

Online
Lean Six Sigma Master Black Belt (MBB)
Training and Certification Program

with
Machine Learning and Analytics using python

(Batch -18)



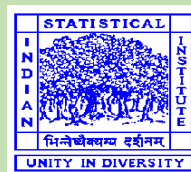
During

Phase-I: Sept 15 -20, 2025 (6 days)
Phase-II: October 06- 11, 2025 (6 days)
Duration: 12 days

LAST DATE FOR REGISTRATION: 09 September 2025

Final online MCQ test: 12 October 2025 during 7:00 p.m. to 9:00 p.m.

Conducted by



SQC & OR Unit, Mumbai
Indian Statistical Institute

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Overview of this Program:

The SQC & OR Unit, Mumbai, offers this **online classroom-based** training and certification program through a virtual platform. All training sessions and examinations will be conducted online. The training material (in PDF format) and datasets for class exercises will be shared via 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 **Statistical software** and **MS Excel** for data analysis. Regarding statistical software installation, we will intimate you during the session.

Benefits of participating in this program?

The successful implementation and sustainability of a Six Sigma/Lean culture in an organization rely heavily on the expertise of a certified Master Black Belt (MBB). The MBB certification program, offered by the SQC & OR Unit, Mumbai, is designed to enhance the technical expertise, coaching abilities, and internal advocacy skills of existing Black Belts and quality professionals, empowering them to lead Six Sigma initiatives within their organizations.

Upon completing this training, participants will:

- Be able to integrate the Six Sigma DMAIC/DFSS approach with the Lean improvement methodology for executing their process improvement projects.
- Gain an in-depth understanding of familiar and advanced statistical tools and techniques which will assist in guiding various Lean six sigma projects.
- Learn to create a measurement system that pulls for the creation of lean or six sigma projects when it is most beneficial for the organizations.
- Finally, gain knowledge of guiding various kinds of projects.

Body of Knowledge: Six Sigma MBB Certification Program:

- Overview of Six Sigma Methodology and Lean
- Review Strategies for effectively implementing Six Sigma and Lean Six Sigma in an organization
- Understanding of Deployment Strategies – Business Goals/ Dashboards/ Balance Business Score Card or Customer Goals including linkages with financial goals
- Executive and other roles and responsibilities in LSS implementation
- Six Sigma Project selection-linkage to strategy
- Overview of Lean Six Sigma Project execution (DMAIC or DFSS/ DMADOV)
- Project Review Guidelines and selection of Belts for the projects
- Voice of Customer, Affinity Diagram & Quality Function Deployment
- Distribution fitting of a data, evaluation of Process Stability and Concept of Process Capability and assessment of Sigma level
- Identification of VA and NVA activities in Processes.
- Value Stream Mapping
- Lean tools and integration of Six Sigma and Lean concept, i.e., Lean Six Sigma
- Multiple Regression, Logistic regression and use of the same in cause validation
- Reliability Theory, Design FMEA, Pugh Matrix, Fault Tree Analysis
- Design of Experiments including RSM
- Taguchi Methods of Parameter and Tolerance Design
- Exploratory Data Analysis
- Multivariate Analysis (cluster analysis, factor analysis, Discriminant analysis)
- Predicting Modelling using Classification and Regression Tree
- Conjoint Analysis, Simulation
- Queuing theory
- Change Management Process dealing with resistance to change,
- Concept of Poke Yoke, Visual Workplace, 5S & Planning for full-scale implementation.
- Work through at least 3 Six Sigma projects of different applications
- Process of Closing the Project

Advance topics:

- Introduction to machine learning and python.
- Prediction modelling using machine learning technique like CART, Random Forest, bagging and boosting, Artificial Neural Network.
- Integration to Industry 4.0

Eligible Participants:

Applicants must hold a degree in any discipline and have a minimum of six months of specialized training in quality management sciences from recognized institutions such as ISI. Alternatively, candidates should be Certified Black Belts from reputable certification bodies like ISI, ASQ, Motorola University, or Rath & Strong.

Faculties:

Experienced faculty from the Indian Statistical Institute, with extensive expertise in implementing Six Sigma across leading manufacturing and service organizations worldwide, will be actively involved in the training sessions.

Examination/Assignments:

- An assignment will be provided after the first module (initial six days), which participants must complete within 15 days.
- A two-hour online MCQ test will be conducted, and participants must achieve a minimum score of 70% to pass.

Criteria for Master Black Belt (MBB) Certification:

- An Enrolment certificate will be issued after securing 70% marks in the MCQ-test and successful completion of the assignment.
- The final Master Black Belt (MBB) certification will be awarded to all enrolled participants upon fulfilling the following requirements within one year:
 1. Submission of a report detailing the guidance or mentoring of five process improvement projects using Lean, Six Sigma (DMAIC or DFSS) or Lean Six Sigma approach.
 2. Completion of 120 hours of training in related topics or participation in at least three conferences, seminars, or workshops on relevant subjects.

Online platform for conducting classes:

The program will use either **Microsoft Teams** or **Zoom** for online sessions.

Program Schedule:

The entire training program is divided into two phases (Phase -I & Phase - II) as given below:

September 15-20, 2025 (Phase-I)- 6 days

October 06- 11, 2025 (Phase-II)- 6 days

MCQ Test: 12 October 2025 (Sunday) from 7:00 p.m. – 9:00 p.m. (IST)

Daily Online Class Schedule:

09:30 a.m. – 11:00 a.m. Session 1

11:00 a.m. – 11:30 a.m. Tea break

11:30 a.m. - 01:00 p.m. Session 2

01:00 p.m. – 02:00 p.m. Lunch break

02:00 p.m. – 03:30 p.m. session 3

03:30 p.m.– 04:00 p.m. Tea break

04:00 p.m. - 05:30 p.m. Session 4

Course fee:

The program fee is ₹50,000 plus 18% tax as per government regulations, totalling **₹59,000** per participant. Payment can be made only via online bank transfer. The bank details for the payment are as follows:

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: The fee will be refunded in case of program cancellation by ISI.

Registration:

Registration is strictly on a **first-come, first-served** basis. For any clarifications, participants may contact us at **9869242240** or **9969928144**.

To apply for this program, please click on the '**Register Now**' option on the homepage of our website (www.isimum.ac.in). After verifying your application, we will notify you via email with payment instructions. Kindly proceed with the payment only after receiving the official email from us.

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