

# IASSC Lean Six Sigma Yellow Belt Certification



**Body of Knowledge  
Syllabus**

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The Universal Lean Six Sigma Body of Knowledge (LSSBOK) is the result of research that was conducted over a two year period with the assistance of the leading industry publication house and is a property of IASSC. With input from over 1000 companies, the LSSBOK is truly the Voice of the Industry.

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# IASSC Universally Accepted Lean Six Sigma Body of Knowledge (Syllabus)



## Yellow Belts

### 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 and 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. Straighten, Shine, Standardize, Self-Discipline, Sort

## **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

## **3.0 Control Phase**

### **3.1 Lean Controls**

- 3.1.1 Control Methods for 5S
- 3.1.2 Kanban
- 3.1.3 Poka-Yoke (Mistake Proofing)

## **3.2 Six Sigma Control Plans**

3.2.1 Cost Benefit Analysis

3.2.2 Elements of the Control Plan

3.2.3 Elements of the Response Plan

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