



OpusWorks®
Rapid Scaling Made Real

# Curriculum Guide

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# Welcome to this Guide!

**PURPOSE:**

The purpose of this document is to provide descriptions and objectives of all OpusWorks' online eLearning modules and Learning nodes. Becoming familiar with these modules will also give you a sense of our standard courses and ideas for how you can build any combination of courses using the online modules.

**HOW TO USE THIS DOCUMENT:**

This document is broken down by courses (Foundational Skills, Basic Leader, etc.). These are our recommended, standard courses. To find the course you are interested in, simply refer to the Table of Contents.

Our standard courses consist of a group of eLearning modules and in each course, you will see the list of recommended modules for that course. These are only recommendations and using your own branded portal, you can tailor the class to meet your needs and specifications.

You can search easily through this document by pressing the "Control (CTRL)" key and the "F" key at the same time (Ctrl + F). This will bring up a search box and you can enter the word(s) you are looking for.

**ABOUT US:**

We make smart learning that actually works. OpusWorks blends AI, the cloud, and top-tier CPI content into one sleek platform. We help organizations align CI with strategy through custom training and powerful tools. From virtual classes to expert support, we help people level up, teams get sharp, and organizations make real impact—fast.

Whether you're just starting out or leading an enterprise transformation, our learning platform helps you build skills, solve problems, and create real, lasting change. From small teams to global rollouts, OpusWorks delivers the tools, support, and strategy you need to make every training dollar count. Get it right. Get real results.

Real Continuous Process Improvement. Real Results.

Visit us at www.opusworks.com to learn more.

**Note: The minutes listed for each module are approximate. Our modules are self-paced and interactive. The amount of time it takes to complete them will depend on several factors, such as student preferences, prior knowledge of the material, and learning speed, as well as time spent completing practice exercises, studying supporting materials, and reviewing the module content.**

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# MODULE LISTING BY TRACK

*Explore comprehensive e-learning designed organizational improvement across various roles, from foundational skills to advanced leadership training*

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- Changeover Reduction
- Current State VSM
- Eight Wastes
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- Intro to 8D
- Intro to Control Charts
- Intro to Kanban*
- Intro to Lean Office/Service
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**(Black Belt)**

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- Making Inferences about Proportions
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- MSA Advanced Topics in Continuous Data
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- Error Proofing for Healthcare
- Flow and Pull Systems for Healthcare
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- Kaizen Event for Healthcare
- PDCA
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- Visual Management for Healthcare
- Workplace Design for Healthcare

**Lean Essentials for Education**

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- Error Proofing for Education
- Flow and Pull Systems for Education
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- Executing
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- Cause and Effect Diagrams
- Eight Wastes
- Error Proofing
- Intro to Lean Office/Service
- Intro to Lean Principles
- Intro Problem Solving
- Mapping the Process
- Pareto Analysis
- PDCA
- SIPOC

**Indicates modules that are manufacturing intensive.*

*Modules are currently available in Spanish, Portuguese, and Mandarin. Black Belt module translations are **coming soon**.*

# COMPETENCIES BY LEVEL

*OpusWorks' Competency-Based learning is a fast, activity-based, learner-centric way to develop skills, one at a time, just-in-time. The learning objective for competency nodes are 10 minutes each.*

## Competency e-Learning Translations

*Learning Nodes can be viewed in any language by adjusting your browser's language settings*

**Basic Problem-Solving**

- Introduction to Lean Six Sigma
- The Five Principles of Lean
- Waste Elimination
- Going to Gemba
- 5S
- Visual Workplace
- Project Management
- PDCA
- Voice of the Process
- Process Mapping
- SIPOC
- Spaghetti Diagram
- Root Cause Analysis
- Benchmarking
- Design Thinking
- Implementing Solutions
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- A3 Problem-Solving
- Voice of the Customer (VOC)
- Swimlane Process Map
- Voice of the Process (VOP)
- Theory of Constraints (TOC)
- Leading Teams
- Leading Change
- 5S
- Time and Motion Study
- Lean Metrics
- Graphical Analysis
- Pareto Analysis
- Flow and Pull Systems
- Workplace Design and Layout
- Changeover Reduction
- Total Productive Maintenance

**Advanced Problem-Solving**

- Lean Six Sigma
- Kaizen Event
- Theory of Constraints (Part 1)
- 8D
- Voice of the Customer (VOC)
- Project Management
- Estimating Project Benefits
- Leading Teams
- Current State Value Stream Mapping (Module)
- Voice of the Process (VOP)
- Histogram
- Box Plots
- Continuous Probability Distributions
- Run Chart
- Control Charts (Modules)
- Measurement System Analysis (Modules)
- Discrete Probability Distributions (Module)
- Process Capability Assessments (Module)
- Fishbone Diagram
- Theory of Constraints (Part 2)
- Hypothesis Testing (Module)
- Scatter Plot
- Leading Change
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- Controlling the Process (Module)
- Leader Standard Work
- Mentoring Competencies

# FOUNDATIONAL SKILLS

**5S:**
**(40 minutes)**
5S is a technique that results in a workplace that is clean, uncluttered, safe, and well organized. The 5S pillars provide a methodology for organizing, cleaning, developing, and sustaining a productive work environment. A 5S environment has “a place for everything and everything in its place,” with all tools and materials ready where and when they are needed. Learn how 5S can help reduce waste and optimize productivity in any work environment. This module will:

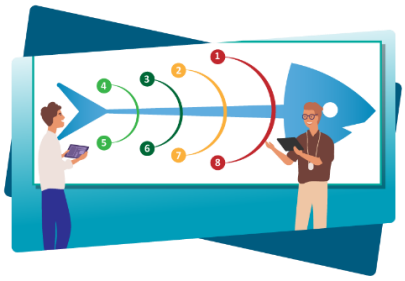
- Discuss 5S and describe its overall purpose and benefits and identify the five phases of its process.
- For each phase, drill down to discuss key objectives, tools or methods used to reach those objectives, and the benefits achieved.
- Introduce a sixth "S," Safety.

**A3 Problem-Solving:**
**(35 minutes)**
A3 Problem Solving is a means of capturing all stages of a problem - identification, analysis, review, solution planning, and project management - on one A3 sized (11"x17") piece of paper. A3 Problem Solving facilitates visual tracking of a project. This module will:

- Show the importance of observation for Lean process improvement.
- Describe the A3 Report as a problem-solving and communication tool.
- Demonstrate how the Plan-Do-Check-Act, or PDCA, cycle is an integral part of A3.
- Explain the concept of Going to Gemba.
- Walk through the steps for completing an A3 Report, including key questions to ask at each stage.
- Discuss what makes a good A3.

**Cause and Effect Diagrams:**
**(65 minutes)**
Cause and effect mean that an action or event will produce a reaction or response in the form of another event. Cause and effect diagrams are used for root cause analysis of what factors are creating the risks within the project. The goal is to identify and treat the root of the problem, not the symptom. This module will:

- Explain the three basic steps for identifying and preventing problems.
- Apply basic cause and effect principles in order to identify the root cause of a problem.
- Teach techniques for gathering information for cause-and-effect analysis, including Five Whys and Brainstorming.
- Organize data and information for analysis using the Affinity Diagram and the Fishbone (or Ishikawa) Diagram.
- Analyze a process using Root Cause Analysis and The XY Matrix.



**Changeover Reduction:**
**(55 minutes)**
Changeover Reduction is a structured methodology and technique used to reduce the combined amount of set-up and start-up time it takes to change a process from running one product to running the next one It is one of the fundamental techniques in Lean manufacturing and a key to waste reduction. This module will:

- Define Changeover Reduction.
- Provide a brief overview of its origin.
- Discuss its benefits and explain how it supports and enables Lean waste reduction.
- Define Takt time.
- Distinguish between external and internal work and discuss the relevance of each.
- Provide a step-by-step guide to implementing a successful Changeover Reduction program.

**Current State Value Stream Mapping:**
**(40 minutes)**
Value Stream Mapping is an essential planning tool used to identify improvements that will result in a Lean Value Stream. The first step is to create the Current State map, showing the Value Stream of a particular product or service. This module will:


- Explain the overall concepts and purpose of Value Stream Mapping Describe a Current State Value
- Stream Map
- Describe the three parts of a Value Stream Map
- Show how product and process offerings are grouped into product families according to similar
- processing steps
- List the common VSM symbols and their meanings
- Describe the steps for constructing a Current State Value Stream Map
- Explain key differences between manufacturing and office/service VSMs
- Apply the steps for creating a VSM in an office or service environment

**Eight Wastes:**
**(25 minutes)**
Producing anything that the customer doesn't want, or need is waste. It lowers your profits and leaves you less competitive in your market. Learn about the waste that is hidden, or taken for granted, in both manufacturing and office environments. Utilizing Lean techniques can help to dramatically reduce these wastes and their associated costs. This module will:

- Describe Value Add versus Non-Value Add activities and explain why they are important in a Lean implementation.
- Identify the Eight Wastes and discuss why they are a primary focus during Lean implementation.
- Describe each of the Eight Wastes in detail and give examples.

**Error Proofing:**
**(20 minutes)**
Error Proofing is used to ensure products and processes are completed correctly the first time. The goal of error proofing is to prevent the occurrence of defects and to ensure that mistakes are detected when they occur. Because people can make mistakes even in inspection, error proofing often relies on mechanisms built into tools or systems that automatically signal when problems occur or prevent the process from continuing until the proper conditions are met. This module will:

- Define Error Proofing from a Lean perspective.
- Describe its business benefits.
- Discuss how it can improve quality and reduce failures and omissions.
- Illustrate the 6-Step error proofing process and how to apply it.
- Explain how to implement Error Proofing for both office and manufacturing processes.

**Flow and Pull Systems:**
**(35 minutes)**
The concept of "Pull" in a Lean office or factory means to respond to the pull, or demand, of the customer. Lean companies design their operations and processes to respond to the ever-changing requirements of customers. This module will:

- Define Continuous or One-Piece Flow and the introductory aspects of Pull Systems.
- Explain where to implement Pull Systems.
- Discuss how they enable effective flow of information and materials, and identify which tools are best suited for various office and manufacturing environments.
- Explain how to apply Pull Systems in a comprehensive and systematic way.

