



Course ID: S07M

CERTIFIED LEAN SIX SIGMA GREEN BELT

**Online course: 12 modules x 4 hours each
with continuous assessment & project work**

1. What is this course about?

Lean six sigma enables all employees to work in collaborative teams to improve process performance and increase customer satisfaction. A Green Belt (GB) project leader is capable of leading a cross-functional team through a series of formal project and problem solving steps. GB projects are short-projects (c. 10 – 20 weeks) that result in customer satisfaction and cost savings or additional revenue for the organization.

On this course you will learn that lean and six sigma are about teamwork, process management and customer service. It is designed to enable all participants, regardless of sector or previous education, to certify as a Lean Six Sigma Green Belt (CLSSGB). The course consists of a series of facilitated online live webinars, interactive exercises, assignments and project work. Your knowledge builds in a step wise fashion and you will be supported and encouraged throughout your learning journey.

The software application used is Minitab.

2. What will you achieve?

On completion of the CLSSGB online course, you will be able to

- define customer needs for a selected process;
- understand the value of cross-functional teamwork;
- use a range of problem-solving techniques, both statistical and non-statistical, to improve process performance;
- be able to lead a cross-functional team through project steps that will resolve process problems;
- quantify business and financial benefits for the organisation and the customer, and
- be primed to support other project teams in the execution of their projects.

Your project will deliver significant benefits to your organization in terms of simplifying and standardizing processes.

Your customers will experience improved service levels.

When you attend all webinars and complete all continuous assessment assignments, you will be eligible to present your project for certification. Successful candidates are awarded a Lean Six Sigma Green Belt certificate. The green belt certificate is a significant achievement and enhances your curriculum vitae.

The webinars are hosted on a secure online learning platform. In advance of course commencement, participants will be enrolled on the platform. All course contents are available to view and download from Moodle.

3 . What topics will be covered?

Module	Content
S07 E01	<p>Introduction to CLSSGB course: GB course objective, curriculum, assignment and project work on course, study effort, certification process, project selection and scope, six sigma history, DMAIC A3 planning, the role of the sponsor & effective sponsorship, team selection.</p> <p>Define phase: Team leader role & team member role, problem definition, gemba walk, the 7 wastes, goal setting, DMAIC A3 development for each candidate, voice of the customer, stakeholder analysis and communication plan, A3 project planning.</p>
S07 E02	<p>Define phase: Project scheduling & the Gantt chart, scope management, is/is not analysis, SIPOC flowchart, swimlane process mapping, spaghetti mapping, interpreting output and prioritizing actions, project cost benefit analysis, A3 update & assignment 1.</p>
S07 E03	<p>Define phase: Stage gate review at end of Define phase, team review of tools used and conclusions drawn, open Q&A on course contents and next steps, project progress review, A3 updates.</p> <p>Measure phase: Data types, data collection, process performance measurement: defects and defectives, rolled throughput yield, introduction to measurement systems analysis (MSA), A3 update.</p>
S07 E04	<p>Measure phase: Assignment 1 review, data graphing, run charts, Pareto charts, Box plots & histograms. Introduction to descriptive statistics: measures of location & spread, properties of the normal distribution, Z scores and prediction, project progress review, A3 update & assignment 2.</p>
S07 E05	<p>Analyse phase: 5 whys, cause and effect analysis, linear correlation & regression, residuals analysis, causation, Hypothesis testing for means, A3 update.</p>
S07 E06	<p>Analyse phase: Hypothesis testing for means & variation.</p>
S07 E07	<p>Analyse phase: Assignment 2 review, process capability analysis (PCA), failure modes & effects Analysis (FMEA) risk analysis & mitigation (intro), assignment 3.</p>
S07 E08	<p>Analyse/Improve phase: introduction to design of experiments (DOE) part 1: full factorial experiments, A3 updates.</p>
S07 E09	<p>Analyse/Improve phase: Assignment 3 review, introduction to design of experiments (DOE) part 2: fractional factorial experiments, A3 updates, assignment 4.</p>
S07 E10	<p>Improve phase: Developing an improvement schedule, 5S workplace management, error proofing, standard work, quick changeover (SMED), piloting improvements.</p>
S07 E11	<p>Control phase: Assignment 4 review, statistical process control – charts for variable data (ImR, XbarR, XbarS). A3 updates.</p>
S07 E12	<p>Control phase: Training personnel and updating procedures, charts and guidelines, control plans, A3updates, final assignment details.</p> <p>Post implementation review, rewarding the team, certification process and timing, review & close.</p>
Final online session	<p>Project presentation for certification: Review and award</p>

The online green belt course is laid out in 12 separate four-hour modules, giving a total of 48 contact hours. All webinars are 4 hours in length, with breaks. To facilitate learning-by-doing on projects, the modules are scheduled two per week, over six weeks.

The final online engagement comprises a project presentation by candidates for certification. During the green belt online course, knowledge of the theory of the topics will be assessed by means of short continuous online assessments. These assessments are completed within a specific time limit and are open book in nature. Passing all assignments is a requirement for certification.

4. Preparation

Before the course starts, candidates and sponsors will select a project on which to work during the green belt course. The course tutor will be help with project selection and scope.

We will also meet with sponsors in advance of course commencement to provide guidance on the role of the sponsor and the support required for GB candidates while the course is ongoing. This is an online meeting.

5. How will you be supported?

During this certified lean six sigma green belt online course, you will

- a) be able to listen to and interact with the online course tutor and other participants;
- b) be able to ask questions and complete online quizzes to self-assess your understanding of the topic;
- c) be able to download all online lean course recorded webinars for your own future use, and
- d) be able to download soft copy presentation files, with data sets and case studies, for your own future use.

6. Certification standard and process

Certification standard. This certified lean six sigma green belt online course is designed and executed in compliance with international standard [ISO 13053. Quantitative methods in process improvement — Six Sigma — Part 1: DMAIC methodology](#). Additional modules in Hypothesis testing and Design of Experiments are included for candidates in the pharmaceutical, medical device and engineering disciplines.

During the green belt course, knowledge of the theory of the topics will be assessed by means of continuous assessments. Certification is based on a combination of attendance, assessments and a completed project. The certifying project is formally evaluated by a Lean Ireland Lean Six Sigma Black Belt. The green belt certificate is awarded by Lean Ireland.

Project review. Projects are reviewed online by the lean Ireland certifying black belt, up to a time limit of 6 months after the final online webinar. Projects are reviewed according to a formatted green belt certification checklist which is circulated to all candidates in advance. The project review time is 30 minutes per candidate.

7. Who is this course for?

The course is suitable for a range of professions and trades: managers, supervisors, senior administrators, engineers, analysts, technicians, specialists, planners, doctors, nurses, bank officials, assessors, and surveyors. It is designed for those who have a keen interest in process improvement in the workplace, in order to improve customer service. Knowledge of statistics is not required before attending the programme. The most successful candidates are likely to be those who have supervisory experience, or who are well regarded as change agents within their workplace.

8. Tailoring the course for your organisation

The course content can be tailored to suit your organization, with relevant case studies and data sets for assignments. Also, the course can be hosted using JMP as an alternative to Minitab, and on any other suitable platform you prefer e.g. Zoom or WebEx. Please contact us to discuss your needs.

9. Where can you find out more?

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