Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Lean Management							
1.0 Introduction to Lean	$\checkmark$	✓	<b>✓</b>	✓	✓	$\checkmark$	✓
2.0 What is Lean & Application of Lean	✓	<b>✓</b>	<b>√</b>	✓	✓	✓	✓
3.0 5S Before Lean	$\checkmark$	✓	✓	✓	✓	$\checkmark$	✓
4.0 Types of Waste – (Videos &Simulation to Understand)	✓	<b>✓</b>	<b>√</b>	<b>√</b>	<b>✓</b>	✓	<b>√</b>
4.1 Different Types of Wastes	$\checkmark$	✓	✓	✓	<b>✓</b>	$\checkmark$	✓
4.2 Causes of Waste	✓	<b>√</b>	<b>√</b>	✓	✓	✓	<b>√</b>
4.3 Remedies of Waste	✓	<b>√</b>		✓	✓	✓	✓
5.0 Lean Principles Introduction	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	✓	<b>√</b>
5.1 Identify Customers & Specify Value	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>
5.2 Value Stream Mapping	✓	✓	✓	✓	<b>✓</b>	✓	<b>✓</b>
5.3 Create Flow	✓	<b>√</b>	<b>√</b>	✓	✓	✓	✓
5.4 Respond to Pull	✓	<b>√</b>	<b>√</b>	✓	<b>✓</b>	✓	✓
5.5 Pursuit Perfection	✓	✓	<b>√</b>	✓	✓	✓	✓
6.0 Identify Customers & Specify Value	✓	<b>✓</b>	<b>√</b>	✓	✓	✓	✓
6.1 Customer – Internal & External	✓	<b>√</b>	✓	✓	✓	✓	✓
6.2 Value Added & Non-Value Added (Simulation to Understand)	✓	<b>√</b>	<b>√</b>	✓	✓	✓	✓
7.0 Create Value Stream Mapping (VSM) (Simulation to Understand)	✓	<b>√</b>	<b>√</b>	✓	✓	✓	✓
7.1 Terminologies (CT, FTY, RTY, CO, TPT, WIP, WIQ)	✓	<b>√</b>	<b>✓</b>	✓	✓	✓	✓
7.2 Process Efficiency	✓	<b>√</b>	<b>√</b>	✓	✓	✓	✓
7.3 Customer Takt time	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	<b>√</b>	<b>√</b>
7.4 Create VSM (Simulation to Understand)	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Lean Management							
8.0 Create Value Stream Design (VSD) (Simulation to Understand)	✓	$\checkmark$		<b>✓</b>	<b>✓</b>	$\checkmark$	
9.0 Create Flow & Respond to Pull (Simulation to Understand)	✓			<b>✓</b>	<b>✓</b>	✓	<b>✓</b>
9.1 Single Piece Flow (Simulation to Understand)	✓	✓		✓	✓	✓	<b>✓</b>
9.2 Single Minute of Exchange of Dies (Simulation to Understand)	✓	✓		✓	<b>✓</b>	✓	✓
9.3 Line Balancing (Simulation to Understand)	✓	$\checkmark$		<b>✓</b>	<b>✓</b>	✓	✓
9.4 Kanban (Pull Production) (Simulation to Understand)	✓	✓	✓	<b>√</b>	<b>✓</b>	✓	✓
9.5 Heijunka (Production Levelling) (Simulation to Understand)	✓	✓		<b>√</b>	<b>✓</b>	✓	<b>✓</b>
9.6 Just In Time (Simulation to Understand)	✓	$\checkmark$		✓	<b>✓</b>	✓	<b>✓</b>
10.0 Additional Lean Tools	✓	✓	<b>✓</b>	✓	✓	✓	
10.1 Spaghetti Diagram	✓	✓			<b>✓</b>	✓	
10.2 Circle Diagram	$\checkmark$	$\checkmark$					
10.3 Total Productive Maintenance & OEE	$\checkmark$	$\checkmark$		✓	<b>✓</b>	$\checkmark$	
10.4 Andon & Visual Management	✓	$\checkmark$		<b>√</b>	<b>✓</b>	$\checkmark$	
10.5 Visual Factory	✓	$\checkmark$		✓	<b>✓</b>	✓	
10.6 Gemba	✓	$\checkmark$		✓	✓	$\checkmark$	
10.7 Hoshin Kanri (Policy Deployment)	$\checkmark$	$\checkmark$			<b>✓</b>	$\checkmark$	
10.8 PDCA (Plan Do Check Act)	$\checkmark$	✓		✓	✓	✓	
10.9 Poka-Yoke (Mistake Proofing) (Simulation to Understand)	✓		<b>✓</b>	✓	<b>✓</b>	$\checkmark$	<b>✓</b>
10.10 Root Cause Analysis	✓	✓		✓	✓	✓	✓
10.11 Standardized Work (Simulation to Understand)	✓	✓	✓	✓	<b>✓</b>	✓	✓
10.12 Theory of Constraints (Introduction)	✓	✓		<b>✓</b>			
10.13 Lean Enterprise	✓		<b>√</b>				
10.14 Lean value chain	<b>√</b>	✓					

