LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

ISO 55001SMC — Asset Management for City Infrastructure

ISO Certification Programme

LAPT — London Academy of Professional Training

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Reference MGT-SMC-55001SMC • ISO Management & Services

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6	30	180	430	60%	Lifetime
SUBJECTS	CHAPTERS	CLASSES	TOTAL MARKS	PASS MARK	VALIDITY

AT A GLANCE

REFERENCE	**MGT-SMC-55001SMC**
AWARD	**Certificate**
ASSESSMENT	**430 marks — 258 to pass (60%)**
PREREQUISITES	**None**
VALIDITY	**Lifetime**
AWARDING BODY	**LAPT — London Academy of Professional Training**

CURRICULUM

1 Integration of Smart Technologies

5 chapters · 30 classes · **85 marks**

• 1 Understanding Smart Technologies in Urban Infrastructure — 6 classes

- › 1.1 Define Smart Technologies in Urban Infrastructure
- › 1.2 Identify Key Components of Smart Urban Systems
- › 1.3 Analyze the Impact of Smart Technologies on City Planning
- › 1.4 Explore Case Studies of Successful Smart Infrastructure Projects
- › 1.5 Evaluate the Challenges of Implementing Smart Technologies
- › 1.6 Design a Proposal for a Smart Technology Integration in Your City

• 2 Frameworks for Integrating Smart Technologies — 6 classes

- › 2.1 Identify Key Frameworks for Smart Technology Integration
- › 2.2 Analyze Benefits of Smart Technologies in City Infrastructure
- › 2.3 Evaluate Stakeholder Roles in Integration Processes
- › 2.4 Develop Criteria for Assessing Smart Technology Solutions
- › 2.5 Design a Strategic Plan for Implementation of Smart Technologies
- › 2.6 Present a Case Study on Successful Smart Technology Integration

• 3 Data Management and Security in Smart Cities — 6 classes

- › 3.1 Understand Key Data Management Principles in Smart Cities
- › 3.2 Identify Types of Data Collected in Urban Environments
- › 3.3 Analyze Data Security Challenges in Smart City Implementations
- › 3.4 Explore Best Practices for Data Protection and Privacy
- › 3.5 Implement Data Governance Frameworks for Smart Technologies
- › 3.6 Evaluate the Role of Emerging Technologies in Enhancing Data Security

• 4 Stakeholder Engagement and Collaboration — 6 classes

- › 4.1 Identify Key Stakeholders in Urban Infrastructure
- › 4.2 Analyze the Role of Stakeholder Engagement in Asset Management
- › 4.3 Develop Effective Communication Strategies for Stakeholder Interaction
- › 4.4 Facilitate Collaborative Workshops for Infrastructure Planning
- › 4.5 Evaluate Feedback Mechanisms for Continuous Improvement
- › 4.6 Implement Collaborative Technologies to Enhance Engagement

• 5 Evaluating the Impact of Smart Technologies on Asset Performance — 6 classes

- › 5.1 Assessing Current Asset Performance Metrics
- › 5.2 Identifying Smart Technologies in Asset Management
- › 5.3 Analyzing the Benefits of Smart Technologies on Asset Efficiency
- › 5.4 Evaluating Data-Driven Decision Making in Asset Management
- › 5.5 Case Studies: Successful Integration of Smart Technologies
- › 5.6 Developing a Strategic Plan for Implementing Smart Technologies

2 Leading Change in Asset Management

5 chapters · 30 classes **65 marks**

• 1 Understanding the Fundamentals of Asset Management in Smart Cities — 6 classes

- › 1.1 Define Asset Management in the Context of Smart Cities
- › 1.2 Identify Key Components of Smart City Infrastructure
- › 1.3 Explore the Relationship Between Asset Management and Urban Development
- › 1.4 Analyze Benefits of Effective Asset Management in Smart Cities
- › 1.5 Assess Challenges Faced in Asset Management Implementation
- › 1.6 Develop Actionable Strategies for Leading Change in Asset Management

