



KRUPANIDHI GROUP OF INSTITUTIONS
(AICTE Approved | ISO 9001-2015 Certified)

Report On
Certificate Course
Six Sigma Green Belt

For the Academic Year

2017-2018

2016-2017

KRUPANIDHI GROUP OF INSTITUTIONS

12/1, Chikka Bellandur, Carmelaram Post Varthur Hobli,
Off Sarjapur Rd, Bengaluru, Karnataka 560035



Pravesh
Principal
Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

Certificate of Completion

This is to Certify Mr / Ms
NITHIN V JOSE

for successfully completing all requirements of

LEAN SIX SIGMA GREEN BELT CERTIFICATION TRAINING

and secured **A** grade*.

This certification acknowledges the conceptual understanding and application knowledge necessary to effectively achieve improved business performance.



Faculty In-Charge
VENKATESAN SOMANATHAN
Certified Master Black Belt from ISI
ASQ Certified Black Belt



[Signature]
Director

Bizards IT Solutions Pvt Ltd.

Principal
Krupanidhi Group of Institutions

C-60 to 612/1 Chikkabellandur Village, <60% (Fail)
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

Date: 23 Oct 2017



* A+ 90% and above

Certificate of Completion

This is to Certify Mr / Ms
EBIN JOSE

for successfully completing all requirements of

LEAN SIX SIGMA GREEN BELT CERTIFICATION TRAINING

and secured **A** grade*.

This certification acknowledges the conceptual understanding and application knowledge necessary to effectively achieve improved business performance.



Date: 23 Oct 2017

Antares .s

Faculty In-Charge
VENKATESAN SOMANATHAN
Certified Master Black Belt from ISI
ASQ Certified Black Belt



Aravind
Director

Bizards IT Solutions Pvt Ltd.

Principal
Krupanidhi Group of Institutions

12/1 Chikkabellandur Village, D-60% (Flat)
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

* A - 90% and above
B - 70 to 79%



KRUPANIDHI GROUP OF INSTITUTION

CIRCULAR

Date: 07.08.2017

All the students are hereby informed to enroll for the Certificate / Value Added Program: **Six Sigma Green Belt Certification program** on or before 09.08.2017 with Course Coordinator Ms. Nivedita. The Program will start on 10.09.2017.



Fr
V. Kumar
Principal

Principal

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035



KRUPANIDHI GROUP OF INSTITUTION

SIX SIGMA GREEN BELT CERTIFICATION SYLLABUSES

- The course on Six-Sigma will focus on detailed strategic and operational issues of process improvement and variation reduction. Six-sigma is a measure of quality that strives for near perfection. It is a disciplined, data-driven approach for eliminating defects (driving towards six standard deviations between the mean and the nearest specification limit) in any process- from manufacturing to transactional and from product to service.
- A Six-sigma defect is anything outside of customer specifications. To be tagged Six Sigma, a process must not produce more than 3.4 defects per million opportunities.
- Six-sigma employs a systematic approach of DMAIC (Define, Measure, Analyse, Improve and Control) for the process improvement. This course will provide a detailed understanding on various issues specific to each phase of DMAIC.
- The course is designed with a practical orientation and includes cases, industry examples and MINITAB software applications.
- The course is designed to satisfy the need of both industry professionals and University students.
- The content is beneficial to both manufacturing and service industry.

COURSE LAYOUT

Module 1: 5 hours

- Course Outline and Expectation setting.
- Introduction to Quality Management.
- Understanding of Basic Statistics
- Understanding Statistical Meaning of Sigma.
- Understand Lean and Six-Sigma
- Six Sigma Organization and Roles
- Different levels of certification and selecting 'Belts'

Module 2: 5 hours

- Six Sigma Methodologies
- DMAIC
- DMADV, IDDOV
- DFSS
- Six Sigma Goals and Metrics
- Benchmarking.
- DMAIC Tools and Applications
- Lean Tools and Application
- Tools used in Define Phase
- Project Charter,
- Pareto Analysis and
- TPM
- Case Study and Work Outs for all the Tools.



