

Lean Six Sigma Service Excellence Green Belt Certification Program

Program of Study

TPMG Educational Services
Lean Six Sigma
Green Belt Certification
5 Day Course Guide

Course Description

In this **40 hour course**, candidates apply the concepts of performance management and continuous improvement to create and sustain a more productive, cost effective and responsive service delivery organization. Through 10 units & 60 lessons, candidates learn the principles and applications which help transactional organizations implement a culture of continuous improvement and use methods such as lean management, continuous improvement and practices like the Toyota Production System. Through live or on-demand virtual *Master Black Belt* instruction, real world case studies, and practical exercises, TPMG promotes powerful performance improvement skill building. The program uses multimedia presentations; value added tutorials and actual performance improvement projects. The Performance Management Group helps candidates master skills such as problem-solving, project management and business analysis while driving sustained performance improvements.

Policies

Consulting faculty and candidates/learners will be held responsible for understanding and adhering to all policies contained within this document:

Course policies are subject to change to the discretion of the consulting faculty.

In accordance with the standards set by the American National Standards Institute (*ANSI/IACET 1-2018 Standard for Continuing Education and Training*), those who complete the green belt certification program will be awarded Continuing Education Units (CEUs). The Continuing Education Units awarded are nationally recognized units designed to provide a record of an individual's continuing education accomplishments. One CEU is awarded for each 10 contact hours of instruction.

Within one month after completion of the program, TPMG Educational Services will record the completion list of all continuing educational units at TPMG headquarters. This list shall contain:

- *name of the TPMG LLC Course*
- *name, dates and location of the program*
- *for each attendee, candidate name, email address, phone number, course candidate number.*

Successful green belt candidates are authorized to place the "LSSGB" designation, which acknowledges this credential, following their name.

Section One: The Roots of Lean Six Sigma, Analyzing Performance, and Process Design & Management.

	Details
Objectives	<ul style="list-style-type: none"> 1.1 The origin of six sigma and the tools used in operational excellence 1.2 The definition of productivity 1.3 The nature of quality and its effect on productivity 1.4 The costs of poor quality 1.5 An introduction to systems thinking <u>1.6 The value proposition of quality improvement</u> <ul style="list-style-type: none"> 4.1 Analyzing performance in the delivery of products and services 4.2 Differentiating between common cause and special cause variation 4.3 Demonstrating how to account for performance using metrics 4.4 Analyzing and interpreting measures of central tendencies 4.5 Analyze service performance using special cause rules 4.6 Use appropriate actions to address each type of variation in performance 3.1 The properties of a well designed process management system 3.2 Understand and analyze process elements and boundaries 3.3 Identify process owners and process stake holders 3.4 Traditional flowcharting 3.5 The SIPOC process map 3.6 Requirements based process mapping 3.7 Differentiating between functionally and process focused organizations
Content	<p>Manual – Units 1, 3 and 4</p> <p>Required Viewing: W. Edwards Deming Parts 1,2,3</p> <p>Required Reading – Failure Mode and Effects Analysis (FMEA)</p>
Participation	Participate in class discussion.
Exercises and Deep Dive Assignments	<ul style="list-style-type: none"> A. Exercise - creating flowcharts: <ul style="list-style-type: none"> 1. Traditional Flowcharting 2. SIPOC (Same Process) B. Exercise: Construct a Run Chart C. Exercise: Run Chart Analysis D. Exercise: Parable of the Red Beads

Section Two: Voice of the Customer, Lean Six Sigma Analytical Tool Set, Statistical Process Control for Service Organizations

	Details
Objectives	5.1 What is Voice of the Customer 5.2 Why focus on Customer Loyalty 5.3 Properties of a Well Designed Customer Loyalty Model 5.4 How to assess the Voice of the Customer 6.1 Check sheets and data sheets for data collection 6.2 Using histograms to measure and analyze central tendencies and dispersion 6.3 Using cause and effect analysis to examine the factors that effect performance 6.4 Using scatter diagramming to test for possible cause and effect relationships 6.5 Correlation and simple linear regression analysis 6.6 Using Pareto analysis to prioritize factors, identify the most significant causes of an issue or an effect, and understand how different units of comparison can effect prioritization 6.7 Establishing performance metrics 6.8 Understanding the object, purpose, and benefits of Statistical Process Control 6.9 Define and apply the principles of rational sub-grouping and sampling. 6.10 Identify, select, construct and apply control charts for performance measurements. 6.11 Measuring process capability 6.12 Data collection techniques
Content	Manual – Units 5 and 6
Participation	Participate in class discussion.
Exercises and Deep Dive Assignments	A. Exercise: Construct and analyze a histogram B. Exercise: Construct and analyze a scatter diagram C. Exercise: Conduct correlation analysis D. Exercise: Conduct simple linear regression analysis E. Exercise: Conduct pareto analysis and apply the 80/20 rule F. Exercise: Select the appropriate control chart G. Exercise: Create and analyze the appropriate control chart for a given situation H. Exercise: Analyze an organization for its capability to produce zero defects I. Exercise: Create a data collection plan

Section Three: Lean Six Sigma Project Teams, People Skills – Working with and Through Others, Managing By Fact – The DMAIC Approach

	<i>Details</i>
Objectives	2.1 Establishing, supporting and facilitating lean six sigma teams 2.2 Defining team roles and responsibilities 2.3 Conducting project team meetings <u>2.4 The stages of team evolution</u> 8.1 Team Dynamics 8.2 Consensus Building 8.3 Brain Storming 8.4 Understanding Group Think <u>8.5 Understanding and Managing Change</u> 7.1 Defining Lean Six Sigma 7.2 PDCA – Deming approach to improvement (overview) 7.3 Antecedents of Six Sigma – creating the right conditions 7.4 DMAIC – Six Sigma approach to root cause analysis and defect reduction
Content	Manual – Units 2, 7 and 8 Required Viewing: What is Root Cause Analysis? Required Reading: Addendum: Project Management
Participation	Participate in class discussion.
Exercises and Deep Dive Assignments	A. Exercise: Completing the leadership profile B. Exercise: Creating a vision statement (optional) C. Exercise: Consensus building

Section Four: Establishing an Operational Excellence System, Lean Fundamentals for Service Organizations

	Details
Objectives	9.1 Attributes of an effective performance excellence program 9.2 Focus on core processes 9.3 Integrating measurements 9.4 Addressing value added and non value added tasks <u>9.5 Establishing performance targets</u> 10.1 Lean thinking 10.2 Value defined: value creation and value added 10.3 Muda (無駄) – waste, waste, waste 10.4 Value stream mapping 10.5 Theory of constraints, work balancing, takt time, theoretical maximum performance <u>10.6 5S – getting your service house in order</u>
Content	Manual – Units 9 & 10
Participation	Participate in class discussion.
Exercises and Deep Dive Assignments	Lean Six Sigma Service Excellence Green Belt Certification Examination

TPMG Educational services department will record CEUs and PDUs awarded to attendees and will retain this information for seven years. Upon written request, we will furnish a transcript showing TPMG course completed and CEUs/PDUs earned. Request for transcript can be made directly to TPMG LLC at P.O. Box 44989, Phoenix, Arizona 85064. Requests must include a check for \$10.00 (U.S.) along with a written request for a transcript.