

LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

ISO 14040NMM — Life Cycle Assessment for Non-Metallic Materials

ISO Certification Programme



LAPT — London Academy of Professional Training

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Reference MTL-NMM-14040NMM • ISO Materials

UKPRN 10067351 • Registered in England and Wales, company 4984798

AT A GLANCE

REFERENCE	MTL-NMM-14040NMM
AWARD	Certificate
ASSESSMENT	430 marks — 258 to pass (60%)
PREREQUISITES	None
VALIDITY	Lifetime
AWARDING BODY	LAPT — London Academy of Professional Training

CURRICULUM

1

Communication and Stakeholder Engagement

5 chapters · 30 classes 65 marks

• 1 Understanding Stakeholder Identification in Non-Metallic Materials — 6 classes

› 1.1 Define Key Stakeholders in Non-Metallic Materials

› 1.2 Analyze the Impact of Non-Metallic Materials on Stakeholders

› 1.3 Identify Methods for Engaging Stakeholders Effectively

› 1.4 Develop Stakeholder Profiles for Non-Metallic Projects

› 1.5 Create Strategies for Communicating with Stakeholders

› 1.6 Evaluate Stakeholder Feedback and Adjust Engagement Strategies

• 2 Effective Communication Strategies for Stakeholder Engagement — 6 classes

› 2.1 Identify Stakeholder Roles and Interests

› 2.2 Analyze Communication Barriers with Stakeholders

› 2.3 Develop Targeted Messaging for Diverse Stakeholders

› 2.4 Employ Active Listening Techniques in Engagement

› 2.5 Create Visual Communication Aids for Clarity

› 2.6 Evaluate Communication Effectiveness Through Feedback

• 3 Building Collaborative Relationships with Stakeholders — 6 classes

› 3.1 Identify Key Stakeholders and Their Interests

› 3.2 Analyze Stakeholder Influence and Engagement Levels

› 3.3 Develop Effective Communication Strategies for Stakeholders

› 3.4 Facilitate Collaborative Workshops and Discussions

› 3.5 Create a Stakeholder Engagement Plan

› 3.6 Evaluate and Adapt Engagement Strategies Based on Feedback

• 4 Managing Conflicts and Challenges in Stakeholder Engagement — 6 classes

› 4.1 Identify Key Stakeholder Conflicts in Engagement

› 4.2 Analyze Underlying Causes of Stakeholder Challenges

› 4.3 Develop Strategies for Resolving Stakeholder Disputes

› 4.4 Implement Techniques for Effective Communication During Conflicts

› 4.5 Evaluate Outcomes of Conflict Resolution Efforts

› 4.6 Create a Stakeholder Engagement Plan for Future Challenges

• 5 Evaluating Stakeholder Engagement Outcomes in LCA — 6 classes

› 5.1 Identify Key Stakeholders in Life Cycle Assessments

› 5.2 Analyze Stakeholder Needs and Expectations

› 5.3 Develop Metrics for Evaluating Engagement Outcomes

› 5.4 Collect and Interpret Stakeholder Feedback Effectively

› 5.5 Assess the Impact of Stakeholder Engagement on LCA Results

› 5.6 Communicate Findings and Recommendations to Stakeholders

• 1 Fundamentals of Life Cycle Assessment (LCA) for Non-Metallic Materials — 6 classes

- › 1.1 Define Life Cycle Assessment and Its Importance for Non-Metallic Materials
- › 1.2 Identify Key Phases of Life Cycle Assessment in Environmental Impact Analysis
- › 1.3 Explore Data Collection Methods for Life Cycle Assessment of Non-Metallic Materials
- › 1.4 Analyze Environmental Impact Categories Relevant to Non-Metallic Materials
- › 1.5 Evaluate Case Studies of Life Cycle Assessments for Non-Metallic Materials
- › 1.6 Apply Life Cycle Assessment Findings to Improve Material Choices and Sustainability

• 2 Goal and Scope Definition in LCA for Non-Metallic Materials — 6 classes

- › 2.1 Define the Purpose of Life Cycle Assessment (LCA)
- › 2.2 Identify Stakeholders in Non-Metallic Material Assessment
- › 2.3 Establish the System Boundaries for LCA
- › 2.4 Determine Functional Units in Non-Metallic Material Analysis
- › 2.5 Set the Goals for Comparative LCA Studies
- › 2.6 Apply Goal and Scope Definitions to Real-World Scenarios

