On-line

Weekend

Six Sigma Green Belt Training and Certification Program

Define Measure Analyse Improve Control

during

September 22-24, & October 06-08 of 2023 (total 6 days)

Final MCQ Test: 15 October 2023 (Sunday) during 9:00 a.m.- 11:00 a.m. (IST)

LAST DATE FOR REGISTRATION: 14 September 2023

Please enquire (mobile: 9969928144 / 7738479688) for the seat availability before registration

Admission is purely on 'first come, first allotment' basis.

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

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.
- 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.

Body of Knowledge: Six Sigma Green Belt Certification Course

- 1. Overview of Six Sigma Methodology
- 2. Cultural imperatives to Six Sigma
- 3. Identification, Prioritization and selection of Improvement opportunities
- 4. Roles and responsibilities in Six Sigma implementation
- 5. Over view of Six Sigma Project execution (DMAIC Define- Measure- Analyze-Improve & Control), and Gate Review Questionnaire
- 6. Development of Project Team and Charter
- 7. Define and Map Processes to be improved (SIPOC (supplier, input, process, output, customer) / COPIS (customer, output, process, input, supplier), Activity Flow Chart)
- 8. Identification of critical to customer / critical to business characteristics
- 9. Voice of Customer
- 10. Type of Data
- 11. Knowledge of Statistical distributions Binomial, Poisson and Normal
- 12. Use of prioritisation matrix in data Collection
- 13. Introduction to various statistical software packages for data display & analysis like Excel, Minitab,

- 14. Measurement System Evaluation (Gauge R&R) for variables as well as for attribute measurements (Kappa Value)
- 15. Understanding special causes vs. common causes variation (like dot plots, box plots, histogram and control charts)
- 16. Graphical summary of data (histogram, dot plot, box plot)
- 17. Pattern analysis of time series data using run chart and control chart
- 18. Normality test of a data, evaluation of Process Sigma Level.
- 19. Verification/validation of causes using workplace investigation (GEMBA)
- 20. Concept of correlation and Regression and use of the same in validating causes
- 21. Concept of Test of Hypothesis like 2 Sample t, Chi Square, ANOVA etc and use of the same in validating the causes
- 22. Generate Improvement Ideas using Creativity Techniques (Traditional & non-traditional)
- 23. Solution Evaluation Criteria, Evaluation of solutions and selection of solutions
- 24. Monitoring the results through statistical Process Control (like Control Charts, Pre-Control Charts etc) after implementation of the solutions
- 25. Monitoring the results as a part of established QMS through use of process audit, product audit and internal audits
- 26. Institutionalization and integration of the solutions
- 27. Process of Closing the Project

About this Program:

SQC & OR Unit, Mumbai offers this "On-line Classroom" type training and certification program through a virtual platform. All the training sessions, and examinations will be through on-line. For registration, participants need to download or type the attached nomination form and send it to sqcbombay@gmail.com after filled in. 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 Minitab and MS Excel for data analysis. Participants either may purchase the Minitab license, or they may download its trial version. For any doubt clarification, participants may communicate with the faculties on weekdays during the training weeks through a phone call or video chat, or they may personally visit SQC & OR Unit, Mumbai, with a prior appointment with the faculties.

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-

<u>365/microsoft-teams/group-chat-software</u>) with the e-mail id they will mention 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:

Engineers/Managers/Executives from any functions, preferably having an Engineering/Science or Commerce background with basic knowledge of MS excel, can join in this program.

Faculties:

Experienced faculties from Indian Statistical Institute will be associated with the training session.

Examination:

Participants need to appear in a two-hour **on-line test** with **multiple-choice questions** (MCQ type) on **15 October 2023 (Sunday) during 09:00 a.m.-11:00 a.m.** They must score a **minimum of 60% marks** to pass the tests. Unsuccessful candidates should appear in a **repeat test** within next 10 days, without any fees.