**Focused Improvement Events** *(Please note, this module is Manufacturing Intensive)***:**
**(60 minutes)**
Focused Improvement Events, also known as Kaizen Events, are short duration focused projects designed to define and implement improvements in a specific area or process step.
This module will:

- Define Focused Improvement, or Kaizen Events, and discuss the purpose and application
- Explain how these activities can provide rapid business benefits and accelerate the execution of larger initiatives
- Walk through the structured approach for running Focused Improvement Events in both office and manufacturing processes
- Show that the Focused Improvement Event (FIE) is one of the most powerful ways to implement E3

**Future State Value Stream Mapping:**
**(30 minutes)**
The goal of a Lean Value Stream is to produce the product or complete the process in the shortest Lead Time, at the highest quality and at the lowest cost possible, in order to deliver the highest level of customer satisfaction. After the Current State Value Stream Map has been created, the next step is to analyze the current process and flow to develop a clear vision of the desired Future State. For an organization to complete its Lean transformation process, it must understand the desired end goal. This module will:

- Define a Future State Value Stream Map and describe its purpose
- Explain the use of several Lean metrics in analyzing a process flow for improvement
- Describe how Continuous Improvement (CPI) activities can be used to transform a Current State Value Stream map into a Future State Value Stream map
- Explain Pull Systems and how to display them on a Future State Value Stream map
- Contrast the application of Future State Value Stream Maps to production and office/administrative processes

**Going to Gemba** *(Please note, this module is Manufacturing Intensive)***:**
**(20 minutes)**
Gemba is a Japanese term for "actual place" and describes the place where the value-creating work happens. To "go to gemba" is to discover the truth. This module will:

- Explain the concept of Going to Gemba.
- Walk through the steps of a Problem-Solving Process.
- Show the importance of going where the value adding work is being done.
- Describe the ground rules for a successful Gemba exercise.
- Discuss how Gemba can be incorporated into other Lean events, like changeover reduction.

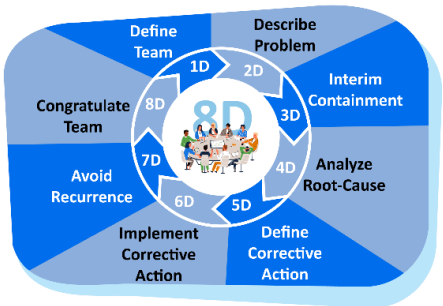
**Introduction to Control Charts**
**(40 Minutes)**
Control Charts are a vital tool in data collection and monitoring. This module will introduce the tool, its benefits, how it is used, and how it is interpreted.

This module will:

- Define Control Charts and discuss their purpose
- Explain how Control Charts are used for monitoring and sustaining improved processes
- Explain common cause and special cause variation and their relationship to process control
- Describe ways to improve out-of-control or unstable processes
- Provide examples for variables and attribute Control Charts

**Introduction to 8D:**
**(45 minutes)**
8D, or "Eight Disciplines," is a problem-solving methodology for product and process improvement. This module will:

- Teach you how to use 8D to identify, correct, and eliminate the recurrence of quality problems.



**Introduction to Kanban** *(Please note, this module is Manufacturing Intensive)*:
**(20 minutes)**
Kanban, a Japanese word that means “card, is a common term used with Pull Systems. This module will:

- Explain what Kanban is.
- Describe the many types of Kanban in detail.

**Introduction to Lean Office and Service:**
**(45 minutes)**
In the office and service environments, Lean improvement activities focus on eliminating waste and speeding up the process. This is accomplished by eliminating idle time, bureaucracy, and unnecessary redundancy. Lean Office and Service also helps organizations understand and predict changes in customer expectations, thereby enabling them to react quickly to meet customer needs. This module will:

- Discuss why Lean Office and Service is important to an organization’s long-term success.
- Discuss common obstacles organizations face when implementing Lean Office and Service and how to overcome them.
- Discuss the relationship between some important Lean tools, including process mapping, service family matrixes, and Value Stream Analysis, and demonstrate how to apply them.

**Introduction to Lean Principles:**
**(55 minutes)**
A Lean operation produces just what is needed when it is needed with no additional labor, costs, inventory, or time. Learn the skills necessary to apply Lean techniques to reduce waste and improve process efficiency. Gain a practical understanding of Lean continuous improvement techniques and how to use them to reduce errors, inventory, and production lead time. This module will:

- Define Lean, its importance, benefits, and objectives.
- Describe Lean tools, methodologies, and levels of deployment.
- Identify the roles and responsibilities of the Lean implementation team.
- Discuss how these roles can be integrated into an organization.

**Introduction to Six Sigma:**
**(55 minutes)**
Six Sigma is a disciplined, data-driven approach and methodology for identifying and removing the causes of defects (errors) and minimizing variability in manufacturing and business processes. It uses a set of quality management methods, including statistical methods, and creates a special infrastructure of people within the organization ("Champions," "Black Belts," "Green Belts," "Yellow Belts," etc.) who are experts in these methods. This module will:

- Define Six Sigma and discuss its origin and evolution.
- Describe how it differs from Lean.
- Explain how sigma levels are determined, and how they are used to indicate process capability.
- Describe the roles of Six Sigma team members.
- Discuss key factors of Six Sigma success.
- Discuss important elements of the Six Sigma process, including key inputs and outputs and the role of "Critical to Xs".
- Describe the five phases of the DMAIC improvement cycle.

**Introduction to the Theory of Constraints**
**(45 minutes)**
The Theory of Constraints (TOC) is a system improvement philosophy developed by Dr. Eliyahu M. Goldratt. TOC explains that the three ways for a company to make money are by reducing operating expenses, reducing inventory, and increasing throughput. This module will:

- Discuss the origins of the Theory of Constraints.
- Examine its philosophy and governing principles.
- Describe its applications.
- Walk through its Five Focusing Steps.
- Study some examples and review typical results.
- Examine the relationship between the Theory of Constraints and Critical Chain Project Management

**Kaizen Event:**
**(35 minutes)**
Kaizen Events are highly effective team events that focus on achieving rapid results. Kaizen teams use various analytical and Lean techniques, such as Value Stream Mapping, Changeover Reduction, 5S, Total Productive Maintenance, and Workplace Design to implement rapid improvements. This module will:

- Define Kaizen Event and discuss its purpose and application.
- Explain how Kaizen Events can provide rapid business benefits and accelerate the execution of larger initiatives.
- Walk you through the structured approach for running Kaizen Events, in both office and manufacturing processes.

**Lean Metrics:**
**(35 minutes)**
These Lean metrics will be used with several tools including value stream mapping to identify barriers to flow. Removing barriers to flow is a critical step in process improvement. Barriers to flow come in many forms, but some of the most common are processes that did not produce to takt, stoppages, and inventory buildup between steps. To enable flow, all processes must be synchronized to produce at the required Takt Time. Quality problems also cause many flow issues. For example, they can prevent a process for producing to Takt; necessitate an increase in inventory to ensure that acceptable product is available: an increase inspection cost and time. We can uncover quality issues by identifying the symptoms of inventory, long cycle times, and added inspection steps.

This module will:

- Apply Little's Law which describes the relationship between process throughput, inventory and flow, and lead time.
- Describe how to calculate several quality metrics including First Time Yield and Rolled Throughput Yield.
- Define and calculate several process flow metrics including Takt Time, Cycle Time, Total Cycle Time, Process Lead Time, Process Cycle Efficiency, and Total Lead Time.

**Mapping the Process:**
**(50 minutes)**
Mapping the Process is a way to visually represent the sequence of actions that comprise a process. It helps to document, analyze, and improve processes. This module will:

- Define a process and a process map.
- Describe the benefits of process mapping.
- Describe the differences between relationship maps, swim lane charts, and process maps.
- Discuss the three levels of detail used to describe a complex process.
- Walk through the five steps of process mapping.
- Demonstrate how to create a process map.

**Pareto Analysis**
**(40 minutes)**
Pareto analysis is a formal technique useful where many possible courses of action are competing for attention. In essence, the problem-solver estimates the benefit delivered by each action, then selects a number of the most effective actions that deliver a total benefit reasonably close to the maximum possible one. This module will:

- Explain how to create a Pareto Chart, including a cumulative relative frequency line.
- Given data and a Pareto Chart, describe how to produce another Pareto chart of the variable using weighted data.
- Discuss how to use stratification methods to perform in-depth Pareto analysis of the data.
- Explain how to interpret a Pareto Chart to make a business decision.

**PDCA:**
**(30 minutes)**
PDCA stands for “Plan-Do-Check-Act” and is a quality control tool. This module will:

- Provide a step-by-step guide to the PDCA cycle.
- Demonstrate the role of PDCA in Kaizen events and other process improvement initiatives.

**Project Selection:**
**(30 Minutes)**
Don’t get caught in a project to nowhere. This module will help you better understand that not all projects are created equal! Following the critical success factors presented in this module will ensure you choose meaningful projects and give them the best chance of success.

This module will:

- Identify the key factors of a successful Lean Six Sigma project.
- Articulate the important elements of project metric identification, including key inputs and outputs and the role of the “Critical to Xs”.
- Describe Hoshin Kanri and how LSS projects are a product of the strategic planning process.

**Project Support:**
**(30 minutes)**
For projects to be successful, they must be supported. This module will spell out how each of the roles that supports process improvement projects can assure the successful completion of these projects.

- Describe various types of projects that Green Belts and Black Belts lead and some of the tools they apply.
- List some of the more common failure modes of unsuccessful projects.
- Provide actionable information so supporters of a GB or a BB-led LSS/CI project can assure the successful completion of these projects.
- Analyze how a leader from a company that has an LSS/CI program can assure the successful launch and continuation of the program.

**SIPOC:**
**(20 minutes)**
SIPOC is a tool that summarizes the inputs and outputs of one or more processes in table form. The acronym SIPOC stands for suppliers, inputs, process, outputs, and customers which form the columns of the table. This module will:

- Define SIPOC and describe its components.
- Discuss the purpose of SIPOC.
- Explain how to construct a SIPOC diagram.
- Describe how the information gained from a SIPOC analysis can be used.


**Standard Work:**
**(30 minutes)**
Standard Work is an essential building block of a Lean Enterprise. It helps ensure that each step in the process is clearly defined so that work can be performed repeatedly in the same manner. Variations in processes result in mistakes or other quality problems that require inspection and rework. This module will:

- Define Standard Work from a Lean perspective.
- Discuss its business benefits; explain why it is the basis for improvement.
- Explain how to create, implement, and improve Standard Work for both office and manufacturing processes.

**Takt Time** *(Please note, this module is Manufacturing Intensive)***:**
**(20 minutes)**
Takt time is the available time divided by the customer demand during the same period. It is an easy calculation, but it can change by changing the available time or the customer demand, or both. This module will:

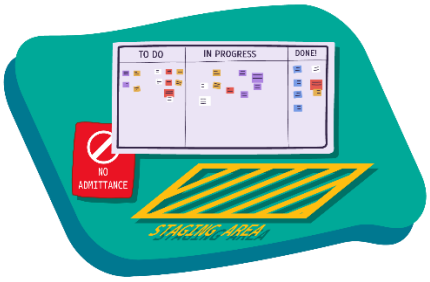
- Calculate Takt Time.
- Describe the two types of pacemakers, Visual and Physical.
- Explain different types of pacemakers, including Day by the Hour (DBTH), and Moving Production Line.

