

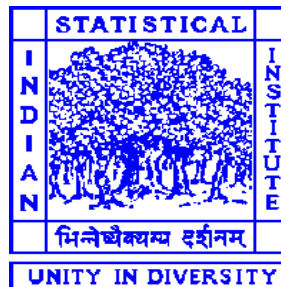


Six Sigma Black Belt Certification Program ***(Weekend Online & Offline Sessions)***

Total duration: 105 hours (10 Weeks)

Last date of registration: 25th February, 2024

Conducted by



Indian Statistical Institute

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.
- Link the quality problems to the specific process, products (or services), and people.
- 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.
- **Interpret** various statistical measures of the data.
- Can use readily available statistical packages like **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:

ISI 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. The **softcopy 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 (trial version)**, **Open-source software like R** and **MS Excel** for data analysis. The participants who will use Minitab 30 days trial version are requested to download it during the class only.

About the On-line sessions:

We will use Zoom platform.

About the Off-line sessions:

- Last 2 day sessions (for project review) along with the certification ceremony will be conducted at Indian Statistical Institute Kolkata campus.
- The travel and accommodation arrangements to be done by participants.

Target Participants:

- Heads of Strategic business units, Managers/ Executives from various functions can attend the current Six Sigma Certification Program.
- Should be graduate in any discipline. Preliminary knowledge of Excel is desirable

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 :

- Sessions will be on alternate weekends during Saturday/Sunday (0930 - 1730 hrs).

Examination :

After the course completion. 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 assignments which will be given during the session.

BB Certification Criteria:

Certificate will be issued by Indian Statistical Institute on successful completion of the course and project work

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) Candidate 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 and ISI will be providing the project guidance for successful completion of the project.*

Course fee:

Rs.45,000 + 18 % Tax as per Govt. Rules. Total fees: **Rs.53,100 /-** per participant. Fees to be paid **through on-line bank transfer only**. The bank details for on-line payment are given below:

Registration:

- Please send your nomination along with appropriate course fee in the attached registration form given below. Seats will be allotted based on the selection done by ISI faculty.
- Registration link: <https://forms.gle/38i76uMwNE7ZU4gJ8>
- Fees once paid will not be refunded under any circumstances
- Scan the following barcode for registration form or click on the link below



Payment Options:

1. Bank transfer details for payment through NEFT/ RTGS

Name of the account holder: Jamshedpur Management Association

Current A/C number: 50200036754530 Name of the bank: HDFC Bank Ltd.

Branch: Mithila Motors, Ram Mandir, Main Road, Bistupur, Jamshedpur- 831001

IFSC Code: HDFC0000087

2. UPI ID



LAST DATE FOR REGISTRATION: 25th February 2024

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, F , 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