LEAN SIX SIGMA
BLACK BELT
OPEN ONLINE PROGRAM

August 2, 2018 – November 29, 2018

- 24.4 online, self-paced learning hours
- One 30-minute introductory live webinar
- Eight 60-minute live webinars

(32.5 hours total)

Overview

Juran's Online Lean Six Sigma Black Belt Program is designed to transfer knowledge from a Juran Certified Instructor to you with the result being a completed project and mastery of the lean six sigma methodology. You will work side by side with the Juran Certified Coach to apply skills learned throughout training to an enterprise-wide improvement project.

The program begins with self paced learning to give you a basic understanding of what needs to be learned, and then is augmented with live instructor led webinars with a certified Juran instructor to reinforce learning points and give you that onsite collaboration experience.

Throughout training and after, candidates work 1-on-1 in a mentorship program with their Juran Certified Coach to deliver a completed project for their organization. This project will yield at least $250,000 for the organization and prove our program's value within 3-6 months from the beginning of training.

Workshop Objectives

1. Preparing to lead multiple complex Lean Six Sigma DMAIC projects.
2. Mastering the Lean and DMAIC methods for improvement.
3. Mastering both graphical and statistical tools that enable the Lean and DMAIC methods.
4. Obtaining in-depth understanding of the Lean Six Sigma philosophy, theory, strategy, tactics, and quality management tools.
5. Applying methods and tools to real quality and performance problems.
6. Applying skills to lead, facilitate, and manage teamwork.
7. Learning leadership roles to support executive management in the deployment of Lean Six Sigma initiatives and selection and chartering of the most

Cost of Training:

$1,750

Cost of Certification:

$2,000 (certification)*

Workshop Materials:

1. eLearning online modules
2. Access to templates and tools
3. Informational live webinars with a certified Juran Instructor
4. Access to a Juran live instructor during training

Prerequisites:

- Participants should be managerial level or technical specialists and usually assigned full-time responsibility to implement Lean Six Sigma, multi-functional improvement projects within a business unit.
- Minitab® should be installed and operational before workshop begins.

Certification Requirements:*

1. Complete all online modules and attend all live webinar sessions with active participation (see training agenda).
2. A passing score on the Black Belt Exam.
3. Satisfactory presentation and oral review of a successful and approved Black Belt project by a Juran Master Black Belt Certifier.

AUTHORIZED IACET PROVIDER

Juran is authorized by the International Association for Continuing Education and Training (IACET), to offer IACET CEUs for this program under the ANSI/IACET 1-2013 Standard.

*Certification is optional and entails additional fees associated with the project review. A Juran professional will review the manager-approved project prior to your first session.

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LEAN SIX SIGMA **BLACK BELT** PROJECT COACHING

(If certification option is selected)

The success or failure of all improvement projects is largely based on the effectiveness or shortcomings of their project management. We consider effective and robust project management to be absolutely critical to the success of an improvement project.

While training is essential for obtaining the knowledge around Lean Six Sigma, coaching makes sure that the learning is applied in the correct way throughout your project. We believe that project coaching highly increases the probability of getting a project completed and in a timely manner.

Typical problems our coaches help combat after training:

- **Project Selection** - Individuals have a hard time scoping their project and determining what impact it can have on their organization.
- **Disengagement** - Individuals lose steam on their project due to getting "stuck" and need help pushing their project forward.
- **Tool Selection** - There are various tools used in the DMAIC process, and individuals typically have a difficult time selecting which one to use and when.
- **Accountability** - Coaches provide a summary after each session with concerns, next steps, and achievements to keep the project on track, and to setup success for the next session.

Juran recommends eight hours of coaching per project. More hours are available for purchase if needed.

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Agenda
24.4 online, self-paced learning hours, one 30-minute introductory live webinar, eight 60-minute live webinars

Time	Topic
August 2, 2018 30 min., 3:00 PM ET The following are to be completed by: ***Webinar 1***	**Live Webinar:** Introduction Instructor: Michael Stamp, VP Juran **The History of Quality and Continuous Improvement** A basic introduction to the vast field of quality improvement, and the impact made by Dr. Joseph M. Juran and his contemporaries. **Basic Quality** Basic quality principles and operational definitions important to continuous improvement. **The Juran Management System** An introduction to how Juran thinks about quality. **Putting the Trilogy to Work Today** How to make continuous improvement efficiently happen in today's organizations. **The Need for Change & Continuous Improvement** An introduction to why organizations must continue to develop processes and services that satisfy organizational and customer needs. **Improving Quality** Methods and steps available to improve levels of quality. **Introduction to Variation and Waste** An introduction to process variation and the waste that variation creates. **Continuous Improvement Structure** Different high-level components of a Continuous Improvement program. **Effective Teams** An introduction to teams, and the team skills necessary to work well together on improvement projects. **Overview of Improvement Methods** An overview of the Lean, Six Sigma, and Quality by Design improvement methodologies. **What is DMAIC?** An introducton to the Six Sigma DMAIC improvement methodology and how to identify and improve process effectiveness. **What is Lean?** Lean improvement methodology and how to identify and eliminate process waste. **What is Quality by Design?** The Quality by Design planning methodology.

