Without continual growth and progress, such words as improvement, achievement, and success have no meaning."

Continuous Improvement Courses

Professional Development Training has a specialised division of Continuous Improvement experts that will tailor the delivery of any of the courses to be specific to your situation and learning needs.
Continuous Improvement Courses

- Lean Six Sigma Introduction
- Lean Six Sigma Black Belt Certification Training
- Lean Six Sigma Management Project Selection Training
- Lean Six Sigma Team Members Training
- 5S Continuous Improvement Training
- Lean Six Sigma Green Belt Certification Training - 3 day Accelerated
- Supply Chain Management
- Lean Six Sigma Green Belt Certification Training
- Lean Six Sigma Process Management Training
- Lean Six Sigma Yellow Belt Certification Training
- Lean Six Sigma Black Belt Certification Training - Accelerated 5 day Course
- Lean Six Sigma Green Belt Certification Training Upgrade from Yellow Belt Course
- Lean Six Sigma - Executive Briefing
- Lean Six Sigma Management Champions Course
- Lean Six Sigma Team Members Awareness Training
- Lean Process Improvement Training Course
- Lean Six Sigma Black Belt Certification Training Upgrade from Green Belt Course
Professional Development Training has a specialised division of Continuous Improvement experts that will tailor the delivery of any of the courses to be specific to your situation and learning needs. Our extensive curriculum in Continuous Improvement, outstanding depth of trainers across the country and diverse range of industry experience means that pd training is the best choice for Continuous Improvement courses. pd training will exceed your expectations and help you achieve the results you are seeking.
In-House Training

**In-House Training Benefits:**

- Tailored to your needs and goals
- Cost-effective - from $140 per person (full-day)
- You choose the day, place and time
- Greatest impact in the shortest time
- Great team building opportunity
- Convenient - Employees do not need to go off-site

**Tailored Delivery – Standard**

We will always tailor the delivery of your In-House Training course to ensure it is relevant to your team and targeted at your learning goals. We can incorporate your company’s examples and terminology to ensure that the training can be directly related back to your workplace. This is standard and included in the price.

The “1-hour Motivator” Training Sessions
These 60-90 minute sessions are highly motivating and thought-provoking - ideal for those people who need to fit training in around a busy work schedule - great as an early morning kick-start or lunchtime boost!

Full-day Short Courses
1-day and 2-day short courses are delivered with a unique focus on 80% activities 20% content - just the way learning should be!

The “3-hour Power” Sessions
3-hour power sessions are a great solution when you have very specific outcomes you are targeting, or if scheduling the team to be off the job for a whole day is proving to be a challenge!

Conferences and Workshops
Do you want your conference to be memorable, fun, interactive and be a real highlight? pd training’s dynamic trainers can add that flair, excitement and much more!

**Expert Trainers**

“When you are training with us, you receive experiential training from an expert in their field which ensures you can apply what you have learned directly back to your workplace. When you are training with us, you are there to learn from the trainer, not the manual!”

Public Courses

**Training Style:**

Your course will be activity-based learning. You receive some background theory, and then spend most of the time working together and with the trainer to apply the concepts to workplace situations that are applicable to your specific situation.

**Class Size:**

Classes are an average of 6 people, max of 12. We keep classes small to ensure the trainer can work with each participant to tailor each activity to be relevant to each person’s workplace/common scenarios.

**Where:**

Sydney, Melbourne, Brisbane, Canberra, Adelaide, Perth, Parramatta.

**Scheduling & Times:**

Classes run from 9:00am - 4:30pm each day
Quality Lunch (tell us your dietary requirements)
Comprehensive up-to-date courseware

**Practical & Real - Activities tailored to you...**

Training is much more effective and enjoyable if you can apply the concepts you learn directly to your own circumstances. So the trainer will change textbook activities to be relevant to you.

**For example:**

If the example activity is based in a retail setting, but you work in a customer service call-centre, we will adapt activities to reflect the culture of a call-centre environment, so your team will be learning relational tools and techniques that really make sense to their world. Helping you learn today, and

**Fun & Relaxed - Laugh while you learn...**

Our relaxed and practical approach with experienced trainers that like to ‘have a laugh’ will ensure you enjoy the experience of learning as much as you enjoy acquiring new skills that help you perform better.

Yes, lunch is free - and we all like a free lunch. However, the highlight of your course will be the learning experience - not the break!
Each course involves about 20 activities each day to assist practical skill development and understanding of concepts. Training is customised according to the requirements of the participants for maximum benefit.

Considering your needs, pd training has made Administration available at your place, online and at various locations across Australia. The courses are designed to be of short-duration, lively, informal and highly valuable.

- Training Booster Reinforcement System
- Free Re-sit
- eHelpDesk Support
- Bonus Supplementary eLearning
- Quick Reference Job Aid
- Hours of Business Video content
Lean Six Sigma uses waste-reduction and process-improvement methodologies to increase end value for customers and save resources in the process of achieving these goals. It improves processes by identifying, analyzing, measuring and controlling areas of waste with the aim to improve processes, reduce costs and enhance value for customers. The pdtraining Lean Six Sigma Introduction Training Course is designed for beginners where you can develop a deeper understanding of Lean Six Sigma and its implementation. The training course creates a solid foundation in Lean Six Sigma methodologies to help you gain expertise in these concepts.

This highly significant and lively course is available throughout the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia and Seattle. Please click on the Public Class tab below to view our Lean Six Sigma Introduction Training course schedule by city or click the Client Site Training tab to receive a free quote for courses delivered at your preferred location.

**Lean Six Sigma Introduction Outline**

**Foreword:**
This course has been developed to enhance the knowledge and capability of people involved in the daily operation of business processes.

**The goal of this training is to:**
- Increase your knowledge of Process Management, Six Sigma and Lean techniques as Business Process Improvement methodologies.
- Increase your skills at improving the ease and performance of the processes in which you work.
- To gain an understanding of your role as a process team member for the achievement of business success.
- To select and improve one of the process you either own or work in.

**Outcomes:**

**Obtain a working understanding of Process Management, Six Sigma and Lean**
- Know and apply the basic concepts
- Demonstrate use of the terminology

**Comprehend daily work as a process-oriented activity**
- Understand process inputs and outputs
- Understand process flow and know what determines value add vs. non-value add
- Understand how the processes you are a part of fit into the larger set of processes needed in delivering value to the customer

**Perform Process Mapping and characterization**
- Create a detailed Process Map of a process you are personally involved in.
- Prioritize significant outputs from the process and quantify their level of performance to requirements.
- Identify inputs and their relationship to the significant outputs.

**Perform process improvement activities**
- Improve a process you are personally involved in using Process Management, Six Sigma methods and Lean
Establish control mechanisms and monitoring processes to sustain an existing process and/or any improvements you make.
Understanding Lean

- About Six Sigma
- About Lean
- History behind Lean
- Toyota Production Systems
- The Toyota Precepts

Liker's Toyota Way

- Philosophy
- Process
- People and Partners
- Problem Solving

The TPS House

- The Goals of TPS
- The First Pillar: Just In Time (JIT)
- The Second Pillar: Jidoka (Error-Free Production)
- Kaizen (continuous improvement)
- The foundation of the house

The Five Principles of Lean Business

- Value
- Value stream
- Flow
- Pull

The First Improvement Concept (Value)

- Basic characteristics
- Satisfiers
- Delighters
- Applying the Kano Model

The Second Improvement Concept (Waste)

- Muda
- Mura
- Muri
- The New Wastes

The Third Improvement Concept (Variation)

- Common Cause
- Special Cause
- Tampering
- Structural

The Fourth Improvement Concept (Complexity)

- What is complexity?
- What causes complexity?
- How to simplify?

The Fifth Improvement Concept (Continuous improvement)

- The PDSA Cycle (Plan, Do, Study, Act)
- The DMAIC Method

The Improvement Toolkit

- Gemba
- Genchi Genbutsu
Web Links:

View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
In a world with expanding markets, increasing costs and environmental concerns, organizations need to ensure that their supply chain is optimized. Supply Chain Management Training Course offers comprehensive understanding of finances, logistics, tracking, monitoring, inventory management, and delivery of products and services to build enhanced supply chains. Organizations can increase customer satisfaction, increase efficiency, and reduce costs by improving the management of their supply chain.

This valuable and practical training course is now available throughout the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia, and Seattle.

Supply Chain Management Outline

Foreword:
Rapid global expansion, rising fuel costs, environmental concerns and interconnected businesses can all have a tremendous impact on corporate strategies and costs. Organizations can no longer ignore what happens outside their own four walls, making Supply Chain Management a critical and in demand field.

This course from pd training helps to meet this demand. You'll gain a better understanding of the finances, logistics, and delivery of products and services, and learn how it leads to increased efficiencies and competitiveness while maximizing customer value and satisfaction.

Outcomes:

By the end of this course, participants will:

- Identify how supply chain management relates to:
  - Customer satisfaction
  - Improving performance
  - Lowering costs
  - Product development
- Define the terms:
  - Procurement
  - Upstream and downstream
  - Raw material
  - Forecasting
  - Carrying cost
  - Inventory
  - Order generation
  - Order taking
  - Order fulfillment
  - Returns management
- Understand the levels of supply chain management and their effects
  - Strategic
  - Tactical
  - Operational
- Comprehend the flows of supply chain management and data warehouses
  - Product flow
  - Information flow
  - Finances flow
- Take a look at inventory management
- Study supply chain groups
- Review tracking and monitoring methods
- Examine supply chain event management
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**Web Links:**


In-house Training Instant Quote: [https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx](https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx)

For successful implementation of Lean Six Sigma, executives must understand Six Sigma techniques, LSS process improvement methodologies, lean principles, and deployment models. Lean Six Sigma Executive Briefing Training Course involves training in each step in the preparation and implementation of Lean Six Sigma. It empowers company executives to map processes, consider capabilities and resources, training of employees in LSS, and the expected result of implementation of LSS.

This engaging and highly significant training course is available throughout the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia, and Seattle.

**Lean Six Sigma - Executive Briefing Outline**

**Foreword:**

This course has been developed to create an awareness of the means of deploying and the impact of a Lean Six Sigma initiative as a Business Process Improvement program.

**The goal of this training is to:**

- Increase your understanding of Lean Six Sigma techniques as business process improvement methodologies.
- Assist you in assessing the impact such as a program may have for your company.
- To gain an understanding of the role you, as management, must undertake to achieve the greatest level of business success.

**Personal Results**

After successfully completing this course you will have enhanced your knowledge of process functionality, analytical skills, problem solving skills, and methods for increasing the efficiency, effectiveness and adaptability of the organization you manage.

