

LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

Six Sigma Foundation Professional



LAPT — London Academy of Professional Training

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Reference MSPC-SS-01 • Management Centres

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AT A GLANCE

REFERENCE	MSPC-SS-01
AWARD	Certificate
ASSESSMENT	430 marks — 258 to pass (60%)
PREREQUISITES	None
VALIDITY	Lifetime
AWARDING BODY	LAPT — London Academy of Professional Training

CURRICULUM

1 Change Management and Leadership 5 chapters 65 marks • 1 Understanding Change Management in the Six Sigma Framework • 2 The Role of Leadership in Implementing Change • 3 Organizational Culture and Resistance to Change • 4 Communication Strategies for Successful Change Management • 5 Sustaining Change and Measuring Impact in Six Sigma Projects
2 Data Analysis Techniques 5 chapters · 30 classes 65 marks • 1 Understanding Data Types and Sources in Six Sigma — 6 classes › 1.1 Identify Different Types of Data in Six Sigma › 1.2 Distinguish Between Qualitative and Quantitative Data › 1.3 Explore Primary and Secondary Data Sources › 1.4 Analyze Data Collection Methods for Quality Improvement › 1.5 Evaluate the Role of Data in Decision-Making Processes › 1.6 Apply Data Analysis Techniques to Real-World Six Sigma Projects • 2 Descriptive Statistics in Six Sigma Analysis — 6 classes › 2.1 Define Key Concepts in Descriptive Statistics › 2.2 Identify Measures of Central Tendency: Mean, Median, Mode › 2.3 Explore Measures of Dispersion: Range, Variance, Standard Deviation › 2.4 Utilize Frequency Distributions and Histograms for Data Visualization › 2.5 Apply Descriptive Statistics in Six Sigma Projects › 2.6 Interpret and Communicate Descriptive Data Findings Effectively • 3 Introduction to Inferential Statistics for Decision Making — 6 classes › 3.1 Understand Key Concepts of Inferential Statistics › 3.2 Distinguish Between Descriptive and Inferential Statistics › 3.3 Explore Sampling Methods for Effective Data Analysis › 3.4 Analyze Confidence Intervals and Their Applications › 3.5 Conduct Hypothesis Testing for Decision Making › 3.6 Apply Inferential Statistics to Real-World Scenarios • 4 Data Visualization Techniques for Effective Communication — 6 classes › 4.1 Understand the Importance of Data Visualization in Communication › 4.2 Identify Key Data Visualization Tools and Software › 4.3 Differentiate Between Types of Data Visualizations › 4.4 Explore Best Practices for Creating Effective Charts and Graphs › 4.5 Analyze Real-World Examples of Successful Data Visualization › 4.6 Apply Data Visualization Techniques to Present Analysis Findings • 5 Advanced Data Analysis Methods: Regression and ANOVA — 6 classes › 5.1 Explore Regression Analysis Fundamentals › 5.2 Implement Simple Linear Regression Techniques › 5.3 Analyze Multiple Linear Regression Models › 5.4 Understand Analysis of Variance (ANOVA) Principles › 5.5 Conduct One-Way ANOVA to Compare Means › 5.6 Apply Regression and ANOVA in Real-World Scenarios

• 1 Fundamentals of Six Sigma and Quality Management — 6 classes

- › 1.1 Define Six Sigma and Its Importance in Quality Management
- › 1.2 Identify Key Principles and Concepts of Six Sigma
- › 1.3 Explore the DMAIC Process in Detail
- › 1.4 Understand the Role of Data in Six Sigma Methodology
- › 1.5 Analyze Real-World Examples of Six Sigma Implementation
- › 1.6 Apply Basic Six Sigma Tools for Quality Improvement

• 2 Understanding the DMAIC Methodology — 6 classes

- › 2.1 Define the Problem: Identifying issues within the DMAIC Framework
- › 2.2 Measure Current Performance: Gathering Data for Analysis
- › 2.3 Analyze Root Causes: Tools for Identifying Underlying Problems
- › 2.4 Improve Processes: Developing Effective Solutions under DMAIC
- › 2.5 Control Implementation: Ensuring Longevity of Improvements
- › 2.6 Apply DMAIC in Real Scenarios: Case Studies and Practical Exercises