Agenda Continued
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Time	Topic
	The Financial Case for Improvement An introduction to how a continuous improvement program can impact an organization's bottom line. **Managing Change** This module details what change is, and how to manage continuous improvement projects to achieve desired results. **The Strategic Planning Roadmap** This module details how to integrate continuous improvement goals into the strategic plan, and provides a roadmap for doing so. **Introduction to Selecting Projects** This module is an introduction to selecting appropriate continuous improvement projects that fit in with an organization's strategic plan. **Introduction to the Cost of Poor Quality** This module is an introduction to the costs related to poor quality, which are the costs of not doing a job perfectly every time it gets done. **Application: Background** This module is an introduction to the JDD Expense Request Case Study. It covers background on the JDD organization and demonstrates the problem their project team will be solving through a Six Sigma DMAIC project. **Application: Creating a Project Charter** This module has learners apply their knowledge and create a Project Charter for the JDD Expense Request project. **Application: Calculating the Cost of Poor Quality** This module has learners apply what they have learned and use provided information to calculate the cost of poor quality relating to the JDD Expense Request process.
August 16, 2018 60 min., 3:00 PM ET The following are to be completed by: ***Webinar 2***	**Live Webinar 1:** **Instructor: Michael Stamp, VP Juran** **DEFINE** Introduces Define, the first step of the Six Sigma DMAIC methodology. It covers what tools are used. **Improvement Tool: Stakeholder Analysis** An introduction to stakeholder analysis, a tool used to gauge important stakeholders views of a problem or project before committing resources to tackle them.

Agenda Continued
24.4 online, self-paced learning hours, one 30-minute introductory live webinar, four 60-minute live webinars

Time	Topic
	Application: Stakeholder Analysis This module has learners use information about JDD stakeholders and answer questions about the stakeholder analysis the team completed. **Improvement Tool: Voice of the Customer Matrix** This module introduces the principles of the Voice of the Customer, Key Issues, and Critical to Quality, all important aspects when working on an improvement project. The goal of this module is to better understand a processes multiple customers and their needs, and ultimately identify what is critical to quality for the process to run effectively. **Application: Verifying the Voice of the Customer** This module has learners use information about JDD customers and answer questions about how the team used the Voice of the Customer and identified what is Critical to Quality. **Improvement Tool: SIPOC Diagram** Introduces the SIPOC Diagram. SIPOC stands for Supplier, Input, Process, Output, Customer, and this is a high-level process map that determines the boundaries of an improvement project. **Application: High Level Process Map (SIPOC)** This module has learners review and interpret the JDD improvement team's SIPOC.
August 30, 2018 60 min., 3:00 PM ET The following are to be completed by: ***Webinar 3***	**Live Webinar 2:** **Instructor: Michael Stamp, VP Juran** **MEASURE** Introduces Measure, the second step of the DMAIC methodology. In this module, learners will discover how improvement teams measure the Y in its current state in numbers, and the tools to do so. **Improvement Tool: Juran's Pareto Analysis** Introduces the Pareto Principle and Pareto Analysis. This is a tool that helps project teams differentiate the "vital few" from the "useful many." It essentially shows that a small number of sources account for the majority of a problem. **Application: Determining the "Vital Few" Through Pareto Analysis** This module has learners interpret the JDD teams Pareto Diagram and answer questions about how it is used. **Improvement Tool: Data Collection Plan** An introduction to Data Collection Plans. A data collection plan is a tool used to define a clear strategy to efficiently collect reliable information that will be used to prove root causes. **Application: Data Collection Plan** This module has the JDD team create a Data Collection Plan, and the learner interpret and answer questions about it.

