



# **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