Mobile: 81128644 Email: <u>info@sqr-training.com</u> Website: <u>www.sqr-training.com</u> Business Reg No.: 53335253C

1. Course Title: Certified Six Sigma Black Belt

Certified Six Sigma Black Belt course equips the participants with knowledge and skills to perform the task of a Certified Six Sigma Black Belt.

2. Program Objectives:

The objective of Certified six Sigma Black Belt is to equip engineering personnel with the Body of Knowledge and competencies to perform process improvement to achieve Six Sigma quality.

3. Program Outlines:

<u>Day 1 (6 hr)</u>

- I. Organization-wide Planning and Deployment
- I.A Organizational wide considerations (3 hr)
- I.B Leadership (3 hr)

Day 2 (6 hr)

- II. Organizational Process Management and Measures
- II.A Impact on Stakeholders (2 hr)
- II.B Benchmarking (2hr)
- II.C Business Measures (2 hr)

Day 3 (6 hr)

- III. Team Management
- III.A Team formation (3 hr)
- III.B Team facilitation (3 hr)

Day 4 (6 hr)

- III.C Team dynamics (3 hr)
- III.D Team training (3 hr)

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Day 5 (6 hr)

- IV. Define
- IV.A Voice of Customer (3 hr)
- IV.B Business Case and Project Charter (3 hr)

Day 6 (6 hr)

- IV.C Project Management (PM) Tools (3 hr)
- IV.D Analytical Tools (3 hr)

Day 7 (6 hr)

- V. Measure
- V.A Process Characteristics (3 hr)
- V.B Data Collection (3 hr)

<u>Day 8 (6 hr)</u>

- V.C Measurement Systems (3 hr)
- V.D Basic Statistics (3 hr)

Day 9 (6 hr)

- V.E Probability (3 hr)
- V.F Process Capability (3 hr)

Day 10 (6 hr)

- VI. Analyze
- VI.A Measuring and Modeling Relationships between Variables (6 hr)

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Day 11 (6 hr)

VI.B Hypothesis Testing (6 hr)

<u>Day 12 (6 hr)</u>

- VI.C Failure Mode and Effects Analysis (FMEA) (3 hr)
- VI.D Additional Analysis Methods (3 hr)

Day 13, Day 14 (6 hr/day)

- VII. Improve
- VII.A Design of Experiments (DOE) (12 hr)

Day 15 (6 hr)

VII.B Lean Methods (6 hr)

Day 16 (6 hr)

- VIII. Control
- VIII.A Statistical Process Control (SPC) (6 hr)

<u>Day 17 (6 hr)</u>

- VIII.B Other Controls (1 hour)
- VIII.C Maintain Controls (1 hour)
- VIII.D Sustain Improvements (1 hour)
- IX. Design for six sigma framework and methodology
- IX.A Common DFSS methodologies (1 hr)
- IX.B Design for X (DFX) (2 hr)

<u>Day 18 (6 hr)</u>

IX.C Robust Design (6 hr)

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Day 19-24 (6 hr/day)

Practical/Practicum - 6 Sigma Black Belt Project Report

{6 Sigma Black Belt Project to be submitted within 6 months on completion of course. Report writing takes about 36 hr (exclude experiment durations)}.

4. **Program Requirement:**

Participants to bring own Scientific Calculators

5. Who should attend:

This course is intended for engineers and technical professionals from a variety of educational backgrounds (with minimum engineering diploma).

Subject matter is applicable to design, validation, reliability, manufacturing, production, and quality professionals, and managers with responsibility for these functions.

Duration	108 hours (classroom training) & 36 hours (report writing)
	9 a.m. to 4 p.m.
	18 Saturdays
	Over 4.5 months
	2 weeks break
	Followed by 4 hr exam
	Practicum - Conduct process or product improvement and write 6 sigma black belt report. Report writing time is about 36 hr.
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6. Schedule & Remarks

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