

IEOM Society International

Lean Six Sigma Certification Exam (LSSCE)

TOPICS

Overview: Lean Six Sigma

- Six Sigma Fundamentals
- Lean Approaches

Define

- Project Charter
- Process Maps, SIPOC, Matrix Diagrams, Critical to Quality (CTQ) Metrics, and DPMO
- Work Breakdown Structure
- Pareto Diagrams
- Project Management and Planning
- Team work

Measure

- Process analysis
- Probability, Statistics and Distribution
- Data collection and analysis
- Gage Repeatability and Reproducibility (R&R)
- Process capability
- X-Bar Charts, Run Charts, Moving Average Charts, EWMA Charts, Attribute Charts, Takt Time, Standardization, Spaghetti Diagrams, and Setup Reductions

Analyze

- Exploratory data analysis
- Hypothesis testing
- Goodness of fit test
- Regression Analysis
- Cause & Effect Diagrams
- Scatter Diagrams
- Interpreting the ANOVA Table
- Confidence & Prediction Limits
- Hypothesis Testing

Improve

- Lean Tools to reduce NVA: 5S, Kaizen, Seven Zeros, TPS Principles, FMEA, and Simulation
- Design of Experiments (DOE)
- Statistical Process Control (SPC)
- Analysis of Variance (ANOVA)
- Solutions Validation

Control

- Control Plan
- SPC
- Batch Control Charts
- Tracking
- DFSS