• 3 Inventory Analysis for Non-Metallic Materials: Data Collection and Modeling — 6 classes

- › 3.1 Identify Key Data Sources for Non-Metallic Materials
- › 3.2 Collect and Organize Inventory Data Efficiently
- › 3.3 Analyze Data Quality and Reliability for Life Cycle Assessment
- › 3.4 Model Input-Output Relationships in Inventory Analysis
- › 3.5 Utilize Software Tools for Data Modeling and Analysis
- › 3.6 Evaluate and Interpret Inventory Results for Decision Making

• 4 Impact Assessment Methods for Non-Metallic Materials — 6 classes

- › 4.1 Define and Understand Life Cycle Assessment Concepts
- › 4.2 Identify Non-Metallic Materials and Their Applications
- › 4.3 Analyze Environmental Impacts Using ISO 14040 Framework
- › 4.4 Compare Impact Assessment Methods for Non-Metallic Materials
- › 4.5 Evaluate Case Studies on Non-Metallic Material Assessments
- › 4.6 Develop an Action Plan for Improving Environmental Impact

• 5 Interpretation and Communication of LCA Results for Non-Metallic Materials — 6 classes

- › 5.1 Analyze Key LCA Metrics for Non-Metallic Materials
- › 5.2 Interpret Environmental Impact Results from LCA Studies
- › 5.3 Compare Life Cycle Results Across Different Materials
- › 5.4 Communicate LCA Findings Effectively to Stakeholders
- › 5.5 Develop Visual Representations of LCA Results
- › 5.6 Apply LCA Insights to Improve Material Selection Strategies

• 1 Introduction to Life Cycle Assessment (LCA) for Non-Metallic Materials — 6 classes

- › 1.1 Define Life Cycle Assessment and Its Importance in Non-Metallic Materials
- › 1.2 Identify Key Stages of the Life Cycle of Non-Metallic Materials
- › 1.3 Explore the Environmental Impact Categories in LCA
- › 1.4 Examine LCA Methodology Specific to Non-Metallic Materials
- › 1.5 Analyze Case Studies of LCA in Non-Metallic Material Applications
- › 1.6 Apply LCA Principles to Assess a Non-Metallic Material Product

• 2 Life Cycle Stages and Impact Assessment for Non-Metallic Materials — 6 classes

- › 2.1 Identify Key Life Cycle Stages of Non-Metallic Materials
- › 2.2 Analyze the Environmental Impact of Raw Material Extraction
- › 2.3 Evaluate Energy Use and Emissions During Manufacturing Processes
- › 2.4 Assess Packaging and Transportation Influences on Sustainability
- › 2.5 Examine End-of-Life Options and Their Environmental Consequences
- › 2.6 Apply Life Cycle Assessment to Improve Non-Metallic Material Choices

• 3 Data Collection and Inventory Analysis in LCA — 6 classes

- › 3.1 Define Key Concepts in Life Cycle Assessment
- › 3.2 Identify Data Sources for Non-Metallic Materials
- › 3.3 Collect Primary and Secondary Data for LCA
- › 3.4 Analyze Inventory Data Collection Methods
- › 3.5 Assess Data Quality and Reliability in LCA
- › 3.6 Apply Inventory Analysis to Case Study Scenarios

• 4 Interpretation of LCA Results and Decision-Making — 6 classes

- › 4.1 Analyze Key LCA Results for Non-Metallic Materials
- › 4.2 Identify Environmental Impact Categories Relevant to Decision-Making
- › 4.3 Interpret Trade-offs in Life Cycle Assessment Outcomes
- › 4.4 Evaluate Sensitivity Analysis in LCA Findings
- › 4.5 Develop Decision-Making Criteria Based on LCA Insights
- › 4.6 Communicate LCA Results Effectively to Stakeholders

• 5 Advanced LCA Approaches and Future Trends in Non-Metallic Materials — 6 classes

- › 5.1 Analyze Advanced LCA Methodologies for Non-Metallic Materials
- › 5.2 Evaluate the Role of Data Quality in LCA Outcomes
- › 5.3 Explore the Integration of Circular Economy Principles in LCA
- › 5.4 Assess the Impact of Emerging Technologies on LCA Practices
- › 5.5 Compare Global LCA Standards and Their Application to Non-Metallics
- › 5.6 Develop Future LCA Approaches for Sustainable Non-Metallic Materials

