



**INDIAN STATISTICAL INSTITUTE
SQC & OR Unit
HYDERABAD**

announces

Certification Program

for

SIX SIGMA BLACK BELT

**Ph-I : 11 – 16 Dec 2017
&
Ph-II : 15 – 20 Jan 2018**

Venue:

INDIAN STATISTICAL INSTITUTE

Road No.8, Habsiguda

Hyderabad - 500 007

Phone : 040 2715 3984
040 2717 1906
040 2717 9402

FAX : 040 2717 3602

e-mail : ssbbisihyd@gmail.com

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SIX SIGMA

Six Sigma is a well-structured approach for achieving process excellence through reducing variation in processes and products/services. The strategy is being successfully implemented across the globe in all types of industries. In this approach the processes which are critical to the Business and Customer are identified through process mapping. The philosophy is to reduce the occurrence of defects in them to 3.4 DPMO/PPM and then to Zero Defects using DMAIC methodology. Black Belts play a substantial role in accomplishing the Six Sigma Projects.

TOPICS

Six Sigma Overview, Identification, Prioritization and selection of Improvement opportunities, Roles and responsibilities in Six Sigma implementation, Overview of Six Sigma Project execution DMAIC (Define-Measure-Analyze-Improve & Control) or DFSS(Design for Six Sigma) / DMADV (Define-Measure-Analyze-Design and Validate), and Gate Review Questionnaire.

Development of Project Team and Charter, Define and Map Processes to be improved. SIPOC / COPIS (Supplier-Input-Process-Output-Customer), Activity Flow Chart. Identification Critical-to-Customer / Critical-to-Business Characteristics (concept of tree diagram). Voice of Customer & Quality Function Deployment.

Types of Data, Statistical distributions – Binomial, Poisson, Normal, Exponential and Weibull. Prioritization Matrix and FMEA and use of it in Data Collection Planning, Introduction to various software packages for data display & analysis like Excel, Minitab, JMP etc. Understanding Sample Size determination for a given confidence level and Data Collection, planning including use of Prioritization Matrix and/or FMEA.

Minitab statistical software package will be used during the training. Measurement Systems Analysis (Gauge R&R) for variables as well as attribute data(Kappa value and Confidence Interval). Understanding variation – Special causes vs. Common causes(like dot plots, box plots, histogram and control charts), Stratification methods (like Pareto, Bar Diagrams, stratified dot plot, Multi-Vari Charts etc), Evaluation of Process Capability, Short term and Long term Standard Deviation and assessment of Sigma level.

Process Mapping, including, identification of value added and non value added activities. Organizing for potential causes using Cause and Effect diagram, FMEA and Tree Diagram. Verification / validation of causes using work place investigation(GEMBA). Concept of Correlation and Regression and use of same in validating causes. Concept of test of Hypothesis like 2 sample t, Chi Square, ANOVA etc and use of the same in validating the causes. Sample Size determination for a given confidence level, Concept of Multiple Regression, Logistic Regression and Exploratory Data Analysis and their use in validating the causes.

Concept of Design of Experiments and details of full factorial, fractional factorial and screening designs generating ideas using creativity techniques(traditional & non-traditional), Orthogonal arrays and Taguchi methods. Lean concepts, including Kaizen and SMED, Solution evaluation criteria, Change management Process. Select and prioritize solutions for the validated causes including concept of Risk Analysis using FMEA. Concept and examples of Poka Yoke, Visual work place, Kaizen, 5S etc.

Monitoring of results through SPC, Process Audit, Product Audit and Internal Audit, Institutionalization and integration of solution, Closing of Project, Work through at Six Sigma projects and documentation of a Project.

Every participant shall carry a Laptop computer pre-loaded with MINITAB 17 or 18 Statistical Software. One month FREE trial version can be downloaded from the site: www.minitab.com

CERTIFICATION CRITERIA

Certificate of successful completion will be issued

- ◆ by maintaining at least 95% attendance
- ◆ by securing 70% Marks in both of the Tests conducted on the last day of each phase of the course.