Certification:

For the "Six Sigma-Green Belt" certification, participants must 1) attend all the training sessions and 2) pass the Qualifying tests (MCQ type). However, participants are encouraged to carry out real-life projects using the six-sigma approach. This is an optional criterion for GB Certification, a participant may or may not opt for it. Interested participants should inform ISI and need to get the project from their parent organization where he/she is currently working. Indian Statistical Institute will not provide any project. However, they will assist in carrying out the project free of cost. The participant must submit the soft copy of the complete project report within six months from the last date of the training. After the successful completion of the project, a six-sigma green belt certificate will be issued with the project name. Otherwise, the certificate will be issued without any project name.

Program Schedule:

| | Day / Date | Time | Session/Break |
|---------|---|--|---|
| | Day-1 | 5:30 p.m. to 7:15 p.m. | Session -1 |
| | 22 September 2023 | 7:15 p.m. to 7:30 p.m. | Break |
| | (Friday) | 7:30 p.m. to 9:00 p.m. | Session -2 |
| | | 9:30 a.m. to 11:00 a.m. | Session -1 |
| | | 11:00 a.m. to 11:30 a.m. | Break |
| | Day-2 | 11:30 a.m. to 1:00 p.m. | Session -2 |
| | 23 September 2023 | 01:00 p.m. to 02:00 p.m. | Break |
| 7 | (Saturday) | 02:00 p.m. to 03:30 p.m. | Session -3 |
| Phase-1 | | 03:30 p.m. to 04:00 p.m. | Break |
| | | 04:00 p.m. to 05:30 p.m. | Session -4 |
| | Day-3 24 September 2023 (Sunday) | 9:30 a.m. to 11:00 a.m. | Session -1 |
| | | 11:00 a.m. to 11:30 a.m. | Break |
| | | 11:30 a.m. to 1:00 p.m. | Session -2 |
| | | 01:00 p.m. to 02:00 p.m. | Break |
| | | 02:00 p.m. to 03:30 p.m. | Session -3 |
| | | 03:30 p.m. to 04:00 p.m. | Break |
| | | 04:00 p.m. to 05:30 p.m. | Session -4 |
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| | Day / Date | Time 5:30 n m to 7:15 n m | Session 1 |
| | Day-4 | 5:30 p.m. to 7:15 p.m. | Session -1 |
| | Day-4 06 October 2023 | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. | Session -1 Break |
| | Day-4 | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. | Session -1 Break Session -2 |
| | Day-4 06 October 2023 | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. | Session -1 Break Session -2 Session -1 |
| | Day-4 06 October 2023 (Friday) | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. | Session -1 Break Session -2 Session -1 Break |
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| -2 | Day-4 06 October 2023 (Friday) Day-5 07 October 2023 | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 1:00 p.m. 01:00 p.m. to 02:00 p.m. | Session -1 Break Session -2 Session -1 Break Session -2 Break |
| lse-2 | Day-4 06 October 2023 (Friday) | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 1:00 p.m. 01:00 p.m. to 02:00 p.m. 02:00 p.m. to 03:30 p.m. | Session -1 Break Session -2 Session -1 Break Session -2 Break Session -3 |
| Phase-2 | Day-4 06 October 2023 (Friday) Day-5 07 October 2023 | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 1:00 p.m. 01:00 p.m. to 02:00 p.m. 02:00 p.m. to 03:30 p.m. 03:30 p.m. to 04:00 p.m. | Session -1 Break Session -2 Session -1 Break Session -2 Break Session -3 Break |
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| Phase-2 | Day-4 06 October 2023 (Friday) Day-5 07 October 2023 | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 1:00 p.m. 01:00 p.m. to 02:00 p.m. 02:00 p.m. to 03:30 p.m. 03:30 p.m. to 04:00 p.m. 04:00 p.m. to 05:30 p.m. 9:30 a.m. to 11:00 a.m. | Session -1 Break Session -2 Session -1 Break Session -2 Break Session -3 Break Session -4 Session -1 |
| Phase-2 | Day-4 06 October 2023 (Friday) Day-5 07 October 2023 (Saturday) | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 1:00 p.m. 01:00 p.m. to 02:00 p.m. 02:00 p.m. to 03:30 p.m. 03:30 p.m. to 04:00 p.m. 04:00 p.m. to 05:30 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. | Session -1 Break Session -2 Session -1 Break Session -2 Break Session -3 Break Session -4 Session -1 Break |
| Phase-2 | Day-4 06 October 2023 (Friday) Day-5 07 October 2023 (Saturday) | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 1:00 p.m. 01:00 p.m. to 02:00 p.m. 02:00 p.m. to 03:30 p.m. 03:30 p.m. to 04:00 p.m. 04:00 p.m. to 05:30 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 01:00 p.m. | Session -1 Break Session -2 Session -1 Break Session -2 Break Session -3 Break Session -4 Session -1 Break Session -1 |
| Phase-2 | Day-4 06 October 2023 (Friday) Day-5 07 October 2023 (Saturday) Day-6 08 October 2023 | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 1:00 p.m. 01:00 p.m. to 02:00 p.m. 02:00 p.m. to 03:30 p.m. 03:30 p.m. to 04:00 p.m. 04:00 p.m. to 05:30 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 01:00 p.m. 01:00 p.m. to 02:00 p.m. | Session -1 Break Session -2 Session -1 Break Session -2 Break Session -3 Break Session -4 Session -1 Break Session -2 Break |
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| Phase-2 | Day-4 06 October 2023 (Friday) Day-5 07 October 2023 (Saturday) Day-6 08 October 2023 | 5:30 p.m. to 7:15 p.m. 7:15 p.m. to 7:30 p.m. 7:30 p.m. to 9:00 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 1:00 p.m. 01:00 p.m. to 02:00 p.m. 02:00 p.m. to 03:30 p.m. 03:30 p.m. to 04:00 p.m. 04:00 p.m. to 05:30 p.m. 9:30 a.m. to 11:00 a.m. 11:00 a.m. to 11:30 a.m. 11:30 a.m. to 01:00 p.m. 01:00 p.m. to 02:00 p.m. | Session -1 Break Session -2 Session -1 Break Session -2 Break Session -3 Break Session -4 Session -1 Break Session -2 Break |

