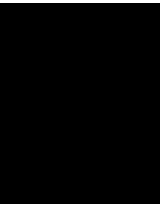

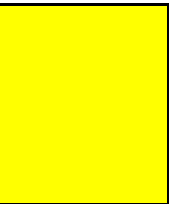
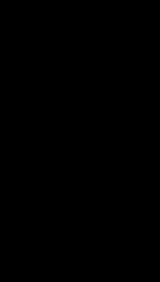

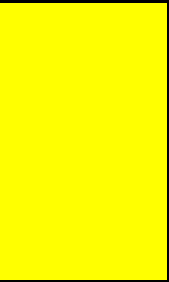
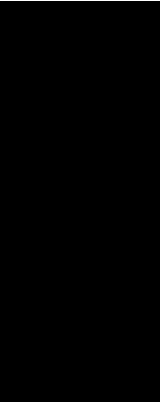

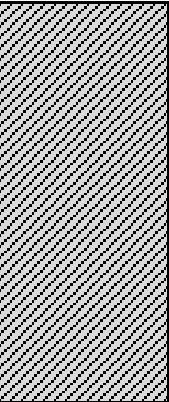
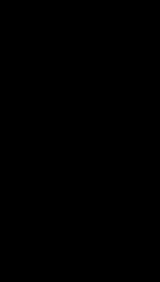
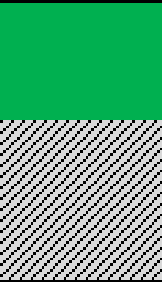
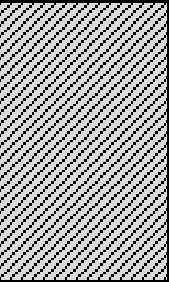
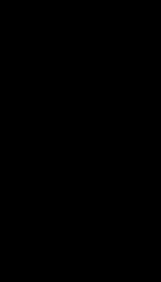

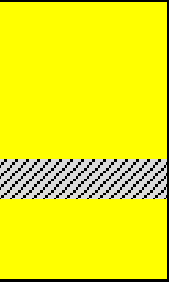


Course Modules

Black Belt Green Belt Yellow Belt

Define	A1 - Understanding Six Sigma 1.0			
	A2 - Fundamentals of Six Sigma 1.0			
	A3 - Project Selection 1.0			
	A4 - Lean Enterprise 1.0			
	A5 - Define Wrap Up 1.0			
Measure	B1 - Intro to Measure 1.0			
	B2 - Process Mapping 1.0			
	B3 - Cause and Effect 1.0			
	B4 - FMEA 1.0			
	B5 - Measurement System Analysis 1.0			
	B6 - Capability Analysis 1.0			
	B7 - Measure Wrap Up 1.0			
Analyze	C1 - Intro to Analyze 1.0			
	C2 - Classes and Causes 1.0			
	C3 - Mult Vari and Other Graphs 1.0			
	C4 - Inference 1.0			
	C5 - Hypothesis Testing 1.0			
	C6 - Hypothesis Testing Normal Data Part 1 1.0			
	C7 - Hypothesis Testing Normal Data Part 2 1.0			
	C8 - Nonnormal Part 1 1.0			
	C9 - Nonnormal Data Part 2 1.0			
	C10 - Analyze Wrap Up 1.0			
Improve	D1 - Intro to Improve 1.0			
	D2 - Simple Linear Regression 1.0			
	D3 - Multiple Regression 1.0			
	D4 - 2^K Experiments 1.0			
	D5 - Fractional Factorials 1.0			
	D6 - DOE Extras 1.0			
	D7 - Improve Wrap Up 1.0			
Control	E1 - Intro to Control 1.0			
	E2 - Solution Selection 1.0			
	E3 - Control Methods 1.0			
	E4 - Return to Lean 1.0			
	E5 -SPC 1.0			
	E6 - Control Plan 1.0			
	E7 - Project Wrap Up 1.0			