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Discovery							
1.0 Introduction to Quality	✓			✓			
2.0 Quality Leaders (Juran, Deming, Shewhart, Ishikawa) (Videos to Understand)	<b>✓</b>	✓		✓	<b>✓</b>	<b>√</b>	
3.0 Cost of Quality (COQ)	✓			✓	✓	✓	<b>✓</b>
4.0 Cost of Poor Quality (COPQ) (Videos to Understand)	✓	✓	✓	✓	✓	✓	✓
5.0 Optimum Quality Levels	✓			✓	✓	$\checkmark$	✓
6.0 Failure Mode & Effect Analysis (FMEA)	✓	✓	✓	✓	<b>✓</b>	✓	✓
6.1 Create Process FMEA (Simulation to Understand)	✓	✓	✓	✓	<b>✓</b>	✓	✓
6.2 Create Design FMEA	✓	$\checkmark$	$\checkmark$		✓	$\checkmark$	✓
7.0 Key Performance Measures	✓	✓		✓	✓	✓	
7.1 Key Performance Indictors	$\checkmark$	$\checkmark$		✓	<b>✓</b>	$\checkmark$	
7.2 Customer Satisfaction	✓			✓	✓	✓	
7.3 Product Differentiation	✓			✓	✓	✓	
7.4 Customer Loyalty Metrics	✓	✓			✓	✓	
7.5 Leading & Lagging Indicators	✓	✓			✓	✓	
7.6 Create Line of Sight	✓	$\checkmark$			✓	$\checkmark$	
8.0 Key Business Drivers & their Impact	✓	✓		<b>√</b>			
8.1 Profit/Margin (Practice to Understand)	✓	$\checkmark$		✓			
8.2 Market Share	✓	$\checkmark$		$\checkmark$			
8.3 Net Present Value (NPV)	✓	✓					
8.4 Cost Benefit Analysis (CBA)	✓	✓	<b>✓</b>	✓			
8.5 Hard & Soft Benefits (Practice to Understand)	<b>✓</b>	✓	<b>✓</b>	✓			
8.6 Cost avoidance & Cost reduction (Practice to Understand)	<b>√</b>	✓		<b>√</b>			
9.0 Organization Goals & Six Sigma	✓	✓		✓	<b>√</b>	✓	
10.0 Balanced Score Card& Six Sigma	✓	✓		✓	✓	✓	

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Discovery							
11.0 History & Evolution of Six Sigma	✓	✓	✓		✓	✓	✓
12.0 Continuous Improvement (KAIZEN)	✓	✓	<b>√</b>	✓	<b>✓</b>	✓	<b>√</b>
13.0 Basics of Six Sigma (Simulation to Understand)	✓	✓	✓	✓	<b>√</b>	✓	✓
14.0 Six Sigma Applications	<b>✓</b>	$\checkmark$	<b>✓</b>				
15.0 Types of Six Sigma Projects	✓	$\checkmark$	<b>✓</b>	<b>√</b>	<b>✓</b>	$\checkmark$	<b>✓</b>
15.1 DMAIC	<b>✓</b>	$\checkmark$	<b>✓</b>	<b>√</b>	✓	$\checkmark$	<b>✓</b>
15.2 DFSS (DMADV/IDOV)	✓	$\checkmark$					
16.0 Organization Road Blocks	✓	✓			✓	✓	
16.1 Organization Structure & Culture	✓	✓			<b>√</b>	✓	
16.2 Common Causes of Six Sigma Failures	<b>✓</b>	$\checkmark$					
16.3 Stakeholder Analysis (Six Sigma Impact)	<b>✓</b>	$\checkmark$	<b>✓</b>	✓	<b>✓</b>	$\checkmark$	<b>✓</b>
17.0 Change Management (Simulation & Videos to Understand)	<b>✓</b>	✓		✓	<b>✓</b>	✓	<b>✓</b>
17.1 Basics of Change Management	✓	✓		✓	<b>√</b>	✓	✓
17.2 Readiness Assessment	<b>✓</b>	$\checkmark$		$\checkmark$	✓	$\checkmark$	✓
17.3 Communication Plans to Overcome Barriers	✓	$\checkmark$		✓	<b>✓</b>	$\checkmark$	✓
18.0 Strategic Planning & Deployment	<b>✓</b>	✓			<b>✓</b>	✓	✓
18.1 Importance of Lean Six Sigma	<b>✓</b>	✓			<b>✓</b>	✓	✓
18.2 Hoshin Kanri (Policy Deployment) (Practice to Understand)	<b>✓</b>	✓			<b>✓</b>	<b>√</b>	
18.3 SWOT Analysis (Practice to Understand)	<b>✓</b>	✓		✓	<b>✓</b>	✓	
18.4 PEST	✓	✓		$\overline{\checkmark}$	✓	$\overline{\checkmark}$	
18.5 Business Contingency Planning	✓	✓			<b>√</b>	✓	
18.6 Portfolio Analysis	<b>✓</b>	✓			<b>✓</b>	$\checkmark$	

