



International
Certification



Singapore
Quality
Institute
International

Certified Lean Six Sigma Black Belt

18 Days International Certification from SQII Singapore
spread over three months with one week class (5 Days) in a month



Managers, engineers, technical staff, process owners, quality professionals, preferably diploma holders and above with minimum two years of work experience. Specially useful for Army, Navy & Air Force Quality Directorates.



Leading the Modern
Quality Movement in Pakistan



Certified Lean Six Sigma Black Belt

Introduction

This is an advance course in Six Sigma and considered one of the most important international courses for managing and improving organizational Quality. This program imparts a thorough in-depth knowledge & understanding of all aspects of Lean and Six Sigma. Black Belts have the ability to lead LSS projects and also provide expert guidance to other staff members in their LSS project work. By integrating elements of Lean and Six Sigma organizations can successfully realize the full potential of both strategies. LSS enhances team problem solving with the use of advanced statistical and other Quality tools. It is a customer focused, data driven approach to optimize products, processes and services. LSS is a proven pathway for enterprise-wide productivity, quality and efficiency improvements.

Who is Six Sigma Black Belt

Six Sigma Black Belt is just a nomenclature used in Six Sigma programs which is an advance program in Total Quality Management or Process Improvement. Introductory level training is known as 'Six Sigma Yellow Belt'; middle level is called 'Six Sigma Green Belt'; while the advance level is called 'Six Sigma Black Belt'. There is no need to do these courses step by step. In case of six sigma black belt, there is no need to do other levels.

Gain Advance Knowledge and Practical Skills through Real Life Projects

This is one of the most advanced courses in Quality and includes a large number of Quality Tools and approaches. The course is specially designed to provide practical exposure to participants with practical projects and hands on experiences on advance statistical software packages so that they are useful in their companies from practical points of views and can actually build the company to the world-class level.

Learning Outcome

On successful completion of this course, participants will be able to:

- Learn the Lean Six Sigma (LSS) methodology, tools and techniques.
- Learn to apply LSS for continuous improvement of work places.
- Acquire the knowledge and skills to implement LSS projects
- Ability to lead project teams to achieve breakthrough results
- Be recognised as a LSS professional and expert coach to guide other staff members.
- Learn to do statistical data analysis using Minitab software.



SINGAPORE QUALITY
INSTITUTE INTERNATIONAL



Certified Lean Six Sigma Black Belt

Course Contents

LEAN SIX SIGMA BLACK BELT

- Six Sigma Theory & Practices
- Basic Concepts of Lean, Integration of Lean & Six Sigma

Define Phase:

- Lean Six Sigma Overview
- Voice of Customer (VoC)
- Project Selection & Prioritization
- SIPOC
- Project Charter & Metrics
- Process Mapping
- Six Sigma Team Dynamics & Management
- Development of Key Performance Indicators (KPIs)
- Calculating Process Performance Metrics
- Enterprise Leadership Responsibilities

Measure Phase:

- Gage R&R
- Collecting and Summarizing Data
- Pivot Analysis
- Graphical Methods
- Non-Normal Data
- Process Characteristics
- Process Capability & Performance
- Central Limit Theorem
- Confidence Intervals
- Measurement System Analysis (MSA)
- Value Stream Mapping (VSM)

Analyze Phase:

- Measuring and Modeling Relationships between Variables
- Causal Analysis
- Hypothesis Testing
- Types of Correlation & Regression
- Non-Parametric Statistics
- Sampling
- Waste Analysis
- Analysis of Variance (ANOVA)

Improve Phase:

- Experimentation on Solutions
- Advance Design of Experiment (DOE)
- DoE Exercises
- Piloting and Implementation
- Process FMEA
- Response Surface Design
- Basic of Total Productive Maintenance (TPM)

Control Phase:

- Control Methods
- Statistical Process Control (SPC)
- Lean Six Sigma

Lean Management:

- Cycle Time Reduction
- 5S & Kaizen
- Kanban, Just-in-Time (JIT)
- Value Stream Mapping (VSM)
- Waste Reduction (7-wastes)
- Mistake Proofing / Poka-Yoke
- Total Productive Maintenance (TPM)

Course Instructors

Internationally qualified and experienced Six Sigma Black Belts. All course instructors are approved course tutors by Singapore Quality Institute International and have worked with large number of Six Sigma projects in companies.



