

Lean Six Sigma Black Belt Certification Programme

Indispensable techniques for business and career grow

業務和職業發展不可缺少的技術



Six Sigma Institute (SSI)

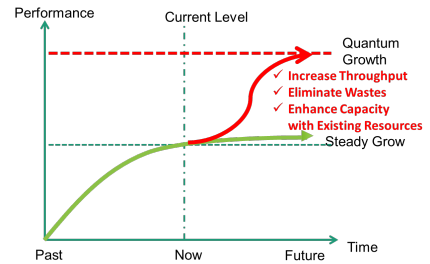
As a non-profit professional organization, the main goal of the Six Sigma Institute (SSI) is to accredit Six Sigma professionals with recognized knowledge and skills in this applied science. SSI works closely with universities and professional bodies to promote the theory and application of Six Sigma, Lean and Theory of Constraints and associated methodologies. SSI develops and launch latest and innovative training programmes aimed at enhancing the competitiveness of practitioners and their organizations.

Lean Six Sigma Programme

Six Sigma methodology since developed by Motorola in 1986 has continuously evolved from quality improvement in 80's and cost reduction in 90's to now focus on revenue generation. To make this application science to match with rapid change of business requirements, Six Sigma has integrated the essence of Lean and Theory of constraints.

LEAN methodology is a process improvement methodology that originated in the manufacturing industry but has since been widely adopted across various industries. The goal of LEAN is to eliminate waste and improve efficiency by focusing on adding value to the customer while minimizing non-value activities. LEAN methodology aims to create a culture of continuous improvement by empowering employees to identify areas of waste and inefficiency in their work processes and implement solutions to eliminate them.

This integrated approach can help organizations achieve a leap in business growth. The Lean Six Sigma Black Belt is an effective driving force for the company to achieve this goal



Course Overview

This unique course will provide you with **a full license for the famous statistical software Sigma XL**. This indispensable tool not only allows you to perform data analysis on future Six Sigma projects, but also helps you make management decisions based on facts and data.

Who should attend?

1. Quality, R&D, process engineers or supervisors.
2. Graduates of Six Sigma Green Belt programme
3. Executives responsible for business growth.
4. Managers who wants to enhance their analytical skills

Why SSI programme?

Award-Wining Institute

As a renowned professional organization, SSI has accumulated 18 years of training experience, providing and sharing knowledge and experience for more than 5,000 participants

Result-Orientated

Aims to develop participants' talents by sharing our rich consultancy experience with latest solutions for business growth.

Flexible Schedule

Provide weekday and weekend courses to let students budget their time between work and family life.

Professional Network

Automatically become a member of our Six Sigma community-a powerful platform for professional networking and experience sharing.

Your partner for Growth

Provides the most comprehensive theory and application of Six Sigma, Lean and Theory of Constraints

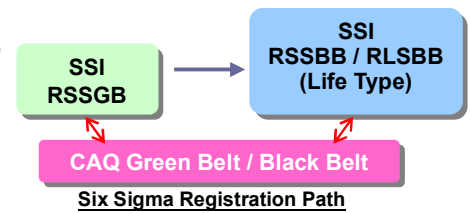


Six Sigma Programme Study Path

Recognition

Certificate holders who have completed a Six Sigma project with verified savings of HK\$500,000 or an individual project in the SSI Six Sigma Project Simulation course are eligible to register with SSI as a Lean Sigma Black Belt and use the professional title RLSBB follows their name.

The SSI Black Belt certification has been mutually recognized by the China Association for Quality (CAQ). RLSSBB (Life Type) also meets the requirements of the China Association for Quality (CAQ) Black Belt certification, is eligible to apply for the CAQ's Certified Six Sigma Black Belt Certificate.



Lean Six Sigma Black Belt Course Outline

Introduction and Project Definition	0.0 Course Introduction 1.1 The latest Development of Lean, Six Sigma and Theory of Constraints (TOCLSS) 1.2 A Case Example of Six Sigma Projects 1.3 Contribution of TOCLSS towards Industry 4.0 1.4 Identification of Six Sigma Projects 1.5 Project Charter 1.6 project schedule 1.7 High Level process Map – SIPOC 1.8 VOC, CCR and CTQ 1.9 In-class Project – Define phase	Analysis – Process Analysis	3.1 Overview of Analyze Phase 3.2 Process Analysis 3.3 Lean and Lean Transformation 3.4 Evaluate the current situation – VSM 3.5 Case Study- Manufacture 3.6 Case Study- Service 3.7 Identify Improvement Opportunities 3.8 Law of Variations 3.9 Theory of Constraints 3.10 Wastes Elimination 3.11 Modify the Existing Process -VSM 3.12 Case Study – Manufacture 3.13 Case Study - Service 3.14 Substantiate and enumerate improvements 3.15 Implement New Standard Work	Process Improvement	4.1 Overview of Improve Phase 4.2 Introduction to Design of Experiment 4.3 DOE – One Factor at a Time 4.4 DOE – Full Factorial Design 4.5 DOE Case study 4.6 DOE Exercise 4.7 Sample Size, Centerpoint and Blocking 4.8 In-class Project – Factorial Design 4.9 Response Surface Method 4.10 RSM Case Study 4.11 In-class Project RSM Design 4.10 Lack of Fit Issues 4.11 Case Study 4.12 Fractional Factorial Design 4.13 Case Studies 4.14 In-class Project - Improve Phase
	2.0 Measure Phase Overview 2.1 Detail Process Map 2.2 In/Out Put Analysis 2.3 C&E Matrix 2.4 FMEA 2.5 Data Collection Plan 2.6 Measurement Systems Analysis 2.7 Attribute GR&R 2.8 Introduction to SigmaXL 2.9 Basic Statistics 2.10 Current Process Capability 2.11 PPM, DPMO and Sigma Level 2.12 In-class Project - Measure phase		3.16 Graphical Data Analysis 3.17 Root Cause Analysis 3.18 Why-Because Tree 3.19 Validate Root Causes by Data 3.20 Graphical Tools 3.21 Confirming Causal and Effects 3.22 Regression Analysis 3.23 Chi Square Tests 3.24 Exercises 3.25 Hypothesis Testing of Means 3.26 Testing Of Variation 3.27 Testing Of Proportion 3.28 Normality and Non-normal Data Transformation 3.29 Determine Sample Size for Tests 3.30 Two-way ANOVA 3.31 Nonparametric Tests 3.32 In-class Project – Analyze Phase		5.1 Oversight of Control Phase 5.2 Risk Identification and Management 5.3 Control Plan 5.4 SPC – Continuous Control Chart 5.5 SPC - Attribute Control Charts 5.6 Cusum Chart 5.7 In-class Project Control Phase 5.8 Performance comparison 5.9 Project Review 5.10 Close the project and handover 5.11 Prospects of BB in HK, UK, Canada, Singapore, New Zealand and China 5.12 Opportunities for Further Growth Case Example Book – 5 BB Projects Presentation of In-class BB Project Mock Exam

Professional Certificate

A **Professional Certificate in Six Sigma Black Belt** will be awarded to participants who met all requirements of the course (70% attendance, complete all assignments, a group project and pass the examination).

Course Schedule (Please visit our website/backward pages for details of schedules)

*A Black Belt course could be enrolled with a Green Belt course as a Combined Course and the examination of Green Belt will be exempted.

Course Fee **HK\$26,600 (includes exam fee)**

- 10% off early-bird discount for settled payment 4 weeks before course commencement date.
- 15% off discount for 3 or above enrolment from the same company.

Enquiry

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