

Lean Six Sigma Black Belt Body of Knowledge

Topic	Subtopics	Bloom's Taxonomy Level
Introduction to Lean Six Sigma	History, Benefits, Roles, Organizational Structure	Understand
Advanced Lean Principles	Kanban, Kaizen, JIT, Continuous Flow, Lean Culture	Understand
Advanced Six Sigma	Six Sigma Metrics, CTQ, Cost of Poor Quality, Six Sigma Culture	Understand
Leadership and Change Management	Leading Teams, Change Models, Stakeholder Engagement	Evaluate
Define Phase	Problem Statement, VOC, SIPOC, Project Charter, High-Level Process Map	Apply
Measure Phase	Detailed Process Mapping, Data Collection Plan, Measurement System Analysis	Apply
Analyze Phase	Root Cause Analysis, Value Stream Mapping, Pareto Analysis, Advanced Process Mapping	Analyze
Improve Phase	Brainstorming, Solution Development, FMEA, Design for Six Sigma	Evaluate
Control Phase	Control Plans, SPC, Monitoring, Sustainability, Standardization	Evaluate
Advanced Statistics	Probability Distributions, Sampling Techniques, Advanced Statistical Analysis	Analyze
Hypothesis Testing	Null Hypothesis, Alternative Hypothesis, P-Value, Advanced Hypothesis Testing	Analyze
Regression Analysis	Simple and Multiple Regression, Logistic Regression, Correlation, ANOVA	Analyze
Design of Experiments (DOE)	Factorial Designs, Response Surface Methodology, Taguchi Methods	Evaluate
Control Charts	Types, Interpretation, Implementation, Advanced Control Charts	Evaluate
Risk Management	FMEA, Risk Mitigation Plans, Contingency Plans, Advanced Risk Management	Evaluate
Financial Impact	Cost-Benefit Analysis, ROI, Financial Metrics, Cost of Quality	Analyze
Project Management	Project Selection, Charter, Stakeholder Analysis, Advanced Project Management Techniques	Evaluate
Lean Six Sigma in Services	Service Process Mapping, Lean Service Principles, Service Metrics	Analyze
Lean Six Sigma in Manufacturing	Manufacturing Process Mapping, Lean Manufacturing Principles, Manufacturing Metrics	Analyze
Strategic Planning	Hoshin Kanri, Balanced Scorecard, Strategic Goal Setting	Evaluate
Lean Six Sigma Deployment	Deployment Planning, Communication, Organizational Readiness	Evaluate
Coaching and Mentoring	Coaching Techniques, Mentoring Approaches, Developing Others	Evaluate