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Discovery							
19.0 Team Management (Simulation & Videos to Understand)	<b>√</b>	$\checkmark$		✓	<b>✓</b>	$\checkmark$	✓
19.1 Team Types & Constraints	<b>✓</b>	$\checkmark$		✓	<b>✓</b>	$\checkmark$	<b>✓</b>
19.2 Team Roles & Responsibilities	<b>✓</b>	$\checkmark$	<b>✓</b>	<b>✓</b>	✓	$\checkmark$	<b>✓</b>
19.3 Team Member Selection Criteria	✓	✓		✓	<b>√</b>	✓	✓
19.4 Team Success Factors	<b>✓</b>	$\checkmark$		✓	<b>✓</b>	$\checkmark$	<b>✓</b>
20.0 Project Team Dynamics (Simulation to Understand)	<b>√</b>	✓		✓			
20.1 Forming	<b>✓</b>	$\checkmark$		✓			
20.2 Storming	<b>√</b>	$\checkmark$		<b>✓</b>			
20.3 Norming	✓	✓		✓			
20.4 Performing	✓	✓		✓			
20.5 Adjourning	<b>√</b>	✓					
20.6 Group Thinking	<b>√</b>	✓					
20.7 Team Communication	<b>√</b>	✓			✓	✓	
20.8 Resolve negative dynamics - overbearing, dominant, or reluctant participants	<b>√</b>	<b>√</b>					
20.9 The unquestioned acceptance of opinions as facts, groupthink, feuding, floundering, the rush to accomplishment, attribution, discounts, digressions, and tangents.	<b>✓</b>	<b>√</b>					
21.0 Team Facilitation	<b>✓</b>	$\checkmark$			✓	$\checkmark$	
21.1 Motivational Technique	<b>√</b>	✓			<b>√</b>	✓	
21.2 Team Stages & Development	<b>√</b>	✓			✓	✓	
21.3 Team Communication	<b>√</b>	<b>√</b>			<b>√</b>	<b>√</b>	
21.4 Team Leadership & Models	<b>√</b>	✓			<b>✓</b>	✓	
22.0 Team Dynamics (Simulation & Videos to Understand)	✓	✓			✓	✓	

Торіс	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Discovery							
22.1 Group Behavior	<b>✓</b>	✓			✓	$\checkmark$	
22.2 Meeting Management	<b>√</b>	✓			✓	✓	
22.3 Team Decision Making Methods	✓	✓			✓	✓	
23.0 Team Training (Simulation to Understand)	✓	✓					
23.1 Need Assessment	<b>✓</b>	✓					
23.2 Delivery	<b>✓</b>	✓					
23.3 Evaluation	<b>✓</b>	✓					
24.0 Six Sigma project impact on customer, suppliers & other stakeholders	<b>✓</b>	<b>√</b>					

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	КРМС
Six Sigma - Define							
1.0 Voice of Customer & Business(Simulation to Understand)	<b>✓</b>	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>✓</b>
1.1 Collect Customer & Business Voices	<b>✓</b>	<b>✓</b>	✓	✓	✓	✓	<b>✓</b>
1.2 Eliminate Vagueness & Ambiguity	<b>✓</b>	<b>√</b>	✓	✓	<b>√</b>	$\checkmark$	<b>✓</b>
1.3 VOC Clarity Table	✓	$\checkmark$	✓	✓	✓	$\checkmark$	✓
2.0 Kano Model (Practice to Understand)	✓	✓		✓	✓	✓	✓
3.0 Benchmarking	✓	$\checkmark$		✓	✓	$\checkmark$	
3.1 Competitive	<b>✓</b>	✓		✓	<b>✓</b>	✓	
3.2 Collaborative	✓	✓		✓	<b>✓</b>	✓	
3.3 Best Practices	✓	✓		✓	✓	✓	
4.0 Customer Requirements to Process Requirements	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	✓	<b>✓</b>

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	КРМС
Six Sigma - Define							
4.1 Critical to X (X-Quality, Cost, Safety or any other )	✓	✓	✓	✓	✓	✓	✓
4.2 CTQ Drill Down	✓	$\checkmark$	<b>✓</b>	<b>✓</b>	✓	$\checkmark$	<b>✓</b>
4.3 Quality Function Deployment (Practice to Understand)	✓	✓		✓	✓	✓	✓
5.0 Project Section (Practice to Understand)	✓	$\checkmark$		✓	✓	$\checkmark$	✓
6.0 Process Owners & Stakeholder Analysis	✓	✓	✓	✓	✓	✓	✓
7.0 Project Charter (Practice to Understand)	✓	✓	✓	✓	✓	✓	✓
7.1 Business Case	<b>✓</b>	✓	<b>✓</b>	✓	✓	✓	<b>✓</b>
7.2 Problem Statement	✓	✓	<b>✓</b>	✓	✓	✓	<b>✓</b>
7.3 Project Goal Statement	✓	✓	✓	✓	✓	✓	✓
7.4 Project Team	✓	✓	✓	✓	✓	✓	✓
7.5 Project Timeline	✓	✓	<b>√</b>	✓	✓	✓	<b>✓</b>
7.6 Project Scope	<b>✓</b>	$\checkmark$	<b>✓</b>	✓	✓	$\checkmark$	<b>✓</b>
7.7 Expected Benefits	✓	✓	<b>√</b>	✓	✓	✓	<b>✓</b>
8.0 Financial Evaluation	✓	✓		✓	✓	✓	<b>✓</b>
9.0 Develop Project Metrics	<b>✓</b>	$\checkmark$	<b>✓</b>	✓	✓	$\checkmark$	
10.0 Project Short &Long Terms Gain (Practice to Understand)	✓			✓	✓	✓	
11.0 Project Risk Analysis	<b>✓</b>	$\checkmark$			✓	$\checkmark$	
12.0 Six Sigma Project Types	<b>✓</b>	$\checkmark$			✓	$\checkmark$	
13.0 Project Roles & Responsibilities	✓	✓	✓	✓	✓	✓	✓
13.1 Roles of Executive Leadership	✓	✓	✓	✓	✓	✓	✓
13.2 Roles of Champion	✓	✓	✓	✓	✓	✓	✓
13.3 Roles of Sponsor	✓	✓	✓	✓	✓	✓	✓
13.4 Roles of Master Black Belt	✓	✓	✓	✓	✓	✓	✓
13.5 Roles of Black Belt	✓	✓	<b>√</b>	✓	$\checkmark$	$\checkmark$	<b>√</b>