• 3 Key Six Sigma Tools and Techniques — 6 classes

- › 3.1 Identify Key Six Sigma Tools for Process Improvement
- › 3.2 Explain the Purpose of DMAIC in Six Sigma Methodology
- › 3.3 Analyze Data Using Statistical Tools in Six Sigma
- › 3.4 Develop Process Maps to Visualize Workflows
- › 3.5 Implement Root Cause Analysis Techniques Effectively
- › 3.6 Apply Control Charts to Monitor Process Stability

• 4 The Role of Leadership in Six Sigma Implementation — 6 classes

- › 4.1 Define Leadership's Impact on Six Sigma Success
- › 4.2 Identify Key Leadership Roles in Six Sigma Projects
- › 4.3 Analyze Leadership Styles and Their Effectiveness in Six Sigma
- › 4.4 Explore Communication Strategies for Effective Leadership in Six Sigma
- › 4.5 Develop Skills for Motivating Teams During Six Sigma Implementation
- › 4.6 Create an Action Plan for Enhancing Leadership in Six Sigma Initiatives

• 5 Measuring Success and Continuous Improvement — 6 classes

- › 5.1 Define Key Performance Indicators for Success
- › 5.2 Identify Metrics for Continuous Improvement
- › 5.3 Analyze Data to Measure Current Performance
- › 5.4 Develop Action Plans Based on Performance Gaps
- › 5.5 Implement Strategies for Sustained Improvement
- › 5.6 Evaluate Success and Iterate for Future Gains

• 1 Understanding Lean Principles and Six Sigma Integration — 6 classes

- › 1.1 Define Lean Principles and Their Importance in Six Sigma
- › 1.2 Identify Key Differences Between Lean and Six Sigma Methodologies
- › 1.3 Explore the Seven Wastes and Their Impact on Efficiency
- › 1.4 Analyze the Value Stream Mapping Process in Lean Six Sigma
- › 1.5 Apply Lean Tools to Real-World Six Sigma Projects
- › 1.6 Develop a Lean-Six Sigma Integration Plan for Continuous Improvement

• 2 Identifying Waste: The Lean Perspective — 6 classes

- › 2.1 Define Value from the Customer's Perspective
- › 2.2 Identify Types of Waste in Processes
- › 2.3 Explore the Seven Wastes of Lean Principle
- › 2.4 Analyze Real-World Examples of Waste
- › 2.5 Evaluate the Impact of Waste on Business Performance
- › 2.6 Develop Strategies to Eliminate Waste in Your Organization

• 3 Value Stream Mapping and Analysis — 6 classes

- › 3.1 Define Value Stream Mapping and Its Importance
- › 3.2 Identify Components of a Value Stream Map
- › 3.3 Analyze Current State Value Stream Maps
- › 3.4 Identify Waste in Value Stream Analysis
- › 3.5 Develop Future State Value Stream Maps
- › 3.6 Implement Value Stream Improvements and Measure Results

• 4 Implementing Lean Tools in Six Sigma Projects — 6 classes

- › 4.1 Identify Key Lean Tools for Six Sigma Integration
- › 4.2 Analyze the Role of Value Stream Mapping in Lean Six Sigma
- › 4.3 Apply the 5S Methodology to Improve Workflow in Projects
- › 4.4 Utilize Kaizen for Continuous Improvement in Six Sigma Initiatives
- › 4.5 Develop Standard Operating Procedures using Lean Techniques
- › 4.6 Evaluate the Impact of Lean Tools on Six Sigma Project Outcomes

• 5 Sustaining Lean Improvements: Culture and Leadership — 6 classes

- › 5.1 Analyze the Role of Leadership in Sustaining Lean Improvements
- › 5.2 Identify Cultural Barriers to Lean Transformation
- › 5.3 Develop Strategies for Cultivating a Lean Culture
- › 5.4 Engage Teams in Continuous Improvement Processes
- › 5.5 Measure and Assess the Impact of Lean Initiatives
- › 5.6 Create a Roadmap for Long-term Lean Sustainability

• 1 Understanding Process Mapping Fundamentals — 6 classes

- › 1.1 Define Key Concepts of Process Mapping
- › 1.2 Identify the Elements of a Process Map
- › 1.3 Explore Different Types of Process Maps
- › 1.4 Analyze a Sample Process Map for Clarity
- › 1.5 Apply Process Mapping Techniques to a Real-World Example
- › 1.6 Evaluate Process Improvement Opportunities from Mapped Data