Agenda Continued
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Time	Topic
	Improvement Tool: Sampling This module introduces sampling. Sampling is when a select group of carefully selected data is used to make an inference about an entire population of data to simplify data collection. **Application: Working With the Right Data, Samples or Populations?** This module has the JDD team decide to use a sample of their total data population. It is then the learners job to analyze how the team used the tool, and answer questions about it. **Improvement Tool: Detailed Process Mapping** This module introduces Detailed Process Mapping. A process map is a graphic representation of the sequence of steps of a given process. It shows where the process begins and ends, aling with where major steps take place. A detailed process map is much more in-depth than a SIPOC map, and follows the "thing" going through the process. **Application: Detailed Process Map** This module has the learner review and answer questions about the detailed process map the JDD team created. **Introduction to Measurement System Analysis** This module is an introduction to analyzing measurement systems. **Measurement System Analysis** This module teaches how to ensure that your measurement system is sustainable and usable. **Process Capability and Calc Sigma** This module teaches how to determine process capability and use data to calculate a sigma level for your process.
September 13, 2018 60 min., 3:00 PM ET The following are to be completed by: ***Webinar 4***	**Live Webinar 3:** **Instructor: Michael Stamp, VP Juran** **ANALYZE** This module introduces Analyze, the third step in the DMAIC methodology. During the improvement step, improvement teaams are tasked with studying the potential Xs, and determining which ones cause the most process variation. **Improvement Tool: Calculating Sigma** This module introduces the concepts of Sigma Level and Yield, and demonstrates how to measure each. Sigma Level is a measure of process effectiveness, and yield is a measure of process output. **Application: Calculating Sigma Level** In this module the learner reviews information provided by the JDD team and answers questions based on that information.

Agenda Continued
24.4 online, self-paced learning hours, one 30-minute introductory live webinar, four 60-minute live webinars

Time	Topic

Improvement Tool: Graphs and Charts
An introduction to basic graphs and charts. Graphs and charts are pictorial representations of quantitative data. They can summarize large amounts of information in a small area and communicate complex situations concisely and clearly. Line graphs, bar graphs, stacked bar graphs, and pie charts are covered in this module.

Application: Using Graphs and Charts
This module has the learner review and answer questions about graphs and charts that the JDD team created.

Improvement Tool: Brainstorming
An introduction to Brainstorming, a tool used to generate many ideas on a topic without judgement. This tool encourages every team member to participate and contribute ideas.

Improvement Tool: Stratification
This module introduces Stratification. Stratification is the breaking apart of data to reveal patterns and allow for examination in many different ways.

Improvement Tool: Histograms
This module introduces Histograms. Histograms charts that display variation in a single characteristic. Patterns in the variation often reveal facts about the process.

Application: Working With Histograms
This module has the learner review histograms that the JDD team created, and answer questions relating to those graphs.

Improvement Tool: Box Plots
This module introduces Box Plots. Box Plots provide a graphic summary of the variation in a set of data. They are especially useful when working with small sets of data.

Application: Working With Box Plots
This module has the learner review box plots that the JDD team created, and answer questions relating to those charts.

Improvement Tool: Scatter Diagrams
This module introduces Scatter Diagrams. Scatter Diagrams show a numerical relationship or correlation between variables. They are an ideal way to display data when trying to evaluate a cause-effect relationship.

Application: Interpreting Scatter Diagrams
This module has the learner review scatter diagrams the JDD team created, and answer questions relating to those charts.

Agenda Continued
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Time	Topic
	Improvement Tool: Cause-Effect Diagrams This module introduces Cause-Effect Diagrams. Cause-Effect diagrams are used to suggest theories of root causes, and help teams focus on possible Xs. **Application: Cause-Effect Diagram** This module has the learner review a cause-effect diagram that the JDD team created, and answer questions relating to it. **Improvement Tool: 5-Why Analysis** This module introduces 5-Why Analysis, a tool that helps identify potential causes of problems through repeatedly asking Why until you reach a root cause. **Application: 5-Why Analysis** This module has the learner review the JDD teams 5-Why analysis and answer questions related to it. **Improvement Tool: FMEA** This module introduces Failure Mode and Effect Analysis (FMEA). FMEA is a systematic method for identifying possible failures that pose the greatest overall risk for the process, product, or service. It depends on identifying a failure mode, the effect of the failure, the cause of the failure, and analysis of the failure mode. **Application: Failure Mode Effects Analysis** This module has the learner review the JDD teams FMEA and answer questions related to it. **Improvement Tool: Impact Control Matrix** This module introduces Impact Control Matrices. An Impact Control Matrix is a simple prioritization tool that identifies the degree of control of a root cause of a problem, vs. the degree of impact the root cause has on the process.
September 27, 2018 60 min., 3:00 PM ET	**Live Webinar 4:** **Instructor: Michael Stamp, VP Juran**
The following are to be completed by: ***Webinar 5***	**Introduction to Hypothesis Testing** This module introduces you to the hypothesis testing method and the concepts surrounding it. **Testing Hypotheses With Categorical Data** This module teaches how to complete hypothesis tests using categorical data. **Testing for Equal Variance** This module teaches how to test for equal variance, a necessary step to take when completing hypothesis tests.

