

# Black Belt Certification

A whole new world of opportunities



benchmark  ix sigma  
Inspiring Minds, Facilitating Excellence

# All About Black Belt

## Program Objectives

The Black Belt certification program provides an advanced coverage of the Six Sigma methodology. The Black Belt training course provides not only the practical knowledge but also hands-on experience applying these tools on real-world problems. By the end of the program, candidates would be ready to solve complex business problems using Six Sigma methodology.

## Training Methodology

The program starts with a half day refresher on Green Belt tools and techniques. Training methodology includes Lectures, Q/A, Small Group Discussions, Review Sessions, Exercises, Tests, Hands-on practical problems, Demonstration, Case Study, Live or Video Demonstration, Simulation, Role Playing, Teaching Others, Guided Practice with Feedback, Brainstorming, Problem Solving and Article Discussions.

Case Studies, practice questions, data for exercises and practice projects are provided to all participants on the first day of the training. Team exercises are used throughout the workshop.

The Benchmark Six Sigma training format provides ample practice in three ways

- Before training by the use of Pre- Course material provided by email on registration.
- Between part 1 and part 2 of the training utilizing practice exercises.
- During training with the help of two simulated practice projects.

## Course Duration

The course duration of the Black Belt program is six days. The first part of the training (three days) covers Define, Measure, and Analyze phases. Participants are provided practice questions to use before they attend the second phase. The second part covers improve and control phases. Practical exercises are completed at the end of each day to reinforce the concepts covered during the day. Both the phases of training are usually held on Friday-Saturday-Sunday to minimize disruption to work schedules.

## Pre-requisites

The pre-requisite for attending a Benchmark Six Sigma Black Belt program is completion of a globally accepted Green Belt training. Completion of a Green Belt project prior to the Black Belt training is not mandatory. A good number of participants are able to carry out their first Six Sigma project as a Black Belt project.

## Certification Requirements

On the last day of the training, there is a 150 question multiple-choice exam that lasts 4 hours. The questions on the final exam include material that is covered in all phases of the training. All participants who get an overall score of greater than 70% will receive a certificate that indicates that they are certified based on examination.

An additional Project Completion certificate can be achieved by candidates who complete a valid Black Belt project and submit a project report within 3 years of completing the training program. This certificate will indicate that the candidate is certified based on examination and completion of one project.

All project certificates are valid for a period of three years. Candidates will have to submit evidence of project completion or continuing education to get recertified every three years.

# Black Belt training

provides hands-on experience on real-world problems.



## Why Choose Benchmark Six Sigma ?

- Most experienced and respected trainers and consultants.
- More than 10,000 Belts trained.
- Highest recognition and respect across sectors.
- Updated programs with latest inputs.
- Unique training and facilitation methodology with Multisensory impact.
- Complete Range of programs up to Master Black Belt Training.
- Regular programs in eight cities.
- Programs since 2001 with the best trainer retention.
- Unique after training support through very active web based forum and group activities.
- Unique after training support through chat sessions with Master Black Belts.
- Project completion support and certification at no additional cost.
- Conducted only by trainers with cross-industry implementation and leadership experience.
- Six Sigma and Lean Implementation (optional) follow-up with powerful Top/ Senior Management Workshops within organizations.
- Recruitment & job support for companies and individuals.

# Advantage Benchmark Six Sigma

Black Belt Programs are conducted at Delhi, Bangalore, Chennai, Mumbai, Kolkata, and Hyderabad. In any given month, there is usually at least one Black Belt program being conducted by Benchmark Six Sigma at one of the cities across India.

Latest schedule at [www.benchmarksixsigma.com/calendar](http://www.benchmarksixsigma.com/calendar)

## Unique After-Training Support

When you undergo training from Benchmark Six Sigma, you become a member of a highly active web based group. This helps you in many ways.

- You can view job postings and career discussions.
- Your queries are responded by people from industry of your interest.
- The responses are approved/ moderated by our Master Black Belts.
- You get to know latest happenings in the Six Sigma community. You get to see challenges faced by people in various sectors.
- You get to view and download material uploaded by other participants.



