

Course Content for Six Sigma Black Belt

- **Introduction**

1. A brief history of Quality
2. What is Quality (Definitions) and service or product
3. Quality Gurus & their contribution to Quality
4. Enterprisewide View
5. Leadership
6. Six Sigma Roles and Responsibilities
7. Team Formation
8. Team Facilitation
9. Team Dynamics
10. Time Management For Teams
11. Team Decision making Tools
12. Management and Planning Tools
13. Team Performance Evaluation And Rewards
14. Overview of DMAIC

- **Define**

1. Important Stakeholders
2. Impact On Stakeholders
3. Critical To X Requirements
4. Benchmarking
5. Business performance measures
6. Financial measures
7. VOC
8. Kano's Customer Satisfaction Levels
9. Juran's customer needs
10. Market research
11. CTQ Flowdown
12. QFD
13. Performance Metrics
14. Project Charter
15. Charter Negotiation
16. Project management plan and Baselines
17. Project Tracking

- **Measure**

1. Processes, Process characteristics, process flow metrics, inputs and outputs
2. Process maps and Flow chart
3. SIPOC
4. Data Type & Measurement scale
5. Data Collection
6. Sampling strategies
7. Fishbone Diagram
8. Relational Matrices or Prioritization Matrix
9. Basic Statistics
10. Analytical Statistics
11. Gauge R & R
12. Process Capability Analysis

- **Analyze**

1. Correlation and Regression Analysis
2. Testing of Hypothesis
3. FMEA
4. Gap Analysis
5. The Five Whys
6. Pareto Diagram
7. Tree Diagram
8. Non-value added activities
9. Cost of Poor Quality (COPQ)

- **Improve**

1. DOE
2. Poka-yoke
3. 5S
4. SMED
5. Continuous Flow Manufacturing
6. Kaizen
7. Kanban
8. Theory of constraints
9. Risk analysis

- **Control**

1. Statistical Process Control
2. Other Control Tools
3. Maintain Controls
4. Sustaining Improvements

- **DFSS**

1. DFSS

- **Case Study 1**

1. Case Study 1 Part 1
2. Case Study 1 Part 2

- **Case Study 2**

1. Case Study 2 Part 1
2. Case Study 2 Part 2