



**INDIAN STATISTICAL INSTITUTE**  
**SQC&OR UNIT, PUNE**  
**[www.isipune.ac.in](http://www.isipune.ac.in)**



It is a unique institution, devoted to the research, teaching & application of not only statistics and allied sciences, but also the natural sciences, social sciences and their interface with the statistics. Founded by Prof. P. C. Mahalanobis, a Physicist turned Statistician; the Institute has been accorded the status of an INSTITUTE OF NATIONAL IMPORTANCE, by an Act of Parliament, 1959.

**LEAN SIX SIGMA MASTER BLACK-BELT CERTIFICATION PROGRAM**  
**FOR 12 DAYS OF WEEK-END HYBRID SESSION**

**DURING: September-26: 26, 27; October-26: 3, 4, 10,11, 17, 18, 24, 25, 31; November-26: 1**

Lean Six Sigma Master Black-belt is a 12 days online program spread over 2 weeks. Practicing Six Sigma Black Belts having completed 3 Six Sigma projects would be eligible to enrol for this Program. Exposure to Master Black-Belt Program would make the participants capable to deploy Six Sigma to any Organisation as effective mentor. An LSSMBB would be able to effectively train and coach at all levels including Leadership team, Sponsor, Champion, Black-Belt, Green-Belt and Yellow Belts on all the related disciplines viz. DMAIC, Lean Six Sigma, Design for Six Sigma and Business Analytic using Data Mining. Our MBB would be able to act as RAJGURU to any Organisation to enable sustainable, predictable and desirable growth in profit following the laws of the lands.

**Who can enrol?**

The program is only for those Certified Six Sigma Black-Belts who have completed at least three Six Sigma Black-Belt level Projects.

**Content**

**Introduction:**

Vision & Mission, HosinKanri, SWOT, Balance Scorecard, Business level dashboard, Annual Business Plan (ABP), Strategic Business Plan (SBP), Multigenerational Process (MGP) and MGAP (Multi generation annual plan), Six Sigma linked to business benefit, Six Sigma Deployment Strategies. Business Process Management Systems, DMAIC, Lean Six Sigma and DFSS, Organisation for Six Sigma, Role clarity and certification requirements, Project hopper, Project selection methodologies, Change Acceleration Process

**Refreshing DMAIC**

Project Hopper, Project Charter, Voice of Customer, Critical to Quality, Tree Diagram, Pareto, SIPOC, Type of Data, Measurement System Analysis, Variable & Attribute, R&R Study, Sampling, Base level Assessment, Normality tests, Capability analysis – Cp, Cpk Pp, Ppk, Defect & defective, DPMO, DPO, DPU, Sigma Level, Process Analysis – Basic Flow Chart, Activity & Deployment flow chart, Opportunity Flow Chart. Problem Analysis, Sporadic Problems, Chronic Problems, Unstable Process, Control Charts, Test of Hypothesis, Tabular Analysis, Chi – Square

test, Regression Analysis, Process FMEA, Real cause identification, TRIZ, Solution Prioritization matrix, RICI – Chart, Before After tests, Solution Implementation, Design of Experiments - Taguchi, ANOVA, Control Plan, Control Charts for Online, Analysis, Mistake Proofing, Kaizen, Philosophy.

### **Lean Six Sigma**

**Define:** Project charter, VSM- CS

**Measure:** Waste related CTQs, Spaghetti chart, Routing card

**Analyse:** Seven Point Waste, Basic Seven Tools

**Improvement:** VSM-FS, Kaizen- Takt time, Heijunka box, 5-S, SMED, ANDON, Poka Yoke, **Jidokha, Super market, Suggestion system, TPM**

**Control: Report-out**

### **Business Analytic using Data Mining**

Data Preparation, Outlier Analysis, Data (Principal Factor Analysis & FA), Data Visualisation, Regression, Classification (Logistic regression, Decision tree, CART), Clustering concept, Affinity analysis (Market basket Analysis concept), Predictive analytic including Time series forecasting

### **Design for Six Sigma**

**Define:** Project charter, MGP/MGAP, Conjoint analysis, Contextual enquiry, ECTQ Dashboard

**Measure:** QFD, Design scorecard

**Analyse:** Transfer functions, Simulation, DFX, Axiomatic design, TRIZ, Pugh Matrix, Fault tree analysis, Reliability analysis, FMEAs, Tolerance design

**Design:** Design components- Design configurations, P-R Map, Control plans **Verify:** ECTQ Dashboard, Control plans (filled in)

### **Certification Requirements:**

**Lean Six Sigma Master Black-belt Certificate will be issued after successful completion of Content Test and a Test of Presentation skill with  $\geq 80\%$  marks in the test conducted on the last day of the session.** We also issue an LSSMBB ID card to the LSSMBB once he mentored at least five Six Sigma Black-Belt level projects and complete at least 100 hours of training session within one year from the date of issue of LSSMBB Certificate.

### **Schedule:**

12 Day Program **September-26: 26, 27; October-26: 3, 4, 10,11, 17, 18, 24, 25, 31; November-26: 1 : (10:00 am to 4:00 pm)**

**Course Fee**

**Fees per Participant= Rs.50,000/- + GST (18%) = Rs.59,000/-**

Participant would have to pay by cheque favouring INDIAN STATISTICAL INSTITUTE, payable at Pune.

**Mode of Payment:**

- Drawing a Cheque/DD in favour of **"Indian Statistical Institute"** payable at Pune
- For RTGS or NEFT: **Current account number 11138205207 with State Bank of India, Erandavana Branch; IFSC No. SBIN0004618.**

**Contact Details:**

**Website: [www.isipune.ac.in](http://www.isipune.ac.in)**

**Email: [srath02@yahoo.com](mailto:srath02@yahoo.com)  
[head@isipune.ac.in](mailto:head@isipune.ac.in)  
[query@isipune.ac.in](mailto:query@isipune.ac.in)**

**Mobile: 9371058816 / 9748478986 / 9960956118**

**Participants must visit us on our website home page go to the `Contact us` menu and provide your query details on the `Contact me` menu for the specific program.**

**Hybrid Lean Six Sigma Master Belt Training and Certification Program  
(Weekend Session)**

**DURING: September-26: 26, 27; October-26: 3, 4, 10,11, 17, 18, 24, 25, 31; November-26: 1 (10 am to 4 pm)**

**REGISTRATION FORM**

Name of the Participant (CAPITAL LETTERS):

Communication Address (Mandatory):

E-mail (mandatory) in CAPITAL LETTERS:

Mobile (with WhatsApp):

Organization Name (Optional):

Position (Optional):

Highest academic qualification:

**Course Fees:**

Rs.50000/- per participant +.Applicable GST @18% = **Rs. 59000/- (To be paid on-line)**

**Bank Details: For Online Payments**

Bank Name: STATE BANK OF INDIA

Account Name: Indian Statistical Institute

Account Type: Current

Bank Account No: **11138205207**

Branch: ERANDWANE(04618)

Bank Address: Karve Rd, Pandurang Colony, Erandwane, Pune, Maharashtra 411004 IFSC code: **SBIN0004618**

Amount Paid: \_\_\_\_\_

Date: \_\_\_\_\_

Bank: \_\_\_\_\_

Payment Ref. No. \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Please send the filled-in form to: [head@isipune.ac.in](mailto:head@isipune.ac.in)  
[accounts@isipune.ac.in](mailto:accounts@isipune.ac.in)

**Contact: S. Rath, 9371058816**

**Registration will be confirmed only on receipt of the filled-in form (attached) and course fees. Note: Fee once paid will be fully refunded if ISI cancels the program only.**