Course Modules		Black Belt	Green Belt	Yellow Belt	Minitab Version Runtime*			SigmaXL Version Runtime*		
					Hours	Minutes	Seconds	Hours	Minutes	Seconds
Define	A1 - Understanding Six Sigma 1.0				1	36	23	1	36	23
	A2 - Fundamentals of Six Sigma 1.0				0	58	2	0	58	2
	A3 - Project Selection 1.0				0	59	25	1	0	52
	A4 - Lean Enterprise 1.0				0	38	10	0	38	10
	A5 - Define Wrap Up 1.0				0	14	26	0	14	26
Measure	B1 - Intro to Measure 1.0				0	6	26	0	6	26
	B2 - Process Mapping 1.0				0	49	6	0	51	44
	B3 - Cause and Effect 1.0				0	26	46	0	30	3
	B4 - FMEA 1.0				0	30	6	0	30	45
	B5 - Measurement System Analysis 1.0				1	26	1	1	39	3
	B6 - Capability Analysis 1.0				1	11	46	1	7	48
	B7 - Measure Wrap Up 1.0				0	8	15	0	8	15
Analyze	C1 - Intro to Analyze 1.0				0	3	59	0	3	59
	C2 - Classes and Causes 1.0				0	35	11	0	36	36
	C3 - Multit Vari and Other Graphs 1.0				0	51	21	0	53	55
	C4 - Inference 1.0				0	43	18	0	43	17
	C5 - Hypothesis Testing 1.0				0	30	42	0	32	14
	C6 - Hypothesis Testing Normal Data Part 1 1.0				0	59	19	1	10	12
	C7 - Hypothesis Testing Normal Data Part 2 1.0				0	56	31	1	7	47
	C8 - Nonnormal Part 1 1.0				0	51	52	1	2	31
	C9 - Nonnormal Data Part 2 1.0				0	35	51	0	35	31
	C10 - Analyze Wrap Up 1.0				0	7	31	0	7	31
Improve	D1 - Intro to Improve 1.0				0	2	45	0	2	45
	D2 - Simple Linear Regression 1.0				0	39	16	0	36	21
	D3 - Multiple Regression 1.0				1	31	51	1	27	55
	D4 - 2^K Experiments 1.0				1	1	58	1	1	41
	D5 - Fractional Factorials 1.0				0	53	22	0	57	10
	D6 - DOE Extras 1.0				1	10	25	1	16	18
	D7 - Improve Wrap Up 1.0				0	7	58	0	7	58
Control	E1 - Intro to Control 1.0				0	2	42	0	2	42
	E2 - Solution Selection 1.0				0	14	6	0	14	6
	E3 - Control Methods 1.0				0	18	6	0	18	6
	E4 - Return to Lean 1.0				0	34	11	0	34	11
	E5 -SPC 1.0				1	29	4	1	32	28
	E6 - Control Plan 1.0				0	29	43	0	29	43
	E7 - Project Wrap Up 1.0				0	9	43	0	9	38

* "Instructional Run time" or Video time refers to the total length of a video, while "study time" represents the amount of time spent actively learning and processing information from that video, which can be longer than the video's runtime if the viewer pauses, takes notes, conducts exercises and analysis and reviews sections; essentially, study time encompasses the full engagement with the video content beyond just passively watching it.

Black Belt Approx. Instructional Runtime 24 Hrs, Study Time 160 Hrs. (+/-20)

Green Belt Approx. Instructional Runtime 20 Hrs, Study Time 100 Hrs. (+/-20)

Yellow Belt Approx. Instructional Runtime 11 Hrs, Study Time 40 Hrs. (+/-10)

IASSC Body of Knowledge (BoK)

Black Belt

1.0 Define Phase

- 1.1 The Basics of Six Sigma
 - 1.1.1 Meanings of Six Sigma
 - 1.1.2 General History of Six Sigma & Continuous Improvement
 - 1.1.3 Deliverables of a Lean Six Sigma Project
 - 1.1.4 The Problem Solving Strategy $Y = f(x)$
 - 1.1.5 Voice of the Customer, Business and Employee
 - 1.1.6 Six Sigma Roles & Responsibilities
- 1.2 The Fundamentals of Six Sigma
 - 1.2.1 Defining a Process
 - 1.2.2 Critical to Quality Characteristics (CTQ's)
 - 1.2.3 Cost of Poor Quality (COPQ)
 - 1.2.4 Pareto Analysis (80:20 rule)
 - 1.2.5 Basic Six Sigma Metrics

a. including DPU, DPMO, FTY, RTY Cycle Time; deriving these metrics

- 1.3 Selecting Lean Six Sigma Projects
 - 1.3.1 Building a Business Case & Project Charter
 - 1.3.2 Developing Project Metrics
 - 1.3.3 Financial Evaluation & Benefits Capture

