Digital Sustainability Leader (DSL)

**Learning Pathway: Core programme in Level 7 Master's Degree in Digital Sustainability Leadership**

This curriculum prepares learners to provide advanced leadership for large-scale sustainability transformations and conduct applied research that contributes to the advancement of sustainability practice. Graduates will develop capabilities in strategic research, large-scale change leadership, and innovation in sustainability methodologies. They typically serve as senior executives responsible for transformational sustainability programmes, applied research initiatives, and the development of cutting-edge approaches to organisational sustainability.

EQF Level 7 | 110 ECTS | 21 Learning Units | Work-Based Learning: 44.8% (exceeds 20% minimum)

# Programme Overview

**Role Focus:** Executive and system-level leadership

**Target Audience:** Senior leaders and experts seeking master's level expertise in strategic sustainability leadership and large-scale transformation management

**Learning Approach:** EQF Level 7 professional development programme with 110 ECTS, combining theoretical knowledge with practical application through structured learning and standardised work-based learning integration.

**Core Tools & Platforms:** Strategic planning frameworks, Change management platforms, Executive dashboards, Transformation methodologies

# Competence Frameworks Alignment

**GreenComp Framework:** 2.1 Systems thinking, 4.1 Political agency, 4.3 Collective action

## e-CF Framework (Detailed Mapping)

**A.1:** IS and Business Strategy Alignment - Level 4

**E.1:** Forecast Development - Level 4

**E.8:** Information Security Management - Level 3

*Learning outcomes are mapped directly to GreenComp and e-CF framework descriptors*

# Dual Education Model & Work-Based Learning

**WBL Compliance:** 44.8% work-based learning (exceeds minimum 20%)

## Model Implementation

**Minimum Wbl Percentage:** 20

**Employer Partnership:** Mandatory for all programmes

**Workplace Learning:** Integrated throughout curriculum

**Assessment Split:** 70% academic, 30% workplace-based

## Quality Assurance

**Workplace Standards:** Standardised workplace learning environments

**Mentor Qualifications:** Certified workplace mentors

**Assessment Criteria:** Unified workplace assessment standards

**Monitoring Systems:** Regular quality monitoring of WBL delivery

# Flexible Learning Pathways

**Modular Design:** Learning units designed for flexible recombination

**Competence Catalog:** Integrated with competence-based learning unit catalog

**Stackability Options:** Horizontal and vertical stacking supported

**Pathway Flexibility:** Multiple entry and exit points available

# Assessment Framework

**Primary Method:** Master's level leadership demonstration

**Work-Based Component:** Master's level research application and strategic transformation

**Assessment Components:**

**• Applied research project:** 40%

**• Large-scale transformation leadership:** 35%

**• Industry practice contribution:** 25%

**Rationale:** Master's level programmes require applied research contribution and demonstrated large-scale leadership impact

# Delivery Framework

|  |  |
| --- | --- |
| **Total Contact Hours** | 550 hours |
| **Self-Study Hours** | 947 hours |
| **Work-Based Hours** | 1232 hours |
| **WBL Percentage** | 44.8% (exceeds 20% minimum) |
| **Work-Based Learning** | Integrated (dual education model) |
| **Delivery Methods** | Classroom, Online, Workplace, Blended |

# Learning Unit Structure

## Learning Unit 1: Sustainable Digital Transformation Strategy

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | General |

**Description:** Develop holistic strategies for sustainability-focused digital transformation

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Pioneer organisational change methodologies in sustainable digital transformation strategy within professional sustainability practice.

*Framework: GreenComp: 4.1 Political agency*

**Skills:** Lead transformation transformation leadership in sustainable digital transformation strategy to support organisational sustainability objectives.

*Framework: e-CF: Forecast Development - Level 4*

**Competence:** Lead strategic transformation of strategic leadership responsibilities for sustainable digital transformation strategy while ensuring professional standards and stakeholder value.

*Framework: e-CF: Information Security Management - Level 3*

## Learning Unit 2: Systematic Innovation for Sustainability Challenges

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 7 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Technical Implementation |

**Description:** Apply structured innovation methodologies to develop breakthrough sustainability solutions

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Establish industry leadership approaches to systematic innovation for sustainability challenges within professional sustainability practice.

*Framework: GreenComp: 4.3 Collective action*

**Skills:** Create breakthrough cross-sector influence through systematic innovation for sustainability challenges to support organisational sustainability objectives.

