



Mountain Home --
We're Different by DESIGN!

P.O. Box 629
Arab, AL 35016
1-877-502-4663

MHC-2002 Lean Six Sigma Green Belt Certification Course
Course Outline

Lean Six Sigma Green Belt Course Module

1.0 Chapter One – Introduction to Continuous Process Improvement

1.1 Overview of Continuous Process Improvement

- 1.1.1 The Need for Change
- 1.1.2 A Tool for Change – Continuous Process Improvement (CPI)
 - 1.1.2.1 History of Continuous Process Improvement
 - 1.1.2.2 Continuous Process Improvement (CPI) Defined
- 1.1.3 Overview of Lean Six Sigma & the DMAIC Process Improvement Model
 - 1.1.3.1 Introduction to Lean
 - 1.1.3.2 Introduction to Six Sigma
 - 1.1.3.3 Integrating the DMAIC Process Improvement Model Stages
- 1.1.4 The Lean Six Sigma (LSS) Organizational Control Structure
- 1.1.5 The Impact of Lean Six Sigma on the Enterprise

1.2 Introduction to Business Process Management (BPM)

- 1.2.1 Organizing the New Enterprise
- 1.2.2 So, what is process management?
- 1.2.3 The Evolution of Process Management
- 1.3 The Human Side of Process Improvement (Culture Change)**
 - 1.3.1 Culture Change Defined
 - 1.3.2 The Concept of Pain vs. Pleasure
 - 1.3.3 Reactions to Change
 - 1.3.4 Managing the Transition

1.4 Conclusion

2.0 Chapter Two – Defining the Performance Problem

2.1 Defining the Problem

- 2.1.1 Planning Concepts and Principles
 - 2.1.1.1 Planning / Performance Cycle
 - 2.1.1.2 Planning and Lean Six Sigma
- 2.1.2 Strategic Planning – Defining Mission, Vision, and Performance
 - 2.1.2.1 Leaders Must Lead
 - 2.1.2.2 The Strategic Planning Process

2.2 LSS Project Selection



Mountain Home --
We're Different by DESIGN!

P.O. Box 629
Arab, AL 35016
1-877-502-4663

- 2.3 Defining the LSS Project – Scoping the Effort**
 - 2.3.1 Conduct Customer Needs Analysis: Identifying Customers & their Requirements
 - 2.3.1.1 Gather the Voice of the Customer (VOC)
 - 2.3.2 Define the Top-Level As-Is Business Process
 - 2.3.3 Conduct High-Level SIPOC
- 2.4 Document Project Plan and Final Project Charter**
 - 2.4.1 The LSS Project Charter
- 3.0 Chapter Three - Measuring the Baseline**
 - 3.1 Defining the Process: Introduction to Process Modeling and Mapping**
 - 3.1.1 Introduction to Process Modeling
 - 3.1.2 Introduction to Process Mapping
 - 3.1.3 Introduction to Value Stream Mapping
 - 3.2 Understanding Variance – Variability, Stability, and Capability**
 - 3.3 Develop the Measurement Plan**
- 4.0 Chapter 4 – Analyze the Baseline**
 - 4.1. Conduct Baseline Activity Analysis**
 - 4.1.1. Identify Potential Process Issues
 - 4.1.2. Conduct Value-Added/Non Value-Added Analysis
 - 4.1.3. Conduct Value Analysis
 - 4.1.4. Calculate Process Capability Indices
 - 4.1.5. Determine the Process Yield
 - 4.1.6. Generate a List of Potential Problems Areas
 - 4.2. Identify Root Causes**
 - 4.2.1. Conduct Failure Mode and Effects Analysis (FMEA)
 - 4.2.2. Create Cause-and-Effect Diagrams (Fishbone Diagrams)
 - 4.2.3. Conduct Cause-and-Effect Analysis (C&E Matrix)
 - 4.2.4. Conduct Pareto Analysis
 - 4.3. Verify Root Causes**
 - 4.3.1. Conduct Hypothesis Testing
 - 4.3.2. Conduct Correlation and Regression Analysis
 - 4.4. Determine Opportunities for Improvement**



Mountain Home --
We're Different by DESIGN!

P.O. Box 629
Arab, AL 35016
1-877-502-4663

5.0 **Chapter 5 – Improving the Process**

5.1. **Develop a List of Process Improvements (Idea generation)**

- 5.1.1. Coming up With Solutions - The Lean Philosophy
- 5.1.2. Rank and Select Process Improvement Opportunities
- 5.1.3. Identify Process Best Practices (Benchmarking)
- 5.1.4. Determine Process Improvement Alternatives
- 5.1.5. Populate Activity Analysis Workbook (Sections I & II, Part I)

5.2. **Document To-Be Process**

- 5.2.1. Document the To-Be Process Models
- 5.2.2. Develop To-Be Process/Activity Maps
- 5.2.3. Document To-Be (Future State) Value Stream Map

5.3. **Plan and Implement Solution**

- 5.3.1. Deployment Strategies
- 5.3.2. Populate Activity Analysis Workbook (Section II, Part II)

6.0 **Chapter 6 – Controlling the Process**

6.1. **Define To-Be Process Standards**

- 6.1.1. Standard Procedures
- 6.1.2. Statistical Process Control (SPC)
- 6.1.3. Engineered Process Control (EPC)

6.2. **Developing a Process Control Plan**

- 6.2.1. Components of a Process Control Plan

6.3. **Train Personnel**

6.4. **Establish Internal Audit Plan**

6.5. **Measure the Bottom-Line**

6.6. **Closure and Recognition**