**Total Productive Maintenance:**
**(35 minutes)**
Total Productive Maintenance (TPM) is a team and shop floor-based initiative focused on optimizing the effectiveness of manufacturing equipment. TPM helps workers efficiently care for the equipment and machines they work with, which will reduce costs, including money and space tied up with spare parts inventory. This module will:

- Describe the primary benefits gained from Total Productive Maintenance.
- Identify the four major categories of maintenance.
- Define Overall Equipment Effectiveness.

**Visual Management:**
**(25 minutes)**
Visual Management is the establishment of a workplace where performance conditions can be understood by sight. Problem areas are highlighted so employees can take immediate action to eliminate waste. One of the most important benefits of a visual workplace is that even someone unfamiliar with the process can see what is happening, identify errors, and tell if anything is out of place or missing. This module will:

- Define Visual Management and describe its purpose and benefits.
- Introduce the three characteristics of Visual Management – Self Explaining, Self-Regulating, and Self Improving – and discuss why they are important.
- Describe the difference between Visual Controls and Visual Displays, giving examples of each.




**Waste of Waiting:**
**(8 minutes)**
Waiting is one of the common wastes and often results in inefficient use of people and/or equipment. This module will:

- Discuss the waste of waiting

**Workplace Design and Layout:**
**(25 minutes)**
Creating high-performance workspaces or manufacturing cells involves much more than moving machines and people closer together. Well-designed workplaces eliminate waste and help to optimize material, people, and information flow. The workflows are in alignment with value streams rather than according to functional teams or departments. This module will:

- Describe how Lean Workplace Design differs from traditional approaches.
- Discuss its business benefits.
- Show how it is used to improve quality and reduce lead times.
- Explain how to create effective Workplace Design for office and manufacturing processes.

# BASIC TEAM LEADER/GREEN BELT

Spanish, Portuguese and Mandarin Translations (**COMING SOON**)

**3P/ Production Preparation Process** *(Please note, this module is Manufacturing Intensive)*:
**(50 minutes)**
This module will:

- Define the 3P Production Preparation Process and discuss its purpose and application.
- Explain how and when 3P can be used to create exponential change, designing waste-free products and processes.
- Describe the phases of 3P and how to facilitate a team of subject matter experts through the 3P Process.

**Control Charts I:**
**(30 minutes)**
Control Charts are meaningless if the correct chart is not used. This module will help students learn how to select, create, and apply the most common variable Control Charts.

This module will:

- Define Control Charts and discuss their purpose.
- Explain how to determine whether to use an Attribute or a Variables Control Chart.
- Describe the steps for setting up a Control Chart.
- Discuss the basic rules for using Control Charts.
- Explain how to identify which Control Chart type is most appropriate for monitoring a given process parameter.

**Control Charts II:**
**(40 Minutes)**
Control Charts are meaningless if the correct chart is not used. This module will help students learn how to select, create, and apply the most common attribute Control Charts.

- Use the logic tree to determine the appropriate chart based on data type and subgroup size
- Describe the steps needed to create the four most common attribute control charts
- Explain how these charts can be applied

**Controlling the Process:**
**(60 minutes)**
The last phase of the DMAIC process is Control. Once a solution has been selected and implemented, the team must make sure that the process improvements will be sustained in the future, and the people or system, will not revert to the old way of doing things. The purpose of the Control phase is to maintain a stable and predictable process that meets customer requirements; to make adjustments to meet any changing business requirements and close the project. This module will:

- Discuss the purpose of the Control phase in a Lean Six Sigma DMAIC project.
- Walk through the steps for controlling the process.
- Describe the basic elements of a Control Plan, discuss its importance, and explain how to create and implement it.

- Describe the key components required for effectively closing the project, including documentation, handoff, and leverage.

**Design for Manufacturability and Assembly (DFMA)** *(Please note, this module is Manufacturing Intensive)*:
**(35 minutes)**
This module will:

- Explore DFMA and determine what it is.
- Learn how DFMA affects a company's competitiveness.
- Discover the steps, processes, and tools used to achieve success.

**Developing Lean Thinkers** *(Please note, this module is Manufacturing Intensive)*:
**(40 minutes)**
This module will:

- Describe what "Lean Thinking" is all about and why it's important.
- Explain the use of Kata to develop Lean Thinkers.
- Discuss the Kata of Improvement (how to become a problem solver).
- Explore the Kata of Coaching (helping others become problem solvers).
- How developing Lean Thinkers is incorporated into your everyday process.

**Failure Mode and Effects Analysis (FMEA):**
**(45 minutes)**
Failure Mode and Effects Analysis (FMEA) is a systematic technique for failure analysis. An FMEA is often the first step of a system reliability study. It involves reviewing as many components, assemblies, and subsystems as possible to identify failure modes, and their causes and effects. For each component, the failure modes and their resulting effects on the rest of the system are recorded in a specific FMEA worksheet. This module will:

- Define FMEA and discuss its use as a project risk assessment tool.
- Describe the 10 steps for constructing a process FMEA.
- Explain the FMEA scoring criteria.
- Discuss how to translate FMEA results into action.

**Introduction to Hypothesis Testing:**
**(75 minutes)**
We will explain the purpose of hypothesis testing and show how to interpret the results of various hypothesis tests. This module will:

- Discuss the relationship between probability and p-value.
- Describe how to state the null hypothesis and the alternative hypothesis when provided with a test scenario.
- Explain how to select the proper hypothesis test to use, based on data type.
- Conduct several hypothesis tests for continuous and discrete data.

**Introduction to Inferential Statistics:**
**(30 minutes)**
This module will:

- Distinguish between the use of descriptive and inferential statistics.
- Explain the concept of using a confidence interval to estimate a population parameter.
- Identify when hypothesis testing may be appropriate and explain the methodology as it relates to a scenario.

**Introduction to Measurement Systems Analysis for Attribute Data**
**(35 minutes)**
A measurement systems analysis (MSA) is a specially designed experiment that seeks to identify the components of variation in the measurement. Just as processes that produce a product may vary, the process of obtaining measurements and data may have variation and produce defects. A measurement systems analysis evaluates the test method, measuring instruments, and the entire process of obtaining measurements to ensure the integrity of data used for analysis (usually quality analysis) and to understand the implications of measurement error for decisions made about a product or process. This module will:

- Identify when to use Attribute Agreement Analysis.
- Describe how accuracy and precision apply to attribute data.
- Set up, conduct, and analyze the data for an attribute agreement analysis.
- Interpret the results of the analysis to determine the effectiveness of the measurement system.
- Determine when the measurement system should be improved or redesigned.

**Introduction to Measurement Systems Analysis for Continuous Data**
**(45 minutes)**
A measurement systems analysis (MSA) is a specially designed experiment that seeks to identify the components of variation in the measurement. Just as processes that produce a product may vary, the process of obtaining measurements and data may have variation and produce defects. A measurement systems analysis evaluates the test method, measuring instruments, and the entire process of obtaining measurements to ensure the integrity of data used for analysis (usually quality analysis) and to understand the implications of measurement error for decisions made about a product or process. This module will:

- Identify the characteristics of a good measurement process and the two types of measurement system analysis.
- Identify the benefits of using a Gage R&R study to validate your measurement system.
- Discuss the steps to conduct a Gage R&R study.
- Use the results of the study to determine the effectiveness of the measurement system.

**Introduction to Process Capability:**
**(55 minutes)**
A process is a unique combination of tools, materials, methods, and people engaged in producing a measurable output; for example, a manufacturing line for machine parts. All processes have inherent statistical variability which can be evaluated by statistical methods. The Process Capability is a measurable property of a process to the specification, expressed as a process capability index (e.g., Cpk or Cpm) or as a process performance index (e.g., Ppk or Ppm). The output of this measurement is usually illustrated by a histogram and calculations that predict how many parts will be produced out of specification (OOS). Two parts of process capability are: 1) Measure the variability of the output of a process and 2) Compare that variability with a proposed specification or product tolerance. This module will:

- Determine how well a process can meet customer requirements by measure of process capability.
- Identify when one process is more capable than another.
- Distinguish capable from non-capable processes.
- Identify how sample measurements are used to estimate population values.
- Determine which Control Chart type is most appropriate for monitoring a particular process parameter.

**Leader Standard Work** *(Please note, this module is Manufacturing Intensive)***:**
**(30 minutes)**
Standard Work is one of the key Lean Principles. This module will:

- Review Standard Work for Lean production environments.
- Discuss Leader Standard Work in detail.
- Explain how Leader Standard Work is an integral part of our organization.

**Managing the Project:**
**(60 minutes)**
This module will:

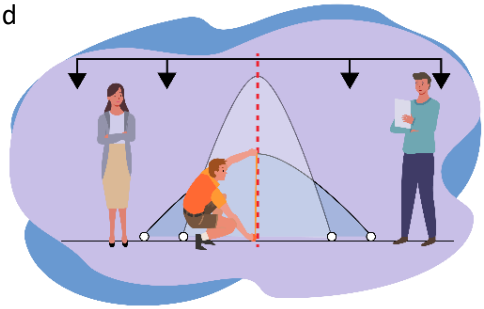
- Identify the Process Owners, internal and external customers and stakeholders.
- Describe the GRPI Model and how to use it throughout the project.
- Apply the ARMI tool to clearly define stakeholder roles.
- Illustrate and complete a Project Charter.
- Conduct a stakeholder analysis.
- Plan the project, identify necessary resources, and discuss the different project roles.
- Explain the team dynamics necessary to be a Change Leader.

**Measures of Central Tendency:**
**(40 minutes)**
In statistics, a central tendency (or, more commonly, a measure of central tendency) is a central value or a typical value for a probability distribution. It is occasionally called an average or just the center of the distribution. The most common measures of central tendency are the arithmetic mean, the median and the mode. A central tendency can be calculated for either a finite set of values or for a theoretical distribution, such as the normal distribution. This module will:

- Discuss the three Measures of Central Tendency (40 minutes): mean, median, and mode.
- Describe how to estimate the relationship of the median and the mean, based upon the shape of the histogram.
- Explore how changes to the original data affect the mean, median, and mode.
- Calculate estimates for the median and mean and how to identify the modal class.

