

LEAN SIX SIGMA GREEN BELT CERTIFICATION

BY ELITE INDIGO





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Program Overview

The Lean Six Sigma Green Belt Certification is a comprehensive 10-day program designed to equip professionals with the skills and knowledge needed to drive process improvements within their organizations. By integrating Lean principles, which focus on eliminating waste, with Six Sigma methodologies aimed at reducing variation, this certification ensures a structured approach to achieving operational excellence.

Participants will learn to apply DMAIC (Define, Measure, Analyze, Improve, and Control) methodology, utilize statistical tools, and lead improvement projects.

Learning Objectives

By the end of the course, participants will be able to:

- Ability to use a structured approach to process improvement
- Ability to use DMAIC methodology Define, Measure, Analyse, Implement & Control
- Skills to predict, prevent and control defects in a process
- Understanding of the elements of waste

Who Should Attend

Engineers, Section Heads, Managers, Technicians, Senior Technicians & Supervisors with Yellow Belt qualification

Methodology

The workshop is highly interactive and uses practical exercises, discussions, case studies, video presentation and games to reinforce understanding and assist and enhance the transfer of learning. The participants will learn how to proactively apply the new learning immediately on return to their own work environment. Participants are expected to have Minitab or JMP software to carry out statistical calculations. Every 2 days, there will be a presentation to the Management Team to present the participants project progress.



Certification

- 1. Certification requires candidates to complete a series of tests with a passing grade of 70% or higher in a multiple-choice exams after each module.
- 2. The exam is intended to validate the Candidate & proficiency with the tools and techniques.

Course Outline

Session A (5 Days)

Phase 1 - Project Selection (Day 1&2)

i.Course Logistics (rules, program layout, expectations)

ii.What is Six Sigma? (introductory overview)

iii.Project Selection

iv.Project Planning and Charters

v.Internal Process Measures (KPI's) & baseline setting

vi.Introduction to DMAIC project management

vii. Introduction to Lean

- a. The 7 wastes
- b.Value add from customers perspective
- c. Importance of Flow
- d.The importance of 5S & amp; standardization
- e. Kanban systems
- f. How to sustain Lean at the workplace?
- g. Activity

viii. VSM (Value Stream Mapping)

ix. Assessment

Phase 2 - Define and Measure (Day 3&4&5)

- i. Introduction to Minitab
- ii. Basic Statistical Concepts
- a. Sampling power & size
- b. Mean & average
- c. Standard deviation
- d. Process capability analysis
- e. Machine capability
- f. Graphs
- iii. Control Charts
 - a. Variable charts
- b. Attributive charts
- iv. The Define Phase
- v. Process Mapping
- vi. MSA (Measurement System Analysis)
 - a. GR&R (Gage repeatability reproducibility)
 - b. Variable & attributive GR&R

vii. Project presentation

viii. Assessment





Course Outline

Session B (5 Days)

Phase 3 - Analyze and Improve (Day 6&7)

i. The Analyze Phase

ii. Root Cause Problem Solving Tools

- a. Fishbone
- b. 5 Why's
- c. FTA
- d. ls/ls not analysis
- e. DOE (Design of Experiments) with Minitab 17

iii. Basic Experimental Design (Hypothesis Testing)

iv. Linear Regression

v. More DOE with Minitab 17

- a. Steps to DOE
- b. Noise factors
- c. Randomization
- d. Blocking
- e. Repetition & amp; replication

vi. FMEA (Failure Mode Effect Analysis)

vii. The Improve Phase

viii. Assessment

ix. Project presentation

Phase 4 - Control (Day 8&9)

i. The Control Phase

ii. Basic Cost Benefit Analysis

iii. The Control Plan Strategy

iv. Error proofing

v. Visual management

vi. Levels of Control

vii. Review and Wrap-up

viii. Certification Test

ix. Certification Project

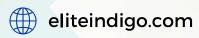
Phase 5 - Final Project Presentation (Day 10)
i. Participants will present on their respective
LSS Project





Course Content

DAY/ TIME	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
1 Hour	Phase 1	Phase 1	Phase 2	Phase 2	Phase 2
1 Hour 30 Minutes	Phase 1	Phase 1	Phase 2	Phase 2	Phase 2
1 Hour 30 Minutes	Lunch	Lunch	Lunch	Lunch	Lunch
1 Hour 30 Minutes	Phase 1	Phase 1	Phase 2	Phase 2	Phase 2
1 Hour 30 Minutes	Phase 1	Phase 1	Phase 2	Phase 2	Phase 2
					0.
DAY/ TIME	DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
	DAY 6 Phase 3	DAY 7 Phase 3	DAY 8 Phase 4	DAY 9 Phase 4	DAY 10 Project Presentation
TIME					Project
TIME 1 Hour 1 Hour 30	Phase 3	Phase 3	Phase 4	Phase 4	Project Presentation Project
TIME 1 Hour 1 Hour 30 Minutes 1 Hour 30	Phase 3 Phase 3	Phase 3 Phase 3	Phase 4	Phase 4 Phase 4	Project Presentation Project Presentation





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