

## Lean Six Sigma Green Belt

Duration: 5 days; Instructor-led

### WHAT YOU WILL LEARN

GREEN BELT certification represents the thorough study and proper application of Lean Six Sigma and process improvement techniques. This course is intended to enable participants to accomplish the vital role of a Lean Six Sigma Green Belt and to integrate the Lean Six Sigma thinking into their leadership skills. This can result in advancement at work and upsurge rewards to take on additional responsibility to flourish any organization.

Lean Six Sigma Green Belts are specialists in executing Lean Six Sigma projects. With the right combination of expertise, statistical analysis and structured Lean Six Sigma methodology, the Green Belt is able to achieve significant improvements in performance and quality.

### AUDIENCE

This course is designed for employees who spend some of their time on process improvement teams. They analyse and solve quality problems, and are involved with Six Sigma, lean, or other quality improvement projects. Other professional members who are involved in research, innovations or consulting in process improvement practices. They will usually support Black Belts with data collection and project application.

### METHODOLOGY

Trainers lecture interactively whilst encouraging participation, guide individuals through group and individual activities, also leading informative simulations that increases recollection of the course content and make learning an exciting journey.

Trainers also mould their teaching and examples to their partakers. Trainers take into consideration of different learning styles to ensure participants are able to understand and absorb what they are required to know.

Then they demonstrate techniques by presenting how these techniques apply directly to specific data, problems and challenges faced by participants in their organizations.

### COURSE OBJECTIVES

- Get to grips with the history and meaning of Lean Six Sigma
- Progress your understanding to apply Lean tools including the DMAIC model
- Learn how to establish customer needs and measure performance
- Function as a analysis member of a six sigma project team
- Lead and execute process-level improvement projects
- Eliminate waste and defects by applying lean six sigma
- Collect process data and develop process maps
- Analyze data using SigmaXL statistical software
- Develop statistical hypotheses using simple statistical tools
- Project management techniques: how to present your project, project closure and key to successful transition

### OUTLINES

#### Module 1: INTRODUCTION

- Introduction
- Roles and responsibilities
- What is LEAN?
- What is Six Sigma?
- Lean Sigma Principal & Methodologies
- LEAN vs. Six Sigma?
- Project Selection

#### Module 2: DEFINE

- Project Charter
- Map Process – SIPOC
- Map Process – Flowcharts
- Voice of Customer & CTQ
- Affinity diagram
- Stakeholders Analyses
- Stakeholders communication

#### Module 3: MEASURE

- Fishbone
- 5 Why's technique
- X-Y Matrix
- Data Type
- Basic Lean Six Sigma Metrics – COPQ
- Measurement System Analysis
- Sampling technique
- Data collection plans

- Baseline performance
- Process capability
- Basic statistics
- Rolled Throughput Yield (RTY)

**Module 4: ANALYZE**

- Process Stratification & Analysis
- Structured Preparation
- Process Step Analysis
- Graphical Analysis
- Introduction To Lean And Lean Thinking
- Lean Methodology & How Lean Works
- Lean Principles, VA, NVA
- Value Stream Mapping-VSM
- 8 Waste Types
- Spaghetti Diagram
- 5s

**Module 5: IMPROVE**

- Solution Brainstorming technique
- Pattern Breaking
- Solution Selection
- Benchmarking
- Flowcharts – To Be Process Map
- Poka-Yoke
- FMEA (Failure Modes & Effects Analysis)
- Pilot
- Pilot results validation (Before/after)

**Module 6: CONTROL**

- Control Charts (I-MR, XBar-R, P chart etc..)
- Control Plan (Monitoring Plan, Training, SOP, System alignment etc..)
- Balanced scorecard (Benefits realization)
- Handover (SOP, FMEA, compliance etc..)
- Closure Project & Recognize Team