



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



*Announces*

**Certification Program  
for  
SIX SIGMA MASTER BLACK BELT  
(MBB-18 Batch)**

**20<sup>th</sup> February to 4<sup>th</sup> March, 2012**



**Indian Statistical Institute,  
8<sup>th</sup> Mile, Mysore Road,  
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## **EXPECTATIONS !**

Six Sigma is like that old Wella Balsam shampoo commercial: 'She told two friends, and they told two friends,' and so on....As Black Belt project leaders multiply and train more people, and those people get involved in projects, the financial impact is exponential, in our view."

Writes Jennifer Pokrzywinski, an analyst with Morgan Stanley, Dean Witter, Discover & Co. (Report on Business Magazine, October 1997)

- **Six Sigma** initiative has become a rage. Every organization wants to implement Six Sigma approach in anticipation of improving market penetration and organizational speed at the same time reducing cost of doing business.
- **Six Sigma** is being perceived to take people to higher level of performance with fewer mistakes while making it a strategic option for transforming an organization.
- **Six Sigma** is a Program to be owned and led by leadership orienting strategically towards market place and customer satisfaction.
- **Six Sigma** is described as a methodology to improve business processes and is supposed to provide metrics that strives for near perfection.
- **Six Sigma** embodies a disciplined, data-driven analytical approach for reducing variation in any process and thereby eliminating defects.

## **BUT WHAT IS HAPPENING**

- Projects remain open much longer than the anticipated 3-6 months, some stuck in an early phase of Six Sigma Life
- Black Belts are unable to get cooperation (from functions and departments) in collecting data, identifying root causes, etc.
- Teams lose focus part of the way through their Projects
- Successes with Projects in one department or function are not reapplied in others
- Managers resist assigning high performers to Black Belt jobs, keeping these performers for "real work" instead
- Managers see 6 Sigma as competing with other improvement initiatives, and are reluctant to participate
- MBBs do not have adequate knowledge on right applicable methodology

## **VENUE AND TIMINGS**

The Sessions shall be during **20<sup>th</sup> February to 4<sup>th</sup> March 2012, 09:00 to 18:00 hrs**, at the **Indian Statistical Institute, 8<sup>th</sup> Mile, Mysore Road, Bangalore 560059** (Between the Bangalore University and the RV Engineering College on Mysore Road).

## **FACULTY**

Specialists from Indian Statistical Institute, and Distinguished Experts from Academics/ Industry

## **WHO CAN ATTEND**

- Degree holder in any discipline with at least 6 months of specialized training in quality management sciences from a recognized institutions like ISI etc. **and/or** Certified Black Belts / Advanced Green Belts (10 days course) from recognized certification bodies like ASQ, ISI, Motorola University, Rath & Strong etc.
- Each candidate should have at least 6 years of experience in conducting/guiding improvement projects.

## **CERTIFICATION CRITERIA**

- **Qualifying certificate** by securing 75% marks in the test conducted on the last day of the course.
- **MBB Card** shall be issued after
  - i) Successful qualification in the test and guiding 5 projects on improvement, **AND**
  - ii)
    - a) Conducting 120 hours of training in related topics, **OR**
    - b) Attending 3 conferences/seminars/workshops on related subjectsin the following one Year.

