



Process Excellence
Beyond Boundaries

IPEC AI Enabled LSS Yellow Belt Brochure

January 2025



AI Enabled Lean Six Sigma Yellow Belt Body of Knowledge

Empowering team members to drive process excellence and support improvement projects with cutting-edge AI tools

Duration : 12 hrs

Mode: Classroom/Online



COURSE OVERVIEW

Your Journey to Process Excellence

Who This Course is For

Team members supporting Lean Six Sigma projects who want to build foundational skills and leverage AI to amplify their impact

What You'll Achieve

Apply essential LSS tools, collect and interpret data effectively, and use AI as your productivity partner in process improvement

Six Core Learning Modules

1

Lean Fundamentals

Master the principles of value creation, identify the eight wastes using DOWNTIME, and understand flow, pull systems, and bottleneck management

2

Six Sigma Fundamentals

Learn Critical to Quality characteristics, defect measurement with DPMO, and grasp variation concepts and standard deviation

3

Define Phase Tools

Create effective project charters, develop SIPOC diagrams, and conduct comprehensive stakeholder analysis

4

Measure Phase Basics

Build swimlane process maps, distinguish data types, and design robust data collection plans

5

AI Enablement

Leverage GenAI for SIPOC creation, charter drafting, and Voice of Customer analysis from multiple sources

6

Team Problem Solving

Facilitate effective brainstorming sessions and apply foundational root cause analysis techniques



Lean Fundamentals: Creating Value

Value vs Non-Value Added

Distinguish activities that customers are willing to pay for from wasteful processes that consume resources without adding value

DOWNTIME Wastes

Identify eight types of waste: Defects, Overproduction, Waiting, Non-utilized talent, Transportation, Inventory, Motion, and Extra-processing

Flow, Pull & Bottlenecks

Optimize process velocity by creating smooth workflow, implementing pull systems, and eliminating constraints that limit throughput

Six Sigma Fundamentals: Pursuing Perfection

01

Critical to Quality (CTQs)

Define the key measurable characteristics that directly impact customer satisfaction and business outcomes

02

Defects & DPMO

Calculate Defects Per Million Opportunities to quantify process performance and establish baseline metrics

03

Variation Concepts

Understand how variation affects quality and grasp standard deviation as a measure of process consistency



Define Phase: Setting the Foundation



Project Charter

Create a comprehensive charter that defines problem statement, scope, goals, team roles, and expected business impact



SIPOC Diagram

Map high-level processes by identifying Suppliers, Inputs, Process steps, Outputs, and Customers for clear process visualization



Stakeholder Analysis

Identify, prioritize, and engage stakeholders to ensure project alignment and secure necessary support and resources



Measure Phase: Capturing Reality



Swimlane Process Maps

Visualize cross-functional workflows showing handoffs, responsibilities, and process inefficiencies across departments



Data Types

Differentiate between continuous data (measured) and discrete data (counted) to select appropriate analysis methods



Data Collection Plans

Design systematic approaches for gathering accurate, relevant data while ensuring consistency and reliability

AI Enablement: Your Digital Assistant



AI-Assisted SIPOC & Mapping

Use GenAI to rapidly generate process maps and SIPOC diagrams, then refine with team input for accuracy

Charter Drafting with AI

Leverage AI to create comprehensive project charter templates, problem statements, and goal formulations in minutes

Voice of Customer Analysis

Automate analysis of customer emails, surveys, and feedback to extract insights, themes, and improvement opportunities

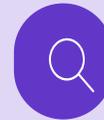


Team Problem Solving: Collaborative Excellence



Effective Brainstorming

Facilitate structured ideation sessions that encourage creative thinking, build on ideas, and generate innovative solutions without judgment



Root Cause Thinking

Apply fundamental techniques like Five Whys to dig deeper than symptoms and identify the underlying causes of problems

Yellow Belt Outcomes

Core Capabilities

Participate effectively in LSS projects, collect and interpret basic data, use AI as your productivity assistant

Upon completion, you'll be equipped to contribute meaningfully to process improvement initiatives, support Green and Black Belts effectively, and leverage AI tools to amplify your impact. You'll understand both traditional LSS methodology and cutting-edge AI applications, positioning you as a valuable team member in any continuous improvement effort.





Thank you