

**SIX SIGMA BLACK BELT CERTIFICATION PROGRAMME (LEVEL 1)**
**April 2022 to October 2022**
**Venue : ACMA Office, New Delhi**
**PROGRAM DETAILS**

Module	Topics discussed	Days	Total Days
Module – 1 April 11,12,13	How to Identify Problems for Solving using Shainin methodology Splitting Generic Problems into Specific Problems Classification of problems into 4 categories	1	3
	Phase -1 – Defining the problem <ul style="list-style-type: none"> <li>- Understanding the problem</li> <li>- Phenomenon analysis</li> <li>- Past data analysis to identify the Possible cause(s) for the problem</li> <li>- Data stratification</li> <li>- Brainstorming</li> <li>- Machine hardware checking</li> <li>-</li> </ul> Phase -2 – Measure and Analyze (Pinpointing the actual cause(s) leading to the problem using Shainin techniques) Techniques that will be discussed are  Tool # 1 – ISO Plot Tool # 2 – Attribute Agreement Analysis (AAA) Tool # 3 – Paired Comparison	2	
Module – 2 May 11,12	Project facilitation and review	1	2
	Tool # 4– Product/Process search Tool # 5 – Component Search	1	
Module – 3 June 22,23	Tool # 6 – Modified Component Search Tool # 7 – Multi-vari analysis	1	2
	Tool # 8 – Variable Search	1	

Module	Topics discussed	Days	Total Days
Module – 4 July 20,21,22	Project review and Facilitation	1	3
	Tool # 9 – Variable search (Contd.) Factorial analysis to find out the optimal setting Using Minitab and Excel to find out the Optimal setting Using Minitab for doing Multi-vari analysis  Tool # 10 – B vs C - How to validate the pin-pointed cause(s) - Quantification of Improvement	2	
Module – 5 August 24,25,26	Tool # 11 – B vs C - How to validate the pin-pointed cause(s) Quantification of Improvement  Tool # 12 – Variation analysis - Identification of monitoring and control method to sustain the improvement - Implementation of the control method  Tool # 13 - Weibull Analysis to establish the life of the product	3	3
October 10,11	Factory visits to check the improvement projects	2	2
Module – 6 Oct 12,13	Presentation of the projects	1	2
	Final assessment and certification	1	
Total days			17 days

- Note :**
1. ACMA will issue Black Belt (Level 1) Certificate to all successful candidates
  2. Program timings are from 9.30 a.m. to 5.30 p.m., it will be extended as and when required in the evening

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

<b>S.no</b>	<b>Module</b>	<b>Tools</b>
<b>1</b>	Module – 1	Phenomenon analysis Trend analysis Data stratification Concentration chart ISO Plot Attribute Agreement Analysis Paired Comparison
<b>2</b>	Module – 2	Product/Process search Component Search
<b>3</b>	Module – 3	Modified Component search Multi-vari analysis Variable search
<b>4</b>	Module – 4	Factorial analysis Using Minitab to do Factorial analysis and finding out optimal setting Using Minitab to do Multivari analysis
<b>5</b>	Module – 5	B Vs C Variation analysis Weibull Analysis

## Training schedule

Programme	Apr 2022	May 2022	June 2022	July 2022	August 2022	Sept.	October 2022
Training session	11,12,13 (M1)	11,12 (M2)	22,23 (M3)	20,21,22 (M4)	24,25,26 (M5)		12,13 (Certification)
Factory visits							10,11
Total days	3	2	2	3	3	-	4

## Who should attend

Function	Positions
Production	Production in-charge Factory head
Quality	Quality Engineer Quality Manager
Manufacturing Engineering	Manufacturing Process Engineers Manufacturing Process Managers
Corporate/Support Functions	Continuous Improvement engineers/managers Quality system implementers