**Measures of Dispersion:**
**(60 minutes)**
Measures of dispersion quantitatively express the degree of variation or dispersion of values in a population or in a sample. Common examples of measures of statistical dispersion are the variance, standard deviation and interquartile range. This module will:

- Calculate measures of dispersion such as range, variance, and standard deviation.
- Explain how a change in dispersion will affect the shape of the histogram.
- Demonstrate how a transformation made to the original data affects the standard deviation.
- Explain how to estimate the percentage of measurements within a specified interval of the mean.
- Calculate the Z score for a stated measurement.



**Organizing and Presenting Data:**
**(40 minutes)**
It is not easy to use data in its raw form to make decisions. Data needs to be organized, summarized, and displayed so that the results can be presented. This module will:

- Describe techniques for displaying data in various tabular or graphical formats.
- Show how to interpret and answer questions about the data, whether qualitative or quantitative.

**Performance Management** *(Please note, this module is Manufacturing Intensive)***:**
**(35 minutes)**
This module will:

- Discuss how to apply Performance Management to your organization and the benefits of doing so.
- Explore ways to "start getting what we expect," rather than expecting the same results we have always received.
- Demonstrate how to transition from non-value-added activities to more value-added activities.

**Point Kaizen** *(Please note, this module is Manufacturing Intensive)***:**
**(15 minutes)**
This module will:

- Give an overview of Point Kaizen, a method or approach to see waste and take immediate action.
- Describe how to find 30 opportunities for improvement in 30 minutes.
- Explain the importance of the expectation of daily, relentless improvement and how to make an improvement in an hour or less.
- Discuss the principles of motion economy and take a close look at the Point Kaizen Gemba Exercise.

**Process Capability Assessments:**
**(70 minutes)**
This module will:

- Compute Cp, Cpk, Pp, and Ppk values for processes using continuous data.
- Interpret Cp, Cpk, Pp and Ppk and relate them to a defect level.
- Take relevant process information for a process using discrete data.
- Calculate process assessment measurements.
- Determine how well processes are meeting customer requirements.
- Look at a powerful operation metric called Rolled Throughput Yield.

**Process-Based Costs:**
**(45 minutes):**
This module will:

- Discuss how the overall cost of quality relates to both the cost of poor quality and the cost of good quality.
- Define the Cost of Poor Quality (COPQ) and identify components of COPQ as they relate to the process.
- Explain how to calculate the Cost of Poor Quality.
- Identify the benefits derived by a company when they can reduce COPQ.

**Production Leveling** *(Please note, this module is Manufacturing Intensive)***:**
**(45 minutes):**
This module will:

- Define Production Leveling and its goals while also explaining the relationship between takt time and production leveling.
- Describe the two types of Production Leveling: by Volume Demand and by Product Mix or Type Demand.
- Show the importance of importance of "pull" in Production Leveling.

**Rewards and Recognition** *(Please note, this module is Manufacturing Intensive)***:**
**(20 minutes)**
Reward and Recognition programs are a powerful tool you can use to increase engagement. Reward and Recognition programs motivate employees to perform at higher levels. This module will:

- Discuss how to establish an effective Reward and Recognition Program
- Explore ways to boost employee performance, motivation, and morale through Rewards and Recognition
- Discuss the two major categories of Rewards and Recognition —formal and informal
- Review examples and suggestions for ways to recognize employee achievements

**Scatter Diagrams:**
**(35 minutes)**
Scatter Diagrams are graphs in which the values of two variables are plotted along two axes. The pattern of the resulting points will reveal if there is any sort of relationship between the variables. This module will:

- Show how to determine if two variables plotted on a scatter diagram appear to be correlated and to what degree.
- How to build a scatter diagram.
- How to avoid errors in analyzing scatter diagrams.
- How to use stratification to further explore the relationship between variables.

**Selecting the Solution:**
**(35 minutes)**
Once the real root cause of a problem has been isolated, the team uses the information gathered to creatively generate potential solutions. It then evaluates the alternate solutions, assesses the risks, and makes its selection. This module will:

- Examine the process of selecting a solution for an improvement project.
- Discuss how potential savings affect a project's Return on Investment (or ROI).
- Describe the purpose and application of common tools used to generate and analyze potential solutions and to assess risk.
- Explain how all these components come together in the implementation plan.

**Translating the VOC:**
**(25 minutes)**
Without understanding the Voice of the Customer, you will never know if you are hitting the mark or if the mark you are hitting is right one. This module connects customer need to the measurable output variables critical to success.

This module will:

- Define Voice of the Customer as an ongoing process
- Describe the three categories of customer needs
- Identify Critical to (CTx) characteristics
- Use a CT Tree to break CTx's into Key Output Variables (KPOVs) and measurable requirements

**Conducting a VOC Study:**
**(40 Minutes)**
This module walks you through the steps necessary to conduct an effective VOC Study for your organization. Following the Plan, Develop, Collect, Analyze, and Integrate steps taught within the module will ensure that critical elements are not missed when planning your next study.

This module will:

- List and describe the five steps for setting up a Voice of the Customer Study
- Gather and use the data in your organization's improvement

**What is Statistics?:**
**(35 minutes)**


Statistics is the science of collecting, organizing, analyzing, and interpreting information. Statistics consists of methods and procedures to reduce a lot of data into a more manageable form. This module will:

- Introduce some basic terminology used in statistics.
- Identify the different kinds of data and ways to gather or collect the data.
- Teach ways to organize information into a manageable form for the purpose of making informed decisions.

# ADVANCED TEAM LEADER/BLACK BELT

**Advanced Control Charts:**
**(50 minutes)**
Building upon the knowledge conferred in Control Charts I and II, Advanced Control Charts takes students to a deeper level of understanding of all aspects of control chart construction and use. Subgrouping, special case control charts, and capturing process performance changes over time, are all covered in this advanced module.

Upon Completion of this module, you will be able to:

- Understand how to calculate the different elements of each type of control chart
- Understand the rationale behind the Nelson rules for out-of-control conditions
- Apply the principle of rational subgrouping for control chart sampling
- Describe special case control charts for short-run production, moving averages, and dispersion concerns (Laney Charts)
- Describe the concept of stages within control chars to show process performance changes over time

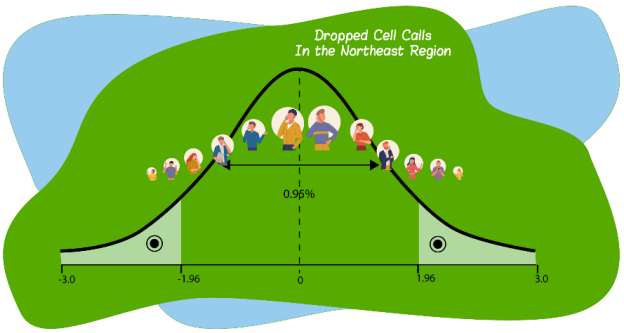
**ANOVA (Analysis of Variance):**
**(80 minutes)**
This module will:

- Identify when the method of ANOVA should be applied.
- Interpret the results and draw valid statistical conclusions from a completed ANOVA table.
- Determine the appropriate degrees of freedom and how to calculate the F-values for one-way, two-way, and nested designs.
- Interpret the results of main effects and interaction plots and draw valid statistical conclusions.

**Comparing Means:**
**(50 minutes)**
This module will:

- Compare two population means and define the difference between independent and dependent samples.
- Show how to compute an appropriate confidence interval for the difference of two population means for both independent and dependent variables.
- Interpret the meaning of the confidence interval.
- Describe how to perform a hypothesis test for the difference of two population means for both independent and dependent samples.

**Confidence Interval for the Mean:**
**(45 minutes)**
This module will:




- Define the differences between a point estimator and a confidence interval.
- Identify the appropriate steps in computing a confidence interval for a single population mean.
- Show how to interpret the meaning of the confidence interval for a population mean.
- Explain the meaning of a sampling distribution for a sample statistic and its relevance in computing a confidence interval for a population parameter.

**Continuous Probability Distributions: Normal Curve:**
**(40 minutes)**
This module will:

- Describe the characteristics of the normal probability distribution including the shape, central tendency, and dispersions.
- Describe how the standard deviation affects the shape of the normal distribution.
- Explain how to use sample data and a normal curve to predict the proportion of product which meets customer requirements.
- Explain how to use a normal curve to estimate the capability of a process.

**Design of Experiments: Basic and Full Factorial:**
**(55 minutes)**
DOE will illustrate two types of simple comparative experiments - the completely randomized design and the randomized block design This module will:

- Define a full factorial experiment.
- Show how to calculate the main and interaction effects.
- Demonstrate how to analyze the results of a full factorial design.
- Explain the role of replication.
- Describe the threats to statistical validity of a designed experiment.

**Hypothesis Testing for Nonparametric Data:**
**(60 minutes)**
This module will:

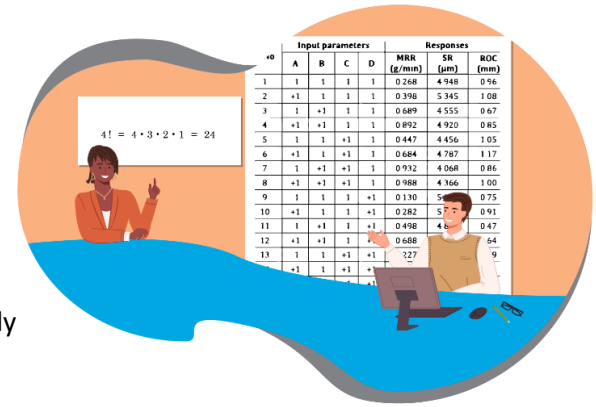
- Explain how to determine data normality and understand possible causes of non-normal data.
- Show how to select appropriate tests for nonparametric data and how to interpret nonparametric test statistics.
- Describe the purpose of transforming data and some of the techniques used to transform data.

**Hypothesis Tests for the Mean:**
**(90 minutes)**
This module will:

- Explain how to identify the appropriate form of a statistical hypothesis for testing a population mean.
- Show to perform a hypothesis test for a single population mean.
- State a valid conclusion based on the result of the test performed.
- Identify the risks associated with making a specific decision.

**Introduction to Design of Experiments:**
**(45 minutes)**
This module will:

- Define Design of Experiments (DOE).
- Describe its purpose, importance, and benefits.
- Define key terms associated with DOE.
- Explain how to conduct a well-designed statistical experiment.
- Describe the five phases used for applying DOE.
- Walk through the steps for each phase as we apply DOE to a sample experiment




**Making Inferences about Proportions:**
**(60 minutes)**
This module will:

- Compare two population means and define the difference between independent and dependent samples.
- Show how to compute an appropriate confidence interval for the difference of two population means for both independent and dependent variables.
- Interpret the meaning of the confidence interval.
- Describe how to perform a hypothesis test for the difference of two population means for both independent and dependent samples.

