

CERTIFIED LEAN SIX SIGMA GREEN BELT (CSSGB)



INTRODUCTION

There is a global need for market and requires competent Six Sigma Certified Green Belt Managers, who can understand Lean System and Optimization of Business processes through Project Management Techniques. We as a recognized institute and offers a comprehensive training curriculum in this area. IMRTC after recognizing the need and in consultation with senior members, executives and trainers have come up with a comprehensive certification program:

THE CERTIFIED LEAN SIX SIGMA GREEN BELT (CLSSGB)

ABOUT CLSSGB

LEAN SIX SIGMA GREEN BELT is require and need to develop necessary expertise and skills for Quality Management System, Production, Operations and Services People. The ultimate goal of this certification that management can increase their productivity by reducing cost effective through lean processes with efficiency and effectiveness.

LEAN SIX SIGMA GREEN BELT covers the areas from Quality Cycle, Lean Management, Qualitative and Quantitative Assessment of Processes and strategic approaches of operational Management of businesses through information technology and ERP, CRM systems. The program follows a systematic learning format with hands on approach including lot of exercises, quizzes, audio-visual aids, case studies, practice sessions and case studies for development of project.

THE AUDIENCE

Anyone involved in Quality, Production, Service industry and/or Manufacturing Industry, and excellent professional qualification for Managers, executive assistants and supervisor in any sector, which are working in the professional market.

THE CREDENTIALS

The Candidates who are looking to have this certification need a proper training of 32 Professional Training Hours (PTH) from any recognized institute and approved professional trainers of IMRTC.

The program also required a self-develop project by using project management techniques and resolving the structure to problems in the organization. The project required in soft form and submitted to our concerned training partners or chapters for assessment and after approval the candidate can sit in the final examination of IMRTC.

After passing the certification examination the candidates can use the credentials **CERTIFIED LEAN SIX SIGMA GREEN** after their name.

PRE-REQUISITE

- Bachelor's degree (high school professional diploma, associate's degree or the global equivalent)
- 2-3 years of professional experience in Quality, Manufacturing or Service Industry
- 32 hours of management education from any accredited IMRTC Institute and accredited Certified Trainer.

PROGRAM CONTENT

This Area provides a detail of Lean Six Sigma Green Belt. It covers theory, process and practice of the Application of Six Sigma, Methodologies, TQM and another advance Project Management, and identify qualitative and quantitative aspects of Problem solving tools will cover.

MAJOR AREAS THAT ARE COVERED

I. Why Six Sigma?

- a. Definition and Graphical View of Six Sigma
- b. Comparisons Between typical TQM and Six Sigma Programs
- c. Origins and Success Stories

II. How to Deploy Six Sigma

- a. Description of the Roles and Responsibilities
- b. Project Focus
- c. Overview of DMAIC Methodology

III. DEFINE: Project Definition

- a. Define Objectives
- b. Work Breakdown Structure
- c. Pareto Diagrams
- d. Process Maps
- e. Matrix Diagrams
- f. Project Charters
- g. Reporting

IV. DEFINE: Project Scheduling

- a. Activity Network Diagram
- b. PERT Analysis
- c. GANNT Chart

V. DEFINE: Change Management/Teams

- a. Problems with Change
- b. Achieving Buy-In
- c. Team Formation, Rules, and Responsibility
 - i. Stages of Team Development
 - ii. Overcoming Problems
- d. Consensus Building Tools
 - i. Affinity Diagram
 - ii. Nominal Group Technique

- iii. Prioritization Matrix

VI. MEASURE: Tools and Objectives

- a. Objectives
- b. Flowcharts
- c. Process Maps
- d. SIPOC
- e. Box-Whisker Plots
- f. Cause and Effect Diagrams
- g. Check Sheets
- h. Interrelationship Diagram
- i. Stem and Leaf Plots

VII. MEASURE: Establishing Process Baseline

- a. Enumerative v. Analytic Statistics
- b. Process Variation
- c. Benefits of Control Charts
- d. Requirements v. Control
- e. Control Chart Interpretation

VIII. MEASURE: X-Bar Charts

- a. Uses
- b. Construction and Calculations
- c. Assumptions
- d. Rational Subgroups
- e. Sampling Considerations
- f. Interpretation

IX. MEASURE: Individuals Data

- a. Uses
- b. Construction and Calculations
- c. Assumptions
- d. Sampling Considerations
- e. Interpretation
- f. Overview of Other Individuals Charts
 - i. Run Charts
 - ii. Moving Average Charts
 - iii. EWMA Charts
 - iv. CuSum Charts

X. MEASURE: Process Capability

- a. Histograms
- b. Probability Plots
- c. Goodness of Fit Tests

- d. Capability and Performance Indices
- e. Relative to Process Control
 - i. Interpretation
 - ii. Estimating Error

XI. MEASURE: Attribute Charts

- a. Uses
- b. Selection
- c. Construction and Calculations
- d. Sampling and Considerations

XII. ANALYZE: Lean Thinking

- a. Definition of Waste
- b. Analyzing Processes for NVA
 - i. Cycle Efficiencies
 - ii. Lead Time and Velocity
- c. Methods to Increase Velocity
 - i. Standardization
 - ii. Optimization
 - iii. Spaghetti Diagrams
 - iv. 5S
 - v. Level Loading
 - vi. Flow
 - vii. Setup Reductions

XIII. ANALYZE: Introduction to Regression Analysis

- a. Scatter Diagrams
- b. Linear Model
- c. Interpreting the ANOVA Table
- d. Confidence and Prediction Limits
- e. Residuals Analysis
- f. Overview of Multiple Regression Tools

XIV. IMPROVE: Tools and Objectives

- a. Improve Stage Objectives
- b. Tools to Prioritize Improvement Opportunities
- c. Tools to Define New Process Flow
- d. Tools to Define and Mitigate Failure Modes
 - i. PDPC
 - ii. FMECA
 - iii. Preventing Failures
- e. Reference to Tools for Defining New Process Levels

XV. CONTROL: Tools and Objectives

- a. Control Stage Objectives
- b. Control Plans
- c. Training
- d. Measuring Improvement

EXAMINATION SYSTEM

The Examinations will be held anytime in a year due to Online Examination system and provided to our accredit partners a testing center by each country chapter; in case chapter is not available in a particular country then candidates can directly approach IMRTC USA examination body through email: Examination@imrtc.org and they will be advised accordingly. The passing criteria shall be 70% of Whole Exam.

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