

CHALLENGING
CONVENTIONAL
THINKING



ECIU Micro-credential Journey: A Story of 2 Ms

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SINCE 1997

Our collaboration is firmly based on expertise in innovative education, research, and knowledge exchange. We pride ourselves on being entrepreneurial, and on maintaining an innovative culture in our institutions, as well as providing a catalytic role for innovation in society.

We are ECIU, the European Consortium of Innovative Universities, a network of 13 universities united since 1997 by a common profile of shared beliefs, interests, and mutual trust.

NOW

Together, we will create, test and evaluate a whole new educational pedagogy. This will help to focus all the university activities from education, research, administration and support through to innovation and valorisation.

The ECIU University is an EU-funded European University that will create a completely new educational model on a European scale. The ECIU University gathers together learners, teachers, and researchers to cooperate with cities and businesses and solve real-life challenges.



OUR SHARED PROFILE

Technology, engineering and social sciences	Firm commitment to innovation and entrepreneurship	Research intensive
Innovative forms of teaching and learning	High quality education with an international focus	Close ties to industry and regional development
Experiments in management and administration systems	European policy-making	Sustaining and nurturing internationally minded staff

PAVING THE ROAD FOR THE MICRO-CREDENTIALS MOVEMENT

ECIU UNIVERSITY WHITE PAPER ON MICRO-CREDENTIALS

Access our 1st Micro-Credential white paper:
<https://www.eciu.org/news/micro-learning-varies-from-online-courses-to-study-packages>

Access our 2nd Micro-Credential white paper:
<https://www.eciu.org/news/paving-the-road-for-the-micro-credentials-movement>

Access our 3rd Micro-Credential white paper:
<https://www.eciu.org/news/presentation-of-the-third-eciu-university-micro-credentials-paper-a-vision-for-european-learners-values-and-priorities>

**DEFINITIONS AND
STANDARDS**

**QUALITY
ASSURANCE**

**CREDITS AND
RECOGNITION**

**STORAGE, PORTABILITY
AND PLATFORMS**

**SUCCESSFUL
UPTAKE**



Key Assumptions 2025... Micro-Credentialing & Micro-Credentials

- ECIU University will exist
- Micro-credentials will be commonplace throughout Europe
- Micro-credentials will feature in most EU qualification frameworks
- ECIU partner universities will be offering their own micro-credentials
- ECIU micro-credentials will complement and extend those offered by partners
- ECIU micro-credentials will be distinctive and enjoyed by students
- ECIU micro-credentials will be well regarded and highly valued by employers & societal stakeholders

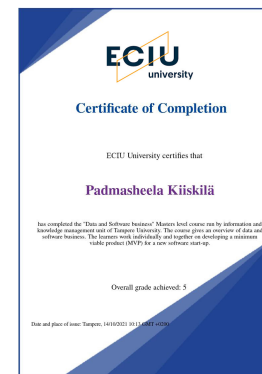


Micro-credentials ECIU University

Learning Experience



Credential



Council of Europe, 2022, available at
[https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627\(02\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(02))



**Interinstitutional File:
2021/0402(NLE)**

Brussels, 25 May 2022
(OR. fr, en)

9237/22

LIMITE

EDUC 154
RECH 252
SOC 272
DIGIT 101
ENV 445

'I/A' ITEM NOTE

From: General Secretariat of the Council
To: Permanent Representatives Committee/Council
Subject: Proposal for a Council Recommendation on a European approach to micro-credentials for lifelong learning and employability
- *Adoption*

Micro-credential means the record of the learning outcomes that a learner has achieved following a small volume of learning. These learning outcomes will have been assessed against transparent and clearly defined criteria.

Learning experiences leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be stand-alone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity.