Principal

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
Carmelaram Road Post Varthur Hobli

Module 3: 5 hours

Tools used in Measure Phase

- DPMO, DPU, RTY
- Histogram,
- Process Map,
- SIPOC,
- Process Capability Study,
- Measurement Scales-Discrete and
- Continuous Data
- MSE

Case Study and Work Outs for all the Tools.

Module 4: 5 hours

Tools used in Analyze Phase

- C & E Diagram
- RCA,
- QFD,
- Box Plot,
- Dot Plot,
- Probability Charts
- 5S
- Correlation/Regression Analysis
- Case Study and Work Outs

Module 5: 5 hours

- Introduction to Hypothesis Testing
- Introduction to ANOVA/DOE
- Tools used in Improve Phase
- Solution Selection Matrix,
- Category Importance Weight
- Case Study and Work Outs for all the Tools.

FMEA

Module 6: 5 hours

- Tools used in Control phase
- Control Charts (X bar R, X bar S and P chart)
- Control Plan.
- Six sigma Green Belt Project Report walkthrough from real time projects.
- Question and Answers

BOOKS AND REFERENCES

1. Roderick A. Munro and Govindarajan Ramu and Daniel J. Zrymiak, The certified six sigma Green Belt Handbook, ASQ Quality Press and Infotech Standards India Pvt. Ltd.
2. T. M. Kubiak and Donald W. Benbow, The Certified Six Sigma Black Belt Handbook, Pearson Publication.
3. Forrest W. Breyfogle III, Implementing Six Sigma, John Wiley & Sons, INC. Evans, J R and W M Lindsay, An Introduction to Six Sigma and Process Improvement. CENGAGE Learning.
4. Howard S. Gitlow and David M. Levine, Six Sigma for Green Belts and Champions, Pearson Education, Inc.
5. Montgomery, D C, Design and Analysis of Experiments, Wiley, Mitra, Amitava, Fundamentals of Quality Control and Improvement, Wiley India Pvt Ltd, Montgomery, D C, Statistical Quality Control, A modern introduction, Wiley.





KRUPANIDHI GROUP OF INSTITUTION
CERTIFICATE / VALUE-ADDED COURSE REPORT

Date: 23.10.2017

1. Name of the Program : Six Sigma Green Belt Certification program
2. Program Start Date : 10/09/2017
3. Program End Date : 15.10.2017
4. Total Duration of the Program : 30 hrs
5. No. of Students Enrolled : 85
6. Course Co-Ordinator of the Program : Ms. Nivedita
7. No. of Unit Exams Conducted : 2
8. Date of the Final Examination : 15.10.2017
9. Maximum Marks for Final Exam : 50
10. Eligibility for Certificate : 60%
11. Total number of Students Eligible for Certificate: 58

Course Co-Ordinator



Fr *V. Bang.*
Principal

Principal
Principal

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

Certificate of Completion

This is to Certify Mr / Ms
Diljith P S
for successfully completing all requirements of

LEAN SIX SIGMA GREEN BELT CERTIFICATION TRAINING

and secured **C** grade*.

This certification acknowledges the conceptual understanding and application
knowledge necessary to effectively achieve improved business performance.



Date: 02-JAN-17



Venkatesan . S

Faculty In-Charge
VENKATESAN SOMANATHAN
Certified Master Black Belt from ISI
ASQ Certified Black Belt



Director

Bizards IT Solutions Pvt Ltd.
Principal

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village (all)
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

* A+ 90% and above

A 80 to 89%

B 70 to 79%

C 60 to 69%

Certificate of Completion

This is to Certify Mr / Ms
Jithin Krishnan B

for successfully completing all requirements of

LEAN SIX SIGMA GREEN BELT CERTIFICATION TRAINING

and secured **C** grade*.