**Specific LSS learning outcomes:**

- Obtain an understanding of a Lean Six Sigma program objectives
  - Know and comprehend the impact the concepts can have on your business
  - Become familiar with the terminology
- Comprehend daily work as a process-oriented activity
  - Understand process inputs and outputs
  - Understand process flow and know what determines value add vs. non-value add
- Understand how the processes you manage fit into the larger set of processes needed in delivering value to the customer
  - Grasp the power of Process Mapping and characterization
  - Recognize significant outputs and quantify their level of performance to requirements
  - Identify inputs and their relationship to the significant outputs
  - Link key processes to the strategic objectives of the company
- Establish control mechanisms and monitoring processes to sustain an existing process and improvements you make.
- Prepare to implement a Lean Six Sigma
  - Determine the structure of such a program for your company
  - Learn to identify “projects”, prioritize them and link them to corporate strategy

**Outcomes:**

During this course you will:

- Obtain an understanding of a Lean Six Sigma program objectives
  - Know and comprehend the impact the concepts can have on your business
  - Become familiar with the terminology
- Comprehend daily work as a process-oriented activity
  - Understand process inputs and outputs
  - Understand process flow and know what determines value add vs. non-value add
- Understand how the processes you manage fit into the larger set of processes needed in delivering value to the customer
  - Grasp the power of Process Mapping and characterization
- Recognize significant outputs and quantify their level of performance to requirements
- Identify inputs and their relationship to the significant outputs
- Link key processes to the strategic objectives of the company
- Establish control mechanisms and monitoring processes to sustain an existing process and improvements you make.
- Prepare to implement a Lean Six Sigma
- Determine the structure of such a program for your company
- Learn to identify "projects", prioritize them and link them to corporate strategy

After successfully completing this course, you will have enhanced your knowledge of process functionality, analytical skills, problem solving skills, and the methods for increasing the efficiency, effectiveness and adaptability of the organization you manage.
Opening

- Competition

Process Management

- Definitions
- Process Ownership
- Cost of Poor Quality

Lean Principles

- Seven Areas of Waste
- Value Stream Analysis
- 5S Principles
- Poka-Yoke Methods

Six Sigma

- Define Phase
- Measure Phase
- Analyze Phase
- Improve Phase
- Control Phase

Deployment Model

- Importing the Knowledge
- Lean Six Sigma Curriculum
- Lean Six Sigma Program Operations
- Communication & Recognition

Glossary of Lean Six Sigma Terms

Web Links:

View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
Black belt certification in Lean Six Sigma signifies a level of mastery in lean and six sigma methodologies. The pdtraining Lean Six Sigma Black Belt Certification Training Course provides in-depth understanding of six sigma fundamentals and advanced phases. This course is designed to prepare people to manage Six Sigma Projects in the workplace, and pass the IASSC Certification exam.

Whilst there is no pre-requisite (you don't need to have completed Yellow or Green Belt to enroll) the course covers a lot of ground and progresses to very advanced analysis and modeling. People with LSS experience and strong mathematical ability will find it easier to keep up with the pace.

To stand out from the crowd with advanced skills and the most highly regarded global certification worldwide, this course is the best choice. Lean Six Sigma Black Belt Certification Training is available throughout the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia and Seattle. Global companies can empower tier continuous improvement initiatives by working with pdtraining globally for their Lean and Six Sigma initiatives.

Please click on the Public Class tab below to view our Lean Six Sigma Black Belt Certification Training course schedule by city or click the Client Site Training tab to receive a free quote for courses delivered at your preferred location.

**Lean Six Sigma Black Belt Certification Training Outline**

**Foreword:**
Becoming certified as a Lean Six Sigma Black Belt prepares you to take a leadership role in adding value to your organization, and opens endless senior job opportunities in your career. This course is the perfect blend between theory and practical application. In the class, you will enjoy learning by doing and walk out with a series of practical skills and methodologies. However, you will also have the perfect theoretical platform to prepare for the stringent IASSC Black Belt Certification exam.

We look forward to welcoming you to the course and empowering you to the drive measurable improvements in your organization and your career.

**Outcomes:**

**During this course, you will develop:**
- Understanding and implementation of the concepts of Six Sigma
- Ability to plan projects to achieve maximum process efficiency
- Capability to recognize elements of waste and countering them
- Skills to measure key aspects of a process to collect relevant data
- Ability to create a process map
- Ability to identify and measure process capability
- Ability to analyse data in order to find cause-and-effect relationships
- Identify the root cause of errors
- Hypothesis testing knowledge
- Ability to improve processes based on analysis
- Understanding of how to use various industry models for process improvement
- Ability to control processes
- Ability to ensure errors are removed before they can damage a process
- Understanding of capability analysis
- Understanding and use of lean
- Skills to control processes, productivity and waste

This **Lean Six Sigma Black Belt Certification** training course has been designed to build your knowledge and capability to improve the performance of processes, and subsequently, the performance of the business of which you are a part. The focus of the course is process centric. Your role in process performance improvement is to be through the use of the methodologies of Six Sigma, Lean and process management.

By taking this course, you will have a well-rounded and firm grasp of many of the tools of these methodologies. We firmly believe this is one of the most valuable classes that you will ever take, and we commit to provide you that value.
LSS Black Belt Define Phase

Phase Description:
The Define Phase of the DMAIC methodology is constructed to introduce the core fundamentals of Six Sigma. There are 5 modules in this phase:

Understanding Six Sigma
- Describe the objectives of Six Sigma
- Describe the relationship between variation and sigma
- Recognize some Six Sigma concepts
- Recognize the Six Sigma implementation model
- Describe your role and responsibilities in Six Sigma

Six Sigma Fundamentals
- Describe what is meant by “Process Focus”
- Describe the importance of VOC, VOB, and VOE, and CTQ’s
- Explain COPQ
- Generate a Process Map
- Describe the Basic Six Sigma metrics
- Explain the difference between FTY and RTY
- Explain the difference between DPU and DPMO

Selecting Projects
- Utilize a structured approach to select projects
- Refine and Define the problem into a Project Charter
- Make an initial estimate of your project’s benefits

Elements of Waste
- Have a clear understanding of the specific deliverables
- Have started to develop a Project Plan to meet the deliverables
- Have identified ways to deal with potential roadblocks
- Be ready to apply the Six Sigma method through your project

Wrap Up & Action Items

LSS Black Belt Measure Phase

Phase Description:
The Measure Phase of the DMAIC methodology is constructed to introduce important Six Sigma tools for characterizing your business issues. There are 6 modules in this phase:

Welcome to Measure

Process Discovery
- Create a high level Process Map
- Create a Fishbone Diagram
- Create an X-Y Diagram
- Describe the elements of a FMEA
- Explain the importance of a FMEA
- Describe why each tool is important

Six Sigma Statistics
- Explain the various statistics used to express location and spread of data
- Describe the characteristics of a Normal Distribution
- Test for Normality
- Describe the difference between Special Cause and Common Cause Variation
- Generate a variety of graphs for data
Measurement System Analysis

- Perform the step by step methodology in Variable and Attribute MSA’s
- Identify the various components of variation so corrections can be made and the gage error reduced
- Recognize the differences between Repeatability, Reproducibility, Accuracy and Calibration

Process Capability

- Estimate Capability for Continuous Data
- Describe the impact of Non-normal Data on the analysis presented in this module for Continuous Capability
- Estimate Capability for Attribute Data

Wrap Up & Action Items

LSS Black Belt Analyze Phase

Phase Description:

The Analyze Phase of the DMAIC methodology is constructed to introduce important Six Sigma tools for isolating critical factors. There are 9 modules in this phase:

Welcome to Analyze

“X” Sifting

- Perform a Multi-Vari Analysis
- Interpret a Multi-Vari Graph
- Identify when a Multi-Vari Analysis is applicable
- Interpret what Skewed data looks like
- Explain how data distributions become Non-normal when they are really Normal

Inferential Statistics

- Explain the meaning of the term “Inferential Statistics”
- Describe the basic tenets of the Central Limit Theorem
- Describe the impact of sample size on your estimates of population parameters
- Explain Standard Error

Intro to Hypothesis Testing

- Articulate the purpose of Hypothesis Testing
- Explain the concepts of the Central Tendency
- Be familiar with the types of Hypothesis Tests

Hypothesis Testing Normal Data Part 1

- Determine appropriate sample sizes for testing Means
- Conduct various Hypothesis Tests for Means
- Properly Analyze Results

Hypothesis Testing Normal Data Part 2

- Be able to conduct Hypothesis Testing of Variances
- Understand how to Analyze Hypothesis Testing Results

Hypothesis Testing Non-Normal Data Part 1

- Conduct Hypothesis Testing for equal variance
- Conduct Hypothesis Testing for Medians
- Analyze and interpret the results

Hypothesis Testing Non-Normal Data Part 2

- Calculate and explain test for proportions
- Calculate and explain contingency tests

Wrap Up & Action Items
LSS Black Belt Improve Phase

Phase Description:

The Improve Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are eight modules in this phase:

Welcome to Improve

Process Modeling Regression

- Perform the steps in a Correlation and a Regression Analysis
- Explain when Correlation and Regression is appropriate

Advanced Process Modeling

- Perform Non-Linear Regression Analysis
- Perform Multiple Linear Regression Analysis
- Determine the reason for experimenting
- Describe the difference between a physical model and a DOE model
- Explain an OFAT experiment and its primary weakness
- Show Main Effects Plots and interactions, determine which effects and interactions may be significant
- Create a Full Factorial Design

Experimental Methods

- Be able to Design, Conduct and Analyze an Experiment

Full Factorial Experiments

- Understand how to Create Balanced & Orthogonal Designs
- Explain how Fit & Diagnose & Center Points factors into an experiment

Fractional Factorial Experiments

- Explain why & how to use a Fractional Factorial Design
- Create a proper Fractional Factorial Design
- Analyze a proper model with aliased interactions

Wrap Up & Action Items

LSS Black Belt Control Phase

Phase Description:

The Control Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are eight modules in this phase:

Welcome to Control

Advanced Experiments

- Use the results of a DOE to determine how to further optimize a process using the steepest ascent/descent method

Capability Analysis

- Understand the importance of Capability Analysis as it is applied in the Control Phase
- Select the appropriate method for Capability Analysis based on the type of data distribution of your process
- Interpret the output of MINITAB™’s Capability functions
- Understand how the use for Capability Analysis may alter through the DMAIC phases

Lean Controls

- Describe Lean tools
- Understand how these tools can help with project sustainability
- Understand how the Lean tools depends on each other
Understand how tools must document the defect prevention created in the Control Phase

Defect Controls

- Describe some methods of defect prevention
- Understand how these techniques can help with project sustainability
- Including reducing those outliers as seen in the Advanced Process Capability section
- If the vital X was identified, prevent the cause of defective Y
- Understand what tools must document the defect prevention created in the Control Phase

Statistical Process Control - SPC

- Describe the elements of an SPC Chart and the purposes of SPC
- Understand how SPC ranks in defect prevention
- Describe the 9 Step route or methodology of implementing a chart
- Design subgroups if needed for SPC usage
- Determine the frequency of sampling
- Understand the Control Chart selection methodology
- Be familiar with Control Chart parameter calculations such as UCL, LCL and the Center Line

Six Sigma Control Plans

- Understand the 5 phases of the Control Plan
- Training
- Documentation
- Monitoring
- Response
- Aligning Systems and Structures

Wrap Up & Action Items

Web Links:

View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
This Lean Six Sigma Green Belt Certification Course is delivered to the global benchmark for the Lean Six Sigma industry worldwide – the IASSC.