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	КРМС
Six Sigma - Define							
13.6 Roles of Green Belt & Team	✓	$\checkmark$	<b>✓</b>	✓	<b>✓</b>	$\checkmark$	✓
14.0 Project Managements & Analytical tools	<b>√</b>	<b>√</b>		<b>✓</b>	<b>✓</b>	<b>√</b>	
14.1 Gantt charts	✓	$\checkmark$		✓	<b>✓</b>	$\checkmark$	
14.2 Work Breakdown Structure	✓	✓		✓	<b>✓</b>	✓	
14.3 Critical Path Method (CPM) (Simulation to Understand)	✓			✓	<b>✓</b>	✓	
14.4 Project Evaluation & Review Technique	✓			✓	<b>✓</b>	✓	
14.5 RACI model	✓	✓		<b>√</b>	<b>✓</b>	✓	
14.6 Activity Network Diagram	✓	✓		✓	<b>✓</b>	<b>√</b>	
14.7 Tree Diagram	✓	✓		✓	<b>✓</b>	<b>√</b>	
14.8 Matrix Diagram	✓	✓		✓	<b>✓</b>	<b>√</b>	
14.9 Interrelationship Diagram	✓	✓		✓	<b>✓</b>	✓	
14.10 Process Decision Program Chart (PDPC)	✓	✓		✓	<b>✓</b>	✓	
14.11 Project Documentation	✓	✓	✓	<b>√</b>	<b>✓</b>	✓	✓
15.0 Project Scope	✓	✓	✓	✓	<b>✓</b>	✓	✓
16.0 SIPOC & Process Mapping (Simulation to Understand)	✓	✓	✓	✓	<b>✓</b>	✓	✓
17.0 Project Performance Measurement	✓	✓		✓	<b>✓</b>	✓	
17.1 Define Performance Measurement	✓	✓		✓	<b>✓</b>	✓	
17.2 Process Critical Elements	✓	✓		✓	<b>✓</b>	$\checkmark$	
17.3 Key Outputs (CSAT, Revenue, Delivery, Schedule)	<b>√</b>	✓			✓	✓	
18.0 Project Tool Gate Review	✓	✓		✓	<b>✓</b>	<b>√</b>	✓

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Measure							
1.0 Process Analysis & Documentation	✓	✓	✓	✓	✓	$\checkmark$	✓
1.1 Process Flow Charts	$\checkmark$	$\checkmark$	✓	✓	✓	$\checkmark$	<b>✓</b>
1.2 Work Instructions & Gap Analysis	✓	✓					
2.0 Types of Data & Measurement Scale (Practice to Understand)	✓	✓	✓	✓	<b>✓</b>	$\checkmark$	✓
2.1 Continuous (Variable) Data	$\checkmark$	$\checkmark$	$\checkmark$	✓	✓	$\checkmark$	<b>✓</b>
2.2 Discrete (Attribute) Data	✓	$\checkmark$	✓	✓	<b>✓</b>	✓	✓
2.3 Nominal Data	✓	$\checkmark$		✓			<b>✓</b>
2.4 Ordinal Data	✓	$\checkmark$		✓			<b>✓</b>
2.5 Interval Measurement	✓	$\checkmark$		✓			<b>✓</b>
2.6 Ratio Measurement	✓	✓		✓			<b>✓</b>
3.0 Population & Sampling	✓	✓	✓	✓	<b>√</b>	✓	<b>✓</b>
3.1 Basics of Sampling	✓	✓	✓	✓	✓	✓	<b>✓</b>
3.2 Calculate Sample size(Practice to Understand)	✓	✓	✓	✓	✓	✓	✓
4.0 Type of Samples(Simulation to Understand)	✓	✓	✓	✓	✓	$\checkmark$	✓
4.1 Random Sample	✓	$\checkmark$	✓	✓	<b>✓</b>	$\checkmark$	<b>✓</b>
4.2 Systematic Sample	<b>✓</b>	$\checkmark$	✓	✓	✓	$\checkmark$	<b>✓</b>
4.3 Stratified Sample	✓	$\checkmark$	✓	✓	✓	$\checkmark$	<b>✓</b>
5.0 Basics of Statistics (Simulation to Understand)	✓	✓	✓	✓	<b>✓</b>	✓	✓
5.1 Central Tendency	✓	$\checkmark$	✓	✓	✓	$\checkmark$	<b>✓</b>
5.2 Dispersion	✓	✓	✓	✓	✓	✓	✓
5.3 Proportion	✓	✓	✓	✓	✓	✓	✓
6.0 Introduction to Statistical Software (Minitab)	✓			✓	✓	✓	✓
6.1 Minitab Practice	✓			✓	<b>✓</b>	$\checkmark$	<b>✓</b>
6.2 Descriptive Statistics	✓	$\checkmark$	✓	✓	✓	<b>√</b>	<b>√</b>

