

**Lean Fundamentals**

**Course Number:** SIX-110  
**Duration:** 3 days

**Overview**

This Lean Fundamentals training gives attendees a high-level overview of Six Sigma and the five principles of Lean. Participants learn how to reduce waste, use Lean tools and methods, address constraints, implement an effective Lean 5-step (5S) environment, adopt continuous improvement, and more.

**Note:** This is a 3-day course if taught online. Adding an extra day for more hands-on lab time is recommended for on-site delivery.

**Prerequisites**

No prior experience is presumed.

**Materials**

All Lean training students receive comprehensive courseware.

**Software Needed on Each Student PC**

Minitab is preferred but not required.  A [free 30-day trial](https://www.minitab.com/en-us/products/minitab/free-trial/) is available for student usage.

**Objectives**

* Lean and Six Sigma, their foundations, and key developments in their application
* Use Lean tools and methods to ensure the success of the Lean transition
* Understand Kaizen Blitz and the structure of Kaizen events
* Complete and sustain an effective 5-step (5S) environment
* Quantify the impact of 5S through inventory, space, and time savings
* Explore the types of activities found in processes
* Identify waste and incorporate methods to reduce the impact
* Conduct basic Root Cause Analysis (RCA) and establish functional mistake-proofing methods
* Calculate the pulse of the process to meet the business demands and maintain flow
* Identify and address constraints within a process
* Establish signaling methods for work task completion
* Implement Generic Pull and 2-Bin Kanban systems
* Identify and remove unnecessary steps

**Outline**

* Introduction
* Lean and Six Sigma
  + A brief history of Lean and Six Sigma in various industries and processes
  + Why businesses should adopt a continuous improvement mentality
* Project Definition and Approach
  + Game plan for the implementation
  + Lean tools and methods
  + Kaizen Blitz and the structure of Kaizen events
* 5-Step (5S) and Visual Management
  + The proper organization of the work environment
  + The 5S environment
  + The impact of 5S through inventory, space, and time savings
* The 5 Principles of Lean & A3
  + The five principles of Lean, as delineated by Jones and Womack
  + A3 thinking and 8-step practical problem-solving
  + The relationship between A3 &DMAIC
* Principle One: Specify Value
  + Customer value add, business value add, or non-value add
* Principle Two: Identifying the Value Stream
  + State process map for wastes and value
  + Maps, time, and metrics
  + Identifying hidden factories and hidden work
* Root Cause Analysis (RCA) and Point of Cause
  + Using RCA to establish functional mistake-proofing methods
* Ideal and Future State Mapping
  + Using True North to guide the next iteration of the process, the Future State
* Principle Three: Removing Barriers to Flow
  + The methods to identify and address various types of constraints within a process
  + Work cells
* Principle Four: Implementing Pull
  + Setting up the process to accommodate inventory fluctuation to maintain a constant flow
  + Generic Pull and 2-Bin Kanban systems
* Principle Five: Pursue Perfection
  + Implementing control and mistake-proofs to eliminate non-value-added processes
* Conclusion