SQC & OR UNIT

INDIAN STATISTICAL INSTITUTE

CHENNAI

Six Sigma Black Belt (SS BB) Certification Program (Online and offline)

Breakthrough agents are needed by any organization – highly motivated people with the ability to transform problems to solutions. Black Belts form such vital group of people. Besides equipping these Black Belts with problem solving methodologies using statistical tools for product, process and system improvements, these people also will be equipped with other key management concepts needed for effective handling and solving of problems and sustenance of solutions.

The program particulars

1. **Period & Number of days:**
   - Six Sigma Black Belt program (12 days): Commencing from 28th September 2024. A total of 24 sessions of 3 hours duration (during Saturdays). Session timings: 10.00 to 13.00 and 14.00 to 17.00.

2. **Venue:**
   - For Online classes: Through virtual platforms.
   - For Offline classes: 110, NM Road, Aminjikarai, Chennai - 600029

3. **Requirements:** Graduates with minimum of 2 years of experience.
Relaxation can be considered for deserving candidates.

4. **Certification requirements:**

Phase I: Passing of an exam at the end of each phase of training (Four). All successful candidates will be issued with a Certificate.

Phase II: Demonstration of ability to solve a live problem through the application of methods learnt in Phase I. 4 to 6 months are given to complete the project work.

After successful completion of both the above phases, candidates will be certified as Black Belts.

5. **Program Fee** (exclusive of 18% GST):

Offline mode: **Rs. 60,000**

6. **Faculty:** From ISI, Chennai

7. **Registration:** Participants may register their names by sending scanned images of the filled-in attached forms through email addressed to The Programme co-ordinators, SSBB, Indian Statistical Institute, Chennai Centre to gravi@hotmail.com and sampangiraman@gmail.com.

Standard Body of Knowledge - Six Sigma Black Belt

Six Sigma Black Belt Curriculum and Body of Knowledge overview, overview of Six Sigma, DMAIC methodology overview, financial Benefits of Six Sigma, the Impact of Six Sigma to the Organization

Define

- Project Definition
- Developing a Business Case Project Charter
- Chartering a Team and defining Roles and Responsibilities
- Translating Customer Needs into Specific Requirements (CTQs)
- SIPOC Diagram and other project scoping tools like C&E matrix, affinity diagram and Pareto analysis
- Process Mapping (As-Is Process)
- Define Phase Review

Measure

- Data types (Discrete and Continuous)
- Measurement System Analysis
- Graphical representation of data
- Concept of Variation
- Measuring Process Capability
- Calculating Process Sigma Level
- Calculation of Baseline Performance
- Measurement Phase Review

Analyze

- Detailed Process Mapping of Critical Areas
- Cause and Effect Analysis
- Sampling distributions and CLT
- Sample size determination
- Point and interval estimation
- Important Parametric and Nonparametric statistical tests
- Correlation and regression analysis, stepwise regression
- Analyze Phase Review

Improve

- Failure Modes and Effects Analysis (FMEA)
- Poka Yoke (Mistake Proofing)
- Principles of experimentaion and strategies
- Basic designs - CRD, RBD and LSD Advanced designs - Factorial and fractional factorials
- Model building and process optimization
- Response surface methodology and EVOP
- Planning for implementation
- Improve Phase Review

Control

- Assessing the Results of Process Improvement
- Statistical Process Control (SPC) Overview
- Control charts for both discrete and continuous data
- Developing a Process Control Plan
- Documenting the Process
- Control Phase Review

Contact details:

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