

2020 Fall Lean Six Sigma Combined Belt Semester Outline



Session / Class	Key Topics and Objectives	Comments
Session 1 - September 15, 2020 Tuesday	Introductions and Basic Expectations Overview of quality and improvement Introduction to variation Introduction to Six Sigma & Six Sigma philosophy Introduction to Lean The DMAIC Approach	Orientation, Basic lecture
Session 2 - September 22 Tuesday	Define Phase Overview Project Selection and Definition - briefly Key Charter Elements SIPOC	lecture statapult activity (collect base line data and write SIPOC)
Session 3 - September 29 Tuesday	Measure Phase Overview Potential Xs Process Mapping C&E diagram Data types - briefly Analyze Phase Overview Pareto charts Process Analysis Hypothesis testing - introduction	statapult activity (process mapping and generate potential xs)
Session 4 - October 6 Tuesday	Improve Phase Overview Generating & prioritizing solutions PDSA Lean approaches Control Phase Overview Control pyramid Standard work mistake proofing visual controls Control plans Closure & handoff (briefly) Yellow Belt Exit Test	statapult activity (document new process)
Session 5 - October 13 Tuesday	Define Phase Part II Project selection Voice of the customer Cost of Poor Quality Kano Analysis CTQ Project plan Drafting Project Charter Facilitation skills Team and Project Management Stages of Team development	

Session 6 - October 20 Tuesday	Measure Phase Part II Detailed process mapping Descriptive statistics Introduction to Minitab Data Types - more depth MSA FMEA Sigma Levels	
Session 7 - October 27 Tuesday	Analyze Phase Part II Comprehensive Quiz Central limit theorem process capability Confidence intervals (means, medians, standard dev) Hypothesis testing p-values	Minitab
Session 8 - October 29 Thursday	Analyze Phase Part II (continued) 1-sample t 2-sample t ANOVA	Minitab
Session 9 - November 3 Tuesday	Analyze Phase Part II (continued) 1-proportion test 2-proportion test Chi-square Correlation & regression	Minitab
Session 10 - November 5 Thursday	Analyze Phase Part II (continued) Control Charts Practice Exercises/Quiz	Minitab
Session 11 - November 10 Tuesday	Improve Phase Overview Part II Generating and Prioritizing Solutions Assessing Risks Change Management Principles	
Session 12 - November 12 Thursday *BLACK BELT ONLY*	Analyze Phase Part II (continued)/ BB content Non-parametrics 1-sample sign Mood's median Kruskal-Wallis Test Levine's test, F Test, Bartlett's Test DOE	Minitab
Session 13 - November 17 Tuesday	Improve Phase Overview Part II Testing Solutions Benefits and Improvement Estimation Basic Lean Principles and Applications	

Session 14 - November 24 Tuesday	Control Phase Overview Part II Control pyramid Standard work mistake proofing visual controls feedback SPC Audits Control plans Closure & handoff	
Session 15 - December 1 Tuesday	Review	
Session 16 - December 8 Tuesday	EXAM	Exam
Project Defense: December 9 - February 28	One-on-one in-depth review and discussion regarding Belt Candidate's Project	Project Defense approximately 2 hours
Certification Presentation - TBA	"DMAIC" Projects and Results presented to Leadership by Belt Candidates	Belt Candidate presentations