

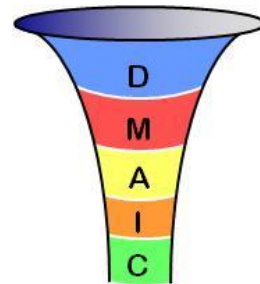
Six Sigma Black Belt Certification

OVERVIEW

Six Sigma by definition is a statistical measure of quality, 3.4 defects per million or 99.99973% good quality. Although zero defects is the goal, as a measure Six Sigma will drive an organization toward achieving high levels of customer satisfaction while reducing operational costs. Six Sigma is a fact based, data driven problem solving methodology that uses statistical tools to solve problems with unknown solutions and unknown root causes. A core part of Six Sigma is the use of a structured problem solving methodology: DMAIC– Define, Measure, Analyze, Improve, & Control. The DMAIC method utilizes project chartering, data collection, and statistical analysis to select the right opportunity, implement the most appropriate improvements, and emphasizes sustaining the improvements over the long term.

Typical Six Sigma Implementation Benefits:

- Cycle time reduction / Faster throughput
- Defect /Rework elimination / reduction
- Improved internal and external quality
- Improved customer satisfaction
- Dramatic improvement in the "bottom-line"



Black Belt Program Benefits:

- Learn what Six Sigma is and learn how to apply the powerful combination of tools to improve business processes
- Attain peer and employer recognition
- Complete a project at your organization that utilizes tools taught throughout the course
- Become a certified Six Sigma Black Belt by the Manufacturers Resource Center

COURSE DESCRIPTION

This course provides participants a comprehensive application based approach to applying Six Sigma Black Belt level statistical tools. Participants will learn by applying the tools taught within the DMAIC method through the use of Minitab and interactive exercises. Throughout the workshop, time will be allotted for project review and mentoring. Candidates then complete a project at their organization in order to demonstrate competency in applying Six Sigma methodology.

COURSE FORMAT

Week 1 – 4.5 days
Week 2 – 4 days
Week 3 – 4 days
Week 4 – 4 days

Each week is approximately one-month apart

COURSE OBJECTIVES

- Learn about the history, deployment, roles and concepts of Six Sigma
- Understand the importance of using the DMAIC methodology and how it relates to sustaining Six Sigma Project results
- Create a project charter and SIPOC
- Learn how to funnel variables using Process mapping, C&E Matrix and FMEA
- Understand how to link input and output data using the Six Sigma formula [$Y = f(x)$] for use in statistical analysis
- Learn how to create Pareto Diagrams, Graphical Summaries and other Multi-vari charts in Minitab
- Learn how to calculate RTY and DPM/DPMO for a process
- Understand how to conduct a variable and attribute Measurements Systems Assessment / Gage R&R (Advanced MSA)
- Understand and learn how to create both variable and attribute control charts: I-MR, X-bar R, P, NP, C, & U
- Learn the Basic Lean Tools
- Have the ability to calculate Cp & Cpk for both normal and non-normal process data
- Learn the concepts of hypothesis testing, normality and chi-square
- Learn how to conduct T-Test, one-way & two-way ANOVA, conduct a correlation and regression analysis, nested and randomized block designs
- Learn how to plan and conduct a fractional and full factorial experimental design (DOE)
- Understand the fundamental of conducting a qualitative DOE (multiple subjective evaluation)
- Understand multiple response optimization and Response Surface Methodology (RSM)
- Recognize the benefits of conducting evolutionary operations (EVOP)
- Understand the importance of implementing Mistake Proofing / Poke Yoke
- Learn how to create a process control plan, savings plan and project transition plan

WHO SHOULD ATTEND?

CEOs, VPs, Directors, General Managers, Managers, Supervisors, Group Leaders, QA, Financial Analysis, Accountants or anyone in management or leadership positions that want to apply the Six Sigma methodology to reduce defects, improve processes, increase throughput, and improve the bottom line financial results.

For more information or to register, please contact:
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