**Making Inferences about Variances:**
**(45 minutes)**
This module will:

- Explain how to identify the appropriate form of a statistical hypothesis for testing population variances.
- Show how to perform a hypothesis test for either one or two population variances.
- Describe the steps for computing a confidence interval for population variance.

**MSA Advanced Topics for Attribute Data**
**(25 minutes)**
MSA Advanced Topics for Attribute Analysis builds upon the concepts learned in Introduction to Measurement Systems Analysis for Attribute Data. Using Minitab, students will perform an Attribute Agreement Analysis and use various methods to perform an analysis when an item or event cannot be measured twice. This module will:

- Perform Attribute Agreement Analysis with Minitab.
- Interpret the kappa statistic results.
- Use various methods to perform an analysis when an item or event cannot be measured twice.
- Describe methods for improving an attribute analysis measurement system

**MSA Advanced Topics for Continuous Data**
**(35 minutes)**
MSA Advanced Topics in Continuous Data builds upon the methods learned in Introduction to Measurement Systems Analysis for Continuous Data and gives students a deeper understanding of how and when to perform a Type 1 Gage R&R to determine the effectiveness of the measuring device. It also Identifies additional methods for performing a continuous data Gage R&R. This module will:

- Identify additional methods for performing a continuous data Gage R&R.
- Understand when and how to perform a Type I Gage R&R to determine the effectiveness of the measuring device.
- Discuss methods for improving a continuous data measurement system.

**Multiple Regression:**
**(50 minutes)**
This module will:

- Explain the purpose of multiple regression and how it differs from simple regression.
- Describe the elements of the multiple linear regression model and identify assumptions about the data required for regression analysis to work.
- Use the “best subsets” method to determine the possible regression models and apply several techniques for selecting the best model.
- Discuss what can go wrong with multiple regression that may lead to incorrect conclusions.

**Probability Distributions: Discrete Random Variables:**
**(40 minutes)**
This module will:

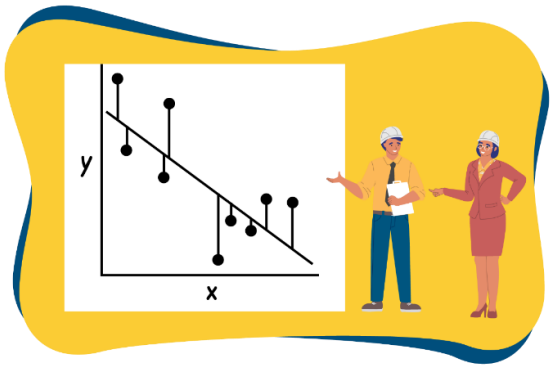
- Explain what a random variable is and distinguish between discrete and continuous random variables.
- Describe the properties of a discrete probability distribution.
- Calculate the mean, or expected value, and standard deviation.

**Simple Linear Regression:**
**(35 minutes)**
This module will:

- Review how to use a scatter plot to determine if two variables appear correlated and to what degree.
- Explain how to calculate the correlation coefficient and the coefficient of determination.
- Show how regression analysis can be used to predict the value of one variable from another variable by fitting a least squares regression line to the data and judging the validity of the model.
- Describe how to use information generated by a computer output from a simple linear regression to write the equation of the line and perform predictions based upon the model.

**Strategy Deployment: X-Matrix** *(Please note, this module is Manufacturing Intensive)***:**
**(30 minutes)**
This module will:

- Describe what Strategy Deployment is and its uses.
- Discuss where Strategy Deployment fits.
- Review the steps for developing a top-level X-Matrix and a Kaizen Event X-Matrix.




# OPUSWORKS MASTER BLACK BELT (MBB)

*The OpusWorks' MBB course is designed with an innovative perspective, with practical scenarios of great added value for tenured Lean Six Sigma Black Belts. For more information click here.*

Estimated time: Approximately 60 hours over 23 weeks

• 18 Weeks of synchronous, remote training (Gen 1)

• Participation in Five Tollgate events to reinforce classroom learning and focus on practical application

• Homework and Case Studies

# CAPSTONE PROJECT SIMULATIONS

Our Capstone Project Simulation, designed for either in-person or virtual use, is a rigorous process improvement event. Using step-by-step PDCA and DMAIC methodologies, students address a familiar problem that is in desperate need of a solution – the driver's license renewal process or the Agricultural shipping certification process. During this Project Simulation, students work in teams and are guided through the e-Learning and team activities by a trained instructor/mentor. Everything students need to complete the project is accessible online: simulations, tutorials, learning reviews, templates, data sets, and more.

The basic scenario is the same for all versions of the Capstone. What varies by belt level is the complexity and expectations for participant involvement in assessing problems and developing solutions.

Yellow Belt participants complete three Capstone Events throughout the virtual course, while in-person classes typically conclude with a one-day, hands-on Capstone following the core Yellow Belt instruction.

During the Yellow Belt Capstone experience, participants take part in the interactive Capstone Events designed to apply their learning through the PDCA (Plan-Do-Check-Act) methodology. Each event simulates real-world scenarios that challenge participants to identify problems, implement solutions, and evaluate outcomes in a structured and practical way.

For Green Belts, the Capstone Simulation offers flexible delivery options: it can be integrated throughout the course by DMAIC phase or delivered as a comprehensive experience after training completion. When delivered after training, the Green Belt Capstone is typically conducted over three days.

During the Green Belt Capstone, you will:

- Learn an improved, goals thinking process that incorporates the use of Lean Six Sigma tools.
- Use the DMAIC phase tools and methods to identify the root causes of the problem, simulate options, and provide potential solutions for Process Improvement.

**Capstone Event – Define:**
In the Define Phase, the goals are to identify a problem that is meaningful to the organization and determine which toolset, Lean or Six Sigma, is most appropriate for the specific problem to be solved. If the problem is in process efficiency, Lean tools will be leveraged. Typical efficiency issues are uneven or unpredictable workflow and long lead or cycle times. If the problem is in product quality or process variation, Six Sigma tools will be leveraged. Typical issues are poor product yield and unpredictable process outcome. The outputs of this phase are a preliminary problem statement, a quantified business gap, and the go-forward plan. What makes this phase different from the other approaches is that in a Six Sigma approach, we narrow the scope to one project that focuses on one CTQ. The projects are identified and selected using Six Sigma prioritization methods.

**Capstone Event – Measure:**
The Measure Phase focuses on measuring and assessing the current state of the operation. Value Stream Mapping helps us understand the current performance of the flow path in an analytical and graphical way. Within the identified process group, select the product family to address and create a Current State Value Stream Map for the flow through the functional area. Complete the Current State Map by gathering the baseline measures by "walking the process." The output of this phase is the Current State Value Stream Map, which is a visual representation of the process that includes key process data. This phase is different from the other approaches in that, even though the value stream map will identify many potential opportunities, the Six Sigma project will focus on one of them.

**Capstone Event – Analyze:**

The goal of the Analyze Phase is to identify and explore the graphical and analytical data to determine root causes. The value stream performance data is assessed for limitations and barriers to flow. Quality and yield issues are identified to be addressed with additional Six Sigma improvement projects. Lead or cycle time opportunities will be identified to be addressed with activities such as waste and non-value-adding reduction, setup reduction, total productive maintenance, and cell redesign activities. Flow problems that are identified can be addressed with concepts and tools such as one-piece continuous flow, Kanban and other pull systems, and production leveling techniques. The output is a prioritized list of potential root causes confirmed with data and a vision for the future state. This phase differs from other approaches in that Six Sigma very strictly narrows focus to the "vital few" root causes, and Lean tools will be used where appropriate to support the analysis.

**Capstone Event – Improve:**
The focus of the Improve Phase is to implement solutions to eliminate or reduce the occurrence of the root causes. In addition to the traditional Six Sigma improvement methods, Lean improvement begins with removing the barriers to flow and enabling the introduction of pull. Multiple types of projects may be necessary to achieve the desired results, including both Six Sigma improvement projects to reduce variation and yield issues and Lean tools and techniques to address specific needs such as setup reduction, TPM, or implementing pull systems. Kaizen events may be leveraged to rapidly execute improvements. The output of this phase is demonstrated success, proven through data from trials or pilot runs, verifying that the business gap was closed. The Six Sigma approach is unique in that the focus will be on one problem and generally requires statistically relevant data to confirm success.

**Capstone Event – Control:**
The goal of the Control Phase is to enable successful transition to a sustainable process. Implementation of standard work practices, poka-yoke processes, performance measures, visual controls, maintenance of 5S, and employee training are all essential to locking in the gains achieved in the project. These are all outputs of this phase. The close of a Six Sigma project is different from other approaches because, although a single project may be closed, only one of many potential opportunities in the value stream has been addressed. Additional projects will need to follow to improve the entire value stream.

# PROP SHOP SIMULATIONS

For organizations in the Aerospace sector, Prop Shop Simulations are also available. These immersive simulations replicate key operational challenges and can be customized to reflect your specific processes, equipment, and business objectives—ensuring relevance and immediate applicability in your workplace.

# LEAN ESSENTIALS FOR HEALTHCARE

**5S Plus Safety for Healthcare:**
**(40 minutes)**
This module will:

- Introduce 5S plus Safety.
- Describe its overall purpose and benefits in Healthcare.
- Identify the phases of its process.
- Drill down to discuss key objectives.
- Tools or methods used to reach those objectives, and the benefits achieved.

**A3 Problem Solving for Healthcare:**
**(35 minutes)**
A3 Problem Solving is a means of capturing all stages of a problem - identification, analysis, review, solution planning, and project management - on one A3 sized (11"x17") piece of paper. A3 Problem Solving facilitates visual tracking of a project. This module will:

- Show the importance of observation for Lean process improvement within a Healthcare environment.
- Describe the A3 Report as a Healthcare problem-solving and communication tool.
- Demonstrate how the Plan-Do-Check-Act, or PDCA, cycle is an integral part of A3.
- Explain the concept of Going to Gemba.
- Walk through the steps for completing an A3 Report, including key questions to ask at each stage.
- Discuss what makes a good A3.

**Current State Value Stream Mapping for Healthcare:**
**(45 minutes)**
This module will:

- Describe a Current State Value Stream Map and discuss its purpose.
- Walk through the steps of creating a Current State Value Stream Map.
- Identify commonly used symbols.
- Describe how metrics are collected and represented.

**Eight Wastes for Healthcare:**
**(25 minutes)**
This module will:

- Describe Value Add versus Non-Value Add activities.
- Explain why they are important in a Lean implementation.
- Identify the Eight Wastes and discuss why they are a primary focus during Lean implementation.
- Describe each of the Eight Wastes in detail and give examples.

