



Six Sigma Black Belt Online Training

WHO SHOULD ATTEND:

Anyone interested in learning the Six Sigma methodology to help a company in product or process improvement activities.

PURPOSE:

This seminar empowered with computer simulations and state of the art interactive presentations provides the student the key skills to establish the basic groundwork, basic measurement, analytical, project management, process characterization, exploratory data analysis, and process improvement/control tools for six sigma projects.

DESCRIPTION:

In this online seminar you will learn and apply the tools of the six sigma methodology. The course consists of five modules: Define Measure, Analyze, Improve and Control. The course is delivered in ten sessions during a recommended period of twenty weeks.

Students may use Minitab 14 or Excel in class. In addition, students can order a copy of ActivStats for Minitab or Excel. ActivStats is a state-of-the art interactive educational tool for leaning statistics. It is very user friendly and allows you to learn at your own pace.

Participants will have the opportunity to ask questions to an online moderator seven days a week during the seminar and interact with other students in the online six sigma forum.

This seminar includes integrated quizzes to assure comprehension and the final Six Sigma Project allows opportunity to apply lessons to real business cases and transform knowledge into understanding.

Ten hours of free project support is included.














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WHAT YOU WILL LEARN:

- You will be able to describe the statistical and conceptual basis of the six sigma methodology as well as the basic management tools.
- You will be able to explain the origin of the breakthrough strategy and the organizational and leadership aspects involved in Six Sigma projects.
- You will have the skills to apply descriptive statistics and measurement system analysis tools.
- You will know the managerial aspects for collecting data and process capability analysis.
- You will know how to apply the basic analytical tools as well as to describe the concepts of potential failure mode and effects analysis.
- You will apply the basic statistical tests involved in hypothesis testing.
- You will be able to apply the basic principles of design of experiments in the context of manufacturing processes.
- You will be able to explain the Taguchi concepts and the planning, implementation and analysis of experimental designs.
- You will have the knowledge to describe the basic concepts of statistical process control, to select the appropriate control chart, and to implement control charts.
- You will be able to explain technical concepts of Statistical Process Control and Lean Manufacturing.













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CONTENT OVERVIEW:

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| DEFINE | <ul style="list-style-type: none">  Six Sigma Overview  Six Sigma Organization  Project Measures <ul style="list-style-type: none"> ○ Defects per Unit, ○ Throughput Yield, Rolled ○ Throughput Yield ○ Normalized Yield ○ DPMO ○ Process Capability ○ Cycle Time  Voice of the customer  Nominal Group Technique  Seven Management Tools  Process Mapping  Six Sigma Goals  Six Sigma History  Process vs Functional View  Financial Performance Metrics  Project Documentation  Project Definition |
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CONTENT OVERVIEW:

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| MEASURE | <ul style="list-style-type: none">  Basic Probability Concepts <ul style="list-style-type: none"> ○ Multiplication/Addition Rules  Basic Statistical Concepts <ul style="list-style-type: none"> ○ Drawing Valid Statistical Conclusions ○ Central Limit Theory and the Mean  Data Collection  Data Graphical Summary <ul style="list-style-type: none"> ○ Histograms ○ Pie Charts ○ Stem-and-Leaf Plots ○ Box-and-Whisker Plots  Basic Probability Distributions <ul style="list-style-type: none"> ○ Normal ○ Binomial ○ Poisson  Measurement System Analysis  Detailed Process Mapping  Methods for Collecting Data  Sample Survey Design  Descriptive Statistics  Process Capability Studies  Process Capability Indices |
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CONTENT OVERVIEW:

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| <p>ANALYZE</p> | <ul style="list-style-type: none">  Analysis Fundamentals  Exploratory Data Analysis <ul style="list-style-type: none"> ○ Bivariate Studies ○ Relationships Between Variables ○ Correlation/Regression Analysis ○ Prediction Intervals ○ Multivariate Studies  Failure Mode and Effects Analysis  Process Analysis  Test for Means  Test for Variances  Test for Proportions  Test Comparing Two Means  Test Comparing Two Variances  Test Comparing Two Proportions |
| <p>IMPROVE</p> | <ul style="list-style-type: none">  Improve Fundamentals  Experimental Design Principles <ul style="list-style-type: none"> ○ Terminology ○ Planning & Organizing Experiments ○ Fractional Factorial Experiments ○ Full Factorial Experiments  Design of Experiments Application  Taguchi Fundamentals  Experimental Design Principles  Mathematical Arrays  Taguchi L9 Experiment  Taguchi L9 Assignment  XYZ Motor Application  XYZ Motor Assignment |

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CONTENT OVERVIEW:

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| CONTROL | <ul style="list-style-type: none">  Statistical Process Control <ul style="list-style-type: none"> ○ Objectives and Benefits ○ Selection of Variable ○ Rational Sub grouping ○ Selection of Control Charts ○ Continuous Control Charts ○ Discrete Control Charts ○ Analysis of Control Charts  Technical Foundations  Pre-Control Charts  Short Run Charts  Time-Weighted Charts  Lean Tools for Control  5-S |
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RECOMMENDED STUDENT MATERIALS AND SOFTWARE:

-  ActivStats for Minitab or Excel (optional)
-  Minitab 14 or Excel
-  Six Sigma Memory Jogger (provided)
-  Black Belt Memory Jogger (provided)

RECOMMENDED HARDWARE:

- Windows XP, 2000, NT 4.0, Me, 98SE
- Intel Pentium II or higher and 32MB of RAM
- 256 K or faster Internet connection.
- Browser: Microsoft Internet Explorer
- Display resolution: 1024 x 768.
- Sound card and speakers (optional).

Black Belt price listing

Six Sigma Black Belt Online Training

- I) Six Sigma Black Belt Training - Define \$395.00
- II) Six Sigma Black Belt Training - Measure \$395.00
- III) Six Sigma Black Belt Training - Analyze \$395.00
- IV) Six Sigma Black Belt Training - Improve \$395.00
- V) Six Sigma Black Belt Training - Control \$395.00