



Quality Management & Operational Excellence

Certified Lean Six Sigma Green Belt

Course Introduction

This Training Program is designed to provide participants with the tools, techniques, and knowledge needed to lead and support process improvement projects within their organizations.

Throughout this program, participants will be guided through the DMAIC (Define, Measure, Analyze, Improve, and Control) framework—the core of Six Sigma methodology.

They will learn how to define project goals, collect and analyze data, identify root causes of issues, implement solutions, and create controls to ensure sustainable improvements.

Additionally, participants will explore essential tools like Pareto analysis, cause-and-effect diagrams, and statistical process control (SPC), which are crucial for diagnosing problems and making data-driven decisions.

This training will equip participants with the skills needed to not only solve complex production and service-related issues but also to significantly enhance profitability and optimize business processes in any industry.

By the end of the program, participants will be ready to implement Six Sigma projects within their organizations, using a structured and efficient approach to achieve operational excellence, and they also will be able to pass Lean Six Sigma (Green Belt) Certification Exam.

Target Audience

- Mid-level Managers and Team Leaders
- Project Managers
- Quality Analysts and Quality Managers
- Engineers (Process, Manufacturing, Quality)

- Business Analysts and Consultants

Learning Objectives

- Identify and evaluate Six Sigma project opportunities based on strategic relevance, impact, and feasibility.
- Plan and manage Six Sigma projects using structured methodologies and project management best practices.
- Build and lead cross-functional teams, guiding them through structured problem-solving efforts.
- Apply the DMAIC framework effectively with various Six Sigma tools.
- Assess risks associated with Six Sigma projects and implement control measures.
- Increase organizational profitability through waste reduction, process optimization, and quality improvement.
- Avoid common pitfalls in Six Sigma implementation and ensure stakeholder engagement.
- Foster creative thinking and structured problem-solving to drive innovation

Course Outline

- **DAY 01**

Introduction to Six Sigma & Lean Concepts

- Origins and evolution of Six Sigma
- Relationship between Lean and Six Sigma
- Types of waste (Muda) and process variation
- Roles in Six Sigma: Green Belt
- Case studies of Six Sigma success stories

Project Selection & Evaluation Criteria

- Identifying improvement opportunities
- Selecting and scoping Six Sigma projects
- Project charter development
- Defining CTQs (Critical to Quality)
- **Workshop:** Drafting a project charter

• Day 02

Define Phase

- Voice of the Customer (VOC)
- SIPOC diagrams
- Stakeholder analysis
- Problem definition tools
- **Exercise:** Creating SIPOC and VOC matrix

Measure Phase

- Measurement systems and data types
- Process mapping and flowcharting
- Data collection planning
- Introduction to descriptive statistics
- **Simulation:** Data collection and baseline measurement

• Day 03

Analyze Phase - Root Cause Analysis

- Pareto analysis
- Cause and effect (Ishikawa) diagrams
- 5 Whys technique
- Hypothesis testing basics
- **Workshop:** Identifying root causes using case study data

Analyze Phase - Statistical Tools

- Graphical analysis (histograms, boxplots)
- Regression and correlation basics
- Variation and process capability (Cp, Cpk)
- **Hands-on activity:** Process capability analysis

• Day 04

Improve Phase

- Generating and evaluating solutions (brainstorming, prioritization matrix)
- Poka-yoke (mistake-proofing)
- Design of Experiments (DoE) – overview
- Piloting improvements and solution validation
- **Group Exercise:** Solution generation using actual case

Control Phase

- Control plans and monitoring systems
- Standardization and documentation
- Visual management
- Introduction to Statistical Process Control (SPC)
- **Simulation:** Creating a control plan for implemented solution

Project Risk Management & Implementation Challenges

- Risk assessment tools (FMEA, risk matrix)
- Common implementation barriers
- Change management and communication planning
- Innovative Problem solving skills for production issues.
- Ensuring sustainability of improvements
- **Interactive Discussion:** Real-world barriers and solutions
- **Full DMAIC case simulation:** Team project presentation
- Exam Preparation Workshop.

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
Aug. 25, 2025	Aug. 29, 2025	5 days	4950.00 \$	England - London
Oct. 20, 2025	Oct. 24, 2025	5 days	4250.00 \$	UAE - Dubai