This internationally recognized course is available from pdtraining across the USA and through our global network. The course provides you with industry leading training and certification, from the global leader.

The pdtraining Lean Six Sigma Green Belt Certification Training Course provides you with the most transportable credential you can achieve which will move with you throughout your career. It includes the Certificate issued by the IASSC that represents the highest standards in the industry after you’ve passed the exam.

This course is practical and hands on. Enroll in a course near you across the U.S.A., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia and Seattle.

Please click on the Public Class tab below to view our Lean Six Sigma Green Belt Certification course schedule by city or click the Client Site Training tab to receive a free quote for courses delivered at your preferred location.

Lean Six Sigma Green Belt Certification Training Outline

Foreword:

In this course, you will develop the knowledge to pass the certification, and learn techniques that you can use as a Continuous Improvement Practitioner.

The course takes you through some theory, after which you will work through a series of case studies to practice the application of the techniques.

This course is designed to take you from little to no experience right through to Green Belt certification standard, ready for sign-off by the IASSC.

Be careful when comparing it to other courses; often, companies require you to attend the yellow belt course first, then the green belt, this comprehensive course builds your knowledge and skills from the ground up.

This is an exam-based certification administered by the IASSC, which means that you can receive the training and then get certified as soon as you are ready. The exam you pass means that you are marked against a global benchmark and will have a globally recognized credential.

Many other LSS Green Belt Certifications require you to complete a project in the workplace that gets signed off by your trainer, which is very subjective, and means that you can’t get ‘certified’ until your project at work is complete.

Join this Lean Six Sigma Green Belt Certification, learn from the best, and achieve your certification on schedule.

Outcomes:

During this course, you will develop:

- Understanding of the concepts, implementation & objectives of Six Sigma
- Ability to use a structured approach to process improvement
- Ability to use DMAIC methodology - Define, Measure, Analyze, Implement & Control
- Skills to predict, prevent and control defects in a process
- Understanding of the elements of waste
- Skills to achieve sustainable quality improvement through process improvement
- Understanding of the tools of process discovery
- Understanding of variation in processes
- Skills to reduce variation in processes and achieve predicted outcomes
- Ability to identify, measure and analyze process potential
- Usage of inferential statistics
- Usage of hypothesis testing
- Understanding when to use which Six Sigma methodology
- Ability to use Capability Analysis to control processes
- Knowledge of the interdependence of Lean tools
- Skills to prevent, identify and control defects
- Understanding and use of statistical process control
- Skills to train, document, monitor, respond, and align systems
- Skills to provide sustainable & cost-effective improvement in processes

This Lean Six Sigma Green Belt Certification training course has been designed to build your knowledge and capability to improve the performance of processes, and subsequently the performance of the business of which you are a part. The focus of the course is process centric. Your role in process performance improvement is to be through the use of the methodologies of Six Sigma, Lean and Process Management.

By taking this course, you will have a well-rounded and firm grasp of many of the tools of these methodologies. We firmly believe this is one of the most effective classes you will ever take and it is our commitment to provide you that value.
LSS Green Belt Define Phase

Phase Description:
The Define Phase of the DMAIC methodology is constructed to introduce the fundamentals of Lean Six Sigma. There are five modules in this phase:

Understanding Six Sigma
- Describe the objectives of Six Sigma
- Describe the relationship between variation and sigma
- Recognize some Six Sigma concepts
- Recognize the Six Sigma implementation model
- Describe your role and responsibilities in Six Sigma

Six Sigma Fundamentals
- Describe what is meant by “Process Focus”
- Describe the importance of VOC, VOB, and VOE, and CTQ’s
- Explain COPQ
- Generate a Process Map
- Describe the Basic Six Sigma metrics
- Explain the difference between FTY and RTY
- Explain the difference between DPU and DPMO

Selecting Projects
- Utilize a structured approach to select projects
- Refine and Define the problem into a Project Charter
- Make an initial estimate of your project’s benefits

Elements of Waste
- Have a clear understanding of the specific deliverables
- Have started to develop a Project Plan to meet the deliverables
- Have identified ways to deal with potential roadblocks
- Be ready to apply the Six Sigma method through your project

Wrap Up & Action Items

LSS Green Belt Measure Phase

Phase Description:
The Measure Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for characterizing your business issues. There are six modules in this phase:

Welcome to Measure

Process Discovery
- Create a high level Process Map
- Create a Fishbone Diagram
- Create an X-Y Diagram
- Describe the elements of a FMEA
- Explain the importance of a FMEA
- Describe why each tool is important

Six Sigma Statistics
- Explain the various statistics used to express location and spread of data
- Describe the characteristics of a Normal Distribution
- Test for Normality
- Describe the difference between Special Cause and Common Cause Variation
- Generate a variety of graphs for data
Measurement System Analysis

- Perform the step by step methodology in Variable and Attribute MSA’s
- Identify the various components of variation so corrections can be made and the gage error reduced
- Recognize the differences between Repeatability, Reproducibility, Accuracy and Calibration

Process Capability

- Estimate Capability for Continuous Data
- Describe the impact of Non-normal Data on the analysis presented in this module for Continuous Capability
- Estimate Capability for Attribute Data

Wrap Up & Action Items

LSS Green Belt Analyze Phase

Phase Description:
The Analyze Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for isolating critical factors. There are nine modules in this phase:

Welcome to Analyze

“X” Sifting

- Perform a Multi-Vari Analysis
- Interpret and a Multi-Vari Graph
- Identify when a Multi-Vari Analysis is applicable
- Interpret what Skewed data looks like
- Explain how data distributions become Non-normal when they are really Normal

Inferential Statistics

- Explain the meaning of the term “Inferential Statistics”.
- Describe the basic tenets of the Central Limit Theorem.
- Describe the impact of sample size on your estimates of population parameters.
- Explain Standard Error

Intro to Hypothesis Testing

- Articulate the purpose of Hypothesis Testing
- Explain the concepts of the Central Tendency
- Be familiar with the types of Hypothesis Tests

Hypothesis Testing Normal Data Part 1

- Determine appropriate sample sizes for testing Means
- Conduct various Hypothesis Tests for Means
- Properly Analyze Results

Hypothesis Testing Normal Data Part 2

- Be able to conduct Hypothesis Testing of Variances
- Understand how to Analyze Hypothesis Testing Results

Hypothesis Testing Non-Normal Data Part 1

- Conduct Hypothesis Testing for equal variance
- Conduct Hypothesis Testing for Medians
- Analyze and interpret the results

Hypothesis Testing Non-Normal Data Part 2

- Calculate and explain test for proportions
- Calculate and explain contingency tests

Wrap Up & Action Items
LSS Green Belt Improve Phase

Phase Description:

The Improve Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are five modules in this phase:

Welcome to Improve

Process Modeling Regression

- Perform the steps in a Correlation and a Regression Analysis
- Explain when Correlation and Regression is appropriate

Advanced Process Modeling

- Perform Non-Linear Regression Analysis
- Perform Multiple Linear Regression Analysis (MLR)
- Examine Residuals Analysis and understand its effects

Designing Experiments

- Determine the reason for experimenting
- Describe the difference between a physical model and a DOE model
- Explain an OFAT experiment and its primary weakness
- Shown Main Effects Plots and interactions, determine which effects and interactions may be significant
- Create a Full Factorial Design

Wrap Up & Action Items

LSS Green Belt Control Phase

Phase Description:

The Control Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are eight modules in this phase:

Welcome to Control

Advanced Experiments

- Use the results of a DOE to determine how to further optimize a process using the steepest ascent/descent method

Capability Analysis

- Understand the importance of Capability Analysis as it is applied in the Control Phase
- Select the appropriate method for Capability Analysis based on the type of data distribution of your process
- Interpret the output of MINITAB’s Capability functions
- Understand how the use for Capability Analysis may alter through the DMAIC phases

Lean Controls

- Describe Lean tools
- Understand how these tools can help with project sustainability
- Understand how the Lean tools depends on each other
- Understand how tools must document the defect prevention created in the Control Phase

Defect Controls

- Describe some methods of defect prevention
- Understand how these techniques can help with project sustainability
  - Including reducing those outliers as seen in the Advanced Process Capability section
  - If the vital X was identified, prevent the cause of defective Y
- Understand what tools must document the defect prevention created in the Control Phase

Statistical Process Control - SPC
Describe the elements of an SPC Chart and the purposes of SPC
Understand how SPC ranks in defect prevention
Describe the 9 Step route or methodology of implementing a chart
Design subgroups if needed for SPC usage
Determine the frequency of sampling
Understand the Control Chart selection methodology
Be familiar with Control Chart parameter calculations such as UCL, LCL and the Center Line

Six Sigma Control Plans

- Understand the 5 phases of the Control Plan
  - Training
  - Documentation
  - Monitoring
  - Response
  - Aligning Systems and Structures

Wrap Up & Action Items

Web Links:


In-house Training Instant Quote: [https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx](https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx)

A Lean Six Sigma Champion has important responsibilities in the implementation of a Lean Six Sigma project, including project selection, team selection, progress tracking, and management. Lean Six Sigma Management Champions Training Course provides participants in-depth understanding and training in the implementation of Lean Six Sigma methodologies for the successful application of a new LSS project.

Lean Six Sigma Champions are required to have expertise in LSS so that they can plan, select, implement and manage a LSS project efficiently. The role of a Champion includes generating project ideas, prioritizing them, assigning them to Belts, tracking and managing them till they are completed.

This vigorous and lively training course is available across the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia, and Seattle.

**Lean Six Sigma Management Champions Course Outline**

**Foreword:**
Lean Six Sigma Champion – Learn. Train. Implement.

Lean Six Sigma Champions are typically responsible for Project Selection, Team assignments and progress tracking. This course prepares one to fulfill that role. Champions are key players in the success of any Lean Six Sigma deployment. They are the front line to selecting and guiding your Lean Six Sigma trained personnel.

A Champion also generates project ideas, prioritizes them, assigns them to Belts and tracks them to successful completion. The pd training Lean Six Sigma Champion course provides everything one must know to perform the function of a Lean Six Sigma Champion to the highest standards.

**Outcomes:**
Lean Six Sigma Champions are typically responsible for Project Selection, Team assignments and progress tracking. This course prepares one to fulfill that role. Champions are key players in the success of any Lean Six Sigma deployment. They are the front line to selecting and guiding your Lean Six Sigma trained personnel.

