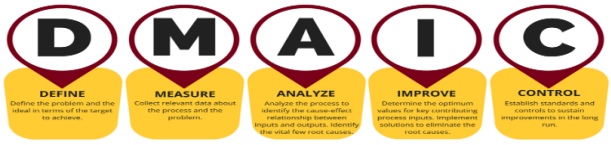
On-line

Six Sigma Black Belt Training and Certification Program

(Evening Session)

(Batch -25)



During

August 16 - 21, 2021 (Phase-I) - 6 days
August 30 – Sept 4, 2021 (Phase-II) - 6 days
September 20 - 25, 2021 (Phase-III) - 6 days
October 4 - 9, 2021 (Phase-IV) - 6 days

Duration : 24 days

Every day session timing : 6:00 pm.- 7:30 p.m. & 8:00 p.m.- 9:30 p.m. (3 hrs.)

Final Examination (MCQ type) :10 October 2021 (Sunday),during 7:00 p.m. – 9:00 p.m. (IST)

Last date of registration : August 12, 2021

Conducted by

SQC & OR Unit, Mumbai
Indian Statistical Institute
Room No. 320, 3rd Floor Old C G O Building,
101 Maharshi Karve Road, Mumbai 400 020.
Tel No.022-22014588 (O), Email: *sqcbombay@gmail.com*
www.isimumbai.co.in
Mobile: 9969928144 / 9869242240

Why should I attend this program?

The objective of this program is to disseminate the knowledge of Six Sigma methodology among the participants so that they can

- Identify **quality problems** in various manufacturing and service processes within their organization.
- They can link the quality problems to the specific process, products (or services), and people.
- They can recognize **critical to quality characteristics (CTQ)** in various quality-related problems.
- Participants can apply the **DMAIC approach** of Six Sigma methodology for their process improvement projects.
- Participants can perform various **graphical and statistical analysis** of the process data to extract valuable and actionable information.
- They can **interpret** various statistical measures of the data.
- They can use readily available statistical packages like **R-studio,Minitab** and **MS Excel** for data analysis.
- Participants will be aware of the unique features of popular **commercial software** used in six sigma implementations.
- Finally, the participants will be knowledgeable for identifying and carry out **real-life process improvement projects**, which will significantly improve the bottom line of their organization.

About this Program:

SQC & OR Unit, Mumbai offers this "**On-line Classroom**" type Six Sigma Black Belt (BB) training and certification program through a virtual platform. All the training sessions and end-examination will be through on-line. **For registration**, participants should download or type the nomination form (last page of the brochure) and send it to *sqcbombay@gmail.com*. The **soft copy of the training material** (*in pdf*) and **data set** (for class exercises) will be shared through a virtual drive. The participants should download the training material and the data set from the drive before attending the classes. The training sessions will primarily use **R-Studio** ,**Minitab** and **MS Excel** for data analysis. Participants may either purchase the **Minitab license,** or they may download its one-month **trial version also**. The participants who will use Minitab 30 days trial version are requested to download it during the class only.

About the On-line sessions:

The program will use **Microsoft Teams** as its on-line platform. Participants must **sign up** in Microsoft Teams (https://www.microsoft.com/en-in/microsoft-365/microsoft-teams/group-chat-software) **with the same e-mail id which they will provide in their nomination form**. Participants may watch the following YouTube videos to know how to create a new Microsoft Teams account and attend a Microsoft Team session.
https://www.youtube.com/watch?v=oq_6-TJkGBA
https://www.youtube.com/watch?v=BH6bSIwR0-4

Target Participants:

Heads of Strategic business units, Managers/ Executives from various functions with a minimum of six months specialized training in the area of Quality Management of certified Six Sigma Green Belts, can attend the current Six Sigma Certification Program.

Faculties:

Experienced faculties from Indian Statistical Institute, having in-depth experience in implementing six sigma in various leading manufacturing and service organizations across the globe, will be associated with the training sessions.

Program Schedule :

August 16 - 21, 2021 (Phase-I) - 6 days
August 30 – Sept 4, 2021 (Phase-II) - 6 days
September 20 - 25, 2021 (Phase-III) - 6 days
October 4 - 9, 2021 (Phase-IV) - 6 days

Everyday On-line session timing
06:00 p.m. – 7:30 p.m (IST) session 1
7:30 p.m. – 8:00 p.m. break
8:00 p.m. - 09:30 p.m. (IST) Session 2

Examination :

On **10 October 2021 (Sunday)** , **during 7:00 p.m. – 9:00 p.m. (IST)** there will be a two hours online examination with **multiple-choice type question (MCQ),** and participants should score **minimum of 70% marks** to pass the

Examination. In addition to MCQ test, participants must submit the assigmnents which will be given during the session.