*Framework: e-CF: Information Security Management - Level 3*

**Competence:** Shape industry practices in industry influence activities through systematic innovation for sustainability challenges while ensuring professional standards and stakeholder value.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

## Learning Unit 3: Ethics and Governance in Digital Innovation

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Ethics & Governance |

**Description:** Evaluate ethical implications of digital systems and ensure inclusive governance

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Research systemic impact strategies for ethics and governance in digital innovation within professional sustainability practice.

*Framework: GreenComp: 2.1 Systems thinking*

**Skills:** Innovate organisational culture change via ethics and governance in digital innovation to support organisational sustainability objectives.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

**Competence:** Influence sector-wide systemic change leadership involving ethics and governance in digital innovation while ensuring professional standards and stakeholder value.

*Framework: e-CF: Forecast Development - Level 4*

## Learning Unit 4: Sustainability Frameworks and Standards

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Management |

**Description:** Overview of major sustainability frameworks, regulations, and standards

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Advance strategic transformation frameworks for sustainability frameworks and standards within professional sustainability practice.

*Framework: GreenComp: 4.1 Political agency*

**Skills:** Research and develop strategic roadmap development for sustainability frameworks and standards to support organisational sustainability objectives.

*Framework: e-CF: Forecast Development - Level 4*

**Competence:** Drive systemic change in enterprise-wide transformation initiatives in sustainability frameworks and standards while ensuring professional standards and stakeholder value.

*Framework: e-CF: Information Security Management - Level 3*

## Learning Unit 5: Sustainable ICT Procurement and Policy

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Management |

**Description:** Develop policies and practices for sustainable technology procurement

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Conceptualise organisational change methodologies in sustainable ict procurement and policy within professional sustainability practice.

*Framework: GreenComp: 4.3 Collective action*

**Skills:** Lead transformation transformation leadership in sustainable ict procurement and policy to support organisational sustainability objectives.

*Framework: e-CF: Information Security Management - Level 3*

**Competence:** Lead strategic transformation of strategic leadership responsibilities for sustainable ict procurement and policy while ensuring professional standards and stakeholder value.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

## Learning Unit 6: Applied Ethics in AI for Sustainability

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Ethics & Governance |

**Description:** Address ethical considerations in AI applications for sustainability challenges

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Pioneer industry leadership approaches to applied ethics in ai for sustainability within professional sustainability practice.

*Framework: GreenComp: 2.1 Systems thinking*

**Skills:** Create breakthrough cross-sector influence through applied ethics in ai for sustainability to support organisational sustainability objectives.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

**Competence:** Shape industry practices in industry influence activities through applied ethics in ai for sustainability while ensuring professional standards and stakeholder value.

*Framework: e-CF: Forecast Development - Level 4*

## Learning Unit 7: Sustainability Assessment and Benchmarking

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Analysis |

**Description:** Evaluate organizational sustainability performance against relevant benchmarks

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Establish systemic impact strategies for sustainability assessment and benchmarking within professional sustainability practice.

*Framework: GreenComp: 4.1 Political agency*

**Skills:** Innovate organisational culture change via sustainability assessment and benchmarking to support organisational sustainability objectives.

*Framework: e-CF: Forecast Development - Level 4*

**Competence:** Influence sector-wide systemic change leadership involving sustainability assessment and benchmarking while ensuring professional standards and stakeholder value.

*Framework: e-CF: Information Security Management - Level 3*

## Learning Unit 8: Work-based Sustainability Project

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 10 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 250 hours |
| **Contact Hours** | 50 hours |
| **Self-Study Hours** | 87 hours |
| **Workplace Hours** | 112 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Management |

**Description:** Apply sustainability knowledge in real-world workplace settings

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Research strategic transformation frameworks for work-based sustainability project within professional sustainability practice.

*Framework: GreenComp: 4.3 Collective action*

**Skills:** Research and develop strategic roadmap development for work-based sustainability project to support organisational sustainability objectives.

*Framework: e-CF: Information Security Management - Level 3*

**Competence:** Drive systemic change in enterprise-wide transformation initiatives in work-based sustainability project while ensuring professional standards and stakeholder value.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

## Learning Unit 9: Circular Economy and Lifecycle Thinking

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | General |

**Description:** Analyze product lifecycles and propose circular redesign strategies

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Advance organisational change methodologies in circular economy and lifecycle thinking within professional sustainability practice.