**During this Lean Six Sigma Course you will:**

- Obtain a working understanding of Lean Six Sigma
- Know and apply the basic concepts
- Demonstrate use of the terminology
- Comprehend daily work as a process-oriented activity
  - Understand process inputs and outputs
  - Understand process flow and know what determines value add vs. non value add
- Understand how the processes you are a part of fit into the larger set of processes needed in delivering value to the customer
  - Perform Process Mapping and characterization
  - Create a detailed Process Map of a process you are personally involved in
  - Prioritize significant outputs and quantify their level of performance to requirements
  - Identify inputs and their relationship to the significant outputs
- Perform process improvement activities
  - Improve a process you are involved in using Lean Six Sigma methods
  - Continue to improve other processes
- Establish control mechanisms and monitoring processes to sustain an existing process and/or any improvements you make.
Opening

- Competition

Process Management

- Definitions
- Process Ownership
- Cost of Poor Quality

Lean Principles

- Seven Areas of Waste
- Value Stream Analysis
- 5S Principles
- Poke-Yoke Methods

Six Sigma

- Define Phase
- Measure Phase
- Analyze Phase
- Improve Phase
- Control Phase

Champion Responsibilities

- Managing People through Change
- Project & Candidate Selection
- Project Tracking
- Communication & Recognition

Glossary of Lean Six Sigma Terms

Web Links:

View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
For the success of a Lean Six Sigma project, project selection and management is significant. Recognizing appropriate projects, identifying opportunities for improvement, effective planning, and management of projects must be carried out with expertise for the success of an LSS project.

Lean Six Sigma Management Project Selection Training Course provides knowledge and skill development in project selection, opportunity analysis, affinity diagramming, and defining, tracking and launching a project. It provides complete skill building for the successful implementation and completion of LSS projects.

This comprehensive and practical training course is now available throughout the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia, and Seattle.

Lean Six Sigma Management Project Selection Training Outline

Foreword:
Six Sigma Improvement Projects strategic selection - Recognize, Define, Launch... succeed!
This Six Sigma Project selection course will empower you to take a giant leap forward in improving your business. During this course, you will learn to Recognize multiple areas of opportunity for improvement, Define the opportunities and create a Launch plan to achieve those improvements. There is a lot covered in this course, but it really is as easy as 1-2-3.

Generating high impact projects consists of performing a Project Selection Process (“PSP”) to identify the company’s areas of concern; those areas where significant business problems or opportunities exist. The Opportunity Analysis is performed through two primary approaches: 1) by identifying any and all opportunities perceived by the management team and 2) by identifying specific problems which are preventing the accomplishment of specific goals and objectives of the organization.

Following this process will allow any business unit manager, from Department Manager through Chief Executive Officer, to identify ALL opportunities for improvement throughout the business unit. The opportunities identified may relate to any and all of the corporate strategies – they needn’t be solely financial savings in nature.

The methodology of the PSP will create a fertile and highly structured list of projects linked to strategy and projected benefits (usually dollars) that are then organized by area and responsibility. Assisting the PSP methodology is a process for defining projects, assuring they are clearly written with all of the essential information to achieve meaningful results. The PSP is a complete methodology from project ideation to project definition, selection, and ongoing management through the business improvement roadmap.

Outcomes:
Six Sigma Improvement Projects strategic selection - Recognize, Define, Launch... succeed!
This Six Sigma Project selection course will empower you to take a giant leap forward in improving your business. During this course you will learn to Recognize multiple areas of opportunity for improvement, Define the opportunities and create a Launch plan to achieve those improvements. There is a lot covered in this course, but it really is as easy as 1-2-3.

Generating high impact projects consists of performing a Project Selection Process (“PSP”) to identify the company’s areas of concern; those areas where significant business problems or opportunities exist. The Opportunity Analysis is performed through two primary approaches: 1) by identifying any and all opportunities perceived by the management team and 2) by identifying specific problems which are preventing the accomplishment of specific goals and objectives of the organization.

Following this process will allow any business unit manager, from Department Manager through Chief Executive Officer, to identify ALL opportunities for improvement throughout the business unit. The opportunities identified may relate to any and all of the corporate strategies – they needn’t be solely financial savings in nature.
Opening

- The Project Roadmap

Recognize Phase

- Opportunity Definition
- Problematic Areas

Problem Statement Creation

- Problem Statement Objectives
- Examples – Good and Bad

Affinity Diagramming

- Step-by-Step Process
- Affinity Diagramming Outputs

Define Phase

- Steps for Defining a Project
- Champion Project Worksheet
- Objective Statement Creation
- Development of Project List
- Link to Corporate Strategies

Launch Phase

- Identify People Associated with Projects
- Obtain Approvals and Launch DMAIC

Glossary of Lean Six Sigma Terms

Templates

- Problem Statement Template
- Opportunity Analysis Matrix – Template
- Opportunity Analysis Matrix – Sample
- Project List – Template
- Project List – Sample
- Champion Project Worksheet – Template
- Champion Project Worksheet – Sample
- Project List – Template
- Project List - Sample

Web Links:

View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
Process management in a Lean Six Sigma project involves defining, measuring, analyzing, improving, and controlling a process. Effective process management also requires application of 5S principles, basic statistics and management methodologies. Lean Six Sigma Process Management Training Course provides skill building in each phase of Lean Six Sigma process management with the aim to achieve process improvement. It assists in expertly managing key business processes using relevant Lean Six Sigma techniques. This significant and engaging training course is now available throughout the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia, and Seattle.

Lean Six Sigma Process Management Training Outline

**Foreword:**
The Process Management Course provides knowledge and skill building in how to manage business processes so they are effective, efficient and adaptable. Through the use of various tools, methodologies, management approaches, and technologies, you will learn that Process Management is the collection and orchestration of these efforts in order to assure improvement and success.

**Outcomes:**
- Complete training and certification as a Lean Six Sigma team member in process management.
Phase A – Introduction; Define and Measure

- Course Overview
- Process Management
- Basic Statistics
- Cost of Poor Quality
- Define Phase
- Defining an Improvement Project
- Measure Phase Part One
- Measure Phase Part Two
- X-Y Matrix Analysis
- Capability Analysis
- Measurement System Analysis
- Process Improvement Project

Phase B – Analyze, Improve and Control

- Introduction
- Defects, Defectives and Opportunities
- Graphical Analysis
- Lean Value Stream Analysis
- Applying the 5S Principles
- Introduction to Improvement Experiments
- Poka-Yoke Methods
- Statistical Process Control
- Control Charts
- Tracking and Managing a Process
- Finalizing Your Process Project

Glossary of Lean Six Sigma Terms

Web Links:


In-house Training Instant Quote: https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Lean Six Sigma teams need to have certain theoretical and practical knowledge of Lean Six Sigma methodologies to be able to carry out a project successfully. Lean Six Sigma Team Members Awareness Training Course provides comprehensive understanding and skill development in important LSS practices relevant to employees that participate in process improvement.

This valuable and engaging course is available across the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia, and Seattle.

Lean Six Sigma Team Members Awareness Training Outline

Foreword:
This Lean Six Sigma course has been developed to enhance the general knowledge and provide some capabilities in Lean Six Sigma for people involved in the daily operation of business processes and who are a part of Process Improvement Teams.

The goal of this training is to:

- Increase your knowledge of Lean Six Sigma techniques as business process improvement methodologies.
- Increase your skills at improving the ease and performance of the processes in which you work.
- To gain an understanding of your role as a process team member for the achievement of business success.

Team Members that participate in this course will have enhanced knowledge of process functionality, as well as improved analytical and problem solving skills and methods.

Team members will:

- Obtain a working understanding of Lean Six Sigma
  - Know and apply the basic concepts
  - Demonstrate use of the terminology
- Comprehend daily work as a process-oriented activity
  - Understand process inputs and outputs
  - Understand process flow and know what determines value add vs. non value add
- Understand how the processes you are a part of fit into the larger set of processes needed in delivering value to the customer
  - Perform Process Mapping and characterization
  - Create a detailed Process Map of a process you are personally involved in
  - Prioritize significant outputs and quantify their level of performance to requirements
  - Identify inputs and their relationship to the significant outputs
  - Perform process improvement activities
  - Improve a process you are involved in using Lean Six Sigma methods
- Continue to improve other processes
  - Establish control mechanisms and monitoring processes to sustain an existing process and/or any improvements you make.

Outcomes:
This Lean Six Sigma course has been developed to enhance the general knowledge and provide some capabilities in Lean Six Sigma for people involved in the daily operation of business processes and who are a part of Process Improvement Teams.

The goal of this training is to:

- Increase your knowledge of Lean Six Sigma techniques as business process improvement methodologies.
- Increase your skills at improving the ease and performance of the processes in which you work.
- To gain an understanding of your role as a process team member for the achievement of business success.

Team Members that participate in this course will have enhanced knowledge of process functionality, as well as improved analytical and problem solving skills and methods.
Define Phase
- Understanding Six Sigma
- Six Sigma Fundamentals
- Selecting Projects
- Elements of Waste
- Wrap Up and Action Items

Measure Phase
- Welcome to Measure
- Process Discovery
- Six Sigma Statistics
- Measurement System Analysis
- Process Capability
- Wrap Up and Action Items

Control Phase
- Welcome to Control
- Lean Controls
- Defect Controls
- Statistical Process Control (SPC)
- Six Sigma Control Plans
- Wrap Up and Action Items

Web Links:

View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
Building teams that have knowledge and expertise in their area of functioning in the implementation of Lean Six Sigma projects is essential for the success of the projects. Lean Six Sigma Team Members Training Course provides intensive training in every Lean principle, process management, Six Sigma phases, and the implementation of the methods to empower participants to fulfill their duties in Lean Six Sigma projects efficiently. This highly significant and intensive training course is conducted across the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia, and Seattle.

**Lean Six Sigma Team Members Training Outline**

**Foreword:**
This Lean Six Sigma course has been developed to enhance the general knowledge and provide some capabilities in the arena of Lean Six Sigma for people involved in the daily operation of business processes and who are a part of Process Improvement Teams.

The goal of this training is to:

- Increase your knowledge of Lean Six Sigma techniques as business process improvement methodologies.
- Increase your skills at improving the ease and performance of the processes in which you work.
- To gain an understanding of your role as a process team member for the achievement of business success.

Team Members that participate in this course will have enhanced knowledge of process functionality, as well as improved analytical and problem solving skills and methods.