This certification acknowledges the conceptual understanding and application knowledge necessary to effectively achieve improved business performance.



Date: 02-JAN-17

Venkatesan S

Faculty In-Charge
VENKATESAN SOMANATHAN
Certified Master Black Belt from ISI
ASQ Certified Black Belt



Arun

Director

Bizards IT Solutions Pvt Ltd.

Krupanidhi Group of Institutions

12/1 Chikkabellandur Village

C 60 to C 60 (Old) Easty

Carmelaram Road Post Varthur Hobli

Bangalore - 560 035

A 80 to 89%

B 70 to 79%

* A+ 90% and above

Certificate of Completion

This is to Certify Mr / Ms
Abin Surendran

for successfully completing all requirements of

LEAN SIX SIGMA GREEN BELT CERTIFICATION TRAINING.....

and secured **C** grade*.

This certification acknowledges the conceptual understanding and application
knowledge necessary to effectively achieve improved business performance.

Date: 02-JAN-17



Somanathan S

Faculty In-Charge
VENKATESAN SOMANATHAN
Certified Master Black Belt from ISI
ASQ Certified Black Belt



Abin Surendran

Director

Bizards IT Solutions Pvt Ltd.
Principal

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village, (F-III)
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

* A+ 90% and above

A 80 to 89%

B 70 to 79%

C 60 to 69%

Certificate of Completion

This is to Certify Mr / Ms
Sajna K M.....
for successfully completing all requirements of

LEAN SIX SIGMA GREEN BELT CERTIFICATION TRAINING.....

and secured **C** grade*.

This certification acknowledges the conceptual understanding and application knowledge necessary to effectively achieve improved business performance.



Date: 02-JAN-17

Venkatesan S

Faculty In-Charge
VENKATESAN SOMANATHAN
Certified Master Black Belt from ISI
ASQ Certified Black Belt



[Signature]

Director
Bizards IT Solutions Pvt Ltd.
Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
C. 60 to 69, Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

* A+ 90% and above
A 80 to 89%
B 70 to 79%

Certificate of Completion

This is to Certify Mr / Ms
Pooja Kumari.....
for successfully completing all requirements of

LEAN SIX SIGMA GREEN BELT CERTIFICATION TRAINING.....

and secured **C** grade*.

This certification acknowledges the conceptual understanding and application knowledge necessary to effectively achieve improved business performance.

Date: 02-JAN-17



Venkatesan.S

Faculty In-Charge
VENKATESAN SOMANATHAN
Certified Master Black Belt from ISI
ASQ Certified Black Belt



Arjun

Director

Bizards IT Solutions Pvt. Ltd.

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,

C 60 to 69 Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

A 80 to 89%

B 70 to 79%

* A+ 90% and above



KRUPANIDHI GROUP OF INSTITUTION

CIRCULAR

Date: 01/09/2016

All the students are hereby informed to enroll for the Certificate / Value Added Program: **Six Sigma Green Belt Certification program** on or before 03.09.2016 with Course Coordinator Dr. Sony Alexander. The Program will start on 05.09.2016.



Fr *V. Dama*

Principal

V. Dama
Principal

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035



KRUPANIDHI GROUP OF INSTITUTION

SIX SIGMA GREEN BELT CERTIFICATION SYLLABUSES

- The course on Six-Sigma will focus on detailed strategic and operational issues of process improvement and variation reduction. Six-sigma is a measure of quality that strives for near perfection. It is a disciplined, data-driven approach for eliminating defects (driving towards six standard deviations between the mean and the nearest specification limit) in any process- from manufacturing to transactional and from product to service.
- A Six-sigma defect is anything outside of customer specifications. To be tagged Six Sigma, a process must not produce more than 3.4 defects per million opportunities.
- Six-sigma employs a systematic approach of DMAIC (Define, Measure, Analyse, Improve and Control) for the process improvement. This course will provide a detailed understanding on various issues specific to each phase of DMAIC.
- The course is designed with a practical orientation and includes cases, industry examples and MINITAB software applications.
- The course is designed to satisfy the need of both industry professionals and University students.
- The content is beneficial to both manufacturing and service industry.