Course fee:

Rs. 20000 + 18 % Tax as per Govt. Rules. Total fees: **Rs.23600/-** per participant. Fees to be paid **through internet banking**. 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: Fees Will be fully refunded if ISI cancels the program only.

Registrations are purely on a 'first come, first alloted' basis. Participants must enquire (mobile no. 9969928144 / 7738479688) for the seat availability before making the payments. Registration will be confirmed only on receipt of filled-in nomination form (attached at the last page) and course fees.

LAST DATE FOR REGISTRATION: 14 September 2023

Nomination form is on the last page

Weekend On-Line Six Sigma Green Belt Certification Program September-October 2023 (6 days)

NOMINATION FORM

| Name of the Particip | ant (CAPITAL LETTERS): Mr./Ms./Dr. | | |
|--|---|--|--|
| Communication Add | dress (Mandatory): | | |
| E-mail* (Mandatory |) for all future communications: | | |
| Mobile (with Whatsa | App mandatory): | | |
| Organization Name | (Optional): | | |
| Functional area (Optional): | | | |
| Highest academic qualification: | | | |
| Course Fees: | | | |
| Rs.20000/- per particip Bank Details: For O | pant +. tax @18% = Rs. 23600/- (To be paid through internet banking) Online Payments | | |
| Bank Name: | STATE BANK OF INDIA | | |
| Account Name: | Indian Statistical Institute, | | |
| Account Type: | Current | | |
| Bank Account No: | | | |
| Branch: | MUMBAI MAIN BRANCH | | |
| Bank Address: | \mathcal{E}_{i} | | |
| IFSC code: | SBIN0000300 | | |
| Amount Paid: | Date: | | |
| Bank: | Payment Ref. No | | |
| Signature: | | | |
| Name: | Date: | | |
| v | d-in form to sqcbombay@gmail.com ions should be throughout a single email id only. | | |