LEAN SIX SIGMA GREEN BELT
PROFESSIONAL CERTIFICATION

LSSGBPC™ Version 022021

CertiProf®

Syllabus V082019

Introduction

CertiProf® offers professional certification in Lean Six Sigma Green Belt, for those professionals in project management who want to prepare for the implementation of the Lean Six Sigma methodology, with the purpose that companies optimize their processes, taking advantage of resources and decreasing the variability of the processes to eliminate the waste that may exist in it.

This certification aims to teach professionals to lead or be part of a team with the ability to analyze and solve quality problems. In addition to coordinating the project data collection process, validate the measurement system and develop the project charter and SIPOC diagram (provider, input, process and output). It is recommended to acquire prior knowledge about the aspects within the phases of DMAIC (Define, Measure, Analyze, Improve and Control / Define, Measure, Analyze, Improve and Control), in order to know how to interpret and implement Six Sigma tools.

Learning Objectives

- Use Lean Six Sigma techniques and tools.
- Provide knowledge according to the general vision of Six Sigma for its correct implementation.
- Strengthen the skills to improve and optimize processes.
- Obtain the Lean Six Sigma Green Belt certification.

Exam format and duration

The study program has a test that the candidate must pass to obtain the certification in Lean Six Sigma Green Belt Professional Certification LSSGBPC ™

- Format: Multiple choice. 40 Questions.
- Duration: 60 minutes maximum, for all candidates in their respective language.
- Prerequisite: None.
- Supervised: It will be at the Partner's discretion.
- Open book: No.
- Pass Score: 24/40 or 60 %.
- Delivery: This examination is available online.

Eligibility for certification

Anyone who is interested in expanding their knowledge in Lean Six Sigma Green Belt and wants to improve their area of work.

Content

Unit 1: Quality

What is Quality?
Theorists of Quality
Evolution of Quality
What is Six Sigma?
Beginnings of Six Sigma
What is Six Sigma?
Six Sigma Approach
What is Defects per Million Opportunities (DPMO)?
Let's practice!
Answer
Involved
Benchmarking
Stages of Benchmarking
Voice of the Customer (VOC)
Data Collection
Balanced Scorecard
KANO Analysis Model
Deployment of the Quality Function (QFD)
Exercise
What is a Six Sigma project?
Roles in a Six Sigma Organization
Six Sigma Overview
Define (Define)
Measure (Measure)
Analyze (Analyze)
Improve (Improve)
Control (Control)
Summary DMAIC Tour
Evaluation of a Project
Organization chart
Process map
High Level Map SIPOC
Process Map Tools
Ideas Generation Tools
CTQ Definition
Project Charter
Anatomy of the Project Charter

Unit 2: Measurement

Target Phase Measure
Definition of Causes and Effects
Matrix Cause - Effect
Example Matrix Cause - Effect
Pareto application in the C & E Matrix
Joining Points
Statistics
Types of Statistics
Objective of the Statistics
Type of data
Data Collection Process
Basic statistics
What interests us about the data?
Measures of central tendency
Measures of dispersion
What is a measurement system?
Analysis of the Measurement System (MSA)
Gage R & R
What time is it?
You can say?
ASM (Analysis of the Measurement System) in Administrative Environments
Do you know the difference?
Repeatability and Reproducibility
General Model of a Gage R & R Study
Sources of Variation
R & R Analysis through Minitab
How good is good?

Unit 3: Analysis

Objective
Ishikawa's diagram
AMEF / FMEA
How to make an AMEF?
Types of AMEF
Example AMEF
Data Distribution
Charts of Run (Runcharts)
Process Capacity
Hypothesis Tests
Steps to Conduct a Hypothesis Test
Hypothesis Tests

Unit 4: Improvement

What is done in the improvement phase?
Return on Investment (ROI)
Present Net Value
VPN exercise
Design of Experiments (DOE)
What is DOE?
goals
Steps of the Improvement Plan
Taguchi Designs
Project management
Prototypes
Lean Manufacturing
Lean tools
What is Lean?
What is Lean Manufacturing?
Lean
Lean waste
What is Kaizen?
Poka Yoke
Gemba Walks
What is Kanban?
Kanban (Pull vs. Push)
Just in Time (JIT)
Pillars of JIT
VSM (Value Stream Mapping)
VSM Symbology

Unit 5: Control

Why is the control phase important?
The Main Function of Controlling is:
What do we control?
Main Control Mechanisms
Control Plan Check List
The 3 Pillars of Data Control
CEP (Statistical Process Control)
Control Graphics
Types of Control Graphics
Steps to Make Control Graphics
Interpreting Control Charts
Definitions by Attributes