## Highest Global Recognition

Benchmark Six Sigma offers unparalleled international recognition. Benchmark Six Sigma is certified as a Training Provider for Black Belt training by Exemplar Global (Previously RABQSA).

Exemplar Global's principal offices are located in Sydney, Australia, Milwaukee, USA and Seoul, Korea with international offices located in Brazil, Cyprus, Japan, Malaysia, New Zealand, Taiwan, Thailand and Turkey, and Seoul Branch offices located in China and Vietnam.



Participants from US, Europe, Middle East, Japan, and other parts of Asia attend our programs indicating a world-wide acceptance of Benchmark Six Sigma programs.

Benchmark Six Sigma trainers include practitioners who have experience as Master Black Belts in spearheading Six Sigma programs in multinational companies.

## Free Feature

### Benchmark Six Sigma Learn & Share

- View Case studies from 41 industries.
- Study applications in 13 functions and interest areas.
- Share papers & articles.
- Participates in discussions.
- Enhance and showcase your benchmarks.

Visit [www.benchmarksixsigma.com](http://www.benchmarksixsigma.com)





# Benchmark Six Sigma Black Belt Content Outline



If you compare Benchmark Six Sigma Black Belt program course contents with those offered by other leading providers—you will find that Benchmark coverage is same or better. The advantage is how the material is covered by focusing on the practical knowledge that is directly applicable to real-world situations.



## Project Leadership

- Leadership roles & responsibilities
- Organizational roadblocks & how to address them
- Deploying Six Sigma in an organization

## Manage Projects

- Benchmarking and replication
- Planning tools & time management
- Financial measures (NPV, IRR, Benefits)

## Coaching Projects

- Team facilitation (Team Stages)
- Team performance evaluation and reward
- Project tracking

## Change Management

- Identify resistance to change
- Implement a plan to counter resistance
- Stakeholder management

## Define Phase

- Voice of the customer (Survey Methods, Analysis of Survey Results)
- Project charter
- Identify owners and stakeholders
- Project risk analysis

## Measure Phase

- Process mapping & analysis (SIPOC, Functional Deployment Maps, VA/NVA Analysis)
- Data types & collection plan (Continuous & Discrete, Sampling)
- Measurement systems analysis (Continuous & Attribute)
- Basic statistics & process capability analysis (DPU, DPMO, Sigma Level,  $C_p/C_{pk}$ ,  $P_p/P_{pk}$ )

## Analyze Phase

- Hypothesis testing (Null & Alternate, Types of Errors, P values, Sample Sizes)
- Relationship between variables (Regression, Logistic Regression)
- Tests of means, variances, and proportions (t-Tests, ANOVA, Chi-Square etc)
- Identify and handle non-normal data (Non-Parametric Tests)
- Lean tools and techniques to analyze data (5 Why's)

## Improve Phase

- Idea generation (Brainstorming, Creative Thinking)
- Design of experiments and analysis (Full & Fractional Factorial Designs)
- Failure modes and effects analysis
- Implementation of improved process
- Lean tools to improve (Kaizen, Waste Elimination, Kaizen)

## Control Phase

- Statistical process control (IMR, Xbar-R, C, U, P, NP Charts)
- Lean tools for control (TPM, Visual Factory)
- Sustain improvements (Control Plan, Lessons Learned, Documentation)
- Financial reviews & validation (Hard and Soft Benefits)

## Enterprise View

- Integration of Lean and Six Sigma
- Six Sigma and Project Management
- Differences between DMAIC & DFSS

Our Six Sigma programs are not just about learning DMAIC methodology. Importantly, they are about learning scientific decision making techniques which are extremely useful even if you are not doing a six sigma project.

