

Six Sigma Black Belt | *A Refresher course*



“Knowledge untouched for long time, gets lost”

To overcome such impediment in professional growth, we have designed and developed a *refresher* program for trained/certified six sigma black belts. This highly focused program is covered over 3 days. The program is focused on revisiting black belt concepts in a nutshell. This program is recommended for participants who are preparing for interviews, Certification exams like ASQ, or just want to refresh the concepts.

To take up this program, it is recommended that the participants are either trained or certified in Six Sigma Black Belt, as attending this program requires some basic working knowledge of six sigma.



I. SIX SIGMA APPROACH - Define & Measure

- Define, classify and evaluate qualitative and quantitative data i.e., continuous (variables) and discrete (attributes) data and convert attributes data to variables measures when appropriate.
- Define and distinguish between population parameter and sample statistics.
- Calculate and interpret measures of dispersion and central tendency.
- Construct and interpret diagrams and charts, including box-and-whisker plots, normal probability plots, and 7 QC tools.
- Introduction to probability distributions and describe, apply and interpret the following distributions: Normal, Poisson, Binomial.
- Define, select and calculate Cp and Cpk to assess process capability - Describe and apply elements of designing and conducting process capability studies, including identifying characteristics and specifications, developing sampling plans and verifying stability and normality.
- Distinguish between natural process limits and specification limits, and calculate process performance metrics such as percent defective, parts per million (PPM), defects per million opportunities (DPMO), defects per unit (DPU), process sigma and rolled throughput yield (RTY).

II. SIX SIGMA APPROACH - Analyze

- Calculate and interpret the correlation coefficient and its confidence interval, and describe the difference between correlation and causation.
- Calculate and interpret regression analysis (linear model only), and apply and interpret hypothesis tests for regression statistics. Use the regression model for estimation and prediction, analyze the uncertainty in the estimate, and perform a residuals analysis to validate the model.
- Hypothesis testing - Define and interpret the significance level, power, type I and type II errors of statistical tests. Use and interpret the results of hypothesis tests for means, variances and proportions.
- Define and distinguish between confidence and prediction intervals. Define and interpret the efficiency and bias of estimators. Calculate tolerance and confidence intervals.
- Select, calculate and interpret the results of ANOVAs. Mann-Whitney, etc..

- Select, develop and use various non-parametric tests, including Mood's Median, Levene's test, Kruskal-Wallis, Mann-Whitney, etc.
- Define, select and interpret the results of these Chi square tests. Select, develop and use contingency tables to determine statistical significance.

III. SIX SIGMA APPROACH - Improve & Control

- Define basic DOE terms, including independent and dependent variables, factors and levels, response, treatment, error, etc..
- Define and apply DOE principles – Randomization, Replication and blocking.
- Design, conduct and analyze full factorial experiments. Define and describe the objectives of SPC, including monitoring and controlling process performance, tracking trends, runs, etc., and reducing variation in a process. Identify and select critical characteristics for control chart monitoring.
- Select and use the following control charts in various situations: Average and Range , Average and standard deviation, individual and moving range (ImR), p, np, c, u,. Interpret control charts and distinguish between common and special causes using rules for determining statistical control.

Register now !

call

080 - 41281005

0 9886790511

email

training@skilglobal.com

visit us

www.skilglobal.com