- 1.4 The Lean Enterprise
 - 1.4.1 Understanding Lean
 - 1.4.2 The History of Lean
 - 1.4.3 Lean & Six Sigma
 - 1.4.4 The Seven Elements of Waste

- a. Overproduction, Correction, Inventory, Motion, Overprocessing, Conveyance, Waiting.
- 1.4.5 5S
- a. Sort, Straighten, Shine, Standardize, Self-Discipline

2.0 Measure Phase

- 2.1 Process Definition
 - 2.1.1 Cause & Effect / Fishbone Diagrams
 - 2.1.2 Process Mapping, SIPOC, Value Stream Map
 - 2.1.3 X-Y Diagram
 - 2.1.4 Failure Modes & Effects Analysis (FMEA)
- 2.2 Six Sigma Statistics
 - 2.2.1 Basic Statistics
 - 2.2.2 Descriptive Statistics
 - 2.2.3 Normal Distributions & Normality
 - 2.2.4 Graphical Analysis
- 2.3 Measurement System Analysis
 - 2.3.1 Precision & Accuracy
 - 2.3.2 Bias, Linearity & Stability
 - 2.3.3 Gage Repeatability & Reproducibility
 - 2.3.4 Variable & Attribute MSA

- 2.4 Process Capability
 - 2.4.1 Capability Analysis
 - 2.4.2 Concept of Stability
 - 2.4.3 Attribute & Discrete Capability
 - 2.4.4 Monitoring Techniques

3.0 Analyze Phase

- 3.1 Patterns of Variation
 - 3.1.1 Multi-Vari Analysis
 - 3.1.2 Classes of Distributions
- 3.2 Inferential Statistics
 - 3.2.1 Understanding Inference
 - 3.2.2 Sampling Techniques & Uses
 - 3.2.3 Central Limit Theorem
- 3.3 Hypothesis Testing
 - 3.3.1 General Concepts & Goals of Hypothesis Testing
 - 3.3.2 Significance; Practical vs. Statistical
 - 3.3.3 Risk; Alpha & Beta
 - 3.3.4 Types of Hypothesis Test

3.4 Hypothesis Testing with Normal Data

- 3.4.1 1 & 2 sample t-tests
- 3.4.2 1 sample variance
- 3.4.3 One Way ANOVA
 - a. Including Tests of Equal Variance, Normality Testing and Sample Size calculation, performing tests and interpreting results.
- 3.5 Hypothesis Testing with Non-Normal Data
 - 3.5.1 Mann-Whitney
 - 3.5.2 Kruskal-Wallis
 - 3.5.3 Mood's Median
 - 3.5.4 Friedman
 - 3.5.5 1 Sample Sign
 - 3.5.6 1 Sample Wilcoxon
 - 3.5.7 One and Two Sample Proportion
 - 3.5.8 Chi-Squared (Contingency Tables)
 - a. Including Tests of Equal Variance, Normality Testing and Sample Size calculation, performing tests and interpreting results.

4.0 Improve Phase

- 4.1 Simple Linear Regression
 - 4.1.1 Correlation
 - 4.1.2 Regression Equations
 - 4.1.3 Residuals Analysis
- 4.2 Multiple Regression Analysis
 - 4.2.1 Non-Linear Regression
 - 4.2.2 Multiple Linear Regression
 - 4.2.3 Confidence & Prediction Intervals
 - 4.2.4 Residuals Analysis
 - 4.2.5 Data Transformation, Box Cox

Green Belt

1.0 Define Phase

- 1.1 The Basics of Six Sigma
 - 1.1.1 Meanings of Six Sigma
 - 1.1.2 General History of Six Sigma & Continuous Improvement
 - 1.1.3 Deliverables of a Lean Six Sigma Project
 - 1.1.4 The Problem Solving Strategy $Y = f(x)$
 - 1.1.5 Voice of the Customer, Business and Employee
 - 1.1.6 Six Sigma Roles & Responsibilities
- 1.2 The Fundamentals of Six Sigma
 - 1.2.1 Defining a Process
 - 1.2.2 Critical to Quality Characteristics (CTQ's)
 - 1.2.3 Cost of Poor Quality (COPQ)
 - 1.2.4 Pareto Analysis (80:20 rule)
 - 1.2.5 Basic Six Sigma Metrics

a. including DPU, DPMO, FTY, RTY Cycle Time, deriving these metrics and these metrics