## **The Training Sessions shall include Topics like:**

- “ Overview of Six Sigma Methodology
- “ Review Strategies for effectively implementing 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 Six Sigma implementation
- “ Six Sigma Project selection-linkage to strategy
- “ Over view of Six Sigma Project execution (DMAIC or DFSS/ DMADV) (Define- Measure- Analyse- Improve & Control, Design for Six Sigma, Define Measure Analyse Design and Validate)
- “ Project Review Guidelines and selection of Belts for the projects
- “ Development of Project Team and Charter
- “ Define and Map Processes to be improved
- “ Voice of Customer & Quality Function Deployment
- “ Type of Data, knowledge of Statistical distributions
- “ Data Collection Planning
- “ Introduction to software packages for data display & analysis like Minitab, JMP etc.- understanding in usage & interpretation of output
- “ Measurement System Evaluation for Measurable data (Gauge R&R) as well as for attributes (Kappa Value and Confidence interval for agreement with expert)
- “ 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, stratified scatter plot, Box Plot, Multi-Vari Charts etc)
- “ Normality test of a data, Evaluation of Process Capability for data from a Normal distribution; Concept of confidence interval; Concept of Short Term, Long Term Process Capability and assessment of Sigma level
- “ Identification of Value-added and Non-value-added activities (use of lean concept) & Value Stream Mapping
- “ Organizing for potential causes using cause and effect diagram, FMEA & Tree Diagram
- “ Verification/validation of causes using work place investigation (GEMBA)
- “ Correlation and simple & multiple regression and use of the same in validating cause
- “ Estimation & Test of Hypothesis and use of the same in validating the causes
- “ Logistic regression and use of the same in validating the cause
- “ Design of experiment and details of full factorial, fractional factorial and screening design
- “ Reliability Theory, Design FMEA, Pugh Matrix, TRIZ, Fault Tree Analysis
- “ Taguchi Methods of Parameter Design and Tolerance Analysis
- “ Exploratory Data Analysis
- “ Multivariate Analysis like Cluster Analysis, Factor Analysis etc
- “ Conjoint analysis
- “ Improvement Ideas using Creativity Techniques (Traditional & non traditional)
- “ Solution Evaluation Criteria, Evaluation of solutions and selection of solutions
- “ Change Management Process dealing with resistance to change, Process of piloting the solutions & Risk Analysis through use of FMEA or related methodologies
- “ Concept and Examples of Poke Yoke, Visual Workplace & 5S; Planning for full scale implementation (use of Gantt Charts, Planning Grid, Involvement Matrix),
- “ Evaluation of results after implementation, Monitoring the results through Statistical Process Control after implementation of the solutions, Monitoring the results as a part of established QMS; Institutionalisation and integration of the solutions
- “ Process of Closing the Project
- “ Work through six sigma projects of different applications

## PARTICIPATION FEE

**INR 80,000/- (for India & SAARC countries) / US\$ 2000 (for others) per head**

- NOTE:**
1. Participation Fee includes Course Manual, Lunch & refreshments, and Course Kit. Participants staying at the Institute Guest house will be provided accommodation on twin-sharing basis for 14 days, Breakfast, morning and evening tea/coffee, and Indian dinner.
  2. Discount for a) Member Organizations and b) Self-sponsoring participants : INR 5,000/- (Or US\$ 125) per participant
  3. Discount for Participants NOT staying in Guest House : INR 5,000/- (Or US\$ 125)
  4. Discount for Group Participation (3 or more participants from the same Orgn.) : 5% on total
  5. **Applicable Service Tax, presently 10.3%, TO BE ADDED to the total amount due.**
  6. **Total fees to be paid in full alongwith the application by a) Demand Draft favouring INDIAN STATISTICAL INSTITUTE payable at Bangalore, OR b) Cash at the ISI Bangalore Cash Office**
  7. Seats are limited. Enrolment on First-Come-First-Served basis.

## IMPORTANT DATES

**Submission of nomination: NOT LATER THAN 6<sup>th</sup> February, 2012**

## CONTACT

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## INDIAN STATISTICAL INSTITUTE

- ❖ The **Indian Statistical Institute** is a quasi central organization under the Ministry of Statistics and Program Implementation.
- ❖ It is declared by an **Act of Parliament** as an **Institute of National Importance**.
- ❖ Over the years the Institute has grown as a multi-disciplinary organization.
- ❖ It functions as a **University** empowered to award degrees up to D.Sc.; as a **Corporation** in undertaking large scale projects; as a **Firm of Consultants** to industries to improve Quality, Reliability and Efficiency and as a **Meeting place** of Scientists, Economists and Literary figures from all parts of the world.
- ❖ For further details, please visit website [www.isibang.ac.in](http://www.isibang.ac.in) / [www.isical.ac.in](http://www.isical.ac.in)

## Role & Function of SQC & OR DIVISION

- ❖ The **pioneer and leader** in blending **statistical theory with practice** and institutionalizing the **continuous improvement process** into a sustaining system.
- ❖ To strengthen **national economy** through continual search for excellence in Quality.
- ❖ To disseminate the basic concepts and **techniques for Quality Improvement** by organizing Training programs, Workshops and In-house programs.
- ❖ To develop **highly skilled professionals** capable of self actualization.
- ❖ To help industries in their efforts to cope up with the growing challenge of global competition through implementation of quality system based on **ISO-9000 series, ISO-14000, TS-16949-2002 standards, Six Sigma & World Class Manufacturing**.
- ❖ To continually develop and improve methodologies through **applied research** efforts to attain International Standards in services provided.
- ❖ To provide **solutions to the problems** pertaining to the entire gamut of complex Business Decision Processes with the aid of **Statistics and Operations Research**.