• 2 Evaluating Current Asset Management Practices — 6 classes

- › 2.1 Assess Current Asset Management Practices
- › 2.2 Identify Gaps and Opportunities for Improvement
- › 2.3 Analyze Stakeholder Feedback on Current Practices
- › 2.4 Benchmark Asset Management Against Industry Standards
- › 2.5 Develop Criteria for Effective Asset Management Evaluation
- › 2.6 Create a Strategic Plan for Implementing Improvements

• 3 Strategic Planning for Change in Asset Management — 6 classes

- › 3.1 Assess Current Asset Management Practices
- › 3.2 Identify Stakeholders and Their Roles in Change
- › 3.3 Define Vision and Objectives for Asset Management Change
- › 3.4 Develop a Strategic Change Management Plan
- › 3.5 Communicate the Change Strategy Effectively
- › 3.6 Evaluate and Adapt the Change Strategy Continuously

• 4 Implementing Change: Tools and Techniques for Stakeholder Engagement — 6 classes

- › 4.1 Identify Key Stakeholders for Asset Management Change
- › 4.2 Analyze Stakeholder Needs and Expectations
- › 4.3 Develop Effective Communication Strategies for Engagement
- › 4.4 Utilize Tools for Facilitating Stakeholder Collaboration
- › 4.5 Implement Feedback Mechanisms to Assess Stakeholder Input
- › 4.6 Evaluate Engagement Outcomes and Adapt Strategies

• 5 Measuring Success and Continuous Improvement in Asset Management Change Initiatives — 6 classes

- › 5.1 Define Key Performance Indicators for Asset Management Success
- › 5.2 Implement Data Collection Methods for Continuous Improvement
- › 5.3 Analyze and Interpret Asset Management Performance Data
- › 5.4 Foster a Culture of Continuous Improvement in Asset Management
- › 5.5 Communicate Success Stories and Lessons Learned in Asset Management
- › 5.6 Develop Action Plans for Future Improvements in Asset Management

3 Operational Efficiency in Infrastructure

5 chapters · 30 classes **65 marks**

• 1 Understanding Operational Efficiency in City Infrastructure — 6 classes

- › 1.1 Define Operational Efficiency and Its Importance in City Infrastructure
- › 1.2 Identify Key Components of Operational Efficiency in Infrastructure Management
- › 1.3 Analyze Current Challenges in Achieving Operational Efficiency
- › 1.4 Explore Best Practices for Enhancing Operational Efficiency
- › 1.5 Assess Tools and Technologies that Support Operational Efficiency
- › 1.6 Develop a Plan for Implementing Operational Efficiency Strategies

• 2 Key Performance Indicators and Metrics for Infrastructure Management — 6 classes

- › 2.1 Define Key Performance Indicators (KPIs) for Infrastructure Management
- › 2.2 Analyze the Role of Metrics in Operational Efficiency
- › 2.3 Identify Common KPIs Used in City Infrastructure Assessment
- › 2.4 Develop a Framework for Measuring Infrastructure Performance
- › 2.5 Evaluate the Impact of KPIs on Decision-Making Processes
- › 2.6 Implement a Continuous Improvement Strategy Using KPIs

• 3 Data-Driven Decision Making for Smart City Operations — 6 classes

- › 3.1 Understand Key Concepts of Data in Smart City Operations
- › 3.2 Identify Data Sources for Effective Asset Management
- › 3.3 Analyze Data Trends to Improve Infrastructure Performance
- › 3.4 Apply Data Visualization Tools for Enhanced Decision Making
- › 3.5 Develop Actionable Strategies Based on Data Insights
- › 3.6 Evaluate the Impact of Data-Driven Decisions on Operational Efficiency

• 4 Risk Management and Resilience in Infrastructure Operations — 6 classes

- › 4.1 Identify Key Risks in Infrastructure Operations
- › 4.2 Analyze the Impact of Risks on Service Delivery
- › 4.3 Develop Effective Risk Mitigation Strategies
- › 4.4 Assess Resilience Frameworks for Infrastructure
- › 4.5 Implement Risk Management Practices in Daily Operations
- › 4.6 Evaluate and Adapt Risk Management Approaches Over Time