Торіс	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLA R GLOBAL	ISO	КРМС
Six Sigma - Measure							
6.3 Inferential Statistics	✓	$\checkmark$	✓	✓	✓	$\checkmark$	✓
7.0 Probability	✓	$\checkmark$					
7.1 Basic Concepts	✓	✓					
7.2 Independence Events	✓	✓					
7.3 Mutually Exclusive Events	✓	✓					
7.4 Addition & Multiplication Rules	✓	$\checkmark$					
7.5 Complimentary Probability	✓	✓					
7.6 Occurrence of events	<b>√</b>	✓					
8.0 Statistical Distributions (Practice to Understand)	<b>√</b>	✓	✓	✓	<b>✓</b>	✓	✓
8.1 Normal	✓	$\checkmark$	<b>✓</b>	<b>✓</b>	<b>✓</b>	$\checkmark$	<b>✓</b>
8.2 Binominal	<b>√</b>	✓	✓	✓	✓	✓	✓
8.3 Poisson	✓	✓	✓	✓	✓	✓	✓
8.4 Chi-Square	✓	✓	✓	✓	✓	✓	✓
8.5 Student's T	✓	✓	✓	✓	<b>√</b>	✓	✓
8.6 F distribution	✓	✓	✓	✓	✓	✓	✓
8.7 Hypergeometric	✓	✓					
8.8 Bivariate	✓	✓					
8.9 Exponential	✓	✓					
8.10 Lognormal	✓	✓					
8.11 Weibull	✓	✓			✓	✓	
9.0 Probability of Distributions (Practice to Understand)	✓	✓	<b>√</b>	<b>√</b>			✓
9.1 Frequency Distribution	✓	$\checkmark$	<b>✓</b>	✓			✓
9.2 Cumulative Frequency Distribution	<b>✓</b>	✓	<b>✓</b>	<b>√</b>			<b>✓</b>
9.3 Inverse Cumulative Frequency Distribution	✓	✓	✓	✓			✓

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLA R GLOBAL	ISO	KPMG
Six Sigma - Measure							
10.0 Central Limit Theorem (Simulation to Understand)	✓	✓	✓	✓			✓
11.0 Measurement & Data Collection	✓	✓	✓	✓	<b>✓</b>	$\checkmark$	✓
11.1 What is Measurement	✓			✓	<b>✓</b>	$\checkmark$	✓
11.2 Operation Definition	<b>✓</b>			✓	<b>✓</b>	$\checkmark$	<b>✓</b>
12.0 Data Collection Plan (Simulation to Understand)	✓	✓	✓	✓	✓	✓	✓
12.1 Check Sheets	✓	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	✓
12.2 Data Coding	<b>✓</b>	✓			<b>✓</b>	$\checkmark$	
12.3 Data Cleaning	✓	✓			<b>✓</b>	✓	
12.4 Data Collection Pitfalls	✓	✓			<b>✓</b>	✓	
12.5 Avoid Data Collection Pitfalls	✓	✓			✓	✓	
12.6 Seasonality Effect on Data	✓	✓			<b>✓</b>	✓	
12.7 Data Collectors Training	✓	✓			<b>√</b>	✓	
13.0 Graphical Analysis (Practice to Understand)	<b>√</b>	<b>√</b>	✓	✓	✓	✓	✓
13.1 Pareto	✓	✓	<b>✓</b>	✓	<b>✓</b>	$\checkmark$	✓
13.2 Scatter Plot (X - Y Plot)	✓	✓	<b>✓</b>	✓	<b>✓</b>	✓	<b>✓</b>
13.3 Box Plot	<b>✓</b>	✓	<b>✓</b>	✓	<b>✓</b>	$\checkmark$	<b>✓</b>
13.4 Histogram	✓	✓	<b>√</b>	✓	<b>✓</b>	✓	✓
13.5 Stem &Leaf Plots	✓	✓	<b>√</b>	✓	<b>✓</b>	✓	✓
13.6 Time Series Plot	✓			✓	<b>✓</b>	✓	✓
13.7 Run Chart	✓			✓	<b>✓</b>	✓	✓
13.8 Normality (using Minitab)	✓	<b>√</b>	✓	<b>√</b>	<b>✓</b>	✓	✓
13.9 Graphical Summary	✓	<b>√</b>	✓	✓	<b>✓</b>	✓	<b>✓</b>
14.0 Metrology	✓	✓					
14.1 Elements of Metrology	✓	<b>√</b>					