*Framework: GreenComp: 2.1 Systems thinking*

**Skills:** Lead transformation transformation leadership in circular economy and lifecycle thinking to support organisational sustainability objectives.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

**Competence:** Lead strategic transformation of strategic leadership responsibilities for circular economy and lifecycle thinking while ensuring professional standards and stakeholder value.

*Framework: e-CF: Forecast Development - Level 4*

## Learning Unit 10: Digital Circular Business Models

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | General |

**Description:** Design business models that leverage digital technologies for circular economy

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Conceptualise industry leadership approaches to digital circular business models within professional sustainability practice.

*Framework: GreenComp: 4.1 Political agency*

**Skills:** Create breakthrough cross-sector influence through digital circular business models to support organisational sustainability objectives.

*Framework: e-CF: Forecast Development - Level 4*

**Competence:** Shape industry practices in industry influence activities through digital circular business models while ensuring professional standards and stakeholder value.

*Framework: e-CF: Information Security Management - Level 3*

## Learning Unit 11: AI for Sustainable Decision-Making

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 7 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Data |

**Description:** Using AI tools to support sustainability decisions in organizations

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Pioneer systemic impact strategies for ai for sustainable decision-making within professional sustainability practice.

*Framework: GreenComp: 4.3 Collective action*

**Skills:** Innovate organisational culture change via ai for sustainable decision-making to support organisational sustainability objectives.

*Framework: e-CF: Information Security Management - Level 3*

**Competence:** Influence sector-wide systemic change leadership involving ai for sustainable decision-making while ensuring professional standards and stakeholder value.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

## Learning Unit 12: Data Ethics and Governance in Practice

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Data |

**Description:** Implement ethical data governance approaches for sustainability initiatives

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Establish strategic transformation frameworks for data ethics and governance in practice within professional sustainability practice.

*Framework: GreenComp: 2.1 Systems thinking*

**Skills:** Research and develop strategic roadmap development for data ethics and governance in practice to support organisational sustainability objectives.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

**Competence:** Drive systemic change in enterprise-wide transformation initiatives in data ethics and governance in practice while ensuring professional standards and stakeholder value.

*Framework: e-CF: Forecast Development - Level 4*

## Learning Unit 13: Collaborative Tools for Green Innovation

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Analysis |

**Description:** Leverage collaborative platforms to drive sustainable innovation processes

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Research organisational change methodologies in collaborative tools for green innovation within professional sustainability practice.

*Framework: GreenComp: 4.1 Political agency*

**Skills:** Lead transformation transformation leadership in collaborative tools for green innovation to support organisational sustainability objectives.

*Framework: e-CF: Forecast Development - Level 4*

**Competence:** Lead strategic transformation of strategic leadership responsibilities for collaborative tools for green innovation while ensuring professional standards and stakeholder value.

*Framework: e-CF: Information Security Management - Level 3*

## Learning Unit 14: Large Language Prompt Design for Sustainability Data Science

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Data |

**Description:** Design effective prompts for large language models applied to sustainability data contexts

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Advance industry leadership approaches to large language prompt design for sustainability data science within professional sustainability practice.

*Framework: GreenComp: 4.3 Collective action*

**Skills:** Create breakthrough cross-sector influence through large language prompt design for sustainability data science to support organisational sustainability objectives.

*Framework: e-CF: Information Security Management - Level 3*

**Competence:** Shape industry practices in industry influence activities through large language prompt design for sustainability data science while ensuring professional standards and stakeholder value.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

## Learning Unit 15: Systems Architecture for Sustainability

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Technical Implementation |

**Description:** Design IT systems aligned with circular economy and low-impact principles

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Conceptualise systemic impact strategies for systems architecture for sustainability within professional sustainability practice.

*Framework: GreenComp: 2.1 Systems thinking*

**Skills:** Innovate organisational culture change via systems architecture for sustainability to support organisational sustainability objectives.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

**Competence:** Influence sector-wide systemic change leadership involving systems architecture for sustainability while ensuring professional standards and stakeholder value.

*Framework: e-CF: Forecast Development - Level 4*

## Learning Unit 16: Circular Economy for Digital Systems

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Circular Economy |

**Description:** Comprehensive circular economy principles and lifecycle thinking for sustainable digital system design and management

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Pioneer strategic transformation frameworks for circular economy for digital systems within professional sustainability practice.