**Team members will:**

- Obtain a working understanding of Lean Six Sigma
  - Know and apply the basic concepts
  - Demonstrate use of the terminology
- Comprehend daily work as a process-oriented activity
  - Understand process inputs and outputs
  - Understand process flow and know what determines value add vs. non value add
- Understand how the processes you are a part of fit into the larger set of processes needed in delivering value to the customer
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- Perform process improvement activities
  - Improve a process you are involved in using Lean Six Sigma methods
  - Continue to improve other processes
- Establish control mechanisms and monitoring processes to sustain an existing process and/or any improvements you make.

**Outcomes:**
This Lean Six Sigma course has been developed to enhance the general knowledge and provide some capabilities in the arena of Lean Six Sigma for people involved in the daily operation of business processes and who are a part of Process Improvement Teams.

The goal of this training is to:

- Increase your knowledge of Lean Six Sigma techniques as business process improvement methodologies.
- Increase your skills at improving the ease and performance of the processes in which you work.
- To gain an understanding of your role as a process team member for the achievement of business success.

Team Members that participate in this course will have enhanced knowledge of process functionality, as well as improved analytical and problem solving skills.
Opening

- Competition

Process Management

- Definitions
- Process Ownership
- Cost of Poor Quality

Lean Principles

- Seven Areas of Waste
- Value Stream Analysis
- 5S Principles
- Poka-Yoke Methods

Six Sigma

- Define Phase
- Measure Phase
- Analyze Phase
- Improve Phase
- Control Phase

Glossary of Lean Six Sigma Terms

Web Links:

View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
Achieving Yellow Belt Certification in Lean Six Sigma to the IASSC standard demonstrates a command of Six Sigma and Lean processes and principles. This LSS Yellow Belt training and certification will empower you to contribute to any continuous improvement initiative. During the training course you learn both techniques and strategies, then put them into practice in a range of activities and case studies. The tools you master will prepare you for the exam, and empower you to support continuous improvement (CI) projects in the workplace. Six Sigma is the most highly regarded CI and Management System ever developed - Yellow Belt Certification is your ticket to enter the world of CI with credibility, respect and ability. The training course provides comprehensive training and exam preparation to achieve Yellow Belt Certification with the International Association of Six Sigma Certification. No prior knowledge of Lean Six Sigma is necessary to participate in this course. This LSS Certification program is now available throughout the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia, and Seattle.

**Lean Six Sigma Yellow Belt Certification Training Outline**

**Foreword:**
The pd training course is much more than a trainer simply telling you information. This curriculum is formatted in such a way that the problem solving strategy is demonstrated throughout the course. By utilizing the various Statistical and Business Improvement tools participants can clearly see and communicate the flow and process of the methodology in order to instill both the tactical and strategic aspects of the LSS Yellow Belt skill set. The implementation roadmaps within each phase provide a clear line-of-sight for putting into practice the problem solving technology. Various group exercises utilizing training aids, pre-formatted data sets and templates facilitate interactive group learning within a class. These very training materials are the industry standard used by thousands of industry trainers, coaches and mentors to train Lean Six Sigma Yellow Belts around the world.

**Outcomes:**
During this course, you will:
- Develop a complete understanding of Lean Six Sigma
- Learn how to to improve processes for enhanced product quality
- Understand the tactical and strategic aspects of Lean Six Sigma
- Develop techniques to drive CI through each of the primary process LSS stages: Define, Measure, Analyze, Improve and Control
- Learn an accurate system to predict outcomes, that are measurable and quantifiable
- Define and drive toward tangible goals
- Develop methodology to drastically improve processes
- Understand how to minimize variability in processes
- Learn how to maximize production by fully utilizing the potential of processes
- Acquire techniques to reduce waste through the identification & removal of present & potential errors
- Learn how to take control over defects effectively reduce or prevent future defects
- Learn how realize smoother, faster and error-free processes
- Contribute to project that increase savings through reduction in waste & improvement in processes

This Lean Six Sigma Yellow Belt Certification training course has been designed to build your knowledge and capability to improve the performance of processes and subsequently the performance of the business of which you are a part. The focus of the course is process centric. By taking this course you will have a well rounded and firm grasp of many of the tools of these methodologies. We firmly believe this is one of the most effective classes you will ever take and it is our commitment to provide you that value.
Yellow Belt Define Phase

Phase Description:

The Define Phase of the DMAIC methodology is constructed to introduce the fundamentals of Lean Six Sigma. There are 5 modules in this phase:

Understanding Six Sigma.

- **Deliverables**
  - Describe the objectives of Six Sigma
  - Describe the relationship between variation and sigma
  - Recognize some Six Sigma concepts
  - Recognize the Six Sigma implementation model
  - Describe your role and responsibilities in Six Sigma

Six Sigma Fundamentals

- **Deliverables**
  - Describe what is meant by “Process Focus”
  - Describe the importance of VOC, VOB, and VOE, and CTQ’s
  - Explain COPQ
  - Generate a Process Map
  - Describe the Basic Six Sigma metrics
  - Explain the difference between FTY and RTY
  - Explain the difference between DPU and DPMO

Selecting Projects:

- **Deliverables**
  - Utilize a structured approach to select projects
  - Refine and Define the problem into a Project Charter
  - Make an initial estimate of your project’s benefits

Elements of Waste:

- **Deliverables**
  - Have a clear understanding of the specific deliverables
  - Have started to develop a Project Plan to meet the deliverables
  - Have identified ways to deal with potential roadblocks
  - Be ready to apply the Six Sigma method through your project

Wrap Up & Action Items

LSS Yellow Belt Measure Phase

Phase Description:

The Measure Phase of the DMAIC methodology is constructed to introduce important Six Sigma tools for characterizing your business issues. There are 6 modules in this phase:

Process Discovery

- **Deliverables**
  - Create a high level Process Map
  - Create a Fishbone Diagram
  - Create an X-Y Diagram
  - Describe the elements of a FMEA
  - Explain the importance of a FMEA
  - Describe why each tool is important

Six Sigma Statistics

- **Deliverables**
  - Explain the various statistics used to express location and spread of data
  - Describe the characteristics of a Normal Distribution
Test for Normality
Describe the difference between Special Cause and Common Cause Variation
Generate a variety of graphs for data

Measurement System Analysis

Deliverables
Perform the step by step methodology in Variable and Attribute MSA’s
Identify the various components of variation so corrections can be made and the gage error reduced
Recognize the differences between Repeatability, Reproducibility, Accuracy and Calibration

Process Capability

Deliverables
Estimate Capability for Continuous Data
Describe the impact of Non-normal Data on the analysis presented in this module for Continuous Capability
Estimate Capability for Attribute Data

Wrap Up & Action Items

LSS Yellow Belt Control Phase

Phase Description:
The Control Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are five modules in this phase:

Welcome to Control

Deliverables
Lean Controls
Deliverables
Describe Lean tools
Understand how these tools can help with project sustainability
Understand how the Lean tools depends on each other
Understand how tools must document the defect prevention created in the Control Phase

Defect Controls

Deliverables
Describe some methods of defect prevention
Understand how these techniques can help with project sustainability
Including reducing those outliers as seen in the Advanced Process Capability section
If the vital X was identified, prevent the cause of defective Y
Understand what tools must document the defect prevention created in the Control Phase

Six Sigma Control Plans

Deliverables
Understand the 5 phases of the Control Plan
Training
Documentation
Monitoring
Response
Aligning Systems and Structures

Wrap Up & Action Items

Web Links:
View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
Organizations use lean process improvement to reduce waste and improve value for customers. Lean methodologies are used to identify areas of waste through Define, Measure, Analyze, Improve, and Control.

The pdtraining Lean Process Improvement Training Course provides an understanding and implementation of lean data mapping methods, 5s, PDSA, 5W-2H, DMAIC, Genchi, Kaizen, and Genbutsu.

This comprehensive and highly engaging training course helps organizations to implement lean principles of process improvement to reduce waste and improve the end product/service.

The course is now available throughout the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia and Seattle.

Please click on the Public Class tab below to view our Lean Process Improvement Training course schedule by city or click the Client Site Training tab to receive a free quote for courses delivered at your preferred location.

Lean Process Improvement Training Course Outline

Foreword:
This two-day Lean Process Improvement training course will give your organization the foundational tools it requires to implement Lean.

Day one will explore the foundational Toyota precepts of Lean and the five improvement concepts - value, waste, variation, complexity, and continuous improvement.

Day two will focus on the actual tools for implementing these continual improvement concepts in an organization. Useful tools include: Lean data mapping methods, 5S, 5W-2H, PDSA, DMAIC, Kaizen, and Genchi Genbutsu.

Lean Process Improvement Training Course will enable an entire organization to holistically apply lean thinking across every aspect of their value stream. From the worker to the CEO, the constant re-evaluation of the value stream across each product/service family will challenge old thinking and create a new culture of lean thinking. Once the value of a product/service is identified, unnecessary waste can be removed with continual process improvement.

Lean is not just limited to manufacturing and production, but also can equally be applied to service oriented industries like healthcare, government, education, and agribusiness.

Outcomes:
By the end of this course, participants will:
- Gain an understanding of Lean
- Describe "The Toyota Production System" and TPS house
- Master the five lean principles
- Learn how to categorize products or systems into the three groups
- Learn how to create and contribute to a lean enterprise
- Identify and reduce various types of waste
- Learn to create a plan for an organization that's more environmentally Lean
- Learn how to implement & evaluate Lean changes with PDSA cycle R-DMAIC-S models
- Learn how to effectively use lean thinking frameworks like 5W-2H, Genchi Genbutsu, Gemba, and 5-S
- Prepare for and complete a basic 5-S
- Learn the five levels of Kaizen events, particularly a Kaizen blitz
- Effective tips for data gathering, mapping and analysis using flow charts, Ishikawa and SIPOC diagrams, and value stream maps
- Create a successful plan for a lean project
Lean Process Improvement Training Course Day One:

Understanding Lean

Participants will learn what Lean is and what its origins are. Participants will also learn about the Toyoda Precepts, how Lean differs from Six Sigma, and some common Lean terms.

The Toyota Production System

Participants will learn about the Toyota Production System. The Toyota Production System House: In this session, participants will learn about another representation of the Toyota Production System.

The Five Critical Improvement Concepts

Discuss five key ideas supporting Lean process improvement: value, waste, variation, complexity, and continuous improvement.

Understanding Value with the Kano Model

This session will explore value with the Kano model, which divides product or system characteristics into three groups: basic, performance, and value added.

Types of Waste In this session

Participants will learn about the three main wastes (muda, muri, and mura) as well as some new types.

Creating a Lean Enterprise

Explore some ways to create an environmentally friendly organization with Lean. Learn about the 20 keys to a Lean organization.

Lean Process Improvement Training Course Day Two:

The Plan, Do, Study, Act (PDSA)

The first session of Day Two will cover the PDSA cycle, which should be used to plan and implement organizational changes.

Using the R-DMAIC-S Model

This session will cover the Recognize - Define - Measure - Analyze - Improve - Control – Sustain model, an advanced version of PDSA primarily used in Six Sigma.