Торіс	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Measure							
14.2 Calibration System	✓	✓					
14.3 Traceability & Reference Standards	✓	✓					
14.4 Control & Integrity of Standards	✓	✓					
15.0 Variations& Measurement System Analysis	✓	✓	✓	✓	✓	✓	✓
15.1 Understanding Variations (Simulation to Understand)	✓	✓	✓	✓	✓	✓	✓
15.2 Measurement System Analysis (MSA)	✓	✓	✓	✓	✓	✓	✓
15.2.1 Discrimination	✓	✓	✓	✓	<b>✓</b>	✓	✓
15.2.2 Accuracy (includes Linearity & Bias)	✓	✓	✓	✓	✓	✓	✓
15.2.3 Precision	✓	✓	✓	✓	✓	✓	✓
15.2.4 Stability	<b>√</b>	$\checkmark$	✓	✓	✓	$\checkmark$	✓
15.2.5 Percent Agreement	$\checkmark$	$\checkmark$					
15.3 GRR for Continuous data (Simulation to Understand)	✓	$\checkmark$	<b>✓</b>	<b>√</b>	<b>✓</b>	✓	✓
15.4 GRR for Discrete Data (Simulation to Understand)	✓	✓	✓	✓	✓	✓	✓
15.5 Control Charts & Stability (Simulation to Understand)	✓	✓	✓	✓	<b>√</b>	✓	✓
16.0 Measurement Systems to	✓	✓					
16.1 Sales & Marketing	✓	✓					
16.2 Engineering	✓	✓					
16.3 Supply chain & Management	<b>√</b>	✓					
16.4 Research & Development	<b>√</b>	✓					
16.5 Customer Satisfaction	✓	✓					
17.0 Baseline Process Performance (Practice to Understand)	✓	✓	✓	✓	✓	✓	<b>✓</b>
17.1 Baseline Discrete Data (DPU, DPO,DPMO)	✓	✓	✓	✓	<b>✓</b>	✓	✓
17.2 Baseline Continuous Data (Cp, Cpk, Pp, Ppk, Cpm)	✓	✓	✓	✓	✓	✓	✓

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Measure							
17.3 Sigma Value (Short term & Long term)	<b>✓</b>	✓		✓	<b>✓</b>	$\checkmark$	✓
17.4 Sigma Shift (Short term Vs Long term)	✓	✓		✓	<b>✓</b>	$\checkmark$	✓
18.0 Process Capability in Detail (Practice to Understand)	✓	✓	✓	✓	<b>✓</b>	$\checkmark$	✓
18.1 Natural Process Limits & Specification Limits	✓	✓	✓	✓	<b>✓</b>	✓	✓
18.2 Design & Conducting Process Capability Studies	✓	✓	✓	✓	<b>✓</b>	✓	✓
18.3 Specifications, Sampling Plan, Stability & Normality	✓	✓	✓	✓	<b>✓</b>	$\checkmark$	✓
18.4 Capability for Normal & Non- Normal Data	✓	✓	✓	✓	<b>✓</b>	$\checkmark$	✓
18.5 Process Performance (PPM, DPU, DPMO)	<b>√</b>	$\checkmark$	✓	✓	<b>✓</b>	$\checkmark$	✓
18.6 Transformations (Box-Cox & Johnson transformation)	<b>√</b>	$\checkmark$	✓	✓			✓
18.7 Capability for Discrete Data	✓	$\checkmark$	✓	✓	✓	$\checkmark$	✓
19.0 Monitoring Techniques	✓		✓				
20.0 Reliability - MTTF, MTBF	<b>✓</b>				✓	$\checkmark$	

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	КРМС
Six Sigma - Analyze							
1.0 Identify Potential Causes (Practice to Understand)	✓	<b>✓</b>	✓	✓	<b>✓</b>	$\checkmark$	✓
1.1 Brain Storming	<b>✓</b>	<b>✓</b>		✓	<b>✓</b>	$\checkmark$	<b>✓</b>
1.2 Affinity Diagram	✓	<b>√</b>		✓	✓	✓	✓
1.3 Cause & Effect Diagram	✓	<b>√</b>	✓	✓	✓	✓	✓
1.4 Five Whys?	✓	<b>√</b>		✓	✓	✓	✓
2.0 Process Analysis	<b>✓</b>	<b>✓</b>	✓	✓	<b>✓</b>	✓	✓
2.1 Value Stream Mapping (Recap from Lean)	✓	<b>✓</b>	✓	✓	<b>✓</b>	✓	✓

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Analyze							
3.0 Data Analysis	✓	✓	$\checkmark$	✓	<b>✓</b>	$\checkmark$	✓
4.0 Normal Curve & Normality Test(Practice to Understand)	✓	<b>✓</b>	✓	✓	✓	✓	✓
5.0 Confidence Interval, Risk & P value	✓	✓	$\checkmark$	✓	✓	$\checkmark$	✓
6.0 Hypothesis Testing -Null & Alternate	✓	<b>✓</b>	✓	✓	✓	✓	✓
6.1 Significance of Confidence Level	✓	✓	$\checkmark$	✓	<b>✓</b>	$\checkmark$	✓
6.2 Significance of Power	✓	<b>✓</b>			<b>✓</b>	✓	
6.3 Statistical & Practical Significance	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>	<b>✓</b>	$\checkmark$	<b>✓</b>
6.4 Sample Size for Hypothesis Tests	✓	<b>✓</b>	✓	<b>✓</b>	<b>✓</b>	✓	✓
6.5 Point & Interval Estimates	<b>✓</b>	<b>✓</b>	$\checkmark$	<b>✓</b>			
6.6 Contingency Tables	✓	✓			✓	✓	
7.0 Alpha & Beta Risks (Practice to Understand)	✓	<b>✓</b>	✓	✓	<b>✓</b>	<b>√</b>	<b>✓</b>
8.0 Hypothesis with Normal Data(Practice to Understand)	✓	<b>✓</b>	$\checkmark$	<b>√</b>	<b>✓</b>	$\checkmark$	<b>√</b>
8.1 1 Sample T	✓	✓	$\checkmark$	✓	<b>✓</b>	$\checkmark$	✓
8.2 2-Sample T	✓	✓	✓	<b>√</b>	<b>✓</b>	✓	✓
8.3 Paired T	<b>✓</b>	✓		<b>✓</b>			<b>✓</b>
8.4 One-Way Anova	✓	✓	✓	<b>√</b>	✓	✓	✓
8.5 Test of Variance	✓	✓	✓	<b>√</b>	✓	✓	✓
9.0 Hypothesis with Non- Normal Data(Practice to Understand)	✓	<b>✓</b>	✓	✓	<b>✓</b>	✓	
9.1 1 Sample Sign	✓	✓	$\checkmark$	<b>✓</b>	<b>✓</b>	$\checkmark$	
9.2 1 Sample Wilcoxon	✓	✓	✓	✓	<b>✓</b>	✓	
9.3 Mann – Whitney	✓	<b>✓</b>	✓	<b>√</b>	<b>✓</b>	✓	
9.4 Kruskal- Wallis	✓	<b>✓</b>	✓	<b>√</b>	<b>√</b>	✓	
9.5 Mood's Median	✓		✓	<b>√</b>	<b>✓</b>	✓	
9.6 Freidman Test	<b>√</b>		<b>√</b>				