*Framework: GreenComp: 4.1 Political agency*

**Skills:** Research and develop strategic roadmap development for circular economy for digital systems to support organisational sustainability objectives.

*Framework: e-CF: Forecast Development - Level 4*

**Competence:** Drive systemic change in enterprise-wide transformation initiatives in circular economy for digital systems while ensuring professional standards and stakeholder value.

*Framework: e-CF: Information Security Management - Level 3*

## Learning Unit 17: Big Data for Environmental Intelligence

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Data |

**Description:** Leverage big data technologies to analyze environmental patterns and trends

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Establish organisational change methodologies in big data for environmental intelligence within professional sustainability practice.

*Framework: GreenComp: 4.3 Collective action*

**Skills:** Lead transformation transformation leadership in big data for environmental intelligence to support organisational sustainability objectives.

*Framework: e-CF: Information Security Management - Level 3*

**Competence:** Lead strategic transformation of strategic leadership responsibilities for big data for environmental intelligence while ensuring professional standards and stakeholder value.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

## Learning Unit 18: Advanced Visualisation for Sustainability Reporting

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Data |

**Description:** Create effective data visualizations to communicate sustainability performance

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Research industry leadership approaches to advanced visualisation for sustainability reporting within professional sustainability practice.

*Framework: GreenComp: 2.1 Systems thinking*

**Skills:** Create breakthrough cross-sector influence through advanced visualisation for sustainability reporting to support organisational sustainability objectives.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

**Competence:** Shape industry practices in industry influence activities through advanced visualisation for sustainability reporting while ensuring professional standards and stakeholder value.

*Framework: e-CF: Forecast Development - Level 4*

## Learning Unit 19: Low-Carbon Cloud Infrastructure

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Technical Implementation |

**Description:** Design and implement energy-efficient cloud computing solutions

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Advance systemic impact strategies for low-carbon cloud infrastructure within professional sustainability practice.

*Framework: GreenComp: 4.1 Political agency*

**Skills:** Innovate organisational culture change via low-carbon cloud infrastructure to support organisational sustainability objectives.

*Framework: e-CF: Forecast Development - Level 4*

**Competence:** Influence sector-wide systemic change leadership involving low-carbon cloud infrastructure while ensuring professional standards and stakeholder value.

*Framework: e-CF: Information Security Management - Level 3*

## Learning Unit 20: Data Analytics for Sustainability

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 6 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Data |

**Description:** Use data tools to derive actionable sustainability insights

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Conceptualise strategic transformation frameworks for data analytics for sustainability within professional sustainability practice.

*Framework: GreenComp: 4.3 Collective action*

**Skills:** Research and develop strategic roadmap development for data analytics for sustainability to support organisational sustainability objectives.

*Framework: e-CF: Information Security Management - Level 3*

**Competence:** Drive systemic change in enterprise-wide transformation initiatives in data analytics for sustainability while ensuring professional standards and stakeholder value.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

## Learning Unit 21: Machine Learning and Predictive Modeling

*This learning unit forms part of the Core programme in Level 7 Master's Degree in Digital Sustainability Leadership*

|  |  |
| --- | --- |
| **ECTS Credits** | 5 |
| **EQF Level** | 7 (Programme: 7) |
| **Total Workload** | 125 hours |
| **Contact Hours** | 25 hours |
| **Self-Study Hours** | 43 hours |
| **Workplace Hours** | 56 hours |
| **WBL Percentage** | 44.8% |
| **Thematic Area** | Data |

**Description:** Develop predictive models to assess sustainability scenarios

### Work-Based Learning Integration

**Employer Partnerships:** Senior executive roles across sectors

**Mentor Support:** Workplace mentor assigned for practical guidance

**Workplace Activities:**

• Strategic transformation leadership

• Cross-sector collaboration projects

• Industry influence initiatives

### Learning Outcomes

**Knowledge:** Pioneer organisational change methodologies in machine learning and predictive modeling within professional sustainability practice.

*Framework: GreenComp: 2.1 Systems thinking*

**Skills:** Lead transformation transformation leadership in machine learning and predictive modeling to support organisational sustainability objectives.

*Framework: e-CF: IS and Business Strategy Alignment - Level 4*

**Competence:** Lead strategic transformation of strategic leadership responsibilities for machine learning and predictive modeling while ensuring professional standards and stakeholder value.

*Framework: e-CF: Forecast Development - Level 4*

Educational Curriculum Modeller (ECM) - Version 2.0 - July 10, 2025