SINGAPORE QUALITY
INSTITUTE INTERNATIONAL



Certified Lean Six Sigma Black Belt

Duration/ Timings

Six Sigma Black Belt is a four months course spread over three months and a take home project to be submitted in the 4th month. The distribution of days is as follows:

- **Phase I:** Five days classes with take home assignments
- **Phase II:** Five days classes with take home assignments
- **Phase III:** Five days classes with take home assignments
- **Project submission after one month of Phase III**

Training timings are from 9:30 am to 5:30 pm on the designated Phase I-III.

Six Sigma Black Belt Body of Knowledge and Topics

The body of knowledge of this course compatible to the one defined by the American Society of Quality - ASQ®. The instructors and the teaching methodology is also ensured to the highest level. The following is the guidelines of the topics which will be covered in the course.

Valuable for

Quality Managers, Engineers & Professionals, Process Improvement Engineers

Fee

US\$ 1750 or equivalent to PKR per participant



SINGAPORE QUALITY
INSTITUTE INTERNATIONAL





خوب سے خوب تر کی تلاش
**QUALITY
PAKISTAN**
In Search of Excellence

PIQC

Leading the Modern
Quality Movement in Pakistan

PIQC - Center for Excellence

Leading Institute in Pakistan providing academic programs, professional diplomas & certifications, short courses and corporate development in Quality Control (QC), Quality Assurance (QA) and Total Quality Management (TQM), Human Resource Management (HRM) and Health, Safety and Environment (HSE). Celebrating the 25th year of its establishment, PIQC vision is to see Pakistan a hallmark of Quality in the national and global environments. With its leadership and team of specialists, it has provided academic education and professional courses to more than 40,000 students and professionals. It is the pioneer and most authentic source for running International Six Sigma and Lean Manufacturing programs, including Six Sigma Yellow Belt, Six Sigma Green Belt and Six Sigma Black Belt in Pakistan.

PIQC has professional collaborations and linkages with various local and foreign organizations including Hamdard University, Superior University, NED University of Engineering and Technology, IQCS Certification, Singapore Quality Institute International (SQII), American Society for Quality (ASQ), and Quality and Productivity Society of Pakistan (QPSP)

Degree Programs	Professional Diploma	International Certifications	Corporate Courses	International Conventions
Masters & MPhil in: Quality Management Human Resource Management Industrial Management EHS Management	PIQC Diplomas/ Certifications in Quality Management Project Management Health Care Quality Management HSE Management HRM Management Supply Chain Management Labor Laws and IR Management	Internationally Recognized Certifications IRCA (UK) Accredited Certified ISO 9000 Lead Auditor Certified Six Sigma Green Belt & Black Belt	Nation-wise seminars & workshops on Total Quality Management, Six Sigma, ISO 9000 Quality Assurance in Manufacturing, Services, Education, Banks and Healthcare, Total Productive Maintenance	PIQC has organized 13 International Conventions on Quality Improvement and 5 National Conferences on Quality Education in Pakistan since 1991

PIQC INSTITUTE OF QUALITY

Head Office

Training Department
½ km Defence Road, Off 10 km Raiwind Road,
Lahore, Pakistan
Tel: 0092 42 35323600-6,
Fax: 0092 42 35324169
Cell # 0334-7472722
Email: training@piqc.edu.pk,

Karachi Office:

Ikramulla Shariff
Director Business Development
D-33, Block 8, Gulshan-e-Iqbal
Karachi - Pakistan
Tel: 92-21-34989707, 34825684
Cell # 0333-2163620
Fax: 92-21-34990775
E-mail: ikram@piqc.edu.pk

Web: www.piqc.edu.pk