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Analyze							
10.0 Hypothesis with Discrete Data (Practice to Understand)	✓	<b>✓</b>	✓	✓	✓	✓	✓
10.1 1 Proportion	✓	✓	$\checkmark$	✓	<b>✓</b>	$\checkmark$	$\checkmark$
10.2 2 Proportions	<b>✓</b>	<b>✓</b>	✓	✓	✓	$\checkmark$	<b>✓</b>
10.3 Chi-Square	✓	✓	✓	✓	✓	✓	✓
10.4 Levene's Test	✓				✓	✓	
11.0 Multi-Vari Chart (Practice to Understand)	✓	<b>✓</b>	✓	✓	<b>✓</b>	✓	
12.0 Correlation & its Terminologies (Practice to Understand)	✓	✓	$\checkmark$	✓	<b>✓</b>	$\checkmark$	✓
13.0 Correlation & Causation (Practice to Understand)	✓	✓		✓	<b>✓</b>	✓	✓
14.0 Regression Analysis (Practice to Understand)	✓	<b>✓</b>	✓	✓	<b>✓</b>	✓	✓
15.0 Linear & Non-Linear Regression (Practice to Understand)	✓	<b>✓</b>	$\checkmark$	<b>√</b>	✓	✓	✓
16.0 Simple & Multi-Linear Regression (Practice to Understand)	✓	✓	✓	✓	<b>✓</b>	✓	✓
17.0 Residual Analysis (Practice to Understand)	✓	<b>✓</b>	✓	<b>√</b>			
18.0 Multivariate Tools (Practice to Understand)	✓	<b>✓</b>		<b>✓</b>			
18.1 Factor Analysis	✓	✓					
18.2 Item Analysis	✓	✓					
18.3 Discriminant Analysis	<b>✓</b>	<b>✓</b>					
18.4 Simple & Multiple Correspondence Analysis (MANOVA)	✓	✓					
19.0 Design of Experiments (Practice to Understand)	✓	✓	✓	✓	<b>✓</b>	✓	✓
19.1 Need for DOE	✓	<b>✓</b>	✓	✓	✓	✓	✓
20.0 Terminologies	✓	✓	✓	✓	<b>√</b>	✓	<b>✓</b>
20.1 Factors, Levels, Response, Treatment	✓	✓	✓	✓	✓	✓	✓

Торіс	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	КРМС
Six Sigma - Analyze							
20.2 Blocks, Randomization, Effects & Replication	$\checkmark$	<b>✓</b>	✓	✓	<b>✓</b>	$\checkmark$	✓
20.3 DOE Plots: Main Effect & Interaction Plots	✓	<b>✓</b>	✓	✓	<b>✓</b>	$\checkmark$	✓
20.4 Confounding	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓			
21.0 DOE Designs	✓	<b>√</b>	✓	✓	✓	✓	<b>✓</b>
21.1 Full Factorial Experiments (Practice to Understand)	✓	<b>✓</b>	✓	✓	<b>✓</b>	✓	✓
21.2 Fractional Factorial (Practice to Understand)	✓	<b>√</b>	✓	✓	<b>✓</b>	$\checkmark$	
21.3 Latin Square Designs	$\checkmark$	<b>√</b>		<b>✓</b>			
21.4 Balanced & Orthogonal Arrays	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>	$\checkmark$	
21.5 Taguchi's Design	<b>√</b>	<b>√</b>		✓	<b>✓</b>	✓	
22.0 Force Field Analysis	✓				<b>✓</b>	✓	
23.0 Service Delivery Analysis	✓				<b>✓</b>	✓	