# Partial List of Clients



## “ Here is What our past participants say about Black Belt Certification

I liked the explanation on DMAIC along with usage of tools and methods at each of the steps. Very effective and simple way to get acquainted with six sigma's concepts and methodology.  
-Alain Comparet, CEO, Schneider Electric

The best course to achieve customer satisfaction and breakthrough performance improvement.  
- Y. Subrahmanyam, GM, Apollo Hospitals

The Benchmark Six Sigma Black Belt training and certification program is comprehensive and well presented with lucid lectures, various relevant examples, focus groups for different industries and a detailed treatment of statistical methods which makes for a valuable learning experience.  
- Rajesh Sampathkumar, Asst. Manager - Engineering Consultant, Larsen & Toubro

One of the most interesting workshops I have ever attended. The clarity of concepts and their application is very well covered throughout the training. Definitely recommend the course.  
- Sudhi Snha Varshney, Manager-Process Management, HDFC Life Insurance

I appreciate the in-depth knowledge of the Instructor and his communication ability.  
- Rajeev Dua, Director, Sun Microsystems

Training and course material were excellent. The trainer's concept and clarity was remarkable and helped me to look things differently.  
- Niladri Shekhar Dutta, Senior Consultant, Price Water House Coopers.





Want to see Six Sigma success stories in a specific industry or function?

Visit Our Website

[www.benchmarksixsigma.com](http://www.benchmarksixsigma.com)

## About Benchmark Six Sigma

Founded in 2001, Benchmark Six Sigma leads the change management workshops in India, Benchmark utilizes a wide variety of management techniques that have evolved over centuries to help client organizations and professionals address challenges and chart extra-ordinary growth paths.

Benchmark workshops have evolved as Industry best offerings in two formats. In the public workshops format, we offer globally recognized programs with content and methodology that can be used in practically any domain. In the customized in-company workshops format, Benchmark is known for its ability to design and deliver highly valuable programs with demonstrated applicability. Our in-company workshops are offered with or without consulting support.

While Benchmark has already initiated conduct of workshops in certain other parts of the world, years 2011 and 2012 are earmarked for initiation of Benchmark programs in continents across the globe.

Benchmark has industry experience across 41 industry sectors.

## Benchmark Six Sigma Job Portal

- Explore jobs and gain competitive edge.
- Recruit people for your Six Sigma team at no cost. Get short listing support at nominal fee.

## Public Training Locations



## Regional Offices

### BANGALORE

Level 14 & 15, Concorde Towers,  
UB City 1, Vittal Mallya Road,  
Bangalore - 560001  
Tel : +919343217449  
[bangalore@benchmarksixsigma.com](mailto:bangalore@benchmarksixsigma.com)

### CHENNAI

Chennai Citi Centre, Level 6, 10/11,  
Dr.Radhakrishna Salai,  
Chennai - 600 004  
Tel : +919380615163  
[chennai@benchmarksixsigma.com](mailto:chennai@benchmarksixsigma.com)

### KOLKATA

BF -144, Salt Lake City,  
Sector -1,  
Kolkata - 700064  
Phone: +9193310 04509  
[kolkata@benchmarksixsigma.com](mailto:kolkata@benchmarksixsigma.com)

### MUMBAI

Level 2, Raheja Centre Point,  
294 CST Road, Near Mumbai University,  
Off Bandra-Kurla Complex,  
Santacruz (E), Mumbai - 400 098  
Tel : +9193234 32233  
[mumbai@benchmarksixsigma.com](mailto:mumbai@benchmarksixsigma.com)

### HYDERABAD

Hyderabad Mid-Town  
1st Floor, Mid Town Plaza  
Road No. 1, Banjara Hills,  
Hyderabad - 500034  
Tel: +919391330353  
[hyderabad@benchmarksixsigma.com](mailto:hyderabad@benchmarksixsigma.com)

### CORPORATE OFFICE

Benchmark Six Sigma, The Corenthum  
2714, Tower A, 7th Floor, A-41, Sector- 62,  
Noida - 201301

### MARKETING OFFICE FOR DELHI

SF 34, Ansal Fortune Arcade,  
Block K, Sector 18,  
Noida - 201301  
Tel : +919810919501  
[delhi@benchmarksixsigma.com](mailto:delhi@benchmarksixsigma.com)

### DUBAI

Emirates Towers,Level 41,  
Sheikh Zayed Road,  
Dubai- UAE, PO Box 31303  
Phone: +971 561442663  
[dubai@benchmarksixsigma.org](mailto:dubai@benchmarksixsigma.org)