Lean Thinking Tools

Learn about some Lean thinking tools, including 5W-2H, Genchi Genbutsu, Gemba, and 5-S.

Kaizen Events

This session will cover the five levels of Kaizen events, with a focus on Level 3 (the Kaizen blitz).

Data Gathering and Mapping

Most of the second afternoon will be spent learning about and practicing various Lean data tools, including flow charts, Ishikawa (cause and effect or fishbone) diagrams, SIPOC charts, and value stream maps. We will also share some tips for effective data analysis.

A Plan to Take Home

The final session will challenge participants to think about roadblocks and pitfalls to Lean implementation and how to bring those lessons to their organization. Participants will also be given some ideas for Lean projects and a framework for a successful Lean approach.

Web Links:
View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
5s methodology is used for the creation, maintenance and improvement of the workplace. It identifies areas of waste and errors in processes, equipment and inventory, and provides resources to remove them. Organizations use 5s for continuous improvement, waste reductions, and process improvement. The pdtraining 5s Continuous Improvement Training Course provides an understanding and implementation of the 5s’ namely Seiton, Seiri, Seiketsu, Seiso, and Shitsuke. This significant and valuable training course is now available across the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia and Seattle. Please click on the Public Class tab below to view our 5s Continuous Improvement Training course schedule by city or click the Client Site Training tab to receive a free quote for courses delivered at your preferred location.

5S Continuous Improvement Training Outline

Foreword:
5S is much more than just "housekeeping". Housekeeping and an organized workplace are the results of 5S, but the real purpose of 5S is to uncover errors and problems more quickly. Learn to reduce waste through a systematic application of 5S principles – Sort, Set in Order, Shine, Standardize, and Sustain. This workshop teaches the basic 5S techniques and illustrates how its implementation immediately reduces waste, and provides a cleaner and safer work environment.

Outcomes:
By the end of this course, participants will be able to:

- Explain the origins of 5S methodology
- Discuss the benefits of 5S principles
- Identify opportunities for improvement using 5S principles
- Introduce and embed 5S changes to the workplace for sustained improvement
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</tbody>
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**Web Links:**


In-house Training Instant Quote: [https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx](https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx)

Lean Six Sigma is a process improvement methodology that uses the methodologies of both Lean and Six Sigma. Lean helps to eliminate waste and improve the end value of a product/service. Six Sigma, on the other hand, defines, measures, analyzes, controls, and verifies processes for process improvement. Both these methodologies lead to the same goal of greater productivity at lower costs.

The pdtraining Lean Six Sigma Black Belt Certification Training - Accelerated 5 day Course provides intensive training in each principle and use of Lean and Six Sigma to empower participants to gain expertise in Lean Six Sigma. The popular and highly significant course is conducted across America, including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia and Seattle. Please click on the Public Class tab below to view our Lean Six Sigma Black Belt Certification Training - Accelerated 5 day course schedule by city or click the Client Site Training tab to receive a free quote for courses delivered at your preferred location.

Lean Six Sigma Black Belt Certification Training - Accelerated 5 day Course

Outline

Foreword:
The pd training materials are much more than simple tools training. This curriculum is formatted in such a way that the problem solving strategy is demonstrated throughout the course. By utilizing various Statistical and Business Improvement tools participants can clearly see and communicate the flow and process of the methodology in order to instill both the tactical and strategic aspects of the LSS Black Belt skill set.

The implementation roadmaps within each phase provide a clear line-of-sight for putting into practice the problem solving technology. Various group exercises utilising training aids, pre-formatted data sets and templates facilitate interactive group learning within a class.

These very training materials are the industry standard used by thousands of industry trainers, coaches and mentors to train Lean Six Sigma Black Belts around the world.

Outcomes:
During this course, you will develop:

- Understanding and implementation of the concepts of Six Sigma
- Ability to plan projects to achieve maximum process efficiency
- Capability to recognize elements of waste and countering them
- Skill to measure key aspects of a process to collect relevant data
- Ability to create a process map
- Ability to identify and measure process capability
- Ability to analysis data accurately to find cause-and-effect relationship and identify the root cause of errors
- Hypothesis testing knowledge
- Ability to improve processes based on analysis
- Understanding of how to use various industry models for process improvement
- Ability to control processes
- Ability to ensure errors are removed before they can damage a process
- Understanding of capability analysis
- Understanding and use of lean
- Skill to control processes, productivity and waste
LSS Black Belt Define Phase

Phase Description:

The Define Phase of the DMAIC methodology is constructed to introduce the core fundamentals of Six Sigma. There are 5 modules in this phase:

Understanding Six Sigma

- Describe the objectives of Six Sigma
- Describe the relationship between variation and sigma
- Recognise some Six Sigma concepts
- Recognise the Six Sigma implementation model
- Describe your role and responsibilities in Six Sigma

Six Sigma Fundamentals

- Describe what is meant by “Process Focus”
- Describe the importance of VOC, VOB, and VOE, and CTQ’s
- Explain COPQ
- Generate a Process Map
- Describe the Basic Six Sigma metrics
- Explain the difference between FTY and RTY
- Explain the difference between DPU and DPMO

Selecting Projects

- Utilize a structured approach to select projects
- Refine and Define the problem into a Project Charter
- Make an initial estimate of your project’s benefits

Elements of Waste

- Have a clear understanding of the specific deliverables
- Have started to develop a Project Plan to meet the deliverables
- Have identified ways to deal with potential roadblocks
- Be ready to apply the Six Sigma method through your project

Wrap Up & Action Items

LSS Black Belt Measure Phase

Phase Description:

The Measure Phase of the DMAIC methodology is constructed to introduce important Six Sigma tools for characterizing your business issues. There are 6 modules in this phase:

Welcome to Measure

Process Discovery

- Create a high level Process Map
- Create a Fishbone Diagram
- Create an X-Y Diagram
- Describe the elements of a FMEA
- Explain the importance of a FMEA
- Describe why each tool is important

Six Sigma Statistics

- Explain the various statistics used to express location and spread of data
- Describe the characteristics of a Normal Distribution
- Test for Normality
- Describe the difference between Special Cause and Common Cause Variation
- Generate a variety of graphs for data
Measurement System Analysis

- Perform the step by step methodology in Variable and Attribute MSA’s
- Identify the various components of variation so corrections can be made and the gage error reduced
- Recognize the differences between Repeatability, Reproducibility, Accuracy and Calibration

Process Capability

- Estimate Capability for Continuous Data
- Describe the impact of Non-normal Data on the analysis presented in this module for Continuous Capability
- Estimate Capability for Attribute Data

Wrap Up & Action Items

LSS Black Belt Analyze Phase

Phase Description:

The Analyze Phase of the DMAIC methodology is constructed to introduce important Six Sigma tools for isolating critical factors. There are 9 modules in this phase:

Welcome to Analyze

“X” Sifting

- Perform a Multi-Vari Analysis
- Interpret and a Multi-Vari Graph
- Identify when a Multi-Vari Analysis is applicable
- Interpret what Skewed data looks like
- Explain how data distributions become Non-normal when they are really Normal

Inferential Statistics

- Explain the meaning of the term “Inferential Statistics”.
- Describe the basic tenets of the Central Limit Theorem.
- Describe the impact of sample size on your estimates of population parameters.
- Explain Standard Error

Intro to Hypothesis Testing

- Articulate the purpose of Hypothesis Testing
- Explain the concepts of the Central Tendency
- Be familiar with the types of Hypothesis Tests

Hypothesis Testing Normal Data Part 1

- Determine appropriate sample sizes for testing Means
- Conduct various Hypothesis Tests for Means
- Properly Analyze Results

Hypothesis Testing Normal Data Part 2

- Be able to conduct Hypothesis Testing of Variances
- Understand how to Analyze Hypothesis Testing Results

Hypothesis Testing Non-Normal Data Part 1

- Conduct Hypothesis Testing for equal variance
- Conduct Hypothesis Testing for Medians
- Analyze and interpret the results

Hypothesis Testing Non-Normal Data Part 2

- Calculate and explain test for proportions
- Calculate and explain contingency tests

Wrap Up & Action Items
LSS Black Belt Improve Phase

Phase Description:

The Improve Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are eight modules in this phase:

Welcome to Improve

Process Modeling Regression

- Perform the steps in a Correlation and a Regression Analysis
- Explain when Correlation and Regression is appropriate

Advanced Process Modeling

- Perform Non-Linear Regression Analysis
- Perform Multiple Linear Regression Analysis
- Determine the reason for experimenting
- Describe the difference between a physical model and a DOE model
- Explain an OFAT experiment and its primary weakness
- Shown Main Effects Plots and interactions, determine which effects and interactions may be significant
- Create a Full Factorial Design

Experimental Methods

- Be able to Design, Conduct and Analyze an Experiment

Full Factorial Experiments

- Understand how to Create Balanced & Orthogonal Designs
- Explain how Fit & Diagnose & Center Points factors into an experiment

Fractional Factorial Experiments

- Explain why & how to use a Fractional Factorial Design
- Create a proper Fractional Factorial Design
- Analyze a proper model with aliased interactions

Wrap Up & Action Items

LSS Black Belt Control Phase

Phase Description:

The Control Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are eight modules in this phase:

Welcome to Control

Advanced Experiments

- Use the results of a DOE to determine how to further optimize a process using the steepest ascent/descent method

Capability Analysis

- Understand the importance of Capability Analysis as it is applied in the Control Phase
- Select the appropriate method for Capability Analysis based on the type of data distribution of your process
- Interpret the output of MINITABTM's Capability functions
- Understand how the use for Capability Analysis may alter through the DMAIC phases

Lean Controls

- Describe Lean tools
- Understand how these tools can help with project sustainability
- Understand how the Lean tools depends on each other
Understand how tools must document the defect prevention created in the Control Phase

## Defect Controls
- Describe some methods of defect prevention
- Understand how these techniques can help with project sustainability
- Including reducing those outliers as seen in the Advanced Process Capability section
- If the vital X was identified, prevent the cause of defective Y
- Understand what tools must document the defect prevention created in the Control Phase

## Statistical Process Control - SPC
- Describe the elements of an SPC Chart and the purposes of SPC
- Understand how SPC ranks in defect prevention
- Describe the 9 Step route or methodology of implementing a chart
- Design subgroups if needed for SPC usage
- Determine the frequency of sampling
- Understand the Control Chart selection methodology
- Be familiar with Control Chart parameter calculations such as UCL, LCL and the Center Line

## Six Sigma Control Plans
- Understand the 5 phases of the Control Plan
- Training
- Documentation
- Monitoring
- Response
- Aligning Systems and Structures

## Wrap Up & Action Items

Web Links:
- In-house Training Instant Quote: [https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx](https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx)
You’ve already achieved the Six Sigma Green Belt, so now it’s time to gain an even deeper understanding of Six Sigma and Lean methodologies, project selection, process discovery, process capability, hypothesis testing, DMAIC, and other methods of process improvement through the Black Belt.