(Council of Europe, 2022)

Element	21 Definitions of Micro-Credentials																					%
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Certification	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓		✓		81.0
Stackability	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓		✓	✓		✓	✓	✓	76.2
Outcomes	✓	✓		✓				✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	71.4
Workload			✓	✓	✓		✓		✓	✓	✓		✓	✓	✓				✓	✓	✓	61.9
Assessment	✓	✓	✓	✓	✓			✓	✓				✓	✓		✓				✓	✓	57.1
Standards & QA		✓	✓	✓				✓				✓	✓		✓	✓	✓				✓	47.6
Purpose	✓	✓		✓				✓	✓			✓			✓							33.3
Accreditation		✓	✓		✓	✓							✓		✓						✓	33.3
Education Level		✓	✓		✓								✓		✓						✓	28.6
Provider		✓	✓										✓			✓	✓				✓	28.6
Learner Agency			✓	✓					✓									✓		✓	✓	28.6
Security					✓				✓							✓		✓				19.0
Mode of delivery			✓																	✓		9.5
Total	5	9	10	8	7	3	3	6	8	4	4	4	8	4	5	7	4	5	3	8	8	

European standard elements to describe a micro-credential (Annex I)

(Council of Europe, 2022)

Mandatory elements:	Identification of the learner
	Title of the micro-credential
	Country(ies)/Region(s) of the issuer
	Awarding body(ies)
	Date of issuing
	Learning outcomes
	Notional workload needed to achieve the learning outcomes (in ECTS credits, where possible)
	Level (and cycle, if applicable) of the learning experience leading to the micro-credential (EQF, QF-EHEA), if applicable
	Type of assessment
	Form of participation in the learning activity
	Type of quality assurance used to underpin the micro-credential
Optional elements, where relevant (non-exhaustive list)	Prerequisites needed to enrol in the learning activity
	Supervision and identity verification during assessment (unsupervised with no identity verification, supervised with no identity verification, supervised online, or onsite with identity verification)
	Grade achieved
	Integration/stackability options (stand-alone, independent micro-credential/integrated, stackable towards another credential)
	Further information

European design and issuance principles for micro-credential (Annex II)

Ten Principles: Quality, transparency, relevance, valid assessment, learning pathways, recognition, portability, being learner-centred, authentic, and providing information and guidance
(Council of Europe, 2022)

ANNEX II

Union principles for the design and issuance of micro-credentials

The 10 principles presented below specify the nature of micro-credentials and offer guidance to Member States, public authorities and providers on the design and issuance of micro-credentials and systems for micro-credentials. The principles highlight the key characteristics of the European approach to micro-credentials that can enable the trust and quality of micro-credentials. The principles are universal and may be applied in any area or sector.

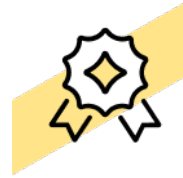
1	Quality	<p>Micro-credentials are subject to internal and external quality assurance by the system producing them (e.g. the education, training or labour market context in which the micro-credential is developed and delivered). Quality assurance processes must be fit-for-purpose, be clearly documented and accessible and meet the needs and expectations of learners and stakeholders.</p> <p>Providers: External quality assurance is based primarily on the assessment of providers (rather than individual courses) and the effectiveness of their internal quality assurance procedures.</p> <p>Providers should make sure that internal quality assurance covers all the following elements:</p>
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(Council of Europe, 2022)

Individualized & Scaffolded Life-Long, Flexible Learning Pathways through Challenges, Micro-modules and Micro-Credentials

- 1** Real-life challenges come from industry, society and university on SDGs
- 2** Teams of diverse learners and researchers are formed engaging in an active pedagogy
- 3** AI with scaffolded engagement with experts assign micro-modules to the challenges for skills and competence development for learners
- 4** Gained skills, competences and knowledge are stored in a digital competence passport
- 5** Micro-credentials accumulate into competence passport or can be stacked into a qualification

