



## Six Sigma Green Belt Training Course



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## Introduction:

The Six Sigma Green Belt Training Course is designed to enhance your knowledge and skills, propelling you toward becoming a qualified project manager. This exhaustive five-day training program imparts essential expertise for leading a project management team and nurturing effective teamwork. Embarking on the Six Sigma Green Belt program sets you on the definitive path to identifying and selecting the most impactful projects at the most appropriate times.

Achieving a Lean Six Sigma Green Belt certification equips you with the capability to contribute substantially at the project level through meticulous data gathering and analysis, skills highly sought after by Black Belt-certified professionals. It will have the prowess to manage Green Belt projects and teams, demonstrating a deep understanding of Six Sigma methodologies.

Leading a project management team signifies confidence, leadership, and exceptional problem-solving abilities. This coveted certification delves into critical aspects of management roles, underscoring its value and attractiveness in the professional realm. It intricately combines the concepts of Lean Manufacturing and Six Sigma, forming a comprehensive Six Sigma Green Belt course.

The primary focus is on delivering maximum quality and value to customers. A leader must foster a caring and responsive team adept at addressing customer needs. The Six Sigma Green Belt course elucidates essential concepts such as critical customers, stakeholder analysis, and business case development. Its underlying significance lies in its commitment to mitigating flaws and enhancing managerial quality standards.

## Course Objectives:

Participants in this Six Sigma Green Belt course will be able to:

- Establish clear and objective success metrics for project initiatives.
- Grasp the intricacies of examining measurement systems and processing measurements accurately.
- Implement reliable and intuitively understandable statistical analysis to comprehend processes better.
- Eliminate issues persistently using root-cause problem-solving approaches.
- Formulate, scrutinize, and ameliorate processes that strive towards achieving set objectives.
- Develop a sustainable plan to ensure the continuity of process improvements.

## Targeted Groups:

- Quality System Managers.
- Supervisors.
- Operations Managers.
- Finance and Commercial Managers.
- Professionals are eager to apply methodology and quality control processes within their organizations.

## Targeted Competencies:

At the end of this Six Sigma Green Belt training, participants competencies will:

- Proficient Statistical Analysis Skills.
- Mastery of Process Improvement Techniques DMAIC.
- Project Management Competencies.
- Understanding of Quality Management Principles.
- Expert Problem-solving Skills.
- Effective Team Leadership and Collaboration.
- Change Management Acumen.
- Aptitude in Communication.
- Data-Driven Decision Making.
- A Continuous Improvement Mindset.

## Course Content:

### Unit 1: Introduction to Six Sigma and DMAIC:

- Overview of Six Sigma and Quality Concepts:
  - Discovering Six Sigma's legacy, principles, and the advantages it brings to quality improvement.
  - Understanding the historical context and evolution of Six Sigma.
  - Grasping fundamental quality concepts and their significance in Six Sigma.
- Define Phase:
  - Project Selection and Charter:
    - Understanding the criteria for project selection and defining them with concrete objectives and stakeholder involvement.
    - Developing a clear and concise project charter.
    - Aligning project goals with organizational objectives.
  - Voice of the Customer VOC and Critical to Quality CTQ:
    - Capturing customer requirements and establishing critical quality parameters.
    - Translating customer needs into measurable specifications.
    - Prioritizing customer expectations to drive quality improvements.
- Measure Phase:
  - Data Collection and Measurement System Analysis MSA:
    - Employing techniques for precise data collection.
    - Evaluating the reliability of measurement systems.
    - Ensuring accuracy and consistency in data gathering.
  - Process Mapping and Variance Analysis:
    - Utilizing methods to map out processes.
    - Analyzing variation to identify potential improvement areas.
    - Creating detailed process flowcharts and diagrams.

## Unit 2: Analyze Phase and Statistical Tools:

- Analyze Phase:
  - Root Cause Analysis and Hypothesis Testing:
    - Employing techniques to pinpoint root causes.
    - Validating suppositions with statistical methods.
    - Utilizing tools such as fishbone diagrams and the 5 Whys.
  - Design of Experiments DOE:
    - Gaining insights into optimizing process configurations and factors through DOE.
    - Planned and conducted experiments to identify key variables.
    - Analyzing experimental results to guide improvements.
  - Regression Analysis and Correlation:
    - Utilizing regression and correlation to ascertain relationships among variables.
    - Applying statistical techniques to model and predict outcomes.
    - Interpreting results to inform decision-making.

## Unit 3: Improve Phase and Control Phase:

- Improve Phase:
  - Lean Principles and Value Stream Mapping:
    - Applying Lean concepts to eradicate waste.
    - Creating value stream maps to visualize process flows.
    - Identifying and eliminating non-value-added activities.
  - Kaizen Events and Error Proofing Poka-Yoke:
    - Adopting Kaizen events for continuous improvement.
    - Implementing error-proofing methodologies to prevent defects.
    - Encouraging a culture of constant, incremental improvement.
  - Solution Implementation and Validation:
    - Executing solutions and verifying their effectiveness.
    - Testing and refining improvements before full-scale implementation.
    - Measuring the impact of changes on process performance.
  - Project Management and Change Control:
    - Navigating project management dimensions, including meticulous planning and change management.
    - Ensuring smooth implementation of changes.
    - Monitoring progress and addressing issues promptly.
- Control Phase:
  - Statistical Process Control SPC and Control Plans:
    - Integrating SPC techniques to monitor and stabilize processes.
    - Developing control plans to maintain improvements.
    - Using control charts to track process performance.
  - Sustaining Improvements:
    - Ensuring the sustainability of enhancements through effective monitoring.
    - Establishing standard operating procedures.
    - Training employees to maintain new processes.
  - Final Project Review and Closure:
    - Conducting a conclusive review of project outcomes.
    - Thorough documentation of project findings.
    - Formalizing project closure and celebrating successes.

## **Unit 4: Project Work, Review, and Certification:**

- Project Work and Data Analysis:
  - Hands-on application of Six Sigma devices and methodologies through active project work.
  - Collecting and analyzing project-specific data.
  - Applying Six Sigma tools to real-world scenarios.
- Project Review and Mentorship:
  - Receiving guided reviews and mentorship to refine projects.
  - Collaborating with experienced mentors for feedback.
  - Continuously improving project approaches based on expert guidance.
- Reporting and Documentation:
  - The critical role of accurate reporting and thorough documentation in communicating project results.
  - Preparing comprehensive project reports.
  - Ensuring clear and concise documentation of project activities.
- Certification Assessment and Exam Preparation:
  - Preparing rigorously for Six Sigma certification exams.
  - Reviewing key concepts and methodologies.
  - Taking practice exams to assess readiness.
- Graduation and Closing Ceremony:
  - A celebration of achievement and the formal recognition of successful completion.
  - Awarding of Six Sigma Green Belt certification.
  - Reflecting on the journey and accomplishments.

## **Unit 5: Quality Principles and Professional Development:**

- Quality Principles in Six Sigma:
  - An overview of the core quality principles that underpin Six Sigma.
  - Understanding the importance of quality in organizational success.
  - Applying quality principles to drive continuous improvement.
- Continuous Improvement:
  - Emphasizing the importance of ongoing enhancement for organizational success.
  - Developing a culture of constant improvement.
  - Encouraging employees to seek and implement improvements.
- Professional Development in Six Sigma:
  - Exploring career paths and growth opportunities within the Six Sigma framework.
  - Identifying potential roles and industries for Six Sigma professionals.
  - Planning professional development to advance in the field.