Document Generated: 11/15/2026

Learning Style: Virtual Classroom

Technology: PMI

Difficulty: Beginner

Course Duration: 7 Weeks

Lean Six Sigma Project Management Program



About This Course:

The Lean Six Sigma Project Management Program is a comprehensive, multi-certification pathway combining Six Sigma Green Belt, Lean Six Sigma Black Belt, Project Management Professional (PMP) preparation, and Microsoft Project (Levels 1 & 2). Designed for professionals who want to lead process improvement and manage projects with confidence, this program blends proven Lean and Six Sigma techniques with PMI-aligned project management practices and hands-on Microsoft

Project training. Participants gain practical, real-world skills through instructor-led sessions, case studies, and exercises that emphasize DMAIC, waste elimination, data-driven decision-making, project planning, and sustaining continuous improvement.

Course Objectives:

- Apply Lean and Six Sigma methodologies to analyze, improve, and control business processes.
- Utilize the DMAIC (Define, Measure, Analyze, Improve, Control) framework to solve complex organizational challenges.
- Identify and eliminate inefficiencies to enhance productivity, quality, and customer satisfaction.
- Implement Lean tools and techniques to minimize waste and optimize workflow efficiency.
- Apply statistical process control, root cause analysis, and performance measurement tools for data-driven decision-making.
- Plan, schedule, and manage projects using Microsoft Project, including task management, resource allocation, and progress tracking.
- Understand and apply the core principles and best practices of the Project Management Professional (PMP®) framework.
- Integrate Lean Six Sigma and PMP methodologies to manage projects effectively within cost, scope, and time constraints.
- Lead cross-functional teams, communicate effectively with stakeholders, and manage organizational change initiatives.
- Develop leadership, analytical, and strategic planning skills essential for continuous improvement and operational excellence.

Audience:

This program is designed for professionals across industries who want to build or enhance their expertise in project management, quality assurance, and process improvement. It is ideal for:

- Project Managers, Team Leaders, and Supervisors overseeing business or technical projects
- Engineers, Analysts, and Process Improvement Specialists engaged in quality or productivity initiatives

- Quality Managers, Continuous Improvement Professionals, and Operations Leaders seeking Lean Six Sigma or PMP certification

- Manufacturing, Production, and Service Professionals aiming to enhance efficiency and performance

- Individuals seeking to gain globally recognized project management and process improvement credentials to advance their careers

Prerequisites:

- Basic knowledge of PC desktop operations or equivalent.

Course Outline:

Module 1: Six Sigma Green Belt

- Introduction to Six Sigma and Lean Principles
- Understanding Variation and Process Capability
- The DMAIC Methodology: Define, Measure, Analyze, Improve, Control
- Process Mapping, Value Stream Analysis, and Waste Identification
- Data Collection and Measurement System Analysis (MSA)
- Root Cause Analysis and Problem-Solving Tools (Fishbone, Pareto, 5 Whys)
- Statistical Concepts and Process Analysis (Basic Descriptive Statistics, SPC)
- Implementing Process Controls and Sustaining Improvements
- Roles and Responsibilities in Six Sigma Projects

Module 2: Project Management Professional (PMP)

- Introduction to Project Management and PMI Framework
- Project Environment, Life Cycle, and Process Groups
- Integration, Scope, Schedule, and Cost Management
- Quality, Risk, Resource, and Procurement Management
- Stakeholder Engagement and Communication Management
- Leadership, Team Development, and Conflict Resolution
- Agile, Predictive, and Hybrid Project Approaches
- Governance, Ethics, and Professional Responsibility
- PMP Exam Preparation, Practice Questions, and Mock Scenarios

Module 3: Six Sigma Lean Black Belt

- Advanced Lean and Six Sigma Methodologies
- Project Selection, Prioritization, and Financial Evaluation
- Advanced Data Analysis, Hypothesis Testing, and Regression Techniques

- Design of Experiments (DOE) and Process Optimization
- Lean Enterprise Implementation and Value Stream Design
- Strategic Deployment and Organizational Alignment
- Change Leadership and Coaching Green Belt Teams
- Business Process Management and Innovation
- Sustaining Continuous Improvement and Measuring ROI

Module 4: Microsoft Project - Level 1

- Introduction to Microsoft Project Interface and Setup
- Creating and Managing Project Schedules
- Defining Tasks, Milestones, and Dependencies
- Assigning Resources, Costs, and Work Hours
- Tracking Progress and Updating Project Timelines
- Managing Calendars, Constraints, and Baselines
- Customizing Views, Tables, and Basic Reports

Module 5: Microsoft Project - Level 2

- Advanced Scheduling and Resource Management Techniques
- Managing Multiple Projects and Shared Resource Pools
- Earned Value Management (EVM) and Baseline Control
- Custom Fields, Filters, and Advanced Views
- Generating Dashboards and Analytical Reports
- Integrating MS Project with Excel and Other Tools
- Best Practices for Project Monitoring, Control, and Closure