



IndianTM
*School of
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SIX SIGMA GREEN BELT COURSE CONTENTS

IMPORTANCE OF SIX SIGMA & RELATED CONCEPTS

Introduction to Six Sigma & Overview of DMAIC, DMADV
Basic Quality Concepts
Seven Basic Quality Control (QC) tools
Seven New Management & Planning Tools
Lean Management Overview
Eight Discipline (8D) Problem Solving

CHANGE MANAGEMENT

Identify resistance to change Implement plan to counter resistance
Team formation (Team Stages)
Team Tools
Stakeholder Management

DMAIC

DEFINE PHASE

Sources of project ideas (VOC, VOB, VOP)
Project selection Finalising the CTQ
Project Charter
Team Roles and Responsibilities
Project scoping with SIPOC

MEASURE PHASE

CTQ Performance characteristics
Measurement System Analysis (MSA) – Gage R&R
Process Mapping (with VA/NVA Analysis)

Concept of Yield
Sampling
Data types (Continuous & Discrete) & Data collection plan
Basic Statistics (Measures of Central Tendency, Dispersion & Central Limit Theorem)
Process Capability Analysis (DPU, DPMO/PPM, Sigma level, C_p/C_{pk})
Concept of Normality

ANALYZE PHASE

Identifying X's using Cause & Effect analysis (Ishikawa diagram)
Identifying critical X's using Cause & Effect matrix (FDM)
Hypothesis testing (Null & Alternate, Types of Errors, p value) Relationship between variables (Correlation, Regression, Scatter diagram)
Test of means, variances, & proportions (t-test, z-test, f-test, Anova test & Chi-square test)
Finding critical X's using graphical techniques like Pareto analysis, Box plots
Failure Modes & Effects Analysis – FMEA

IMPROVE PHASE

Idea generation (Brainstorming, Creative Thinking, Benchmarking)
Comparing Alternative Solutions
Solution selection tools (Solution Prioritization matrix)
Introduction to Design of Experiments (DoE) Validation & Implementation of improved process

CONTROL PHASE

Elements in a Process Control Plan
Statistical process control (variable data charts IMR, Xbar-R & Xbar-S Charts)
Introduction to Attribute data charts (p, np, c & u charts)
Mistake Proofing
Sustaining improvements (creating Control Plan, Documentation)
RACI matrix
Project closure

“ISPE’s Six Sigma Green belt program course contents focus & emphasize on the practical aspects of subject matter (Six Sigma), being directly applicable to real-time situations”.