Pyzdek INSTITUTE

LEAN SIX SIGMA
GREEN BELT COURSE TOPICS

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COURSE TOPICS

LESSON	TOPIC
Overview	A top-level overview of the topics covered in this course
What is Six Sigma?	A complete overview of Six Sigma
Lean Overview 1	Waste and Value
Lean Overview 2	Value Streams, Flow and Pull
Lean Overview 3	Perfection
Recognizing an Opportunity	Linking your Green Belt activities to the organization's vision and goals
Choosing the Project-Pareto Analysis	How to pick a winning project using Pareto Analysis
Assessing Lean Six Sigma Project Candidates	How to carefully assess Lean Six Sigma project candidates to assure success
Develop the Project Plan 1	Team selection and dynamics; brainstorming; consensus decision making; nominal group technique
Develop the Project Plan 2	Stakeholder analysis, communication and planning, cross functional collaboration, and Force Field Analysis
Develop the Project Plan 3	Obtain a charter for your project
Develop the Project Plan 4	Work breakdown structures, DMAIC tasks, network diagrams
Develop the Project Plan 5	Project schedule management; project budget management
Develop the Project Plan 6	Obstacle avoidance tactics and management support strategies
High Level Maps 1	L-Maps, linking project charter Ys to L-Map processes
High Level Maps 2	Mapping the process from supplier to customer (SIPOC)
High Level Maps 3	Product family matrix

Voice of the Customer (VOC) 1	Kano Model, getting the voice of the customer using the critical incident technique
VOC 2-CTQ Specification	Link the voice of the customer to the CTQs that drive it
Principles of Variation 1	How will I measure success? Are my measurements trustworthy? Scales of measurement, data types, measurement error principles.
Principles of Variation 2	Enumerative and analytic studies; statistical process control principles; operational definitions
Establish the Process Baseline 1	Descriptive statistics for measuring distribution location, spread, and shape
Establish the Process Baseline 2	Control charts for individual observations and moving ranges.
Establish the Process Baseline 3	Control chart interpretation
Establish the Process Baseline 4	Continuous probability distributions for Lean Six Sigma: normal, Student's t
Establish the Process Baseline 5	Process capability analysis
Establish the Process line 6	Rolled throughput yield, normalized yield, process Base-sigma level
Establish the Process Baseline 7	Create detailed pictures of the as-is process
Establish the Process Baseline 8	Spaghetti charts
Establish the Process Baseline 9	Current state value stream map
Test Theories with Data 1	Statistical inference
Stratify Data 1	Data collection and sampling for stratification
Stratify Data 2	Data stratification tools: tree diagrams, Pareto analysis, matrix diagrams, check sheets, defect location maps
Stratify Data 3 frequency plots.	Distributions-graphical data summaries. Histograms and
Stratify data 4-CTQ by 2 or more Xs	Multi-Vari Charts
Set Goals for the Outputs 1	Benchmarking as an aid in goal setting

Set Goals for the Outputs 2	Project FMEA
Focus the Problem Statement-Opportunity Maps	Use activity maps to identify value added activities
Design a Lean Value Stream	Lean principles; future state value stream map
Develop Theories 1	Brainstorming, cause-and-effect diagrams (Ishikawa diagrams, fishbone diagrams)
Test Theories with Data 2	Testing common assumptions: data type, independence, normality
Test Theories with Data 3	Experimentation concepts and sample size
Test Theories with Data 4	Testing one way classifications: t-tests
Model Cause-and-Effect 1	Correlation analysis, scatter plots
Creating Flow (2 modules)	Select the subproject, identify high-impact variables, design pull systems, design continuous flow work cells, choosing and maintaining equipment, 5S, SMED, etc.
Measurement Systems Analysis	Analysis of continuous data measurement systems (taught here, but used earlier in actual projects)
Determine Improvement Strategy 01	Improvement project planning, pilot study, simulation
Implement 1	Institutionalize your changes
Implement 2	Process control planning, process control principles, choosing the process elements to monitor, approaches to process control, and next steps.
Implement 3	Process deployment maps
Implement 4	Dashboards for process control and improvement
Implement 5	Training needs analysis, continuous improvement with KAIZEN, Kaizen events, extend flow to suppliers and customers, project closure

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