

Six Sigma Green Belt

Length: Five Days

Summary: Students will implement Six Sigma as a Green Belt. Our Lean Six Sigma Green Belt methodology has just the right blend of statistics so you can measure your success. Learn how to successfully charter, scope, and close projects as well as how to apply the appropriate metrics to help ensure total change implementation.

Who Should Attend: This course is intended for any level of employee and various levels of management that intend to take an active role in the Six Sigma methodology.

Course Content

FUNDAMENTALS OF SIX SIGMA

- Describe Six Sigma
- Identify Organizational Drivers and Metrics
- Describe Project Selection and Organizational Goals
- Describe Lean

IDENTIFYING SIX SIGMA METHODOLOGIES

- Describe the DMAIC Methodology
- Describe the DFSS Methodology
- Describe QFD
- Describe DFMEA and PFMEA

CONDUCTING THE SIX SIGMA DEFINE PHASE: INTRODUCTION

- Describe the Define Phase
- Describe Process Elements
- Identify Stakeholders and Process Owners
- Identify Customers
- Gather Customer Data
- Analyze Customer Data
- Translate Customer Requirements
- Identify Six Sigma Projects

CONDUCTING THE SIX SIGMA DEFINE PHASE: FUNDAMENTALS OF PROJECT MANAGEMENT

- Draft a Project Charter
- Develop the Project Scope
- Identify Project Metrics
- Identify Project Planning Tools
- Describe Project Documentation
- Describe Project Risk Analysis
- Describe Project Closure

CONDUCTING THE SIX SIGMA DEFINE PHASE: MANAGEMENT AND PLANNING TOOLS

- Create an Interrelationship Digraph
- Create a Tree Diagram
- Create a Prioritization Matrix
- Describe a Matrix Diagram
- Draft a PDPC
- Create an Activity Network Diagram

CONDUCTING THE SIX SIGMA DEFINE PHASE: KEY METRICS OF PROJECTS

- Track Process Performance
- Perform FMEA

CONDUCTING THE SIX SIGMA DEFINE PHASE: TEAM DYNAMICS

- Describe Six Sigma Team Stages and Dynamics
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- Describe Six Sigma Teams and Roles
- Identify Team Tools
- Identify Effective Communication Techniques

CONDUCTING THE SIX SIGMA MEASURE PHASE: INTRODUCTION

- Describe the Measure Phase
- Draft a SIPOC
- Create a Process Map
- Describe Additional Process Documentation Tools
- Create a Fishbone Diagram
- Create a Cause-and-Effect Matrix

CONDUCTING THE SIX SIGMA MEASURE PHASE: PROBABILITY AND STATISTICS

- Describe Basic Probability Concepts
- Identify Valid Statistical Conclusions
- Describe the Central Limit Theorem

CONDUCTING THE SIX SIGMA MEASURE PHASE: THE DATA COLLECTION PLAN

- Identify Data Types
- Identify Data Collection Methods
- Identify Sampling Types

CONDUCTING THE SIX SIGMA MEASURE PHASE: DESCRIPTIVE MEASURES

- Introduction to Statistical Tools
- Compute Descriptive Statistical Measures
- Construct Probability Distribution Charts
- Describe Other Distributions

CONDUCTING THE SIX SIGMA MEASURE PHASE: GRAPHICAL METHODS

- Create a Run Chart
- Create a Box-and-Whisker Plot
- Create a Stem-and-Leaf Plot
- Create a Scatter Plot
- Create Pareto Charts

CONDUCTING THE SIX SIGMA MEASURE PHASE: MEASUREMENT SYSTEM ANALYSIS

- Perform Measurement System Analysis
- Conduct the Gage R&R Study
- Interpret Gage R&R Data

CONDUCTING THE SIX SIGMA MEASURE PHASE: PROCESS CAPABILITY AND PERFORMANCE

- Determine Process and Customer Specification Limits
- Conduct a Process Capability Study
- Interpret Process Capability
- Interpret Sigma Levels

CONDUCTING THE SIX SIGMA ANALYZE PHASE: INTRODUCTION

- Describe the Analyze Phase
- Perform Multi-Vari Studies
- Perform Simple Linear Correlation
- Perform Simple Regression

CONDUCTING THE SIX SIGMA ANALYZE PHASE: HYPOTHESIS TESTING

- Introduction to Hypothesis Testing
- Conduct Hypothesis Tests
- Perform t-Tests
- Perform Single-Factor ANOVA
- Perform Chi-Square Tests

CONDUCTING THE SIX SIGMA IMPROVE PHASE

- Describe the Improve Phase
- Perform DOE
- Interpret Main Effects and Interaction Plots
- Generate Ideas for Solutions
- Pilot Solutions

CONDUCTING THE SIX SIGMA CONTROL PHASE: INTRODUCTION

- Describe the Control Phase
 - Draft a Control Plan
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**CONDUCTING THE SIX SIGMA CONTROL
PHASE: SPC**

- Describe Control Charts
- Create Control Charts
- Interpret Control Charts
- Implement and Validate Solutions
- Six Sigma Project Closure

**DESCRIBING THE IMPLEMENTATION OF
SIX SIGMA**

- Identify the Essentials of Six Sigma Implementation
 - Describe Six Sigma for Service Industries
 - Describe DMAIC Failure Modes
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