**Error Proofing for Healthcare:**
**(20 minutes)**
This module will:

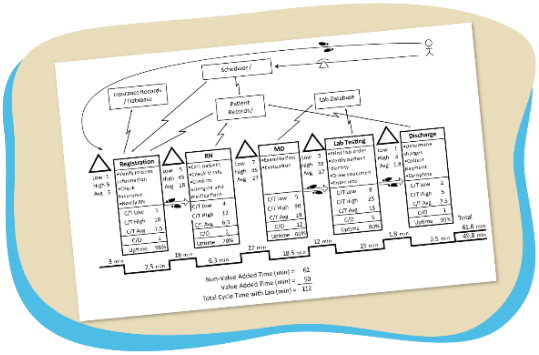
- Define Error Proofing from a Lean perspective.
- Describe the benefits a healthcare organization can expect.
- Discuss how it can improve patient safety and service quality while reducing failures and omissions.
- Understand and be able to apply the 6-Step error proofing process.
- Explain how to implement Error Proofing for healthcare processes.

**Flow and Pull Systems for Healthcare:**
**(35 minutes)**
This module will:

- Define Continuous or One-Piece Flow and the introductory aspects of Pull Systems.
- Explain where to implement Pull Systems, discuss how they enable effective flow of information and materials, and identify which tools are best suited for various office and healthcare environments.
- Explain how to apply Pull Systems in a comprehensive and systematic way.

**Future State Value Stream Mapping for Healthcare:**
**(45 minutes)**
This module will:

- Define a Future State Value Stream Map and describe its purpose.
- Define and calculate Takt Time and discuss its role in Value Stream Mapping.
- Demonstrate how to analyze a Current State Value Stream Map to create a Future State Value Stream Map.
- Discuss how to enable flow and develop Pull.




**Kaizen Event for Healthcare:**
**(35 minutes)**
This module will:

- Define Kaizen Event and discuss its purpose and application.
- Explain how Kaizen Events can provide rapid organizational benefits and accelerate the execution of larger initiatives.
- Walk you through the structured approach for running Kaizen Events in healthcare processes.

**Introduction to Lean for Healthcare:**
**(30 minutes)**
This module will:

- Why the implementation of Lean is vital to the continuous improvement of a healthcare system.
- The basics of the Lean improvement methodology.
- The five key principles of Lean, and how they work in a healthcare environment.

**PDCA:**
**(30 minutes)**
PDCA stands for "Plan-Do-Check-Act" and is a quality control tool. This module will:

- Provide a step-by-step guide to the PDCA cycle.
- Demonstrate the role of PDCA in Kaizen events and other process improvement initiatives.

**Standard Work for Healthcare:**
**(30 minutes)**
This module will:

- Define Standard Work from a Lean perspective.
- Discuss its benefits.
- Explain why it is the basis for improvement.
- Explain how to create, implement and improve Standard Work for healthcare processes.

**Visual Management for Healthcare:**
**(25 minutes)**
This module will:

- Define Visual Management and describe its purpose and benefits in healthcare.
- Introduce the three characteristics of Visual Management – Self Explaining, Self-Regulating, and Self Improving – and discuss why they are important.
- Describe the difference between Visual Controls and Visual Displays, giving examples of each.

**Workplace Design for Healthcare:**
**(25 minutes)**
This module will:

- Describe how Lean Workplace Design differs from traditional approaches.
- Discuss its benefits to a healthcare organization.
- Show how it is used to improve quality and reduce lead times.
- Explain how to create effective Workplace Design for Healthcare processes.

# LEAN ESSENTIALS FOR EDUCATION

**5S Plus Safety for Education:**
**(40 minutes)**
This module will:

- Introduce 5S plus safety, describe its overall purpose and benefits in Education, and identify the phases of its process.
- Drill down for each phase to discuss key objectives, tools or methods used to reach those objectives, and the benefits achieved.

**A3 Problem Solving:**
**(35 minutes)**
A3 Problem Solving is a means of capturing all stages of a problem - identification, analysis, review, solution planning, and project management - on one A3 sized (11"x17") piece of paper. A3 Problem Solving facilitates visual tracking of a project. This module will:

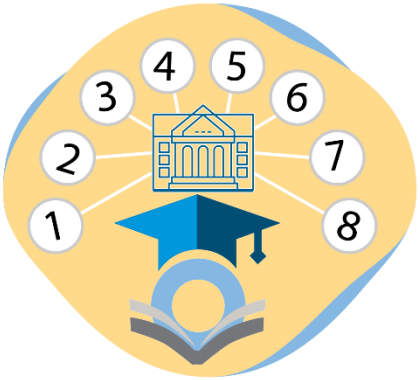
- Show the importance of observation for Lean process improvement.
- Describe the A3 Report as a problem-solving and communication tool.
- Demonstrate how the Plan-Do-Check-Act, or PDCA, cycle is an integral part of A3.
- Walk through the steps for completing an A3 Report, including key questions to ask at each stage.
- Discuss what makes a good A3.

**Current State Value Stream Mapping for Education:**
**(45 minutes)**
This module will:

- Define a Value Stream.
- Describe a Current State Value Stream Map and discuss its purpose.
- Walk through the steps of creating a Current State Value Stream Map; identify commonly used symbols; and describe how metrics are collected and represented.

**Eight Wastes for Education:**
**(25 minutes)**
This module will:

- Describe Value Add versus Non-Value Add activities and explain why they are important in a Lean implementation.
- Identify the Eight Wastes and discuss why they are a primary focus during Lean implementation.
- Discuss each of the Eight Wastes in detail and give examples.

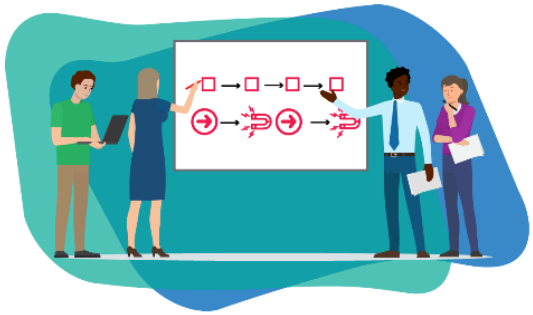


**Error Proofing for Education:**
**(20 minutes):**
This module will:

- Define Error Proofing from a Lean perspective.
- Describe the benefits an educational organization can expect.
- Discuss how it can improve student and customer safety, confidentiality, and service quality while reducing failures and omissions.
- Show how to apply the 6-Step error-proofing process.
- Explain how to implement Error Proofing for education processes.

**Flow and Pull Systems for Education:**
**(35 minutes)**
This module will:

- Define Continuous or One-Piece Flow and the introductory aspects of Pull Systems.
- Explain where to implement Pull Systems in the educational environment.
- Discuss how they enable the effective flow of information and materials.
- Identify which tools are best suited for various office and education environments.



**Future State Value Stream Mapping for Education:**
**(45 minutes)**
This module will:

- Define a Future State Value Stream Map and describe its purpose.
- Define and calculate several Lean metrics and discuss their roles in Value Stream Mapping.
- Demonstrate how to analyze a Current State Value Stream Map to create a Future State Value Stream Map.
- Discuss how to enable Flow and develop Pull.

**Introduction to Lean for Education:**
**(30 minutes)**
This module will:

- Discuss why the implementation of Lean is vital to the continuous improvement of an educational system.
- Define the basics of the Lean improvement methodology.
- Learn the five key principles of Lean, and how they work in an education environment.

**Kaizen Event for Education:**
**(35 minutes)**
This module will:

- Define Kaizen Event and discuss its purpose and application.
- Explain how Kaizen Events can provide rapid organizational benefits and accelerate the execution of larger initiatives.
- Walk you through the structured approach for running Kaizen Events in education and back-office processes.

**PDCA:**
**(30 minutes)**
PDCA stands for "Plan-Do-Check-Act" and is a quality control tool. This module will:

- Provide a step-by-step guide to the PDCA cycle.
- Demonstrate the role of PDCA in Kaizen events and other process improvement initiatives.

**Standard Work for Education:**
**(30 minutes):**
This module will:

- Define Standard Work from a Lean perspective.
- Discuss the benefits of Standard Work.
- Explain why it is the basis for improvement.
- Explain how to create, implement, and improve Standard Work for education and back-office processes.

**Visual Management for Education:**
**(25 minutes):**
This module will:

- Define Visual Management and describe its purpose and benefits in education.
- Introduce the three characteristics of Visual Management – Self Explaining, Self-Regulating, and Self Improving – and discuss why they are important.
- Describe the difference between Visual Controls and Visual Displays, giving examples of each.

**Workplace Design for Education:**
**(25 minutes)**
This module will:

- Describe how Lean Workplace Design differs from traditional approaches.
- Discuss its benefits to an educational organization.
- Show how it is used to improve quality and reduce lead times.
- Explain how to create effective Workplace Design for Education processes.

# PROJECT MANAGEMENT ESSENTIALS

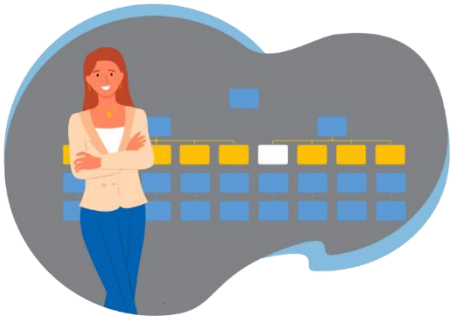
**PM: Introduction to Project Management:**
**(100 minutes)**
This module will:

- Define a project.
- Identify the roles and responsibilities of a Project Manager.
- Identify the processes involved in Project Management such as: initiating, planning, executing, controlling and closing.
- Identify the relationship between scope, time and cost and how these factors affect the success and quality of a project.

**PM: Initiating:**
**(70 minutes)**
This module will:

- Explain how to develop the Project Charter
- Identify the Project Stakeholders
- Define the purpose of the Focus Arrow and how it helps us assist with defining "Done Looks Like This"
- Describe how to create a Priority Matrix that helps us rank the customer's wants for the project
- Determine how to create and write a Project Scope Statement

**PM: Work Breakdown Structure (WBS):**
**(75 minutes)**
This module will:



- Explain the purpose of the WBS.
- Discuss how to develop the WBS.
- Describe how to use the WBS.
- Identify the various approaches to constructing the WBS.
- Define the terminology that is involved with the WBS.