The pdtraining Lean Six Sigma Black Belt Certification Training Upgrade from Green Belt Course provides intensive training in every step of process improvement and waste reduction to empower participants to gain true expertise in Lean Six Sigma philosophies.

Green Belt holders will now add further Lean Six Sigma knowledge and improve their existing skills to plan, implement and manage Lean Six Sigma projects successfully, and also prepare for the Black Belt certification exam. This highly significant and intensive training course is conducted across America, including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia and Seattle.

Please click on the Public Class tab below to view our Lean Six Sigma Black Belt Certification Training Upgrade from Green Belt course schedule by city or click the Client Site Training tab to receive a free quote for courses delivered at your preferred location.

**Lean Six Sigma Black Belt Certification Training Upgrade from Green Belt Course Outline**

**Foreword:**
The pd training materials are much more than simple tools training. This curriculum is formatted in such a way that the problem solving strategy is demonstrated throughout the course. By utilizing various Statistical and Business Improvement tools, participants can clearly see and communicate the flow and process of the methodology in order to instill both the tactical and strategic aspects of the LSS Black Belt skill set.

The implementation roadmaps within each phase provide a clear line-of-sight for putting into practice the problem solving technology. Various group exercises utilizing training aids, pre-formatted data sets and templates facilitate interactive group learning within a class.

These very training materials are the industry standard used by thousands of industry trainers, coaches and mentors to train Lean Six Sigma Black Belts around the world.

**Outcomes:**
**During this course, you will develop:**
- Understanding and implementation of the concepts of Six Sigma
- Ability to plan projects to achieve maximum process efficiency
- Capability to recognize elements of waste and countering them
- Skill to measure key aspects of a process to collect relevant data
- Ability to create a process map
- Ability to identify and measure process capability
- Ability to analysis data accurately to find cause-and-effect relationship and identify the root cause of errors
- Hypothesis testing knowledge
- Ability to improve processes based on analysis
- Understanding of how to use various industry models for process improvement
- Ability to control processes
- Ability to ensure errors are removed before they can damage a process
- Understanding of capability analysis
- Understanding and use of lean
- Skill to control processes, productivity and waste
LSS Black Belt Define Phase

Phase Description:

The Define Phase of the DMAIC methodology is constructed to introduce the core fundamentals of Six Sigma. There are 5 modules in this phase:

Understanding Six Sigma

- Describe the objectives of Six Sigma
- Describe the relationship between variation and sigma
- Recognise some Six Sigma concepts
- Recognise the Six Sigma implementation model
- Describe your role and responsibilities in Six Sigma

Six Sigma Fundamentals

- Describe what is meant by “Process Focus”
- Describe the importance of VOC, VOB, and VOE, and CTQ’s
- Explain COPQ
- Generate a Process Map
- Describe the Basic Six Sigma metrics
- Explain the difference between FTY and RTY
- Explain the difference between DPU and DPMO

Selecting Projects

- Utilize a structured approach to select projects
- Refine and Define the problem into a Project Charter
- Make an initial estimate of your project’s benefits

Elements of Waste

- Have a clear understanding of the specific deliverables
- Have started to develop a Project Plan to meet the deliverables
- Have identified ways to deal with potential roadblocks
- Be ready to apply the Six Sigma method through your project

Wrap Up & Action Items

LSS Black Belt Measure Phase

Phase Description:

The Measure Phase of the DMAIC methodology is constructed to introduce important Six Sigma tools for characterizing your business issues. There are 6 modules in this phase:

Welcome to Measure

Process Discovery

- Create a high level Process Map
- Create a Fishbone Diagram
- Create an X-Y Diagram
- Describe the elements of a FMEA
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- Describe why each tool is important

Six Sigma Statistics

- Explain the various statistics used to express location and spread of data
- Describe the characteristics of a Normal Distribution
- Test for Normality
- Describe the difference between Special Cause and Common Cause Variation
- Generate a variety of graphs for data
Measurement System Analysis

- Perform the step by step methodology in Variable and Attribute MSA’s
- Identify the various components of variation so corrections can be made and the gage error reduced
- Recognise the differences between Repeatability, Reproducibility, Accuracy and Calibration

Process Capability

- Estimate Capability for Continuous Data
- Describe the impact of Non-normal Data on the analysis presented in this module for Continuous Capability
- Estimate Capability for Attribute Data

Wrap Up & Action Items

LSS Black Belt Analyze Phase

Phase Description:

The Analyze Phase of the DMAIC methodology is constructed to introduce important Six Sigma tools for isolating critical factors. There are 9 modules in this phase:

Welcome to Analyze

“X” Sifting

- Perform a Multi-Vari Analysis
- Interpret and a Multi-Vari Graph
- Identify when a Multi-Vari Analysis is applicable
- Interpret what Skewed data looks like
- Explain how data distributions become Non-normal when they are really Normal

Inferential Statistics

- Explain the meaning of the term “Inferential Statistics”.
- Describe the basic tenets of the Central Limit Theorem.
- Describe the impact of sample size on your estimates of population parameters.
- Explain Standard Error

Intro to Hypothesis Testing

- Articulate the purpose of Hypothesis Testing
- Explain the concepts of the Central Tendency
- Be familiar with the types of Hypothesis Tests

Hypothesis Testing Normal Data Part 1

- Determine appropriate sample sizes for testing Means
- Conduct various Hypothesis Tests for Means
- Properly Analyze Results

Hypothesis Testing Normal Data Part 2

- Be able to conduct Hypothesis Testing of Variances
- Understand how to Analyze Hypothesis Testing Results

Hypothesis Testing Non-Normal Data Part 1

- Conduct Hypothesis Testing for equal variance
- Conduct Hypothesis Testing for Medians
- Analyze and interpret the results

Hypothesis Testing Non-Normal Data Part 2

- Calculate and explain test for proportions
- Calculate and explain contingency tests

Wrap Up & Action Items
LSS Black Belt Improve Phase

Phase Description:

The Improve Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are eight modules in this phase:

Welcome to Improve

Process Modeling Regression

- Perform the steps in a Correlation and a Regression Analysis
- Explain when Correlation and Regression is appropriate

Advanced Process Modeling

- Perform Non-Linear Regression Analysis
- Perform Multiple Linear Regression Analysis
- Determine the reason for experimenting
- Describe the difference between a physical model and a DOE model
- Explain an OFAT experiment and its primary weakness
- Shown Main Effects Plots and interactions, determine which effects and interactions may be significant
- Create a Full Factorial Design

Experimental Methods

- Be able to Design, Conduct and Analyze an Experiment

Full Factorial Experiments

- Understand how to Create Balanced & Orthogonal Designs
- Explain how Fit & Diagnose & Center Points factors into an experiment

Fractional Factorial Experiments

- Explain why & how to use a Fractional Factorial Design
- Create a proper Fractional Factorial Design
- Analyze a proper model with aliased interactions

Wrap Up & Action Items

LSS Black Belt Control Phase

Phase Description:

The Control Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are eight modules in this phase:

Welcome to Control

Advanced Experiments

- Use the results of a DOE to determine how to further optimize a process using the steepest ascent/descent method

Capability Analysis

- Understand the importance of Capability Analysis as it is applied in the Control Phase
- Select the appropriate method for Capability Analysis based on the type of data distribution of your process
- Interpret the output of MINITABTM’s Capability functions
- Understand how the use for Capability Analysis may alter through the DMAIC phases

Lean Controls

- Describe Lean tools
- Understand how these tools can help with project sustainability
- Understand how the Lean tools depends on each other
Understand how tools must document the defect prevention created in the Control Phase

Defect Controls

- Describe some methods of defect prevention
- Understand how these techniques can help with project sustainability
- Including reducing those outliers as seen in the Advanced Process Capability section
- If the vital X was identified, prevent the cause of defective Y
- Understand what tools must document the defect prevention created in the Control Phase

Statistical Process Control - SPC

- Describe the elements of an SPC Chart and the purposes of SPC
- Understand how SPC ranks in defect prevention
- Describe the 9 Step route or methodology of implementing a chart
- Design subgroups if needed for SPC usage
- Determine the frequency of sampling
- Understand the Control Chart selection methodology
- Be familiar with Control Chart parameter calculations such as UCL, LCL and the Center Line

Six Sigma Control Plans

- Understand the 5 phases of the Control Plan
- Training
- Documentation
- Monitoring
- Response
- Aligning Systems and Structures

Wrap Up & Action Items

Web Links:

View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
This accelerated 3-day course is designed to teach you the primary principals, learn from a seasoned expert and give you thorough knowledge on how to approach Six Sigma projects with a Green Belt . . . and get you back on the job faster!

To support your learning and fill in the gaps in your exam preparation, you receive:

- Comprehensive Courseware to keep
- The Complete IASSC Certified Green Belt eLearning Course
- Practice Exam and marking key to support your exam preparation
- A ‘Lean and Six Sigma’ supplementary eLearning Course
- Subscription to the pd training Training Booster series - reinforcing your learning for 12 months
- Subscription to the pd training Continuous Improvement YouTube channel
- Free re-sit for 12 months (come back and sit the course for free)

This is the BEST accelerated package in the industry!

This course is practical and hands on, enroll in a course near you across the U.S.A. including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia and Seattle.

Please click on the Public Class tab below to view our Lean Six Sigma Green Belt Certification Training course schedule by city or click the Client Site Training tab to receive a free quote for courses delivered at your preferred location.

**Lean Six Sigma Green Belt Certification Training - 3 day Accelerated Outline**

**Foreword:**
The pd training materials are much more than simple ‘tools training’. This curriculum is formatted in such a way that the problem-solving strategy is demonstrated throughout the course. By utilizing the various Statistical and Business Improvement tools, participants can clearly see and communicate the flow and process of the methodology in order to instill both the tactical and strategic aspects of the LSS Green Belt skill set.

The implementation roadmaps within each phase provide a clear line-of-sight for putting into practice the problem solving technology.

Various group exercises utilizing training aids, pre-formatted data sets and templates facilitate interactive group learning within a class.

These very training materials are the industry standard used by thousands of industry trainers, coaches and mentors to train Lean Six Sigma Green Belts around the world.