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Improve							
1.0 Generate & Evaluate Ideas (Simulations to Understand)	<b>√</b>	✓	✓	✓	<b>✓</b>	✓	✓
1.1 Brain Storming	✓	$\checkmark$		✓	✓	$\checkmark$	
1.2 SCAMPER	✓			✓			
1.3 Benchmarking	✓	✓		✓	✓	✓	
1.4 Lean Solutions	✓	✓	✓	✓	✓	✓	<b>✓</b>
1.5 TRIZ (Introduction)	✓			✓			<b>√</b>
2.0 Selecting Best Solution(Practice to Understand)	<b>√</b>	✓	✓	✓	<b>✓</b>	✓	<b>✓</b>
2.1 Multi-Voting	✓	$\checkmark$	✓	✓	✓	$\checkmark$	<b>✓</b>
2.2 Pay-off Matrix	✓			✓	✓	✓	<b>√</b>
2.3 Criteria Matrix	✓		✓	✓	<b>✓</b>	✓	<b>✓</b>
3.0 Error Proofing	✓	✓	<b>√</b>	✓	✓	✓	<b>✓</b>
3.1 Prevention & Detection	✓	✓	✓	✓	✓	✓	<b>✓</b>
3.2 Mistake Proofing &Examples	✓	✓	<b>✓</b>	<b>√</b>	✓	✓	<b>✓</b>
4.0 Assess Risk FMEA (Recap)	✓	$\checkmark$	<b>✓</b>	<b>✓</b>	✓	$\checkmark$	<b>✓</b>
5.0 Piloting & Implementation	✓	$\checkmark$	<b>✓</b>	<b>✓</b>	✓	$\checkmark$	<b>✓</b>
5.1 Pilot Solutions	✓	✓	<b>√</b>	✓	✓	✓	<b>✓</b>
5.2 Pilot Location	✓	✓	✓	✓	<b>✓</b>	✓	<b>√</b>
5.3 Pilot Success Criteria	✓			✓			<b>✓</b>
6.0 Implementation	✓	✓	✓	✓	✓	✓	<b>√</b>
6.1 Plan for implementation	<b>√</b>	$\checkmark$	<b>√</b>	<b>√</b>	<b>√</b>	$\checkmark$	<b>✓</b>
6.2 Stakeholder Analysis	<b>√</b>	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	✓
6.3 Communication Plan	<b>√</b>	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>✓</b>
6.4 Implementation	✓	✓	<b>√</b>	<b>√</b>	✓	✓	<b>✓</b>

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	KPMG
Six Sigma - Control							
1.0 What is Process Control?	$\checkmark$	✓	✓	✓	✓	$\checkmark$	✓
2.0 Different Types of Process controls	✓	<b>√</b>	✓	<b>√</b>	<b>✓</b>	✓	<b>√</b>
3.0 Response Plan & Reaction Plan	$\checkmark$		✓	✓			✓
4.0 Statistical Process Control (Practice to Understand)	✓	<b>√</b>	<b>√</b>	✓	<b>✓</b>	✓	<b>√</b>
4.1 Monitoring, Controlling of Process Performance	✓	✓	✓	✓	✓	✓	✓
4.2 Identify & Select Critical Process Parameters	$\checkmark$	✓	✓	✓	<b>✓</b>	$\checkmark$	✓
4.3 Subgrouping & Rational Subgrouping	$\checkmark$	✓	✓	✓	✓	$\checkmark$	✓
4.4 SPC- Continuous Data (I-MR, X bar R, X bar S, CUSUM, EWMA, Short Run)	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>
4.5 SPC – Discrete Data (C,U,P,NP charts)	$\checkmark$	✓	✓	✓	✓	$\checkmark$	✓
5.0 Analyze Control Charts	$\checkmark$	✓	✓	<b>✓</b>	<b>✓</b>	$\checkmark$	<b>✓</b>
6.0 Control Plan	✓	✓	✓	✓	✓	✓	✓
7.0 Visual Control	✓	✓	✓	✓	✓	✓	✓
8.0 Sustain Improvements	$\checkmark$	✓	<b>✓</b>	<b>✓</b>	<b>✓</b>	$\checkmark$	<b>✓</b>
8.1 Lesson Learnt	✓	✓	✓	✓	✓	✓	✓
8.2 Documentation	✓	✓	<b>✓</b>	✓	✓	$\checkmark$	<b>✓</b>
8.3 Trainings	✓	✓	✓	✓	✓	$\checkmark$	<b>✓</b>
8.4 Ongoing Evaluation	$\checkmark$	✓	<b>✓</b>	✓	✓	$\checkmark$	<b>✓</b>
9.0 Benefit Computation	$\checkmark$	✓	✓	✓	<b>✓</b>	$\checkmark$	✓
10.0 Project Closure	✓	✓	✓	✓	✓	$\checkmark$	✓
11.0 Celebration	$\checkmark$			✓			

Topic	LEAN 6SIGMA PRO	ASQ	IASSC	TUV SUD	EXEMPLAR GLOBAL	ISO	КРМС
Six Sigma - DFSS							
1.0 Common DFSS/ DMADV Methodologies	✓	$\checkmark$		<b>√</b>			
1.1 Define	✓	$\checkmark$		✓			
1.2 Measure	<b>✓</b>	$\checkmark$		✓			
1.3 Analyze	✓	✓		✓			
1.4 Design	<b>✓</b>	✓		✓			
1.5 Validate	✓	✓		✓			
2.0 Design for X (DFX)	✓	✓					
2.1 Design Constraints	✓	✓					
2.2 Design Cost	<b>✓</b>	✓					
2.3 Design for Manufacturability	<b>✓</b>	✓					
2.4 Design for Test	<b>✓</b>	$\checkmark$					
2.5 Design for Maintainability	<b>✓</b>	✓					
3.0 Robust Design	<b>✓</b>	$\checkmark$			✓	✓	
3.1 Robust Product Design	<b>✓</b>	✓			<b>✓</b>	✓	
3.2 Tolerance for Design	<b>✓</b>	✓			<b>✓</b>	✓	
3.3 Statistical Tolerancing	<b>✓</b>	✓			<b>✓</b>	✓	
3.4 Robust Process Design	✓	✓			<b>✓</b>	✓	