**PM: Scheduling Skills:**
**(50 minutes)**
This module will:

- Discuss Sequential and Simultaneous scheduling concepts
- Explain Critical Path and Float Time for scheduling project activities
- Discuss Free Float/Slack Time
- Describe Gantt Scheduling
- Define Network Scheduling e.g., AON, and Pert Charts

**PM: Scheduling Tools:**
**(100 minutes)**
This module will:

- Explain that Activity is a component of work performed during a project
- Discuss the difference between the types of network diagrams, Activity on Arrow and Activity on Node
- Define Duration
- Define what Dependencies and Predecessor lines are
- Discuss how to compute Early Start (ES), Late Start (LS), Early Finish (EF) and Late Finish (LF) for each node in a schedule
- Explain how to calculate the Forward and Backward Pass
- Define what Critical Path and Float Times are

**PM: Human Resources:**
**(50 minutes)**
This module will:

- Explain how the RACI Chart will help us define and clarify the team member's role.
- Discuss how the attributes must be met by prospective team members.
- Define work, duration and elapsed time and how these elements are interrelated when working on a project.
- Show how to plug the team members into the project schedule.
- Define the four stages (Forming, Storming, Norming and Performing) a group of individuals will go through while developing into a team.
- Introduce the core elements for leading and managing a team

**PM: Executing:**
**(50 minutes)**
This module will:

- Introduce useful tools for the Executing Phase.
- Describe how different levels of team member skill or interest may affect the WBS.
- Explain the purpose and use of the Stakeholder Analysis form.
- Discuss how to build quality into every step of the project.

**PM: Managing Project Changes:**
**(35 minutes)**
This module will:

- Discuss how project changes are approved or rejected.
- Explain the 8 processes a Project Manager must know in order to manage changes to a project.
- Identify an easy method for preparing a project status report

**PM: Controlling - Earned Value Management:**
**(50 minutes)**
This module will:

- Explain how to develop a communication plan and establish the communication links
- Discuss the purpose and the building of an Earned Value Management chart
- Identify the purpose of the lines on an Earned Value Management Chart: Planned Value line, Earned Value line and the Actual Cost line
- Discuss the formulas that will help you find: Schedule Variance, Cost Variance, Schedule Performance Index and Cost Performance Index
- Explain how to build the Critical Ratio Chart and worksheet

**PM: Closing:**
**(20 minutes)**
This module will:

- How to gain agreement that the project is complete.
- The process for handing the project off to the customer.
- What support elements must be closed at the end of the project.
- About closing procurements and negotiated settlements.
- How to hand off a project to an implementation team.

# LEADERSHIP

**Leadership - Introduction to Conflict Management:**
**(35 minutes)**
This Leadership module is part one of a two-part series on conflict management. This module will:

- Explore the causes and types of conflict
- Show how to demonstrate the costs of conflict for individuals and organizations
- Examine different conflict styles
- Expose barriers to effective conflict resolution
- Explain how to teach cooperative approaches to handling conflict

**Leadership - Conflict Management Tools:**
**(40 minutes)**
This Leadership module is part two of a two-part series on conflict management. This module will:

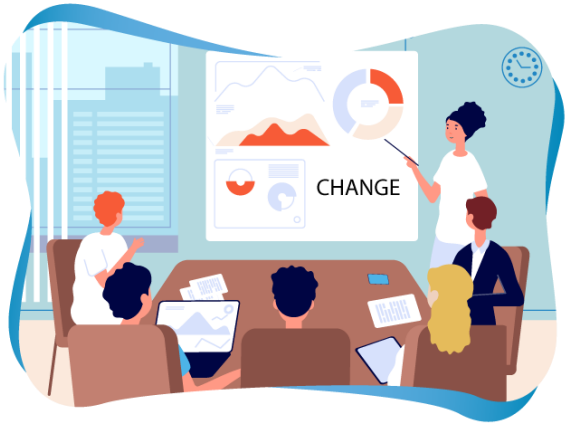
- Expose barriers to effective conflict resolution
- Teach cooperative approaches to handling conflict
- Explore strategies to minimize the costs of conflict

**Leadership - Understanding Change:**
**(40 minutes)**
This module will:

- Evaluate the driving forces of change
- Examine psychological and emotional responses to change
- Identify sources of resistance to change
- Identify attributes that help teams cope with change

**Leadership - Managing Change:**
**(40 minutes)**
This module will:

- Teach how to develop strategies and methods for facilitating change
- Explain how to practice applying change leadership strategies to support a successful change effort
- Identify ways to embed continuous improvement, change, and growth in the organization's culture



**Leadership - Emotional Intelligence:**
**(45 minutes)**
This module will:

- Explain how to use and manage your emotions
- Show methods for positively influencing others' emotions
- Explore ways to influence others through intrinsic motivators

**Leadership - Active Listening:**
**(25 minutes)**
This module will:

- Explain what Active Listening is and how you can develop this skill as you become an effective communicator.
- Consider that Active Listening takes practice and is a learned skill developed over time. It is not only hearing what a person says in communication; it is also being engaged in the conversation.
- Show that Active Listening requires you to hear, think, and absorb what is being said. It requires concentration and interpreting the meaning behind what you hear.

**Leadership - Effective Communication:**
**(60 minutes)**
This module will:

- Enhance awareness of the subject of communication
- Assess your style
- Identification of other's communication style
- Examine the multiple channels of communication
- Recognize and manage verbal and non-verbal behaviors
- Explore and practice behaviors
- Show how to use assertive rather than aggressive, passive, or passive-aggressive communication

**Leadership - Diversity and Inclusion:**
**(60 minutes)**
This module will:

- Explore the many layers of diversity
- Recognize the impact of conscious and unconscious bias
- Examine the roots and causes of our perceptions and reactions to others
- Study how bias and stereotypes may unintentionally influence our thoughts and decisions
- Identify possible areas of conflict among diverse groups and patterns of diversity conflict in the workplace
- Learn our role in fostering diversity and inclusion

**Leadership - Managing Generations:**
**(45 minutes)**
This module will:

- Explain how to identify generational differences
- Describe how the differences are displayed in the workplace
- Discuss communicating with and managing a multi-generational workforce
- Provide details on managing telecommuting workers
- Explore ways to manage potential conflict

**Leadership – Meeting Facilitation Basics:**
**(45 minutes)**
This module will:

- Identify the type of meeting necessary to achieve the desired goal
- Identify the components of a meeting and ensure proper preparation
- Explain how to structure a meeting agenda
- Show how to establish ground rules
- Describe how to follow the PDCA meeting framework for continual improvement

**Leadership –Facilitation Skills:**
**(45 minutes)**
This module will:

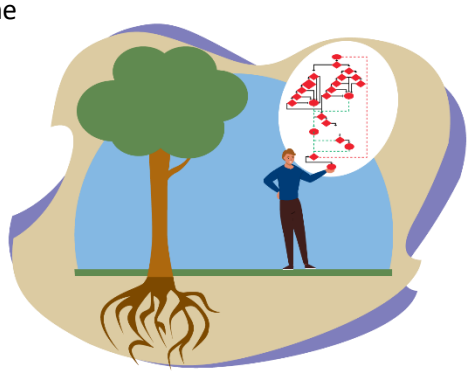
- Explain how to engage meeting participants
- Discuss how to ask effective questions
- Show how to make productive statements
- Provide techniques for making smooth transitions
- Explore how to identify causes of conflict
- Consider ways to resolve conflict
- Provide best practices for guiding the decision-making process
- Show methods for dealing with disruptive behavior

# PROBLEM SOLVING ESSENTIALS

**A3 Problem-Solving:**
**(35 minutes)**
A3 Problem Solving is a means of capturing all stages of a problem - identification, analysis, review, solution planning, and project management - on one A3 sized (11"x17") piece of paper. A3 Problem Solving facilitates visual tracking of a project. This module will:

- Show the importance of observation for Lean process improvement.
- Describe the A3 Report as a problem-solving and communication tool.
- Demonstrate how the Plan-Do-Check-Act, or PDCA, cycle is an integral part of A3.
- Explain the concept of Going to Gemba.
- Walk through the steps for completing an A3 Report, including key questions to ask at each stage.
- Discuss what makes a good A3.

**Cause and Effect Diagrams:**
**(65 minutes)**
Cause and effect mean that an action or event will produce a reaction or response in the form of another event. Cause and effect diagrams are used for root cause analysis of what factors are creating the risks within the project. The goal is to identify and treat the root of the problem, not the symptom. This module will:



- Explain the three basic steps for identifying and preventing problems.
- Apply basic cause and effect principles in order to identify the root cause of a problem.
- Teach techniques for gathering information for cause-and-effect analysis, including Five Whys and Brainstorming.
- Organize data and information for analysis using the Affinity Diagram and the Fishbone (or Ishikawa) Diagram.
- Analyze a process using Root Cause Analysis and The XY Matrix.

**Eight Wastes:**
**(25 minutes)**
Producing anything that the customer doesn't want, or need is waste. It lowers your profits and leaves you less competitive in your market. Learn about the waste that is hidden, or taken for granted, in both manufacturing and office environments. Utilizing Lean techniques can help to dramatically reduce these wastes and their associated costs. This module will:

- Describe Value Add versus Non-Value Add activities and explain why they are important in a Lean implementation.
- Identify the Eight Wastes and discuss why they are a primary focus during Lean implementation.
- Describe each of the Eight Wastes in detail and give examples.

**Error Proofing:**
**(20 minutes)**
Error Proofing is used to ensure products and processes are completed correctly the first time. The goal of error proofing is to prevent the occurrence of defects and to ensure that mistakes are detected when they occur. Because people can make mistakes even in inspection, error proofing often relies on mechanisms built into tools or systems that automatically signal when problems occur or prevent the process from continuing until the proper conditions are met. This module will:

- Define Error Proofing from a Lean perspective.
- Describe its business benefits.
- Discuss how it can improve quality and reduce failures and omissions.
- Illustrate the 6-Step error proofing process and how to apply it.
- Explain how to implement Error Proofing for both office and manufacturing processes.

**Introduction to Lean Office and Service:**
**(45 minutes)**
In the office and service environments, Lean improvement activities focus on eliminating waste and speeding up the process. This is accomplished by eliminating idle time, bureaucracy, and unnecessary redundancy. Lean Office and Service also helps organizations understand and predict changes in customer expectations, thereby enabling them to react quickly to meet customer needs. This module will:

- Discuss why Lean Office and Service is important to an organization's long-term success.
- Discuss common obstacles organizations face when implementing Lean Office and Service and how to overcome them.
- Discuss the relationship between some important Lean tools, including process mapping, service family matrixes, and Value Stream Analysis, and demonstrate how to apply them.