BB Certification Criteria:

For the **"Six Sigma-Black Belt**" certification, participants should

1) attend all the training sessions
2) pass the MCQ -type Qualifying Examination with minimum 70 % marks
3) Submit the assignments
4) must carry out one real-time project using six sigma approach.*

**Note: Participants should get the project from their parent organization where he/she is currently working and need to submit the PPT of the completed project within six months from the last date of the training.*

Course fee:

Rs. 50000 + 18 % Tax as per Govt. Rules. Total fees: **Rs.59000 /-** per participant. Fees to be paid ***through on-line bank transfer only***. The bank details for on-line payment are given below:

Bank Name:	STATE BANK OF INDIA
Account Name:	Indian Statistical Institute,
Account Type:	**Current**
Bank Account No:	10996682279
Branch:	MUMBAI MAIN BRANCH
Bank Address:	Mumbai Samachar Marg, Horniman Circle, Fort. Mumbai 400023
IFSC code:	SBIN0000300

Note: Fee once paid will be fully refunded if ISI cancels the program only.

Registrations are purely on a '**first come, first served' basis**. Participants must enquire (mobile no. 9969928144 / 9869242240) for the seat availability before making the payments. Registration will be confirmed only on receipt of the **filled-in nomination form** (attached) and **course fees**.

LAST DATE FOR REGISTRATION: August 12, 2021

Body of Knowledge: Six Sigma Black Belt Course

1. Overview of Six Sigma Methodology and roles and responsibilities in Six Sigma implementation
2. Identification, Prioritization and selection of Improvement opportunities
3. Over view of Six Sigma Project execution (DMAIC Define- Measure- Analyze- Improve & Control), and Gate Review Questionnaire
4. Development of Project Team and Charter
5. Define and Map Processes to be improved (SIPOC (supplier, input, process, output, customer) / COPIS (customer, output, process, input, supplier), Activity Flow Chart)
6. Identification of critical to customer / critical to business characteristics: Voice of Customer
7. Descriptive Statistics and Statistical distributions Binomial, Poisson ,Normal and other continuous distributions
8. Prioritisation Matrix and FMEA and use of it in Data Collection Planning
9. Introduction to various statistical software packages for data display & analysis like Excel, Minitab, Systat, JMP, crystal ball, etc.- understanding in usage & interpretation of output along with each topic
10. Measurement System Evaluation (Gauge R&R) for variables as well as for attribute measurements (Kappa Value and Confidence interval for agreement with expert)
11. Understanding variation-special causes vs. common causes (Application of Graphical techniques)
12. Stratification methods (like Pareto, Bar Diagrams, stratified dot plot, stratified scatter plot, Box Plot, Multi -Vari Charts etc)
13. Normality test of a data, evaluation of Process Capability for data from a Normal/Non-Normal distribution
14. Evaluation of Process Capability for Data from Normal/Non-Normal Distribution
15. Concept of Short Term, Long Term Process Capability and assessment of Sigma level
16. Cross Functional Process Mapping including identification of value added and non value added activities
17. Organizing for potential causes using cause and effect diagram, FMEA & Tree Diagram
18. Concept of correlation and Regression and use of the same in validating causes
19. Concept of Test of Hypothesis like 2 Sample t, χ^2 , ANOVA etc and use of the same in validating the causes
20. Sample Size determination for a given confidence level
21. Multiple Regression, logistic regression and use of the same in validating the causes
22. Concept of Design of experiment and details of full factorial, fractional factorial and screening designs
23. Generate Improvement Ideas using Creativity Techniques (Traditional & non traditional)
24. Solution Evaluation Criteria, Evaluation of solutions and selection of solutions
25. Change Management Process dealing with resistance to change and Process of piloting the solutions
26. Risk Analysis through use of FMEA or related methodologies
27. Concept and Examples of Poke Yoke, Visual Workplace and 5S
28. Evaluation of results after implementation and monitoring the results through statistical Process Control (like Control Charts, Pre-Control Charts etc)
29. Monitoring the results as a part of established QMS through use of process, product audit and internal audits
30. Institutionalization and integration of the solutions
31. Work through at least 3 six sigma projects of different applications

On-Line Six Sigma Black Belt Training and Certification Program
During August – October , 2021 (24 days)

NOMINATION FORM

Name of the Participant (CAPITAL LETTERS):

Communication Address (*Mandatory*):

E-mail (CAPITAL LETTERS):

Mobile (with WhatsApp):

Organization Name (Optional):

Position (Optional):

Highest academic qualification:

Course Fees:

Rs.50000/- per participant +. tax @18% = ***Rs.* 59000*/- (Bank transfer only)***

Bank Details: For Online Payments

Bank Name:	STATE BANK OF INDIA
Account Name:	Indian Statistical Institute,
Account Type:	**Current**
Bank Account No:	10996682279
Branch:	MUMBAI MAIN BRANCH
Bank Address:	Mumbai Samachar Marg, Horniman Circle, Fort. Mumbai 400023
IFSC code:	SBIN0000300

Amount Paid: _____ Date: _____

Bank: _____ Payment Ref. No._____

Signature:

Name: *Date:*

Please send the filled-in form to sqcbombay@gmail.com