KEY ELEMENTS OF THE EDUCATIONAL PATHWAY UNDERPINNED BY MICRO-CREDENTIALS



Stackable, credit-bearing and quality assured micro-credentials



Platform solutions for the storage, sharing and portability of micro-credentials



An open co-creation model and challenge-based learning approach



Skills and competence recognition

Browse learning opportunities

Learning opportunity

Challenge

Micro-module

Topic

Circular economy

Energy and sustainability

Entrepreneurship, technology and innovation

Language learning

Resilient communities

Transport and Mobility

Status

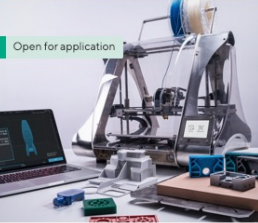
Open for application

Coming soon

Closed for application

8 learning opportunities

Open for application



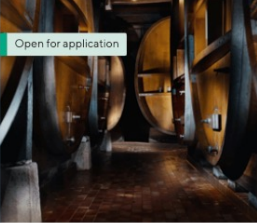
RESILIENT COMMUNITIES

Engineering solutions for a more inclusive society

STUDY PERIOD

4 Apr - 11 Jul

Open for application



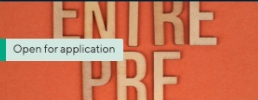
ENTREPRENEURSHIP, TECHNOLOGY AND INNOV...

The Sustainable Wine Race

STUDY PERIOD

17 Apr - 19 May

Open for application




ENTREPRENEURSHIP, TECHNOLOGY AND INNOV...

Entrepreneurship, technology and innovation

STUDY PERIOD

17 Apr - 19 May

Open for application



ENERGY AND SUSTAINABILITY

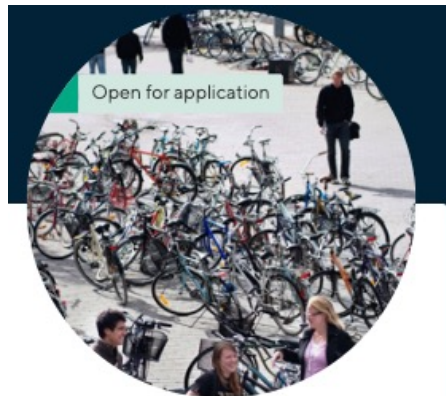
Energy and sustainability

STUDY PERIOD

17 Apr - 19 May

Micro-Credentialing – ECIU Learning offerings

- Challenges
 - May have ECTS
 - Hackathons and workshops that don't carry ECTS
- Micro-modules
 - Include learning offerings from partners
 - Co-created by partners for ECIU
 - Micro 1-3 ECTS, standard up to 8ECTS
 - Online or hybrid setting
 - Instruction in English



Open for application

ENERGY AND SUSTAINABILITY

709A06 Strategic Planning - Regions and EU



Closed for application

ENERGY AND SUSTAINABILITY

Consumer Digital Engagement for Energy Sustainability

<https://engage.eciu.eu/browse>

Micro-Modules

*"A **micro-module** is a short learning experience that formally assessed and supports learners to fill their knowledge gaps and boost their capabilities in order to successfully engage in ECIU University challenge-based activities."*

Characteristics (2021-2022):

- Provided by an accredited institution or program (currently via ECIU network)
- Preferably **1-3 ECTS** (or unbundled from a larger module)
- Is preferably master's level, but can be also bachelor's level
- Priority for **online** provision, offline possible
- Provided in **English**



<https://challenges.eciu.org/>

Challenges

- SDG themes
- Collaboration with
 - Industry
 - Cities
- ECTS based
- May include short non-formal opportunities (No ECTS)

Open for application

RESILIENT COMMUNITIES

Engineering solutions for a more inclusive society

STUDY PERIOD
📅 4 Apr - 11 Jul

Open for application

ENTREPRENEURSHIP, TECHNOLOGY AND INNOV...

The Sustainable Wine Race

STUDY PERIOD
📅 17 Apr - 19 May

Open for app

RESILIENT COI

Create To

STUDY PERIOD
📅 1 May - 4 M

Open for application

ENTREPRENEURSHIP, TECHNOLOGY AND INNOV...

