

# Lean Six Sigma, Green Belt

Course ID #: 1095-200-GR-Z Hours: 35

# **Course Content**

## **Course Description:**

This course focuses on fundamental Lean Six Sigma concepts and methodologies that improve and enhance the digital thread in manufacturing and service industries. The course introduces the participant to the digital thread, the integration of artificial intelligence (AI), advanced robotics, 3D printing, networking, cloud, cybersecurity, big data, and analytics. This course will prepare professionals to be an improver of future systems in Industry 4.0.

## **Course Objectives:**

- Learn the Lean Six Sigma concepts and techniques with the digital tread to improve non-profit, business, and governmental organizations.
- Learn how to use statistical data to solve problems and improve processes
- Learn how to lead a Green Belt Project
- To become a Certified Lean Six Sigma Green Belt

### **Prerequisites:**

Lean Six Sigma Yellow Belt Training

## **Target Audience:**

Plant managers, manufacturing engineering managers, purchasing managers, Industrial engineering managers, quality engineers, supply chain managers, product design engineering managers, manufacturing engineers, data analysts, IT programmers, process engineers, industrial engineers, IT managers, schedulers, supervisors.

## **Topics:**

### Lesson 1: Analyze Phase

- Analyze Phase Overview
- Kaizen Event = Continuous Improvement Workshop
- Future State Value Stream Map
- Future Lean Layouts
- Future Layout Spaghetti Diagram;

- Takt Time Analysis
- Setup Reductions
- One Sample, Two Sample, and Paired T-Tests
- DPMO Calculations; Reliability and Quality Specifications
- Pull Production; Kanbans; Heijunka



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#### Lesson 2: Improve Phase

- Lean Six Sigma Comparison Analysis
- Standardization
- Implementation Plan
- Verifications and/or Qualifications Testing
- Control Plan

#### **Lesson 3: Control Phase**

- Implement Control Plan
- Conduct Verifications and/or Qualifications Testing
- Capture Improvement Data
- Audit Improvement
- Sustain Improvements

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