Agenda Continued
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Time	Topic
	Testing Hypotheses When Y is Continuous and X is Categorical This module teaches how to test hypotheses when the project y is a continuous measure, and the x is a categorical measure.
October 11, 2018 60 min., 3:00 PM ET	**Live Webinar 5:** **Instructor: Michael Stamp, VP Juran**
The following are to be completed by: ***Webinar 6***	**Analysis of Variance** This module teaches how to complete Analysis of Variance.
	Nonparametric Tests This module teaches how to complete hypothesis tests when you have nonparametric data.
	Testing Hypotheses When Y is Continuous and X is Continuous This module teaches how to test hypotheses when your Y is continuous and your X is also continuous.
October 25, 2018 60 min., 11:00 AM ET	**Live Webinar 6:** **Instructor: Michael Stamp, VP Juran**
The following are to be completed by: ***Webinar 7***	**IMPROVE** This module introduces Improve, the fourth step of the DMAIC methodology. During the Improve step, project teams develop proposed solutions, and pilot them in a real business environment.
	Application: Brainstorming Review a brainstorming session the JDD project team held and answers related questions.
	Improvement Tool: Solution Matrix This module introduces the Solution Matrix. A solution matrix helps improvement teams evaluate solutions against evaluation criteria.
	Application: Solution Matrix This module has the learner review the JDDs solution matrix and answer related questions.
	Improvement Tool: Barriers and Aids This module introduces Barriers and Aids Charts. Barriers and Aids Charts are a graphical way to display potential cultural and other barriers to a process change. They also display aids to make the change easier for employees, and show countermeasures for apparent issues that may arise.
	Application: Barriers and Aids This module has the learner review JDDs barrriers and aids chart and answer related questions.

Agenda Continued
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Time	Topic
	Improvement Tool: Pilot Study This module introduces Pilot Studies. A Pilot Study is a test of all or part of a proposed solution on a small scale in order to better understand its effects and to learn how to make the full-scale implementation more effective. **Application: Pilot Study** This module has the learner review JDDs pilot study and answer related questions. **Improvement Tool: Mistake Proofing** This module introduces Mistake Proofing. Mistake Proofing is the act of making a task difficult to perform incorrectly. **Application: Mistake Proofing** This module has the learner review how the JDD team mistake proofed their solution and answer related questions. **Improvement Tool: Benchmarking** This module introduces Benchmarking. Benchmarking is a tool which organizations use to measure their performance against another's best-in-class practices. **Improvement Tool: Pugh Matrix** This module introduces the Pugh Matrix. A Pugh Matrix is a tool for comparing several alternative concepts against a base concept, creating stronger concepts, and eliminating weaker ones until an optimal concept is reached. This tool is useful for concept generation and selection.
November 8, 2018 60 min., 3:00 PM ET The following are to be completed by: ***Webinar 8***	**Live Webinar 7:** **Instructor: Michael Stamp, VP Juran** **CONTROL** Control is the fifth and final step in the DMAIC process. Control is when the means to keep a revised process at a new level of performance. It is the step where the team "holds the gains" of their improvement. **Improvement Tool: Process Control Plan** This module introduces Control Plans. A control plan is the means to document how to monitor a revised process or product and ensure that it remains within specification. **Application: Creating a Control Plan** This module has the learner review the JDD teams process control plan and answer related questions. **Improvement Tool: Control Charts** An introduction to Control Charts. Control Charts display measured performance of a process at given times, and allow an organization to monitor processes to determine their variability and enact corrective action when necessary.

Agenda Continued
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Time	Topic
	Application: Control Charts This module has the learner review the JDD teams control charts and answer related questions. **Statistical Process Control** This module teaches you how to complete statistical process control of your improved process. **Application: Updating COPQ and SIgma Level** This module has the learner review JDD data and calculate a revised sigma level and cost of poor quality. **Application: Documentation** This module has the learner review the JDD teams project documentation and answer related questions.
November 29, 2018 60 min., 3:00 PM ET	**Final Live Webinar 8:** **Instructor: Michael Stamp, VP Juran**

MEET YOUR **BLACK BELT** COACH

Michael Stamp is a Senior Consultant with Juran. In this capacity, he specializes in Continuous Process Improvement, Lean Management and delivering a variety of quality programs to corporate clients. Mr. Stamp has over 25 years of experience and is an outstanding change agent who can identify opportunities, develop focus and provide strategic and tactical business solutions.

Mr. Stamp's core competencies include Process Improvement, Operational Streamlining, Data Science, Special Project Management, Training & Coaching, Cost Reduction, Multi-Site Operations, Quality Control/Assurance, Policy & Procedure Development, Leadership Development & Culture Transformation and Statistics.

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