• 2 Tools and Techniques for Process Mapping — 6 classes

- › 2.1 Identify Key Components of Process Mapping
- › 2.2 Explore Flowcharting Techniques for Effective Mapping
- › 2.3 Analyze Current Processes Using SIPOC Diagrams
- › 2.4 Utilize Value Stream Mapping to Identify Waste
- › 2.5 Apply Process Improvement Tools: Fishbone and 5 Whys
- › 2.6 Develop an Action Plan for Process Improvement Implementation

• 3 Identifying Process Improvements through Mapping — 6 classes

- › 3.1 Define Key Concepts in Process Mapping
- › 3.2 Identify Process Steps and Stakeholders
- › 3.3 Create a Basic Process Map to Visualize Workflows
- › 3.4 Analyze Current Processes for Bottlenecks and Inefficiencies
- › 3.5 Develop Improvement Strategies Based on Mapping Insights
- › 3.6 Implement and Monitor Changes to Ensure Continuous Improvement

• 4 Validating and Optimizing Processes — 6 classes

- › 4.1 Identify Process Validation Criteria
- › 4.2 Analyze Current Process Performance Metrics
- › 4.3 Develop Validation Techniques for Process Improvement
- › 4.4 Implement Process Validation Strategies
- › 4.5 Optimize Processes Using Data-Driven Insights
- › 4.6 Create an Action Plan for Continuous Process Improvement

• 5 Implementing and Sustaining Process Improvements — 6 classes

- › 5.1 Identify Key Processes for Improvement
- › 5.2 Analyze Current Process Performance Metrics
- › 5.3 Design and Implement Effective Process Changes
- › 5.4 Develop a Sustainable Process Monitoring Plan
- › 5.5 Engage Teams for Continuous Improvement
- › 5.6 Evaluate and Adjust Process Improvements Over Time

• 1 Understanding Project Management Principles in Six Sigma — 6 classes

- › 1.1 Define Key Project Management Terminology in Six Sigma
- › 1.2 Identify the Phases of Project Management in Six Sigma
- › 1.3 Explore the Role of Leadership in Six Sigma Projects
- › 1.4 Evaluate Project Scope and Objectives in the Context of Six Sigma
- › 1.5 Analyze Risks and Mitigation Strategies in Six Sigma Projects
- › 1.6 Apply Project Management Tools and Techniques to a Six Sigma Case Study

• 2 Defining Project Scope and Objectives for Six Sigma Initiatives — 6 classes

- › 2.1 Identify Key Stakeholders in Six Sigma Projects
- › 2.2 Understand the Importance of Defining Project Scope
- › 2.3 Develop Clear and Measurable Project Objectives
- › 2.4 Create a Project Charter for Six Sigma Initiatives
- › 2.5 Utilize Tools for Scope Management and Definition
- › 2.6 Review and Adjust Project Scope Based on Stakeholder Feedback

• 3 Strategic Planning and Resource Allocation in Six Sigma Projects — 6 classes

- › 3.1 Define Strategic Planning in Six Sigma Projects
- › 3.2 Identify Key Resources for Six Sigma Implementation
- › 3.3 Analyze Stakeholder Needs in Strategic Planning
- › 3.4 Develop a Resource Allocation Plan for Projects
- › 3.5 Evaluate Project Objectives Against Available Resources
- › 3.6 Implement and Monitor Resource Allocation Strategies

• 4 Risk Management and Mitigation in Six Sigma Projects — 6 classes

- › 4.1 Identify and Assess Project Risks in Six Sigma
- › 4.2 Analyze Risk Impact and Probability for Project Success
- › 4.3 Develop Effective Risk Mitigation Strategies
- › 4.4 Implement Risk Response Plans in Six Sigma Projects
- › 4.5 Monitor and Review Risks Throughout the Project Lifecycle
- › 4.6 Communicate Risk Management Findings to Stakeholders

• 5 Evaluating Project Outcomes and Continuous Improvement in Six Sigma — 6 classes

- › 5.1 Identify Key Metrics for Evaluating Project Outcomes
- › 5.2 Analyze Project Data for Performance Insights
- › 5.3 Compare Expected vs. Actual Project Results
- › 5.4 Conduct Root Cause Analysis for Performance Gaps
- › 5.5 Develop Action Plans for Continuous Improvement
- › 5.6 Implement Feedback Loops for Ongoing Project Evaluation