Innovative Entrepreneurship

STUDY PERIOD
📅 27 Mar - 19 May

Open for application

ENERGY AND SUSTAINABILITY

The Flowers Gourmet Hackathon

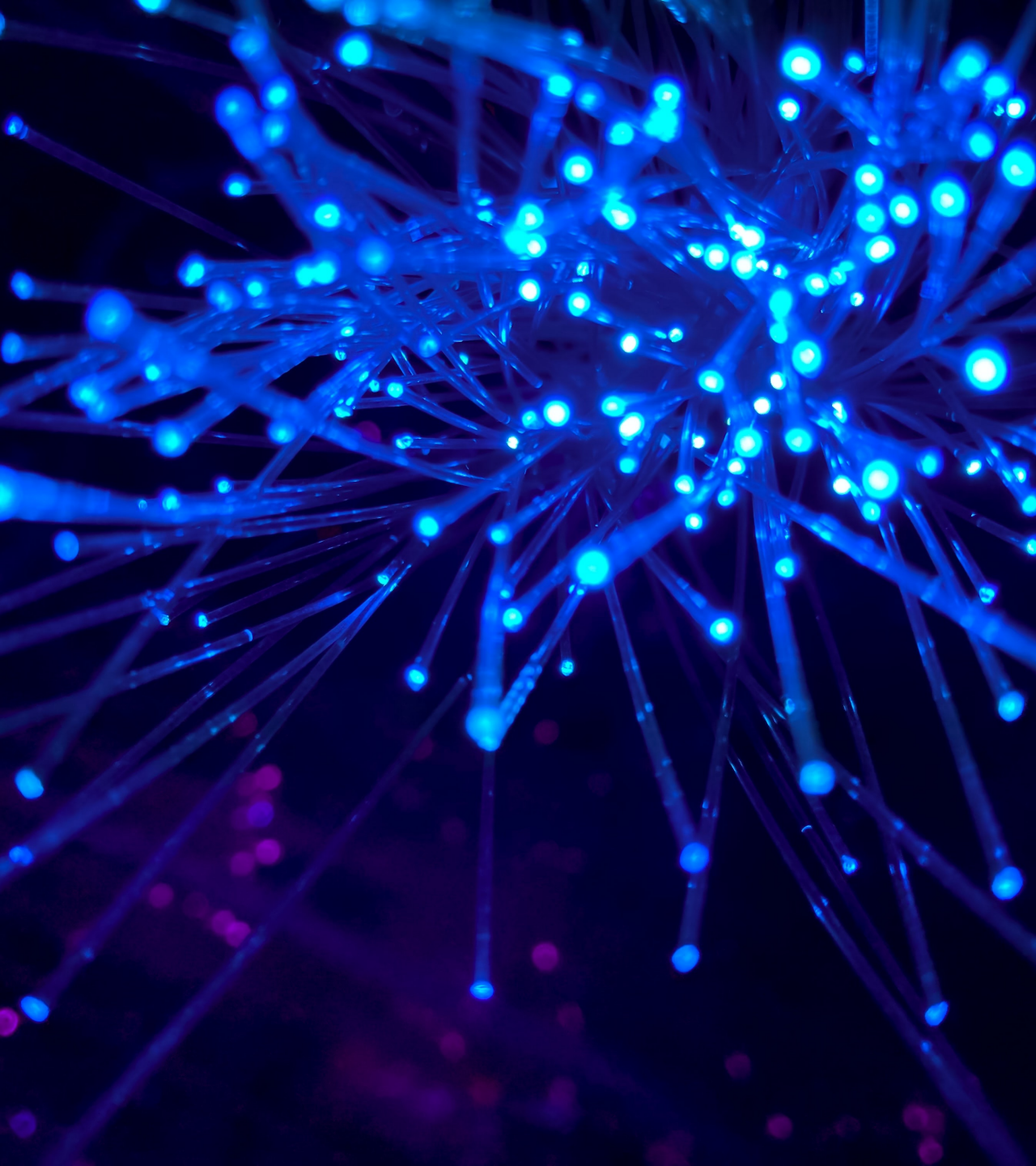
STUDY PERIOD
📅 17 Apr - 14 May

Closed for ap

CIRCULAR EC

**School ec
consump'**

STUDY PERIOD



European Values for European Micro-Credentials

Principle of social good and learner development v market-driven forms of commodified, atomised learning

Active pedagogical approaches, emphasis on real-world, authentic co-constructed learning v passive learning based on predicted needs

Guidance and empowerment of learners to build personalised, flexible learning futures complement current macro qualifications v predetermined paths emphasis on being future capable



