

Six Sigma using Non-statistical approach - Black Belt Certification Workshop

Month	Module	Topics discussed	Days	Total Days
Month-1	Module – 1 Training (Month-1) 3 days	How to Identify Problems for Solving using Non-statistical methodology Splitting Generic Problems into Specific Problems Classification of problems into 4 categories	1	3
		Phase -1& 2 – Defining and Measuring the problem <ul style="list-style-type: none"> - Understanding the problem - Phenomenon analysis - Past data analysis to identify the Possible cause(s) for the problem - Data stratification - Brainstorming - Machine hardware checking Tool # 1 – Measurement Plot Tool # 2 – Attribute Agreement Analysis (AAA) Tool # 3 - Validating the Target set using 1 sample t test Phase -3–Analyze (Pinpointing the actual cause(s) leading to the problem using Non-statistical and Statistical techniques) Tool # 4 – GB Analysis	2	
Month-2	Projects Facilitation in Shop floor (Month-2) 2 days	Facilitation of the selected problems		2
Month-3	Module – 2 Training (Month-3) 2 days	Phase -3 – Analyze (Contd..) Tool # 5 – 2-sample t test Tool # 6 – Product Parameter Analysis	1	2
		Tool # 7 – Regression Analysis Tool # 8 – Assembly Analysis Tool # 9 - Modified Assembly Analysis	1	
Month-4	Projects Facilitation in Shop floor (Month-4) 2 days	Facilitation of selected problems		2

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Month-4	Module – 3 Training (Month-4) 2 days	Tool # 10 – Multi-vari analysis	2	2
Month-5	Projects Facilitation in Shop floor (Month-5) 1 day	Facilitation of the selected problems	1	3
	Module-4 Training (Month-5) 2 days	Tool # 11 - Process Design Analysis and Factorial Analysis – Application for both Problem solving and Process optimization	2	
Month-6	Module – 5 Training (Month-6) 2 days	Phase – 4 – Improve	1	4
		Tool # 12 – Reverse GB Analysis for Validation of the Pinpointed cause(s)	1	
		Phase – 5 – Control		
	Tool # 13 – Variation Analysis for deciding the Monitoring and Control method	2		
Tool # 14 – Monte-carlo simulation to find out the predicted rejection ppm	2			
Tool # 15 – Pre-control chart		2		
Projects Facilitation in Shop floor (Month-6) 2 days	Facilitation of selected problems		2	2
Month-7	Certification	Project Presentation, Quiz to check the understanding level and Certification	2	

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Summary of Process Improvement tools that will be taught and applied in the projects

S.no	Module	Tools
1	Module – 1 (Month-1)	<ol style="list-style-type: none"> 1. Phenomenon analysis 2. Trend analysis 3. Data stratification 4. Concentration chart 5. Pareto 6. Measurement Plot 7. Attribute Agreement Analysis (AAA) 8. GB Analysis
2	Module – 2 (Month-3)	<ol style="list-style-type: none"> 9. 2 sample t test 10. Process Parameter Analysis 11. Regression Analysis 12. Assembly Analysis 13. Modified Assembly Analysis
3	Module – 3 (Month-4)	<ol style="list-style-type: none"> 14. Multi-Vari analysis 15. ANOVA
4	Module – 4 (Month-5)	<ol style="list-style-type: none"> 16. Process Design Analysis 17. Factorial Analysis
5	Module – 5 (Month-6)	<ol style="list-style-type: none"> 18. Reverse GB Analysis 19. Variation Analysis 20. Monte-Carlo Simulation 21. Pre-Control chart

Project Timeline

Program	Month1	Month2	Month3	Month4	Month5	Month6	Month7
Six sigma Black Belt training	3 days (M1)		2 days (M2)	2 days (M3)	2 days (M4)	2 days (M5)	2 days (Certification)
Project facilitation and Review in shop floor		2 days		2 days	1 day	2 days	
Total days	3	2	2	4	3	4	2