- 1.3 Selecting Lean Six Sigma Projects
 - 1.3.1 Building a Business Case & Project Charter
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 - 4.1.1 Correlation
 - 4.1.2 Regression Equations
 - 4.1.3 Residuals Analysis
- 4.2 Multiple Regression Analysis
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 - 4.2.2 Multiple Linear Regression
 - 4.2.3 Confidence & Prediction Intervals
 - 4.2.4 Residuals Analysis
 - 4.2.5 Data Transformation, Box Cox

Yellow Belt

1.0 Define Phase

- 1.1 The Basics of Six Sigma
 - 1.1.1 Meanings of Six Sigma
 - 1.1.2 General History of Six Sigma & Continuous Improvement
 - 1.1.3 Deliverables of a Lean Six Sigma Project
 - 1.1.4 The Problem Solving Strategy $Y = f(x)$
 - 1.1.5 Voice of the Customer, Business and Employee
 - 1.1.6 Six Sigma Roles & Responsibilities
- 1.2 The Fundamentals of Six Sigma
 - 1.2.1 Defining a Process
 - 1.2.2 Critical to Quality Characteristics (CTQ's)
 - 1.2.3 Cost of Poor Quality (COPQ)
 - 1.2.4 Pareto Analysis (80:20 rule)
 - 1.2.5 Basic Six Sigma Metrics

a. including DPU, DPMO, FTY, RTY Cycle Time

- 1.3 Selecting Lean Six Sigma Projects
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 - 1.3.2 Developing Project Metrics
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4.3 Designed Experiments	-	-
4.3.1 Experiment Objectives	-	-
4.3.2 Experimental Methods	-	-
4.3.3 Experiment Design Considerations	-	-
4.4 Full Factorial Experiments	-	-
4.4.1 2k Full Factorial Designs	-	-
4.4.2 Linear & Quadratic Mathematical Models	-	-
4.4.3 Balanced & Orthogonal Designs	-	-
4.4.4 Fit, Diagnose Model and Center Points	-	-
4.5 Fractional Factorial Experiments	-	-
4.5.1 Designs	-	-
4.5.2 Confounding Effects	-	-
4.5.3 Experimental Resolution	-	-
5.0 Control Phase		5.0 Control Phase
5.1 Lean Controls		5.1 Lean Controls
5.1.1 Control Methods for 5S		5.1.1 Control Methods for 5S
5.1.2 Kanban		5.1.2 Kanban
5.1.3 Poka-Yoke (Mistake Proofing)		5.1.3 Poka-Yoke (Mistake Proofing)
5.2 Statistical Process Control (SPC)		5.2 Statistical Process Control (SPC)
5.2.1 Data Collection for SPC		5.2.1 Data Collection for SPC
5.2.2 I-MR Chart		5.2.2 I-MR Chart
5.2.3 Xbar-R Chart		5.2.3 Xbar-R Chart
5.2.4 U Chart		5.2.4 U Chart
5.2.5 P Chart		5.2.5 P Chart
5.2.6 NP Chart		5.2.6 NP Chart
5.2.7 Xbar-S Chart		5.2.7 Xbar-S Chart
5.2.8 CuSum Chart		5.2.8 CuSum Chart
5.2.9 EWMA Chart		5.2.9 EWMA Chart
5.2.10 Control Methods		5.2.10 Control Chart Anatomy
5.2.11 Control Chart Anatomy	-	-
5.2.12 Subgroups, Impact of Variation, Frequency of Sampling	-	-
5.2.13 Center Line & Control Limit Calculations	-	-
5.3 Six Sigma Control Plans		5.3 Six Sigma Control Plans
5.3.1 Cost Benefit Analysis		5.3.1 Cost Benefit Analysis
5.3.2 Elements of the Control Plan		5.3.2 Elements of the Control Plan
5.3.3 Elements of the Response Plan		5.3.3 Elements of the Response Plan