has three weeks between training sessions to work on their respective project, apply the tools and produce a presentation demonstrating results. Project implementation requires the full devotion of the candidate.

Review:

On the first day of each training session, the Black Belt candidates will begin by presenting their project's deliverables. The projects will then be reviewed and a gap analysis conducted.

To be Awarded a Black Belt Certificate

- Complete all Assignments
- Pass a Written Examination
- Successfully Complete One Improvement Project
- Demonstrate Understanding of Six Sigma Tools Through Implementation
- Document and Present each Project as a Six Sigma Report

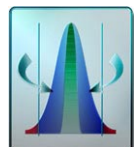


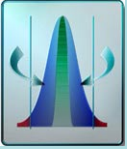
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Course and Other Fees:

- Six Sigma Black Belt Training & Certification - *REQUEST A QUOTE*.
- ASC's Master Black Belt support and consulting - *REQUEST A QUOTE* per day plus expenses.

Payment:

- Fees for the SS Black Belt Training and Certification are *REQUEST A QUOTE* per candidate.
- Full payment is due three weeks (21 days) before the first day of training.
- Payment method: cheque, credit card or Net-15 purchase order.
- Payment for travel expense associated with project support is due 30 days after invoice.

Cancellation Policy:

- Cancellations made up to 30 days prior to the first day of training will be accepted with full refund.
- Cancellations made less than 30 days prior to the first day of training will be subject to a \$2,500 cancellation fee per candidate.
- Cancellations made after training has started will result in a loss of the entire tuition.
- ASC reserves the right to cancel or reschedule any course and is not responsible for any travel charges or penalties incurred as a result.

Six Sigma Candidates are responsible for:

- Identifying a Six Sigma project in their own organization with the assistance of a Champion.
- Providing a laptop computer with Minitab, Microsoft Office installed.
- ASC can make special arrangements to purchase Minitab if required.

Course Length:

- 20 days, four 5-day sessions, delivered over a four month time frame.

Course Requirements:

- PC laptop computer with Microsoft Office and Minitab Software installed.
- Scientific Calculator.

Prerequisites:

- No prior knowledge or experience in statistics or in Minitab is necessary.

Course Includes:

- Minitab Software Demo.
- CpkPlus Version 1.0 Software.
- ASC's Proprietary and Copyrighted Training Materials in Binder format.
- One copy of ASC's text books associated with the training.

Location:

- Open enrollment training at a Scottsdale, Arizona location.
- Training can also be conducted at your location for 5 or more candidates (request a quotation).

Class Size:

- Typically 10-30 candidates.

Black Belt OPEN ENROLLMENT

- **Call 480-432-0081 for Dates and Availability**

Master Black Belt Support and Consulting:

Certification: Technical Support during the certification process should be done with the technical assistance of a Six Sigma Master Black Belt.

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