COURSE LAYOUT

Module 1: 5 hours

- Course Outline and Expectation setting.
- Introduction to Quality Management.
- Understanding of Basic Statistics
- Understanding Statistical Meaning of Sigma.
- Understand Lean and Six-Sigma
- Six Sigma Organization and Roles
- Different levels of certification and selecting 'Belts'

Module 2: 5 hours

- Six Sigma Methodologies
- DMAIC
- DMADV, IDDOV
- DFSS
- Six Sigma Goals and Metrics
- Benchmarking.
- DMAIC Tools and Applications
- Lean Tools and Application
- Tools used in Define Phase
- Project Charter,



Pranav
Principal

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

- Pareto Analysis and
- TPM
- Case Study and Work Outs for all the Tools.

Module 3: 5 hours

Tools used in Measure Phase

- DPMO, DPU, RTY
- Histogram,
- Process Map,
- SIPOC,
- Process Capability Study,
- Measurement Scales-Discrete and
- Continuous Data
- MSE

Case Study and Work Outs for all the Tools.

Module 4: 5 hours

Tools used in Analyze Phase

- C & E Diagram
- RCA,
- QFD,
- Box Plot,
- Dot Plot,
- Probability Charts
- 5S
- Correlation/Regression Analysis
- Case Study and Work Outs

Module 5: 5 hours

- Introduction to Hypothesis Testing
- Introduction to ANOVA/DOE
- Tools used in Improve Phase
- Solution Selection Matrix.
- Category Importance Weight
- Case Study and Work Outs for all the Tools.

FMEA

Module 6: 5 hours

- Tools used in Control phase
- Control Charts (X bar R, X bar S and P chart)
- Control Plan.
- Six sigma Green Belt Project Report walkthrough from real time projects.
- Question and Answers



Pranesh
Principal
Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035

BOOKS AND REFERENCES

1. Roderick A. Munro and Govindarajan Ramu and Daniel J. Zrymiak, The certified six sigma Green Belt Handbook, ASQ Quality Press and Infotech Standards India Pvt. Ltd.
2. T. M. Kubiak and Donald W. Benbow, The Certified Six Sigma Black Belt Handbook, Pearson Publication.
3. Forrest W. Breyfogle III, Implementing Six Sigma, John Wiley & Sons, INC. Evans, J R and W M Lindsay, An Introduction to Six Sigma and Process Improvement, CENGAGE Learning.
4. Howard S. Gitlow and David M. Levine, Six Sigma for Green Belts and Champions, Pearson Education, Inc.
5. Montgomery, D C. Design and Analysis of Experiments, Wiley. Mitra, Amitava, Fundamentals of Quality Control and Improvement, Wiley India Pvt Ltd. Montgomery, D C. Statistical Quality Control: A modern introduction, Wiley.



Pranush
Principal

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035



KRUPANIDHI GROUP OF INSTITUTION
CERTIFICATE / VALUE-ADDED COURSE REPORT

Date: 22.10.2016

1. Name of the Program : Six Sigma Green Belt Certification program
2. Program Start Date : 05.09.2016
3. Program End Date : 20.10.2016
4. Total Duration of the Program : 30 hrs
5. No. of Students Enrolled : 90
6. Course Co-Ordinator of the Program : Dr. Sony Alexander
7. No. of Unit Exams Conducted : 2
8. Date of the Final Examination : 22.10.2016
9. Maximum Marks for Final Exam : 50
10. Eligibility for Certificate : 60%
11. Total number of Students Eligible for Certificate: 68

Course Co-Ordinator



Fi V. Bang.

Principal

Principal

Krupanidhi Group of Institutions
12/1 Chikkabellandur Village,
Carmelaram Road Post Varthur Hobli
Bangalore - 560 035