

Lean Certificate Training

Georgia Tech IIE Chapter

Introduction

A lean enterprise views itself as part of an extended value chain, focusing on the elimination of waste between you and your suppliers, and you and your customers. Lean has its origins in the teaching and writings of TQM and JIT, which espouse the idea of 'delighting the customer through a continuous stream of value adding activities.' Specifically, it is an extension of the phrase 'world class' as defined by Dr. Richard Schonberger as '... adhering to the highest standards of business performance as measured by the customer.'

In other words, value is always defined from the customer's perspective. Understanding your customer's needs is a prerequisite for driving Lean principles and methodologies. A commonly held definition of Lean Enterprise is, 'a group of individuals, functions, and sometimes legally separate but operationally synchronized organizations.'

The 'value stream' defines the Lean Enterprise. The objectives of the Lean Enterprise are to:

- correctly identify and specify 'value to the ultimate customer / consumer' in all its products and services
- analyze and focus the value stream so that it does everything from product development and production to sales and service in a way that activities that do not create value are removed and actions that do create value proceed in a continuous flow as pulled by the customer.

From the time a customer need is recognized until it is satisfied, the process and all its elements must add value for the 'value stream' to be meaningful. The basic components of this Lean system are waste elimination, continuous flow, and customer pull. As defined by John Krafcik, in his book, *The Machine that Changed the World*

'Lean production is 'lean' because it uses less of everything compared with mass production: half the human effort in the factory, half the factory space, half the investment in tools, half the engineering hours to develop a new product in half the time. Also, it requires far less than half of the needed inventory on site. The expected results are fewer defects, while producing a greater and ever growing variety of products.'

Lean applies to any organizational type and can be applied to all areas within the business. Essentially, Lean is a three-pronged approach incorporating A Quality Belief, Waste Elimination and Employee Involvement supported by a Structured Management System. Basically, we've taken simple processes and complicated them resulting in longer lead-times, reduced flexibility, increased inventories and the inability to meet customer demands.

Course Topics - Lean Green Belt

In this course the participant will learn how to map the process flow and identify the activities that add value from the customer's perspective. The participant will learn how to structure the

participant's organization to support and continuously improve a lean process. Individuals who successfully pass IIE's Lean Green Belt Exam will be awarded the Lean Green Belt.

Overview

This three-day course provides an in-depth understanding of lean enterprise principles and how to apply them within the participating organization. The participant's lean journey begins with a series of interactive simulations that demonstrate how each lean concept is applied and its impact on the process. Mapping the process flow and identifying the activities that add value from the customer's perspective is the cornerstone of this class. The class is then given a scenario and the students simulate the conversion from traditional to lean in a practical hands-on environment. The course also provides a structure for how to manage a lean process for continuous improvement. Participants will learn how to structure their organizations to support and continuously improve a lean process. Participants will also fully understand how to implement 5S within their plants and how to begin reducing setup time using the SMED process. At the conclusion of the course the participant must pass IIE's Lean Green Belt exam.

Topic Highlights

- 5S and Muda
- Point of use
- Pull
- SMED
- Value-added
- Value stream mapping
- SMED
- 7 Wastes
- Visual Workplace

What The Participant Will Learn

Upon completion of this course, the participant will be able to:

- Create and improve a lean process
- Implement 5S to develop a safe, clean working environment
- Map the process flow and identify activities that add value
- Reduce setup time using the SMED process

Course Content

- Flow: Establishing one-piece flow across the value-adding activities
- Point-Of-Use: Using workplace organization and equipment setup reduction techniques to enable flow by having all equipment and materials readily accessible
- Pull: Providing a method for continuously replenishing materials as they are consumed by customer demand
- Built-in Quality: Continuously improving each step of the production process to eliminate variation and to pursue the goal of perfect product and process quality
- Build to Demand: Learn to produce only to actual customer demand
- Exam