

General Lean Six Sigma Semester Outline (All Belts)*



Session / Class	Black Belt Key Topics and Objectives	Green Belt Key Topics and Objectives	Yellow Belt Key Topics and Objectives	Comments
Session 1	Introductions and Basic Expectations Basic Overview of Quality and Improvement Improvement Approaches	Introductions and Basic Expectations Basic Overview of Quality and Improvement Improvement Approaches	Introductions and Basic Expectations Basic Overview of Quality and Improvement Improvement Approaches	Orientation, Basic lecture and simple exercises
Session 2	Lean Six Sigma Methodology The DMAIC Project Approach Sigma Levels	Lean Six Sigma Methodology The DMAIC Project Approach Sigma Levels	Lean Six Sigma Methodology The DMAIC Project Approach Sigma Levels	Lecture and Hands-on exercises
Session 3	Define Phase Overview Project Selection and Definition Key Charter Elements	Define Phase Overview Project Selection and Definition Key Charter Elements	Review and discussion regarding Yellow Belt Candidates' Yellow Belt Certification Exam	In-class presentations, Lecture
Session 4	Team and Project Management Stages of Team Development Facilitation Skills Basic Project Management Tools	Team and Project Management Stages of Team Development Facilitation Skills Basic Project Management Tools		Lecture and Hands-on exercises
Session 5	High-Level and Detailed Process Mapping SIPOC Mapping Detailed Process Mapping Techniques	High-Level and Detailed Process Mapping SIPOC Mapping Detailed Process Mapping Techniques		Small group exercises, Lecture
Session 6	Measure Phase Overview Y=f(x) Potential "X's" - Cause and Effect Types of Data and Data Collection Basic Baseline Descriptive Statistics	Measure Phase Overview Y=f(x) Potential "X's" - Cause and Effect Types of Data and Data Collection Basic Baseline Descriptive Statistics		Quiz, In-class presentations, Basic Minitab Introduction, Lecture
Session 7	Measurement System Analysis Failure Mode and Effects Analysis	Measurement System Analysis Failure Mode and Effects Analysis		Lecture and Hands-on exercises
Session 8	Analyze Phase Overview Understanding Variation and Distributions Process Capability Normality Testing	Analyze Phase Overview Understanding Variation and Distributions Process Capability Normality Testing		Hands-on exercises, Minitab practice, Lecture
Session 9	Central Limit Theorem Hypothesis Testing	Central Limit Theorem Hypothesis Testing		Lecture and Hands-on exercises

Session 10	Analysis Tools Statistical Significance Tests Review of Types of Data Attribute (Discrete) Variable (Continuous)	Analysis Tools Statistical Significance Tests Review of Types of Data Attribute (Discrete) Variable (Continuous)		Hands-on exercises, Minitab practice, Lecture
Session 11	Analysis Tools Statistical Significance Tests Data Testing and Interpretation Continued Proportions testing, t-tests, ANOVA, Chi-Square, Regression	Analysis Tools Statistical Significance Tests Data Testing and Interpretation Continued Proportions testing, t-tests, ANOVA, Chi-Square, Regression		Hands-on exercises, Minitab practice, Lecture
Session 12	Improve Phase Overview Generating and Prioritizing Solutions Assessing Risks Change Management Principles	Improve Phase Overview Generating and Prioritizing Solutions Assessing Risks Change Management Principles		Quiz, In-class presentations, Exercises, Lecture
Session 13	Testing Solutions Benefits and Improvement Estimation Basic Lean Principles and Applications	Testing Solutions Benefits and Improvement Estimation Basic Lean Principles and Applications		Hands-on exercises, Small groups, Lecture
Session 14	Control Phase Overview Levels of Control and Oversight Standard Work Control Plans	Control Phase Overview Levels of Control and Oversight Standard Work Control Plans		Quiz, In-class presentations, Exercises, Lecture
Session 15	Project Closure and Leveraging Handoffs Lessons Learned	Project Closure and Leveraging Handoffs Lessons Learned		Lecture and Hands- on exercises
Session 16	Black Belt Project Workshop and Certification Exam	Green Belt Project Workshop and Certification Exam		Exam
Project Defense	One-on-one in-depth review and discussion regarding Belt Candidate's Project	One-on-one in-depth review and discussion regarding Belt Candidate's Project	Review and discussion regarding Team's Project	Project Defense approximately 2 hours
*Schedule and topics subject to change				