• 1 Introduction to Non-Metallic Materials and Their Environmental Impact — 6 classes

- › 1.1 Define Non-Metallic Materials and Their Characteristics
- › 1.2 Analyze the Environmental Impact of Non-Metallic Materials
- › 1.3 Explore Life Cycle Assessment (LCA) Methodologies for Non-Metallics
- › 1.4 Identify Key Non-Metallic Materials Used in Industry
- › 1.5 Evaluate Sustainable Practices in the Use of Non-Metallic Materials
- › 1.6 Apply Life Cycle Assessment to Real-World Non-Metallic Material Cases

• 2 Fundamentals of Life Cycle Assessment (LCA) — 6 classes

- › 2.1 Define Life Cycle Assessment and Its Importance in Non-Metallic Materials
- › 2.2 Identify the Key Phases of Life Cycle Assessment Process
- › 2.3 Explore Data Collection Techniques for Non-Metallic Materials
- › 2.4 Analyze Environmental Impact Categories in Life Cycle Assessment
- › 2.5 Evaluate Life Cycle Assessment Results for Decision Making
- › 2.6 Apply Life Cycle Assessment Methodologies in Real-World Scenarios

• 3 Data Collection and Analysis for Non-Metallic Materials LCA — 6 classes

- › 3.1 Identify Key Data Sources for Non-Metallic Materials LCA
- › 3.2 Collect Quantitative and Qualitative Data for LCA
- › 3.3 Analyze Key Environmental Impact Indicators in LCA
- › 3.4 Use Software Tools for Data Management in LCA
- › 3.5 Interpret Data Results to Assess Non-Metallic Materials Impact
- › 3.6 Present Findings and Recommendations Based on LCA Data

• 4 Impact Assessment Methods for Non-Metallic Materials — 6 classes

- › 4.1 Identify Key Environmental Impacts of Non-Metallic Materials
- › 4.2 Analyze Life Cycle Stages Relevant to Non-Metallic Materials
- › 4.3 Explore Different Impact Assessment Methodologies
- › 4.4 Compare Quantitative and Qualitative Assessment Techniques
- › 4.5 Evaluate Case Studies of Non-Metallic Material Assessments
- › 4.6 Apply Impact Assessment Methods to Real-World Scenarios

• 5 Case Studies and Best Practices in Non-Metallic Materials LCA — 6 classes

- › 5.1 Analyze Successful Case Studies in Non-Metallic Materials LCA
- › 5.2 Identify Key Factors in Effective LCA Methodologies
- › 5.3 Evaluate the Impact of Non-Metallic Materials on Environmental Sustainability
- › 5.4 Compare Best Practices Across Different Industries Using LCA
- › 5.5 Develop a Framework for Implementing LCA in Non-Metallic Material Projects
- › 5.6 Present Findings on LCA Strategies and their Real-World Applications

• 1 Understanding ISO 14040: An Overview for Non-Metallic Materials — 6 classes

- › 1.1 Define ISO 14040: Key Concepts and Principles
- › 1.2 Explore the Structure and Components of ISO 14040
- › 1.3 Identify the Importance of Life Cycle Thinking in Non-Metallic Materials
- › 1.4 Analyze the Four Phases of Life Cycle Assessment (LCA)
- › 1.5 Discuss the Role of ISO 14040 in Regulatory Compliance
- › 1.6 Apply ISO 14040 Guidelines to Real-World Non-Metallic Material Case Studies

• 2 Key Definitions and Terminology in Life Cycle Assessment — 6 classes

- › 2.1 Define Key Concepts in Life Cycle Assessment
- › 2.2 Explain the Importance of Life Cycle Thinking
- › 2.3 Identify Non-Metallic Materials and Their Impact
- › 2.4 Differentiate Between Life Cycle Stages
- › 2.5 Analyze Terminology Related to Environmental Impact
- › 2.6 Apply Key Definitions to Real-World Case Studies