**Outcomes:**

**During this course, you will develop:**

- Understanding of the concepts, implementation & objectives of Six Sigma
- Ability to use a structured approach to process improvement
- Ability to use DMAIC methodology - Define, Measure, Analyze, Implement & Control
- Skills to predict, prevent and control defects in a process
- Understanding of the elements of waste
- Skills to achieve sustainable quality improvement through process improvement
- Understanding of the tools of process discovery
- Understanding of variation in processes
- Skills to reduce variation in processes and achieve predicted outcomes
- Ability to identify, measure and analyse process potential
- Usage of inferential statistics
- Usage of hypothesis testing
- Understanding when to use which Six Sigma methodology
- Ability to use Capability Analysis to control processes
- Knowledge of the interdependence of Lean tools
- Skills to prevent, identify and control defects
- Understanding and use of statistical process control
- Skills to train, document, monitor, respond, and align systems
- Skills to provide sustainable & cost-effective improvement in processes

This course has been designed to build your knowledge and capability to improve the performance of processes and subsequently the performance of the business of which you are a part. The focus of the course is process centric. Your
role in process performance improvement is to be through the use of the methodologies of Six Sigma, Lean, and Process Management.

By taking this course, you will have a well-rounded and firm grasp of many of the tools of these methodologies. We firmly believe this is one of the most effective classes you will ever take and it's our commitment to provide you that value.
LSS Green Belt Define Phase

Phase Description:

The Define Phase of the DMAIC methodology is constructed to introduce the fundamentals of Lean Six Sigma. There are five modules in this phase:

**Understanding Six Sigma**
- Describe the objectives of Six Sigma
- Describe the relationship between variation and sigma
- Recognize some Six Sigma concepts
- Recognize the Six Sigma implementation model
- Describe your role and responsibilities in Six Sigma

**Six Sigma Fundamentals**
- Describe what is meant by “Process Focus”
- Describe the importance of VOC, VOB, and VOE, and CTQ’s
- Explain COPQ
- Generate a Process Map
- Describe the Basic Six Sigma metrics
- Explain the difference between FTY and RTY
- Explain the difference between DPU and DPMO

**Selecting Projects**
- Utilize a structured approach to select projects
- Refine and Define the problem into a Project Charter
- Make an initial estimate of your project’s benefits

**Elements of Waste**
- Have a clear understanding of the specific deliverables
- Have started to develop a Project Plan to meet the deliverables
- Have identified ways to deal with potential roadblocks
- Be ready to apply the Six Sigma method through your project

**Wrap Up & Action Items**

LSS Green Belt Measure Phase

Phase Description:

The Measure Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for characterizing your business issues. There are six modules in this phase:

**Welcome to Measure**

**Process Discovery**
- Create a high level Process Map
- Create a Fishbone Diagram
- Create an X-Y Diagram
- Describe the elements of a FMEA
- Explain the importance of a FMEA
- Describe why each tool is important

**Six Sigma Statistics**
- Explain the various statistics used to express location and spread of data
- Describe the characteristics of a Normal Distribution
- Test for Normality
- Describe the difference between Special Cause and Common Cause Variation
- Generate a variety of graphs for data
Measurement System Analysis

- Perform the step-by-step methodology in Variable and Attribute MSA’s
- Identify the various components of variation so corrections can be made and the gage error reduced
- Recognize the differences between Repeatability, Reproducibility, Accuracy and Calibration

Process Capability

- Estimate Capability for Continuous Data
- Describe the impact of Non-normal Data on the analysis presented in this module for Continuous Capability
- Estimate Capability for Attribute Data

Wrap Up & Action Items

LSS Green Belt Analyze Phase

Phase Description:
The Analyze Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for isolating critical factors. There are nine modules in this phase:

Welcome to Analyze

- Perform a Multi-Vari Analysis
- Interpret and a Multi-Vari Graph
- Identify when a Multi-Vari Analysis is applicable
- Interpret what Skewed data looks like
- Explain how data distributions become Non-normal when they are really Normal

Inferential Statistics

- Explain the meaning of the term “Inferential Statistics"
- Describe the basic tenets of the Central Limit Theorem
- Describe the impact of sample size on your estimates of population parameters
- Explain Standard Error

Intro to Hypothesis Testing

- Articulate the purpose of Hypothesis Testing
- Explain the concepts of the Central Tendency
- Be familiar with the types of Hypothesis Tests

Hypothesis Testing Normal Data Part 1

- Determine appropriate sample sizes for testing Means
- Conduct various Hypothesis Tests for Means
- Properly Analyze Results

Hypothesis Testing Normal Data Part 2

- Be able to conduct Hypothesis Testing of Variances
- Understand how to Analyze Hypothesis Testing Results

Hypothesis Testing Non-Normal Data Part 1

- Conduct Hypothesis Testing for equal variance
- Conduct Hypothesis Testing for Medians
- Analyze and interpret the results

Hypothesis Testing Non-Normal Data Part 2

- Calculate and explain test for proportions
- Calculate and explain contingency tests

Wrap Up & Action Items

LSS Green Belt Improve Phase
Phase Description:

The Improve Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are five modules in this phase:

Welcome to Improve

Process Modeling Regression

- Perform the steps in a Correlation and a Regression Analysis
- Explain when Correlation and Regression is appropriate

Advanced Process Modeling

- Perform Non-Linear Regression Analysis
- Perform Multiple Linear Regression Analysis (MLR)
- Examine Residuals Analysis and understand its effects

Designing Experiments

- Determine the reason for experimenting
- Describe the difference between a physical model and a DOE model
- Explain an OFAT experiment and its primary weakness
- Shown Main Effects Plots and interactions, determine which effects and interactions may be significant
- Create a Full Factorial Design

Wrap Up & Action Items

LSS Green Belt Control Phase

Phase Description:

The Control Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are eight modules in this phase:

Welcome to Control

Advanced Experiments

- Use the results of a DOE to determine how to further optimize a process using the steepest ascent/descent method

Capability Analysis

- Understand the importance of Capability Analysis as it is applied in the Control Phase
- Select the appropriate method for Capability Analysis based on the type of data distribution of your process
- Interpret the output of MINITAB's Capability functions
- Understand how the use for Capability Analysis may alter through the DMAIC phases

Lean Controls

- Describe Lean tools
- Understand how these tools can help with project sustainability
- Understand how the Lean tools depends on each other
- Understand how tools must document the defect prevention created in the Control Phase

Defect Controls

- Describe some methods of defect prevention
- Understand how these techniques can help with project sustainability
  - Including reducing those outliers as seen in the Advanced Process Capability section
  - If the vital X was identified, prevent the cause of defective Y
- Understand what tools must document the defect prevention created in the Control Phase

Statistical Process Control - SPC

- Describe the elements of an SPC Chart and the purposes of SPC
- Understand how SPC ranks in defect prevention
Describe the 9 Step route or methodology of implementing a chart
Design subgroups if needed for SPC usage
Determine the frequency of sampling
Understand the Control Chart selection methodology
Be familiar with Control Chart parameter calculations such as UCL, LCL and the Center Line

Six Sigma Control Plans

- Understand the 5 phases of the Control Plan
  - Training
  - Documentation
  - Monitoring
  - Response
  - Aligning Systems and Structures

Wrap Up & Action Items

Web Links:

View this course online:

In-house Training Instant Quote:
https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx

Public Classes - Enrol Now!
This course is designed for people who have completed the pdtraining Yellow Belt course or an equivalent course with another provider.

The pdtraining Yellow Belt Training provided fundamental skills in the Define, Measure and Control steps of the DMAIC process. This upgrade to Six Sigma Green Belt course provides significant more depth in the Analyze and Improve phases and empowers you with the ability to really drive improvements in their workplace.

This highly significant and lively course is available now throughout the U.S., including Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Los Angeles, Manhattan, Miami, Orlando, Philadelphia and Seattle.

Please click on the Public Class tab below to view our Lean Six Sigma Green Belt Certification Training Upgrade from Yellow Belt course schedule by city or click Client Site Training tab to receive a free quote for courses delivered at your preferred location.

### Lean Six Sigma Green Belt Certification Training Upgrade from Yellow Belt Course Outline

**Foreword:**
Prior to accepting your enrolment, pd training will provide you with an IASSC Practice Test to confirm your existing knowledge, and if accepted, will provide your Green Belt materials a week before the courseware early so you can review the materials early, and pick up with the training without missing a beat.

This upgrade course is days 3, 4 and 5 of the complete 5-day Green belt course, it pick up from where the Yellow Belt training ends.

Moving up from Yellow Belt to Green Belt you develop substantial skills in the **Analyze** and **Improve** phases of DMAIC.

**Outcomes:**
During this course, participants will enhance their skills above the Yellow Belt level and develop:

- Ability to use a structured approach to process improvement
- Ability to use all steps of DMAIC (*with a focus on Analyse and Implement*) methodology
- Skill to achieve sustainable quality improvement through process improvement
- Understanding of the tools of process discovery
- Understanding of variation in processes
- Skill to reduce variation in processes and achieve predicted outcomes
- Ability to identify, measure and analyze process potential
- Usage of inferential statistics
- Usage of hypothesis testing
- Understanding when to use which Six Sigma methodology
- Ability to use Capability Analysis to control processes
- Knowledge of the interdependence of Lean tools
- Skill to prevent, identify and control defects
- Understanding and use of statistical process control
- Skill to train, document, monitor, respond, and align systems
- Skill to provide sustainable and cost-effective improvement in processes
LSS Green Belt Define Phase
Brief review of Yellow Belt content

LSS Green Belt Measure Phase
Brief review of Yellow Belt content

LSS Green Belt Analyze Phase

Phase Description:
The Analyze Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for isolating critical factors. There are nine modules in this phase:

Welcome to Analyze

"X" Sifting

- Perform a Multi-Vari Analysis
- Interpret and a Multi-Vari Graph
- Identify when a Multi-Vari Analysis is applicable
- Interpret what Skewed data looks like
- Explain how data distributions become Non-normal when they are really Normal

Inferential Statistics

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- Conduct Hypothesis Testing for equal variance
- Conduct Hypothesis Testing for Medians
- Analyze and interpret the results

Hypothesis Testing Non-Normal Data Part 2

- Calculate and explain test for proportions
- Calculate and explain contingency tests

Wrap Up & Action Items

LSS Green Belt Improve Phase

Phase Description:
The Improve Phase of the DMAIC methodology is constructed to introduce important Lean Six Sigma tools for properly controlling solutions. There are five modules in this phase:

**Welcome to Improve**

**Process Modeling Regression**
- Perform the steps in a Correlation and a Regression Analysis
- Explain when Correlation and Regression is appropriate

**Advanced Process Modeling**
- Perform Non-Linear Regression Analysis
- Perform Multiple Linear Regression Analysis (MLR)
- Examine Residuals Analysis and understand its effects

**Designing Experiments**
- Determine the reason for experimenting
- Describe the difference between a physical model and a DOE model
- Explain an OFAT experiment and its primary weakness
- Show Main Effects Plots and interactions, determine which effects and interactions may be significant
- Create a Full Factorial Design

**Wrap Up & Action Items**

**LSS Green Belt Control Phase**

Brief review of Yellow Belt content

**Web Links:**

View this course online:

In-house Training Instant Quote:
[https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx](https://bookings.professionaldevelopmenttraining.com/inhouseex1/quoterequestex1a.aspx)

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