Caldwell & Associates LLC
P.O. Box 624
Springboro, OH 45066-0624

Lean Six Sigma Black Belt Training – Part 1

Course Content

This course is an accelerated Lean Six Sigma Black Belt, a two-week Black Belt boot camp. Green Belt's knowledge of Lean Six Sigma concepts and principles is highly recommended. The course will teach you a high level of statistical problem solving and process improvement techniques. The course will cover all the tools and techniques used in the Lean Six Sigma DMAIC methodology.

Who Should Attend

Plant managers, manufacturing engineering managers, Industrial engineering managers, purchasing managers, supply chain managers, product design engineering managers, product design engineers, manufacturing engineers, process engineers, industrial engineers, tooling designers, tooling engineers, quality engineers, schedulers, supervisors, set-up operators, inspectors, buyers, and purchasing agents.

Price: $1,995

Prerequisites

Lean Green Belt or Lean Six Sigma Green Belt Training

Course Materials

Each participant will receive course documentation in pdf format. A trial version of Minitab needed for classes.

Course Goals

- Learn the Lean Six Sigma concepts and techniques to support Operational Excellence performance
- Learn how to use statistical data to solve problems and improve processes
- Learn how to lead a Black Belt Project
- **To become a Certified Lean Six Sigma Black Belt**

Course Outline – Part 1

- **What is Operational Excellence?**
  - What is Lean Six Sigma?
  - A Brief History of Operational Excellence
  - The Journey to World Class Excellence
- **The DMAIC and Define Phase**
  - Project Charter & Define Phase
  - Roles & Responsibilities
  - Voice of the Customer (VOC)
  - Lean Six Sigma VOC Measurables
  - Stakeholder Analysis; SIPOC
  - Group Technology Analysis
  - 8 Waste, 5S, and Visual Workplace
- **Measure Phase**
  - Kaizen Event = Continuous Improvement Workshop
  - Baseline Data Collection
  - Current State Value Stream Maps,
  - Current State Layouts, Spaghetti Diagrams
  - Types of Data; Histograms & Pareto Charts
  - Operator Analysis
  - Measurement System Evaluation Studies (MSE/MSA)
  - Probability and Statistics; Box Plot and Scatter Plot
  - Statistical Process Control (SPC); Gauge R&R studies
  - Process Capability (Pp/Ppk)
  - Introduction to Lean Edit
  - Introduction to IGrafx
  - Introduction to Minitab

Course available at your facility.

www.CaldwellAssociatesExcel.com

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Lean Six Sigma Green Belt Training – Part 2

Course Content

This course is an accelerated Lean Six Sigma Black Belt, a two-week Black Belt boot camp. Green Belt's knowledge of Lean Six Sigma concepts and principles is highly recommended. The course will teach you a high level of statistical problem solving and process improvement techniques. The course will cover all the tools and techniques used in the Lean Six Sigma DMAIC methodology.

Who Should Attend

Plant managers, manufacturing engineering managers, Industrial engineering managers, purchasing managers, supply chain managers, product design engineering managers, product design engineers, manufacturing engineers, process engineers, industrial engineers, tooling designers, tooling engineers, quality engineers, schedulers, supervisors, set-up operators, inspectors, buyers, and purchasing agents.

Price: $1,995

Prerequisites

Lean Green Belt or Lean Six Sigma Green Belt Training

Course Materials

Each participant will receive course documentation in pdf format. A trial version of Minitab needed for classes.

Course Goals

- Learn the Lean Six Sigma concepts and techniques to support Operational Excellence performance
- Learn how to use statistical data to solve problems and improve processes
- Learn how to lead a Black Belt Project
- **To become a Certified Lean Six Sigma Black Belt**

Course Outline – Part 2

- **Analyze Phase**
  - Analyze Phase Overview
  - Kaizen Event = Continuous Improvement Workshop
  - Future State Value Stream Map
  - Future Lean Layouts
  - Future Layout Spaghetti Diagram;
  - Takt Time Analysis
  - One Sample, Two Sample, and Paired T-Tests
  - ANOVA; Regression; Chi-square;
  - DPMO Calculations; Reliability and Quality Specifications
  - Pull Production; Kanbans; Heijunka
- **Improve Phase**
  - Design of Experiments (DOE)
  - Lean Six Sigma Comparison Analysis
  - Standardization
  - Implementation Plan
    - Verifications and/or Qualifications Testing
    - Control Plan
- **Control Phase**
  - Implement Control Plan
  - Conduct Verifications and/or Qualifications Testing
  - Capture Improvement Data
  - Audit Improvement
  - Sustain Improvements
- **Optional Lean Six Sigma Black Belt Certification Exam**

Course available at your facility.

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