• 3 Regulatory Framework Surrounding Non-Metallic Materials — 6 classes

- › 3.1 Identify Key Regulations Governing Non-Metallic Materials
- › 3.2 Analyze the Importance of Compliance in Life Cycle Assessments
- › 3.3 Examine International Standards for Non-Metallic Materials
- › 3.4 Evaluate the Impact of Regulatory Frameworks on Material Selection
- › 3.5 Integrate Regulatory Requirements into LCA Methodologies
- › 3.6 Develop Strategies for Navigating Compliance Challenges

• 4 Standards and Guidelines for LCA in Non-Metallic Materials — 6 classes

- › 4.1 Explore Key Standards for Life Cycle Assessment in Non-Metallic Materials
- › 4.2 Analyze Regulatory Framework Impact on LCA Practices
- › 4.3 Identify Guidelines for Integrating LCA in Material Selection
- › 4.4 Evaluate ISO 14040 and ISO 14044 Standards Application
- › 4.5 Compare LCA Standards Across Different Non-Metallic Materials
- › 4.6 Develop a Compliance Strategy for Implementing LCA Guidelines

• 5 Implementation Challenges and Solutions in ISO Compliance — 6 classes

- › 5.1 Identify Common Implementation Challenges in ISO 14040NMM Compliance
- › 5.2 Analyze Case Studies of ISO Compliance Failures and Successes
- › 5.3 Develop Strategies to Address Regulatory Framework Gaps
- › 5.4 Create an Effective Internal Communication Plan for ISO Implementation
- › 5.5 Evaluate Tools and Resources for Streamlining Life Cycle Assessment Processes
- › 5.6 Formulate an Action Plan for Continuous Improvement of ISO Compliance

• 1 Understanding Non-Metallic Materials and Their Environmental Impact — 6 classes

- › 1.1 Identify Non-Metallic Materials and Their Uses
- › 1.2 Analyze the Life Cycle of Non-Metallic Materials
- › 1.3 Evaluate the Environmental Impacts of Non-Metallic Materials
- › 1.4 Compare Non-Metallic Materials with Metallic Alternatives
- › 1.5 Assess Strategies for Sustainable Non-Metallic Material Use
- › 1.6 Develop a Plan for Implementing Sustainable Practices

• 2 Fundamentals of Life Cycle Assessment (LCA) — 6 classes

- › 2.1 Define Life Cycle Assessment and its Importance
- › 2.2 Identify the Phases of Life Cycle Assessment
- › 2.3 Analyze Environmental Impact Categories in LCA
- › 2.4 Apply LCA Tools for Non-Metallic Materials
- › 2.5 Evaluate Case Studies of Life Cycle Assessment in Practice
- › 2.6 Develop Strategies for Sustainable Material Choices Using LCA

• 3 Assessing the Environmental Impact of Non-Metallic Materials — 6 classes

- › 3.1 Identify Key Environmental Impacts of Non-Metallic Materials
- › 3.2 Analyze Life Cycle Stages of Non-Metallic Materials
- › 3.3 Evaluate Data Sources for Life Cycle Assessment
- › 3.4 Compare Environmental Performance of Different Non-Metallic Materials
- › 3.5 Apply LCA Tools to Assess Material Sustainability
- › 3.6 Formulate Recommendations for Sustainable Material Choices

• 4 Sustainable Practices in Material Selection — 6 classes

- › 4.1 Identify Key Principles of Sustainable Material Selection
- › 4.2 Analyze Environmental Impact Criteria for Non-Metallic Materials
- › 4.3 Evaluate Availability and Sourcing of Sustainable Materials
- › 4.4 Compare Life Cycle Assessment Methodologies for Non-Metallic Materials
- › 4.5 Develop Strategies for Reducing Carbon Footprint in Material Selection
- › 4.6 Create a Sustainable Materials Selection Framework for Projects

• 5 Implementing ISO 14040 Standards in Material Choices — 6 classes

- › 5.1 Understand ISO 14040 Standards and Their Importance in Sustainability
- › 5.2 Identify Key Components of Life Cycle Assessment for Non-Metallic Materials
- › 5.3 Analyze Environmental Impacts of Material Choices Using ISO 14040
- › 5.4 Evaluate Case Studies of Sustainable Material Implementation
- › 5.5 Develop Action Plans for Incorporating ISO 14040 in Material Selection
- › 5.6 Present Recommendations for Continuous Improvement in Material Sustainability Practices