



EZSigma Group Continuing Education

Open Enrollment: Lean Six Sigma Green Belt

Become a leader in Continuous Improvement by enrolling with Canada's original source for Lean & Six Sigma Certification programs.

Subject Matter Support: Jeff Woods jwoods@ezsigmagroup.com / 647.216.9933
Technical Support: Elizabeth Jamischak lstuart@ezsigmagroup.com / 416.737.1729
Certification Grading: Training + Exam Pass + Successful Project
Registration Fee: \$4,595 + HST

I. Rationale:

This course offers participants a theoretical understanding of Lean and Six Sigma tools, practices and application. The Certification component of this program ensures the participants also have the practical experience of applying the learned tools, concepts and practices of Lean and Six Sigma.

II. Course Aims and Outcomes:

Aims

A Lean Six Sigma Green Belt is a professional who demonstrates an understanding of both the Lean and Six Sigma methods and philosophy. They are a skilled team member and possess the tools and training to successfully lead small to medium sized improvement projects through the DMAIC (Define, Measure, Analyze, Improve, & Control). A Green Belt is typically a part-time project manager and is often a team member on a large scale and/or cross-departmental projects being led by a Black Belt.

Specific Learning Outcomes:

The Green Belt training program is divided into two phases. The first phase comprises of a focus on Lean and includes six online modules on this topic followed by instructor-led training. The next and final phase of training will focus on Six Sigma and the DMAIC approach and will also include six online modules followed by instructor-led training. Webinars are also available following each phase to provide a brief summary and review of what was learned.

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

- ✓ Apply the 5 principles of Lean and define “customer value-added” in Lean terms
- ✓ Identify, and assist team members in identifying the 8 sources of waste
- ✓ Facilitate the construction of a current and future state Value Stream Map (VSM)
- ✓ Explain the difference between “Push” versus “Pull” systems and the concept of “Flow”
- ✓ Understand how to apply workplace organization, including 5S & Visual Management



- ✓ Successfully facilitate a Kaizen (rapid improvement) Event
- ✓ Help organizations apply Lean concepts in Workplace Design and Layout
- ✓ Explain the importance of Standard Work in a Lean workplace
- ✓ Apply Error Proofing (aka Mistake-Proofing or Poka Yoke)
- ✓ Describe the purpose of Rapid Changeover Reduction
- ✓ Explain the importance of Total Productive Maintenance
- ✓ Define, plan and lead Lean projects
- ✓ Explain the Six Sigma approach and how process variation impacts process excellence
- ✓ Understand the importance of capturing and aligning with the voice of the customer (VOC)
- ✓ Describe the DMAIC as well as other key concepts and terms that are part of the Six Sigma methodology
- ✓ Understand and can construct Six Sigma charts
- ✓ Lead a team on a small to medium sized improvement project following the DMAIC process (Define, Measure, Analyze, Improve, Control)
- ✓ Determine which Lean and/or Six Sigma tools are most appropriate in a given situation

III. Format and Procedures:

This is a blended program therefore there are three components:

1. Online self-paced learning
 - a. Participants are required to complete a total of twelve online modules relating to Lean and Six Sigma along with supplemental readings through the EZSigma Quality Campus prior to attending the instructor-led training.
2. Instructor-led training
 - a. The instructor-led training is delivered via zoom and a webinar summarizing what was learned online and in-class will occur following the instructor-led training.
3. Certification

The final element of this program is Lean Six Sigma Green Belt Certification. Once the training has been completed participants need to successfully complete the following:

1. **Passing of the Certification Exam.** The Certification exam is available online through the EZSigma Quality Campus. This exam comprises of 50 to 60 multiple choice questions which are derived from the Lean Six Sigma Green Belt Body of Knowledge. The pass mark for all Certification examinations is 70%. The exam is “open book” allowing participants to access all the materials and tools they would normally have access to when leading Lean Six Sigma projects.
2. **Completion of a Continuous Improvement Project.** A Project is defined as having followed the DMAIC (Define, Measure, Analyze, Improve, Control) lifecycle and will include relevant analyses such as Fishbone, Pareto, Hypothesis Tests, Regression etc. where applicable.

