



ACCREDITED BY

ILSSI ENGLAND

EXEMPLAR GLOBAL USA

# CERTIFIED LEAN SIX SIGMA BLACK BELT

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# Lean Six Sigma Black Belt

The LSSBB certification is the advanced level of Lean Six Sigma training course, equipping concerned with an understanding of the basics to detailed tools & techniques of comprehensive Lean Six Sigma DMAIC methodology.

Our comprehensive LSSBB training is accredited by International Lean Six Sigma Institute England & Exemplar Global USA.

Certification from ILSSI UK / Exemplar Global USA is considered a mark of quality excellence in many industries. It helps you advance your career and boosts your organization's bottom line through your mastery of quality skills.

## Learning Outcome

Upon successful completion of this course, participants will be Certified Lean Six Sigma Black Belt.

- Become certified Lean Six Sigma Black Belt™ professional who is well versed in the Lean Six Sigma Methodology, who leads complex improvement projects, typically in a full-time capacity. A Lean Six Sigma Black Belt possesses a thorough understanding of all aspects of the Lean Six Sigma Method including a high-level of competence in the subject matters contained within the phases of Define, Measure, Analyze, Improve and Control (DMAIC). A Lean Six Sigma Black Belt understands how to implement, perform, interpret and apply Lean Six Sigma at an advanced level of proficiency.
- Be able to comprehend how to identify and lead the business excellence initiatives within the organization, which can have a significant impact on company's bottom-line.

- Be able to execute advanced improvement projects comprising statistical data analysis, through a structured problem solving DMAIC framework.
- Be able to have a profound grip over the pool of diversified tools and techniques of lean six sigma. In addition to it, you will have a deep understanding of harnessing the power of softwares like MS Excel, Minitab & Quality Companion for improvement projects.

## LSSBB Content

### Module – 1: Essence of Change Management

- Essence of Change Management
- Change as a Nucleus of attaining Excellence
- Factors Accelerating Industrial Change
- Business Case Study
- What is Change Management
- Kotter model of change management
- Why Change Management Fails
- Business Case Study
- **Module – 2: Lean Six Sigma – An Overview**
  - Evolution of Quality Field
  - What is Lean?
  - What is Six Sigma?
    - Different Opinions on the Definition of Six Sigma
    - Origins of Six Sigma: Motorola and the electronics industry
  - What is Lean Six Sigma?
  - Lean Six Sigma: Organizational Structure
  - Lean & Six Sigma Methodologies
    - DMAIC & Lean Principles
  - DMAIC Roadmap
- **Module – 3: Business Process Management & Measures**
  - What is a Process?
    - The Problem Solving Strategy  $Y = f(x)$ : IPO Diagram
    - IPO Diagram: Output Vs Outcome
    - Critical to Quality (CTQ)
    - Key Performance Indicators (KPIs)
  - Financial Measures
    - Payback period, NPV etc.
  - Quality Cost
- **Module – 4: Define Phase**
  - Voice of Customer (VOC)
    - Kano Model
    - Quality Function Deployment (QFD)

- Seven New Management & Planning Tools
- Project Charter
- Project Tracking
  - Critical Path Method (CPM)
  - Gantt Chart
- **Module – 5: Measure Phase**
  - Process Performance Analysis
    - What is a Process?
    - IPO, SIPOC Diagram, Process Flow chart and analysis
    - Lean Process & Six Sigma Metrics
    - Current State Value Stream Mapping
  - Data Collection
    - Types of Data
    - Sampling Methods
  - Six Sigma – Statistics
    - Descriptive Analysis
    - Pareto Analysis
    - Probability
  - Statistical Process Control: Control Charts for variable and attribute data
  - Measurement System Analysis (MSA) for variable and attribute data
  - Process Capability Studies (Cp, Cpk) for variable and attribute data
- **Module – 6: Analyze Phase**
  - Statistical Inference: Testing of Hypothesis
    - Testing of hypothesis for Variable data (Parametric & Non-Parametric)
    - Testing of hypothesis for Attribute data
  - Choice of Sample Size
  - Scatter Plot & Correlation
  - Linear Regression
    - Simple Linear Regression
    - Multiple Linear Regression
  - Root Cause & Waste Analysis
    - Cause & Effect Analysis
    - Muda, Mura & Muri
    - Muda (7 Wastes)
- **Module – 7: Improve Phase**
  - Design of Experiment
    - Introduction
    - $2^K$  Factorial Design
    - General Full Factorial Design
    - Fractional Factorial Design
    - Taguchi Design
  - Waste Elimination Techniques
    - 5 S
    - Flow Improvement
      - Push Vs Pull System

- Total Productive Maintenance
- Line Balancing (Cycle Time Vs Takt Time)
- Single Piece Flow Overview
- Single Minute Exchange of Dies
- Future State Value Stream Mapping
- **Module – 8: Control Phase**
  - Defect Control
    - Defect Prevention – Failure Model & Effect Analysis (FMEA)
    - Poka-Yoke
  - Control Plan
  - A3 Report development

## Why Us?

Apart from being trained by our Internationally Acclaimed Trainers, our Participant will have the following perks after an enrollment in the course;

- **International Lean Six Sigma Institute England or Exemplar Global USA Certificate**

After the through training and exam completion, participant will be eligible for the International Lean Six Sigma Institute England or Exemplar Global certificate. This Certificate is globally verifiable and acceptable across the world.

- **Practical Learning with Powerful Case Studies**

With the Practical and Factual prone approach, our premium course is loaded with the diversified case studies which will enable you to learn and implement the findings in a real-time scenario.

- **Lifetime Mentoring**

With an aim to establish the largest operational excellence leader's community, you will be part of the futuristic league. You will have lifetime mentoring support from our Master Trainers. Once enrolled, you will be added into the community which is connected via email & WhatsApp for the 24/7 support assurance to our end participant.



# Sample Certificate

- International Lean Six Sigma Institute England, globally verifiable and acceptable certificate sample:



- For getting sample certificate of Exemplar Global USA, email at: [academy@bilalconsultancy.uk](mailto:academy@bilalconsultancy.uk)

## Training Mediums

We offer comprehensive training mediums for our worthy clientele across the globe;

- Virtual online Zoom training (Flexible timings)
- Self-paced Learning Management System
- Physical Classroom Training\

Special group discount is available for the group / corporate signups.

# Contact Us

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