• 5 Innovative Solutions for Enhancing Operational Efficiency — 6 classes

- › 5.1 Identify Key Innovations in Operational Efficiency
- › 5.2 Analyze the Impact of Technology on Infrastructure Management
- › 5.3 Explore Case Studies of Successful Infrastructure Solutions
- › 5.4 Develop Strategies for Implementing Innovative Tools
- › 5.5 Assess the Risks and Benefits of New Operational Techniques
- › 5.6 Create an Action Plan for Enhancing City Infrastructure Efficiency

4 Performance Measurement and Analytics

5 chapters · 30 classes **65 marks**

- **1 Foundations of Performance Measurement in Asset Management** — 6 classes
  - 1.1 Define Key Performance Indicators (KPIs) in Asset Management
  - 1.2 Analyze the Role of Data in Performance Measurement
  - 1.3 Assess the Impact of Performance Measurement on Decision Making
  - 1.4 Explore Benchmarking Techniques for Infrastructure Assets
  - 1.5 Implement a Performance Measurement Framework
  - 1.6 Evaluate the Effectiveness of Performance Measurement Strategies
- **2 Key Performance Indicators (KPIs) for Infrastructure Assets** — 6 classes
  - 2.1 Define Key Performance Indicators for Infrastructure Assets
  - 2.2 Identify Critical KPIs for Urban Infrastructure Management
  - 2.3 Analyze Data Sources for KPI Development
  - 2.4 Establish Baselines and Targets for KPI Measurement
  - 2.5 Assess KPI Performance through Data Visualization Techniques
  - 2.6 Implement Action Plans Based on KPI Analysis Results
- **3 Data Collection and Management for Performance Analytics** — 6 classes
  - 3.1 Identify Key Performance Indicators for Asset Management
  - 3.2 Explore Various Data Collection Methods for Infrastructure
  - 3.3 Assess the Quality and Reliability of Collected Data
  - 3.4 Implement Data Management Tools for Performance Analytics
  - 3.5 Analyze Collected Data to Generate Insights for Decision Making
  - 3.6 Develop a Continuous Improvement Plan Based on Performance Analytics
- **4 Analytical Techniques for Performance Measurement** — 6 classes
  - 4.1 Understand Key Analytical Techniques for Performance Measurement
  - 4.2 Identify Relevant Data Sources for Infrastructure Analysis
  - 4.3 Apply Descriptive Statistics to Evaluate Asset Performance
  - 4.4 Utilize Benchmarking for Performance Comparison
  - 4.5 Implement Predictive Analytics to Forecast Asset Behaviour
  - 4.6 Develop Actionable Insights from Performance Data
- **5 Continuous Improvement through Performance Feedback** — 6 classes
  - 5.1 Identify Key Performance Indicators for Asset Management
  - 5.2 Analyze Performance Data to Determine Improvement Areas
  - 5.3 Develop Strategies for Effective Performance Feedback
  - 5.4 Implement Continuous Improvement Processes in City Infrastructure
  - 5.5 Engage Stakeholders in Performance Measurement and Feedback
  - 5.6 Evaluate the Impact of Performance Feedback on Asset Management

