

## **IASSC® Certified Lean Six Sigma Yellow Belt™**

### **Course overview:**

The IASSC Lean Six Sigma Yellow Belt course provides a foundational understanding of the Lean Six Sigma methodology, equipping participants with core knowledge and practical skills to support process improvement initiatives within organizations. The curriculum covers the essential phases of Define, Measure, and Control and introduces students to concepts such as project selection, process mapping, root cause analysis, basic statistics, and quality control methods. Designed for professionals who participate in or support limited improvement projects, the course emphasizes the application of Lean Six Sigma tools in a skilled but supportive context, preparing candidates to assist Green Belt and Black Belt project leaders by contributing to data-driven decision-making and process optimization.

### **1.0 Define Phase**

#### **1.1 The Basics of Six Sigma**

##### **1.1.1 Meanings of Six Sigma**

##### **1.1.2 General History of Six Sigma & Continuous Improvement**

##### **1.1.3 Deliverables of a Lean Six Sigma Project**

##### **1.1.4 The Problem Solving Strategy $Y = f(x)$**

##### **1.1.5 Voice of the Customer, Business and Employee**

##### **1.1.6 Six Sigma Roles & Responsibilities**

## 1.2 The Fundamentals of Six Sigma

### 1.2.1 Defining a Process

### 1.2.2 Critical to Quality Characteristics (CTQ's)

### 1.2.3 Cost of Poor Quality (COPQ)

### 1.2.4 Pareto Analysis (80:20 rule)

### 1.2.5 Basic Six Sigma Metrics

a. including DPU, DPMO, FTY, RTY Cycle Time; deriving these metrics

## 1.3 Selecting Lean Six Sigma Projects

### 1.3.1 Building a Business Case & Project Charter

### 1.3.2 Developing Project Metrics

### 1.3.3 Financial Evaluation & Benefits Capture

## 1.4 The Lean Enterprise

### 1.4.1 Understanding Lean

### 1.4.2 The History of Lean

#### 1.4.3 Lean & Six Sigma

#### 1.4.4 The Seven Elements of Waste

a. Overproduction, Correction, Inventory, Motion, Overprocessing, Conveyance, Waiting.

#### 1.4.5 5S

a. Sort, Straighten, Shine, Standardize, Self-Discipline

## **2.0 Measure Phase**

### 2.1 Process Definition

2.1.1 Cause & Effect / Fishbone Diagrams

2.1.2 Process Mapping, SIPOC, Value Stream Map

2.1.3 X-Y Diagram

2.1.4 Failure Modes & Effects Analysis (FMEA)

### 2.2 Six Sigma Statistics

2.2.1 Basic Statistics

2.2.2 Descriptive Statistics

### 2.2.3 Normal Distributions & Normality

### 2.2.4 Graphical Analysis

## 2.3 Measurement System Analysis

### 2.3.1 Precision & Accuracy

### 2.3.2 Bias, Linearity & Stability

### 2.3.3 Gage Repeatability & Reproducibility

### 2.3.4 Variable & Attribute MSA

## 2.4 Process Capability

### 2.4.1 Capability Analysis

### 2.4.2 Concept of Stability

### 2.4.3 Attribute & Discrete Capability

### 2.4.4 Monitoring Techniques

## 5.0 Control Phase

### 5.1 Lean Controls

#### 5.1.1 Control Methods for 5S

### 5.1.2 Kanban

### 5.1.3 Poka-Yoke (Mistake Proofing)

## 5.3 Six Sigma Control Plans

### 5.3.1 Cost Benefit Analysis

### 5.3.2 Elements of the Control Plan

### 5.3.3 Elements of the Response Plan