

COMPETENCY-BASED LEARNING

ADVANCED

Our Advanced Skill Series offers:

- Advanced CI Competencies that create immediate value
- Learning nodes, practice exercises, and value-adding activities
- Mobile and/or desktop/laptop delivery
- Facilitated interaction between students and mentors
- Progress tracking, badging, surveys and more



Advanced Problem-Solving Skills Series

Lean Six Sigma – Advanced

Demonstrate how to conduct a Lean Six Sigma project by following the DMAIC roadmap.

Kaizen Event – Advanced

Successfully lead a Kaizen event to implement rapid improvements

Theory of Constraints – Advanced (Part 1)

Apply the five focusing steps of the Theory of Constraints (TOC) to identify and solve a process constraint and bottlenecks

8D – Advanced

Apply the Eight Disciplines (8D) to identify, contain and correct a problem, and to prevent it from happening again

Voice of the Customer – Advanced

Translate the Voice of the Customer (VOC) into Drivers, Critical Characteristics, Key Process Output Variables (KPOVs), and metrics by constructing a CTX Tree

Project Management – Advanced

Create a complete Project Charter with a Problem Statement, a SMART goal, and all its other key elements all aligned with the business strategy

Estimating Project Benefits – Advanced

Work with a finance Subject Matter Expert (SME) within the business to accurately estimate the project Return on Investment (ROI) including both soft and hard savings

Leading Teams – Advanced

Lead a Lean Six Sigma project team by using the GRPI Model, RACI Chart, team facilitation tools and key soft skills

Current State Value Stream Mapping – Advanced

Construct a Current State Value Stream Map and identify opportunities to enable flow, establish pull, and improve the process

Voice of the Process – Advanced

Create a Measurement Plan, collect process data, and calculate descriptive statistics such as the mean, median, mode, range, standard deviation and variance

Histogram – Advanced

Construct and interpret a histogram to visually assess the center, spread, shape of the data (skewness, kurtosis), and potential outliers

Box Plots – Advanced

Construct one or more Box Plots to analyze and compare the center, spread, symmetry of the data and to confirm the presence of suspected outliers

Continuous Probability Distributions – Advanced

Assess risk and calculate probabilities associated with continuous variables and data sets; conduct and interpret the Anderson Darling test for normality

Run Chart – Advanced

Construct a Run Chart and evaluate the process for patterns in the data over time such as clustering, mixtures, trends, and oscillations

Control Charts – Advanced

Choose, construct, and interpret Control Charts and conclude whether the process is under statistical control; investigate alarms and execute actions to bring the process to a state of statistical control

Measurement System Analysis – Advanced

Identify the appropriate Measurement System Analysis (MSA) tool, apply the tool and analyze key outputs to conclude whether the measurement system is acceptable, marginal, unacceptable

Discrete Probability Distributions – Advanced

Assess risk and process capability related to discrete random variables by using the Binomial and Poisson distributions

Process Capability – Advanced

Assess process capability by calculating capability indices including sigma level, Ppk, Cpk, PPM, DMPO, and DPU.

Fishbone Diagram – Advanced

Construct a Fishbone Diagram and prioritize potential root causes for validation using statistical tools

Theory of Constraints – Advanced (Part 2)

Construct a Current Reality Tree (CRT) to evaluate cause-and-effect relationships and identify potential root causes; From the CRT, create a Future Reality Tree (FRT) to identify process improvements

Hypothesis Testing – Advanced

Select, apply, and interpret the appropriate hypothesis test to validate and quantify the impact of Key Process Input Variables (KPIVs) on Key Process Output Variables (KPOVs); statistically validate process improvements

Scatter Plot – Advanced

Construct a Scatter Plot to visually assess the correlation between a pair of continuous variables (a Key Process Output Variable vs a Key Process Input Variable)

Design Thinking – Advanced

Apply Design Thinking to create and implement an innovative solution to a problem or a business opportunity

Leading Change – Advanced

Assess, manage, and lead change necessary to improve the process; take effective actions to prevent and mitigate resistance to change

Failure Modes and Effects Analysis (FMEA) - Advanced

Construct and interpret an FMEA to anticipate, quantify, and prevent failure modes from occurring, minimizing process-related risk

Future State Value Stream Mapping – Advanced

Construct, plan, and implement a Future State Value Stream Map to enable flow, establish pull, and continuously improve the process

Controlling the Process – Advanced

Create and implement a Control Plan to sustain Continuous Process Improvement (CPI) project improvements to ensure that the improvements are sustained

Mentoring Competencies – Advanced

Mentor Continuous Process Improvement (CPI) candidates and projects to optimize candidate success and project impact to the business.