V. Course Requirements:

1. **Class attendance and participation policy:** Participants are expected to attend all instructor-led training. In the case where the participant cannot attend all training days, a written request must be sent to EZSigma and alternate options will be made available to the participant.



2. Course readings:

- (a) Required: EZSigma Quality Campus online modules
- (b) Recommended: Articles listed within the EZSigma Quality Campus.

3. Assignments: Participants are expected to participate in both group and personal assignments during the instructor-led training.

V. Grading Procedures:

Online Modules: Post-module tests are for the benefit of the participant and results from these tests will have no effect upon their eligibility for Certification.

Certification: Participants must achieve a grade of 70% or above on the Certification exam for a 'pass' to be awarded. Should a grade of less than 70% be achieved, participants may rewrite the exam after a 30-day waiting period. Each subsequent attempt will incur an administrative fee of \$85 + applicable taxes.

VI. Academic Integrity

Each participant in this program is expected to abide by the generally recognized Code of Academic Integrity.

Therefore, any work submitted by a participant in this program for certification will be the participant's own work. [Optional: collaboration is allowed for the Certification project submission with special permission from the facilitator.]

Participants are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other participants. You can give "consulting" help to or receive "consulting" help from such participants.

VII. Inclusivity Statement

We understand that our clients represent a rich variety of backgrounds and perspectives. The EZSigma Group Continuing Education Department is committed to providing an atmosphere for learning that respects diversity. While working together to build this community we ask all members respectfully:

- share their unique experiences, values and beliefs
- be open to the views of others
- honor the uniqueness of their colleagues
- appreciate the opportunity that we have to learn from each other in this community
- value each other's opinions and communicate in a respectful manner
- keep confidential discussions that the community has of a personal (or professional) nature

VIII. Tentative Course Schedule: *(May change to accommodate guest facilitators & participant needs)*

Phase I: Pre-Work: Online Modules within the EZSigma Quality Campus

- Introduction to Lean Principles
- Introduction to Lean Office and Service
- 5S
- Current State Value Stream Mapping
- Future State Value Stream Mapping
- Eight Wastes

Instructor-led Training:

Section 1

Lean Introduction
5 Principles of Lean
Lean Culture
8 Wastes
Problem Statements
SIPOC
Value Stream Mapping
Takt Time
Process Mapping
Spaghetti Diagrams
Kaizen
Defining Goals
Opportunity Statement

Section 2

Project Charter
A3
Project Management
RASCI Matrix
Project Plan
Communication Management
Managing Conflict
Team Facilitation
Managing Change
Cause & Effect Analysis
Pareto Chart
FMEA
Future State Value Stream Mapping

Section 3

5S



Lean Huddle
Error Proofing
Visual Workplace
Just-In-Time
Workplace Layout & Design
Rapid Changeover
Total Productive Maintenance
Control Charts & Control Plans

Phase II: Pre-Work: Online Modules within the EZSigma Quality Campus

- Six Sigma Introduction
- What is Statistics?
- Measure of Central Tendency
- Measures of Dispersion
- Continuous Probability Distributions: Normal Curve
- Introduction to Inferential Statistics

Note: Video selections from the 'Against All Odds' video series will be included as supplemental 'assignments' for the online modules however, only completion of the online modules are required for the program.

Instructor-led Training:

Section 1

DMAIC "Roadmap"
Types of Data
Population and Samples
Central tendency measures
Measures of dispersion
Descriptive statistics

Section 2

Histograms
Box plots
Normal distribution
Normality test
Scatter plots and correlation
Data Collection and Sampling
Measurement System Analysis
Gauge Repeatability & Reproducibility
Attribute Agreement Analysis

Section 3

EZSigma Group Continuing Education
Open Enrollment: Lean Green Belt Certification Program



Introduction to Statistical Process Control
Defects, Defectives and Measures of Yield
DPU, DPO, DPMO and Z
Capability Studies Using Continuous Data
Simple Linear Regression
Introduction to Hypothesis Testing

For further information on this resource and more, please contact EZSigma Group at:

lstuart@ezsigmagroup.com

416.737.1729

www.ezsigmagroup.com