Six Sigma and Project Quality Management Synergy Training Course



21 - 25 Dec 2026

Düsseldorf

5900 € (Per Person)

Ref: #PRM5657_125868

Course Introduction / Overview:

This course provides a comprehensive framework for integrating the rigorous, data-driven methodology of Six Sigma with the established principles of project quality management. In today's competitive landscape, simply meeting project specifications is not enough; organizations must strive for near-perfect quality and continuous process improvement to achieve sustainable success. This program bridges the gap between traditional project quality planning and the powerful statistical tools of Six Sigma, creating a synergistic approach to defect reduction and value enhancement. Drawing upon the foundational concepts pioneered by experts like Mikel Harry, a key architect of Six Sigma, and the principles outlined in seminal works such as "The Six Sigma Handbook", participants will explore the Define, Measure, Analyze, Improve, and Control (DMAIC) cycle within a project context. BIG BEN Training Center has designed this course to move beyond theory, offering practical techniques to identify root causes of quality issues, minimize process variation, and align project outcomes with strategic business objectives, ultimately delivering superior value to stakeholders.

Target Audience / This training course is suitable for:

- Project Managers and Project Leaders.
- Quality Assurance and Quality Control Managers.
- Process Improvement Specialists and Consultants.
- Operations Managers and Team Supervisors.
- Engineers and Technical Leads.
- Program Managers and PMO Staff.
- Business Analysts involved in process optimization.
- Individuals aspiring to roles in quality or project management.

Target Sectors and Industries:

- Manufacturing and Industrial Production.
- Information Technology and Software Development.
- Healthcare and Pharmaceutical sectors.
- Banking, Finance, and Insurance services.
- Construction and Engineering.
- Telecommunications and Utilities.
- Governmental agencies and public sector organizations.
- Logistics and Supply Chain Management.

Target Organizations Departments:

- Project Management Office (PMO).
- Quality Assurance (QA) and Quality Control (QC).
- Operations and Production.
- Engineering and Product Development.
- Research and Development (R&D).
- Information Technology (IT).
- Strategic Planning and Business Improvement.
- Customer Service and Support.

Course Offerings:

By the end of this course, the participants will have able to:

- Integrate Six Sigma principles seamlessly into the project management lifecycle.
- Apply the DMAIC methodology to solve complex project quality problems.
- Develop robust project quality management plans that incorporate statistical process control.
- Utilize key quality tools for root cause analysis and process mapping.
- Master data collection and analysis techniques to make informed, evidence-based decisions.
- Calculate and interpret the Cost of Quality (COQ) to justify improvement initiatives.
- Lead project teams in fostering a culture of continuous improvement and quality excellence.
- Implement effective control plans to sustain project gains and prevent regression.
- Enhance stakeholder satisfaction by consistently delivering high-quality project outcomes.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, experiential, and directly applicable to the participant's professional environment. This course moves beyond traditional lectures to create a dynamic learning ecosystem. A significant portion of the training is dedicated to hands-on workshops, real-world case study analysis, and collaborative group exercises where participants apply Six Sigma tools to simulated project scenarios. Our expert instructors facilitate engaging discussions, encouraging peer-to-peer learning and the sharing of diverse industry experiences. The curriculum incorporates interactive simulations that challenge participants to navigate the DMAIC process, make critical decisions, and see the impact of their choices in a risk-free setting. Continuous feedback is a cornerstone of our approach, with structured review sessions and Q&A segments ensuring that all concepts are thoroughly understood. This blended learning model ensures that participants not only grasp the theoretical foundations of project quality and Six Sigma but also develop the practical skills and confidence to implement these powerful methodologies in their own organizations.

Course Agenda (Course Units):

Unit One Foundations of Project Quality and Six Sigma

- Introduction to Project Quality Management principles (PMBOK).
- The history and evolution of Six Sigma methodology.
- Understanding the core concepts: DMAIC and DMADV.
- Differentiating between Quality Assurance and Quality Control.
- Roles and responsibilities in a Six Sigma project team.
- The synergy between project management and process improvement.
- Defining quality from the customer's perspective (Voice of the Customer - VOC).

Unit Two The Define and Measure Phases in Projects

- Developing a comprehensive Project Charter for quality initiatives.
- Identifying key stakeholders and their requirements.
- Techniques for effective process mapping (SIPOC, Flowcharts).
- Creating a data collection plan for project metrics.
- Introduction to basic statistics and data types.
- Understanding Measurement System Analysis (MSA) and Gage R&R.
- Establishing baseline performance and project goals.

Unit Three The Analyze Phase for Root Cause Identification

- Exploring data to identify patterns and potential causes.
- Conducting detailed root cause analysis (Fishbone Diagrams, 5 Whys).
- Introduction to graphical analysis tools (Pareto Charts, Histograms, Scatter Plots).
- Fundamentals of hypothesis testing to validate root causes.
- Process capability analysis (Cp, Cpk).
- Identifying value-added vs. non-value-added activities.
- Presenting analysis findings to project stakeholders.

Unit Four The Improve and Control Phases for Sustainable Results

- Brainstorming and prioritizing potential solutions.
- Utilizing Failure Mode and Effects Analysis (FMEA) to assess risks.
- Planning and executing pilot tests for proposed solutions.
- Developing an implementation plan for full-scale changes.
- Introduction to Statistical Process Control (SPC) charts.
- Creating robust control plans to sustain improvements.
- Documenting new procedures and standard operating processes.

Unit Five Integrating Quality Leadership and Continuous Improvement

- Calculating the Cost of Quality (COQ) and building a business case.
- Strategies for leading change and overcoming resistance.
- Fostering a continuous improvement culture within the project team.
- Advanced tools for process optimization and design.
- Managing stakeholder communications throughout the quality project.
- Final capstone project: Applying DMAIC to a comprehensive case study.
- Developing a personal action plan for applying course concepts.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How might the data-driven, bottom-up approach of Six Sigma challenge the traditional top-down decision-making structures often found in project management hierarchies?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by focusing on the practical synergy between two powerful but often separate disciplines: project management and Six Sigma. While other programs may teach these subjects in isolation, our curriculum is uniquely designed to demonstrate how to embed the rigorous, data-centric DMAIC framework directly into the project lifecycle. We move beyond a mere toolkit approach, emphasizing the development of a strategic mindset that uses statistical evidence to drive project decisions and mitigate quality risks proactively. The course content is built around real-world case studies that illustrate both the successes and failures of quality integration, providing deep, actionable insights. Rather than just learning what a control chart is, participants will learn how to use it to manage scope creep and validate project deliverables. The emphasis is on creating leaders who can not only manage a project's timeline and budget but can also champion a culture of empirical analysis and continuous improvement, ensuring that the final output delivers exceptional and sustainable value long after the project is closed.