SSBB Certificate will be issued on submission of one successfully completed project, and identification of one new project, by the end of August 2018.

VENUE & TIMINGS

Lecture and Practical sessions will be conducted during 11th to 16th December 2017 (Phase-I) and 15th to 20th January 2018 (Phase-II) at the Seminar Hall, at Indian Statistical Institute during 09.00 a.m. to 05.30 p.m.

FACULTY

Specialists from Hyderabad and other branches of Indian Statistical Institute.

PARTICIPANTS' PROFILE

- ◆ Degree / Diploma holder in any discipline with at least 6 months of specialized training in quality management sciences from a recognized institution
- ◆ Certified Green Belts from recognized certification bodies (A soft / hard copy has to be submitted along with the Registration Form)
- ◆ Experience in conducting/guiding improvement projects (A brief summary of the projects if any, has to be attached along with the Registration Form).

PARTICIPATION FEE

- ◆ ₹ 50,000/- (i.e., ₹ 59,000/- with GST @ 18%)
- ◆ ₹ 45,000/- per head (i.e., ₹ 53,100/- with GST @ 18%) for applicants who are GBs from ISI

Note :

1. Participation Fee includes Course kit, Lunch & Refreshments.
2. The number of seats is limited.

Participants making payment through 'Online transfer' shall first get confirmation from us regarding availability of seats, and make payment.

Payment Options:

- i) Demand Draft drawn in favor of INDIAN STATISTICAL INSTITUTE payable at Hyderabad.
- ii) Online Transfer (NEFT only): Syndicate Bank, JSN Colony Branch, Habsiguda, Hyderabad. Current A/c No : 30451010000079, IFSC Code : SYNB0003045

Note : GSTIN 36AAAAI0345R1ZG

Accommodation : Twin-sharing Guest house facility can be opted (subject to availability) by outstation participants (Rs 500/- per day). Request may be sent after registration.

LAST DATE

Last date for submission of Registration form : 30th Nov. 2017 (Subject to availability of seats)

Program Director:

Prof. S M Subhani
Mobile : 098493 23071

Program Facilitator:

Mr. K Venkata Ramana
Mobile : 098492 95892

INDIAN STATISTICAL INSTITUTE

The INDIAN STATISTICAL INSTITUTE founded by Prof. P C Mahalanobis, FRS, is an Institution of National Importance, declared by Act of Parliament and funded by Government of India. It is an Institute of academic excellence offering educational courses at Graduate, Post graduate and Research levels. The scientific activities of the Institute are carried out through different Divisions.

Role of SQC & OR Division

- The Pioneer and Leader in blending Statistical Theory with Practice.
- To disseminate the basic concepts and techniques of Quality Improvement through Training programs, Workshops and In-house programs.
- To render consultancy services to industries in SQC, ISO 9001, ISO 14001, OHSAS 18001, TS 16949, Six Sigma and related areas.
- To provide solutions to the problems pertaining to Business Decision Processes with the aid of Statistical and Operations Research methods.

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SIX SIGMA BLACK BELT

(Ph-I : 11 – 16 Dec 2017 & Ph-II : 15 – 20 Jan 2018)

REGISTRATION FORM

Organization :

Contact Person :

Mailing Address :

Phone : (M)

(O)

(R)

FAX :

E-mail :

Participant(s) details :

S No.	Name	Designation & Department	E-mail	Mobile
1				
2				
3				

Note : ₹ 50,000/- (i.e., ₹ 59,000/- with GST @ 18%)

₹ 45,000/- per head (i.e ₹ 53,100/- with GST @ 18%) for participants who are GBs from ISI

Typed copy of this form may be used in case of more participants.

Amount :

NEFT reference No. :

Date:

DD No. :

Bank & Branch :

Signature :

Date:

Please e-mail, post or FAX the filled-in registration form addressed to the Program Director to our office address.