THAYER SCHOOL OF ENGINEERING AT DARTMOUTH

Lean Six Sigma Yellow Belt

Workshop Objectives

Participants will gain a board base of knowledge that will help in evaluation of problems and the learner will be able to work as a part of a team to present defendable solutions:

1. Know the origin and aims of Lean, Six Sigma, and Lean Six Sigma
2. Understand the roles and responsibilities within a Lean Six Sigma Team
3. Learn the Lean Six Sigma terms, tools, and DMAIC (Define, Measure, Analyze, Improve, Control) methods and definitions
4. Learn by doing a simulated case study whereby you will practice using common Lean Six Sigma tools and methods
5. Learn how to create a Charters Problem Statement that is measurable and linked to the Voice of the Customer (VOC)
6. Practice developing a SIPOC with Input, Process, and Output measures
7. Learn how to develop current state Quality, Speed, and Financial Metrics
8. Practice building a Measure Phase Data Collection Plan
9. Design Cause and Effect Diagram linking root causes to the process issue
10. Practice creating a Pareto Chart that quantifies the significant root causes
11. Learn how to identify and write up a Solutions (Implementation) Plan
12. Practice writing a process Control/Response/Escalation Plan

Prerequisites

Currently work in an office or operational area that can benefit from the tools, methods and concepts to be utilized for problem solving and solution development.

Who Should Attend?

Those who need to gain an understanding of how to systematically solve problems using a defined methodology (DMAIC), and its impact on the organization and on customers. This includes:

- Any direct employee, in office or operational areas
- Managers/supervisors of processes
- Quality department personnel
- Others who want to learn a problem solving methodology that can be utilized in many aspects of work life

Key Session Topics

- Overview of Lean and Lean Six Sigma
- DMAIC model
- Tools for Solving Problems
- Process Definition

Quiz

A multiple choice take home quiz.

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Delivery

Online instructor-led LIVE ONLINE in two (4-hour) sessions plus breaks.
On-site is available at client request.

Certificate of Completion:

Dartmouth College, Thayer School of Engineering, will issue a certificate of completion, in pdf format, to participants who complete the workshop with appropriate attendance and pass the take home quiz.

General Outline of Workshop:

Day 1: (half day, approx. 4 hours including breaks) Instructor: TBD

I. The Process / The Customers

- What is a Process?
- What Do Our Customers Want
- Management, Core & Support Processes

II: Lean

- Origins of Lean
- What is Lean?
- The 7 Wastes of Lean
- Value Analysis
- The Lessons of Lean
- Analysis Tool: “Value-Add” Assessment
- Takt Rate Analysis
- Visible Workplace

III. Six Sigma Section

- Six Sigma History
- What is Six Sigma?
- How Capable are your Products & Services
- Why 99% Yield is Not Good Enough
- Six (6) Causes of Variation

IV. Lean Six Sigma Integration Section

- What is Lean Six Sigma?
- Why Combine Lean & Six Sigma?

V. The DMAIC Methodology

- Funnel-Down Many Variables to the Critical Few!
- High Level DMAIC Approach

Define

- Define Activities and Tools
- Project Charter Elements
- Building an Opportunity or Problem Statement

- Opportunity or Problem Statement Example #1
- Opportunity or Problem Statement Example #2
- Creating the SIPOC Map and Developing Metrics
- Define Phase Completion Check

Day 2: (half day, approx.4 hours plus breaks) Instructor: TBD

V. The DMAIC Methodology(Continued)
Measure

- Measure Activities and Tools
- Value Steam Map Example
- Value Stream Map Symbols
- Measure – What gets measured?

Analyze

- Analyze Activities and Tools
- Cause and Effect Diagram
- How to Build a Cause and Effect Diagram
- Cause and Effect Diagram Example
- Pareto Chart

Improve

- Improve Activities and Tools
- Solution Plan
- Solution Plan Example
- Improve Completion Checks

Control

- Control Activities and Tools
- What is a Control / Response Plan?
- Control / Response Plans Questions?
- Control Completion Checks

VI. Review & Questions