**Introduction to Lean Principles:**
**(55 minutes)**
A Lean operation produces just what is needed, when it is needed with no additional labor, costs, inventory, or time. Learn the skills necessary to apply Lean techniques to reduce waste and improve process efficiency. Gain a practical understanding of Lean continuous improvement techniques and how to use them to reduce errors, inventory, and production lead time. This module will:

- Define Lean, its importance, benefits, and objectives.
- Describe Lean tools, methodologies, and levels of deployment.
- Identify the roles and responsibilities of the Lean implementation team.
- Discuss how these roles can be integrated into an organization.

**Introduction to Problem Solving:**
**(60 minutes)**
This module will:

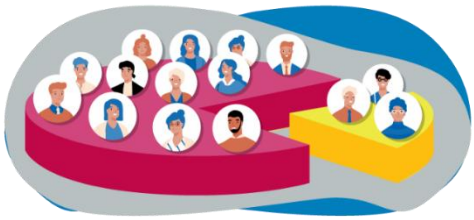
- Describe the importance of problem solving
- Explain a four-step problem-solving framework along with each step's supporting activities
- Discuss the differences between an individual and a team approach to problem solving
- Provide best practices for teams to consider
- Show tools and techniques used in problem solving
- Use an example scenario to tie things together

**Mapping the Process:**
**(50 minutes)**
Mapping the Process is a way to visually represent the sequence of actions that comprise a process. It helps to document, analyze, and improve on processes. This module will:

- Define a process and a process map.
- Describe the benefits of process mapping.
- Describe the differences between relationship maps, swim lane charts, and process maps.
- Discuss the three levels of detail used to describe a complex process.
- Walk through the five steps of process mapping.
- Demonstrate how to apply a process map.

**Pareto Analysis:**
**(40 minutes)**
Pareto analysis is a formal technique useful where many possible courses of action are competing for attention. In essence, the problem-solver estimates the benefit delivered by each action, then selects a number of the most effective actions that deliver a total benefit reasonably close to the maximal possible one. This module will:

- Explain how to create a Pareto Chart, including a cumulative relative frequency line.
- Given data and a Pareto Chart, describe how to use a variable to weight the original data and produce another Pareto Chart.
- Discuss how to use stratification methods to perform in depth Pareto analysis of the data.
- Explain how to interpret a Pareto Chart to make a business decision.



**PDCA:**
**(30 minutes)**
PDCA stands for “Plan-Do-Check-Act” and is a quality control tool. This module will:

- Provide a step-by-step guide to the PDCA cycle.
- Demonstrate the role of PDCA in Kaizen events and other process improvement initiatives.

**SIPOC:**
**(20 minutes)**
SIPOC is a tool that summarizes the inputs and outputs of one or more processes in table form. The acronym SIPOC stands for suppliers, inputs, process, outputs, and customers which form the columns of the table. This module will:

- Define SIPOC and describe its components.
- Discuss the purpose of SIPOC.
- Explain how to construct a SIPOC diagram.
- Describe how the information gained from a SIPOC analysis can be used.

# COMPETENCY-BASED LEARNING

# BASIC

## Our Basic Series offers:



- Basic Problem-Solving 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

## BASIC PROBLEM-SOLVING SKILLS SERIES

**Lean Six Sigma Introduction:**
Explain Lean Six Sigma.

**The Five Principles of Lean:**
Explain the purpose of the Five Principles of Lean, list the Five Principles of Lean and explain how each Lean Principle is applied.

**Waste Elimination:**
Classify activities into value-adding, non-value adding, but required, or non-value-adding and not required. Apply a Waste Walk Checklist to a real process identifying waste.

**Going to Gemba:**
Apply the Gemba principles: go see, ask why, and show respect.

**5S:**
Apply the first 3 steps for 5S in a work area.

**Visual Workplace:**
Apply Visual Management and Visual Controls in a work area.

**Project Management:**
Correctly write a Problem Statement and a Goal Statement.

**PDCA:**
Apply PDCA to a problem; Communicate PDCA results using a PDCA Storyboard.

**Voice of the Process (VOP):**
Collect data at the Gemba following the steps and key concepts about data collection.

**Process Mapping:**
Map a process using a flowchart.

**SIPOC:**
Build a SIPOC of a process.

**Spaghetti Diagram:**
Create a Spaghetti Diagram of a process.

**Root Cause Analysis:**
Apply 5 Whys to investigate a problem and identify the root cause.

**Benchmarking:**
Apply benchmarking to gather ideas to improve a product, service or process.

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

**Implementing Solutions:**
Utilize a Benefit Versus Effort Matrix to prioritize solutions; Complete a 4W1H Action Plan.

**Mistake-Proofing:**
Create a Mistake-Proofing device.

**Standard Work:**
Create Standard Work for a work activity.

**Follow up and Follow through:**
Complete the three steps to develop and implement a Control Worksheet; Effectively close a process improvement project.

# COMPETENCY-BASED LEARNING INTERMEDIATE

## Our Intermediate Skill Servies offers:

- Intermediate 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

## INTERMEDIATE PROBLEM-SOLVING SKILLS SERIES

**Lean Office and Service:**
Explain how Lean tools can be used to address office and service waste.

**A3 Problem-Solving:**
Follow and complete an A3 Problem-Solving report for a process improvement effort.

**Voice of the Customer (VOC):**
Explain the steps to obtain VOC and Construct an Affinity Diagram.

**Swimlane Process Map:**
Construct a Swimlane Process map of a real process to identify waste and suggest improvements.

**Voice of the Process (VOP):**
Show how to collect an adequate and representative sample.

**Theory of Constraints (TOC):**
Identify a constraint in a value stream and apply the first three steps of TOC: identify the constraint, Exploit the constraint, and Subordinate to the constraint.

**Leading Teams:**
Apply leadership skills to form teams and motivate people towards sustainable problem-solving.

**Leading Change:**
Successfully lead people through the process of change.

**5S:**
Apply and sustain all steps of 5S in a work area.

**Time and Motion Study:**
Conduct a Time and Motion study to suggest efficiency improvements based on data.

**Lean Metrics:**
Calculate key Lean metrics to assess the efficiency and the effectiveness of processes.

**Graphical Analysis:**
Plot the right graphics in Excel to present the voice of the process.

**Pareto Analysis:**
Construct a Pareto Chart to distinguish the vital few from the trivial many.

**Flow and Pull Systems:**
Enable flow and establish a pull system; identify opportunities for Kanban.

**Workplace Design and Layout:**
Use lean tools to analyze a real workplace design and suggest improvements using a future state Spaghetti Diagram.

**Changeover Reduction:**
Reduce process changeover time by applying the SMED methodology.

**Total Productive Maintenance (TPM):**
Calculate Overall Equipment Effectiveness (OEE) of a real piece of equipment to analyze its Availability, Performance, and Quality.

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

**Kaizen Event**
Successfully lead a Kaizen event to implement rapid improvements

**Theory of Constraints – (Part 1)**
Apply the five focusing steps of the Theory of Constraints (TOC) to identify and solve a process constraint and bottlenecks

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

**Voice of the Customer**
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**
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**
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**
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 (Module)**
Construct a Current State Value Stream Map and identify opportunities to enable flow, establish pull, and improve the process

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

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

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

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

**Control Charts (Modules)**
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 (Modules)**
Select, apply, and interpret the appropriate Measurement System Analysis (MSA) tool to conclude whether the measurement system is acceptable, marginal, or unacceptable

**Discrete Probability Distributions (Module)**
Assess risk and process capability related to discrete random variables by using the Binomial and Poisson distributions

**Process Capability Assessments (Module)**
Assess process capability by calculating capability indices including sigma level, Ppk, Cpk, PPM, DMPO, and DPU.

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

**Theory of Constraints – (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 (Module)**
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**
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)

**Leading Change**
Assess, Manage, and lead change necessary to improve the process; take effective actions to prevent and mitigate resistance to change

**Failure Modes & Effects Analysis (FMEA) (Module)**
Construct and interpret an FMEA to anticipate, quantify, and prevent failure modes from occurring, minimizing process-related risk

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

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

**Leader Standard Work**
Create and follow Leader Standard Work to role-model leadership behaviors, routines, check-ins to drive consistency, visibility, and accountability in the development of a Lean culture and management system

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

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- ✓ Simple, direct, powerful

**No team needed to grow.**
You have the will…
Now you have the way.

**Solo? You're Still a Powerhouse.**

Gain unlimited access to our Foundational Skills library of e-Learning Modules and popular classes for as long as you subscribe. You'll find the full course list conveniently located on the top menu.

This is the exact training trusted by world-class organizations like the United States Air Force, Bank of America, and Cargill—so you know you're learning what the best already use.

Whether you're looking to advance, transition, or excel in your career, OpusWorks gives you the tools to prepare and supercharge your future.

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### Small Teams

- ✓ IACET-accredited curriculum
- ✓ Full-featured platform, simplified for smaller teams
- ✓ No IT setup or technical support needed
- ✓ Autonomous, self-paced learning
- ✓ Scalable as your team grows
- ✓ Convertible to Enterprise CPI

**Small Team CPI is not just training…**
It's transformation, made easy.

**Small Team. Big Impact.**

Small team agents have full control to track progress, add users, and manage deployments with ease. Learners get immediate access to our complete, IACET-accredited course library earning industry-recognized credentials at their own pace. No scheduling, no instructors required—just log in and start learning when it's most convenient.

# ASK OPUS

**Your AI Guide for CPI Training and Execution**

With "Ask Opus AI", the future of CPI is here—faster results, higher quality, and greater customer satisfaction. "Ask Opus", AI infused into OpusWorks learning platform, and available on all student portals to empower teams with tailored learning that closes knowledge gaps and boosts performance.

**Our Intelligent Assistant can transform your CPI:**

- Personalized Answers to tough questions
- Relevant Examples that are job specific
- Trusted Mentoring every step of the way
- Non-Judgmental Help when needed


**Choose OpusWorks for AI-Infused CPI**

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# STATWORKS!

OpusWorks' StatWorks! is a statistical software offering a user-friendly and intuitive interface. StatWorks! enables users to input raw data, guides them towards the appropriate tool, performs various statistical tests, generate graphs and charts, and interpret results using AI. The OpusWorks' statistical software includes tools such as Pareto, Histogram, Boxplot, Control Charts, Process Capability Analysis, Hypothesis Testing, Correlation Analysis, Regression, ANOVA, Measurement System Analysis, and Design of Experiments. It is a valuable asset for professionals in various roles and industries looking to drive continuous improvement and achieve operational excellence.

Statistical software is a powerful tool used in Process Excellence to analyze data, identify trends and other patterns, relationships among process variables, and make informed decisions based on statistical analyses.