

# CERTIFIED SIX SIGMA BLACK BELT



## Objectives

Participants will learn how to apply statistical methods for business process improvement, including how to:

- Communicate the benefits of Six Sigma as a business strategy across the organisation
- Align with management in the deployment of Six Sigma
- Build a successful infrastructure for Six Sigma deployment
- Integrate Six Sigma with other improvement methods
- Select successful Six Sigma projects and project teams
- Significantly increase profitability through Six Sigma projects

## Duration

3 weekdays (Monday, Wednesday, Friday) | 7pm – 10pm | 4 months | 107 hours

## Who should attend

Quality and / or Training Coordinators;  
Engineers, Business Unit Managers, Program Managers and other practitioners / change agents who will be conducting Six Sigma projects;  
Individuals interested in having certification for Black Belts.

## Entry Requirement

Diploma or Degree holders with relevant working experience;  
and possess Project Management Skills; Analytical Skills.  
Participants must have at least one potential project for execution;  
and possess Basic Skills in MS Excel and Power-Point applications.

## Course Fees

Member: S\$4,708.00  
Non-Member: S\$5,650.00  
*Registration Fee of S\$17.12 and Exam & Certification Fees of S\$214 apply  
All fees stated are inclusive of 7% GST*

## Assessment Method

Written examination - held approximately 4 weeks from end of course  
Project assessment - within 2 years from commencement date of study



**SINGAPORE  
QUALITY  
INSTITUTE**



enquiries@sqi.org.sg



www.sqi.org.sg



+65-6467 4225



1 Sophia Road #05-06/07 Peace Centre S(228149)

## Course Contents

### Enterprise Deployment

- Enterprise View, Leadership
- Organisational Goals & Objectives, History of Organisational Improvement

### Business Process Management

- Process vs Functional View
- Voice of Customer, Business Results
- Process Performance Metrics, Benchmarking, Financial Benefits

### Project Management

- Project Charter and Plan, Team Leadership
- Team Dynamics and Performance, Change Agents

### Define

- Project Definition / Scope / Selection
- Metrics, Problem Statement

### Measure

- Process Analysis & Documentation
- Minitab Software Application
- Probability & Statistics
- Collecting & Summarising Data using Minitab
- Properties & Applications of Probability Distributions
- Measurement Systems Analysis
- Analysing Process Capability

### Analyse

- Hypothesis Testing
- ANOVA
- Non-Parametric Test
- Multivari Chart
- Simple Linear Regression
- Multiple Regression

### Improve

- Full Factorial Design of Experiment (DOE)
- Fractional Factorial Design of Experiment
- Response Surface Methodology (RSM)
- Evolutionary Operation (EVOP)

### Control

- Statistical Process Control
- Advanced Statistical Process Control
- Lean Tools for Control / Measurement System Re-Analysis

### Lean Enterprise

- Lean Concepts
- Lean Tools
- Total Productive Maintenance

### Design for Six Sigma

- Introduction, Quality Function Deployment
- Robust Design & Process, Failure Mode & Effects Analysis
- Design for X, Special Design Tool

### Project Briefing

- Project Briefing

### Special Note:

Participants need to bring their own laptops for Minitab Software Application training



Please refer to this URL  
<https://www.sqi.org.sg/courses/>  
or QR Code for soft copy  
and updated training schedule

### Membership Application

Register membership online at [www.sqi.org.sg/membership-join/](http://www.sqi.org.sg/membership-join/) or contact us to get the membership application form.

Membership Categories:

- ~ Organisation membership
- ~ Individual membership

Singapore Quality Institute (SQI) operates as a non-profit professional institute that promotes and advances excellence in the field of quality in Singapore; and actively champions quality initiatives in the region and around the world through networking and collaborating with other international quality organisations.

SQI is a World Partner of the American Society for Quality (ASQ); and a Board Member of both the Asian Network for Quality (ANQ) and the World Alliance for Chinese Quality (WACQ).



CERT NO. 2812-1-0818  
ISO 9001:2015



APPROVED TRAINING PARTNER

Our World Partner in Quality



Board Member of



ASIAN NETWORK FOR QUALITY