5 Project Management for Infrastructure

5 chapters · 30 classes **65 marks**

- **1 Understanding Project Management Fundamentals for City Infrastructure** — 6 classes
  - 1.1 Define Key Concepts in Project Management for City Infrastructure
  - 1.2 Identify Stakeholders and Their Roles in Urban Projects
  - 1.3 Outline the Project Lifecycle for City Infrastructure
  - 1.4 Develop a Project Scope Statement Specific to Urban Initiatives
  - 1.5 Utilize Tools for Risk Assessment in Infrastructure Projects
  - 1.6 Create an Action Plan for Implementing Project Management Best Practices
- **2 Stakeholder Engagement and Communication Strategies** — 6 classes
  - 2.1 Identify Key Stakeholders in Infrastructure Projects
  - 2.2 Analyze Stakeholder Interests and Influences
  - 2.3 Develop Effective Communication Plans for Stakeholders
  - 2.4 Utilize Tools and Techniques for Stakeholder Engagement
  - 2.5 Implement Feedback Mechanisms to Enhance Communication
  - 2.6 Evaluate the Impact of Stakeholder Engagement on Project Success
- **3 Risk Management in Infrastructure Projects** — 6 classes
  - 3.1 Identify Key Risks in Infrastructure Projects
  - 3.2 Analyze the Impact of Risks on Project Outcomes
  - 3.3 Develop Risk Mitigation Strategies for Infrastructure
  - 3.4 Create a Risk Management Plan for Projects
  - 3.5 Monitor and Review Risks Throughout Project Lifecycle
  - 3.6 Communicate Risk Management Practices to Stakeholders
- **4 Integrating Asset Management Practices with Project Delivery** — 6 classes
  - 4.1 Identify Key Asset Management Principles for Project Delivery
  - 4.2 Analyze the Role of Stakeholders in Asset Management Integration
  - 4.3 Develop Strategies for Aligning Asset Management with Project Goals
  - 4.4 Assess Tools and Techniques for Effective Asset Management Implementation
  - 4.5 Create a Framework for Monitoring Asset Performance during Projects
  - 4.6 Evaluate Success Factors for Continuous Improvement in Asset Management
- **5 Evaluating Project Outcomes and Continuous Improvement in Smart Cities** — 6 classes
  - 5.1 Identify Key Performance Indicators for Project Evaluation
  - 5.2 Analyze Project Outcomes Using Data-Driven Techniques
  - 5.3 Conduct Stakeholder Feedback Sessions for Continuous Improvement
  - 5.4 Implement Best Practices in Project Outcome Reporting
  - 5.5 Develop Action Plans Based on Evaluation Findings
  - 5.6 Evaluate the Impact of Smart City Innovations on Project Success

6 Strategic Asset Management

5 chapters · 30 classes **85 marks**

- **1 Fundamentals of Asset Management in Smart Cities** — 6 classes
  - 1.1 Define Key Concepts in Asset Management for Smart Cities
  - 1.2 Identify Components of Strategic Asset Management Framework
  - 1.3 Analyze the Role of Technology in Smart City Asset Management
  - 1.4 Examine Stakeholder Engagement Strategies for Asset Management
  - 1.5 Evaluate Risk Management Practices in Urban Infrastructure
  - 1.6 Develop an Action Plan for Implementing Asset Management Strategies
- **2 Understanding ISO 55001 Standards and Framework** — 6 classes
  - 2.1 Explore the Key Principles of ISO 55001 Standards
  - 2.2 Identify the Scope and Benefits of Asset Management
  - 2.3 Analyze the ISO 55001 Framework Components
  - 2.4 Examine the Importance of Leadership in Asset Management
  - 2.5 Evaluate Stakeholder Engagement in Implementing ISO 55001
  - 2.6 Develop an Action Plan for Applying ISO 55001 Standards
- **3 Risk Assessment and Management in Asset Lifecycle** — 6 classes
  - 3.1 Identify Key Risks in Asset Lifecycle Stages
  - 3.2 Assess the Impact of Risks on City Infrastructure
  - 3.3 Develop Risk Mitigation Strategies for Asset Management
  - 3.4 Implement Risk Monitoring Techniques in Asset Management
  - 3.5 Evaluate the Effectiveness of Risk Management Plans
  - 3.6 Integrate Risk Assessment into Strategic Asset Decisions
- **4 Strategic Planning for Sustainable Asset Investment** — 6 classes
  - 4.1 Define the Principles of Strategic Asset Management
  - 4.2 Analyze the Role of Stakeholders in Asset Investment Planning
  - 4.3 Assess Current Asset Inventory and Performance Metrics
  - 4.4 Formulate Sustainable Investment Goals Aligned with Local Needs
  - 4.5 Develop a Risk Management Framework for Asset Investments
  - 4.6 Create a Strategic Action Plan for Implementation and Monitoring
- **5 Performance Measurement and Continuous Improvement in Asset Management** — 6 classes
  - 5.1 Define Key Performance Indicators for Asset Management
  - 5.2 Analyze Current Performance Data and Trends
  - 5.3 Identify Gaps in Asset Performance and Improvement Opportunities
  - 5.4 Develop Action Plans for Continuous Improvement
  - 5.5 Implement Monitoring Mechanisms for Asset Performance
  - 5.6 Evaluate the Effectiveness of Improvement Initiatives