ECIU Competence Taxonomy



Domain Competence levels

Explorer	The explorer level describes one with a basic understanding and awareness of relevant concepts in the topic area. They have the basic skills and abilities required to investigate the topic. And they have the interest and curiosity for exploring the topic.
Expert	The expert level describes one with a comprehensive understanding of concepts, structures, and mechanisms in the topic area. They have a wide range of skills required operate within relevant topic activities. And they have a deep awareness for the ethical and philosophical considerations for the topic and context.
Pioneer	The pioneer level describes one with rich and varied knowledge of the system of a topic including the foundational principles, relations with other topics, and possible future developments. They have the skills to expand and create new knowledge within topic area. They have the ability to provide wise and well-reasoned approaches to addressing issues in a topic. They have broad and deeply-considered perspectives for challenges and issues in a topic.

Benchmark for the competence dimensions and levels: EdDiCo maturity model, DigCompEdu, CALOHEE

	Title	Short description	Long description	ESCO skills
2	Circular economy	Seek solutions for resource flows that contribute to a sustainable, biodiverse environment.	<p>A circular economy transition requires adapting to the specific situation of each city and region, utilising its inherent qualities and strengths. Cities and regions have different policies to support the transition to a circular economy, operate along with different times scales, but also differ in their foci and their urgency. As a result, achieving a circular economy will generally require intergovernmental cooperation, which may require special attention in the case of rural regions where municipalities operate more independently.</p> <p>A circular rural and urban region embeds the principles of a circular economy across all its functions, establishing a regional system that is regenerative and restorative by design, with a strong interaction between the urbanised and surrounding rural areas. A major challenge for rural regions will be to identify the quantities and quality of the resource flow at a regional level while identifying and evaluating potential solutions that will contribute to a sustainable, biodiverse environment. The involves the essential digitalisation for measuring, monitoring and supporting these resource flows. Digital technology has enabled a fundamental shift in the way the economy functions, offering possibilities for radical virtualisation, de-materialisation and greater transparency of product use and material flows.</p> <p>At the same time, it creates new ways of operating and participating in the economy for producers and users. Through the collection and analysis of data on materials, people and external conditions, digital technology has the potential to identify the challenges of resource flows in regions, outline the key areas of structural waste, and inform more effective decision-making on how to address these challenges and provide systemic solutions. For this purpose, cities and regions need clear, transparent rules that gradually raise standards. Systems for enforcing those rules and monitoring overall progress are required. This includes removing regulatory barriers within and across countries and phasing out incentives for unsustainable resource use</p>	Sourced by SMART-ER R&I Agenda: https://assets-global.website-files.com/562fb917aa38ca2e349b422e/63523c292a93201512041982_D1.2_Co-Created%20R%26I%20Agenda.pdf
2.1	Responsible consumption and production	Promoting and integrating responsible, sustainable consumption and production practices.	The ability to promote policies, activities, and educational programmes that encourage sustainable consumer consumption behaviour. The knowledge of methods for behaviour change in consumers and of the interconnected nature of production supply chains. The mindset to lead the change needed to realise changes in sustainable consumption and production.	http://data.europa.eu/esco/skill/e1da04bb-4de8-4d17-af8a-75ea893fe36a
2.2	Waste management	Manage effective, healthy processes for safe waste disposal.	The ability to manage the methods and processes used to collect, transport, treat, recycle, and dispose of waste for the benefit of a healthy, hygienic society. The knowledge of monitoring practices for safe waste disposal and a mindset to consider waste management as part of the circular economy, not only an end point.	http://data.europa.eu/esco/skill/40f65a56-ccbe-4601-9f32-1cc6cdd24f28
2.3	Financing circular economy	Developing finance schemes for the circular economy taking into account environmental and societal concerns.	The ability to integrate various environmental, social and governance considerations when making financial decisions towards a circular economy. The knowledge about the sustainable investments, and the mindset to develop longer-term investment scenarios for sustainable economic activities and projects.	http://data.europa.eu/esco/skill/203083ca-b051-4c28-8986-fc8731bacee5
		Identifying and applying policies, regulations, and activities to promote better consumption behaviours and	The ability to apply principles, policies, and regulations towards environmental sustainability. The knowledge and skills to identify and enact methods towards the reduction of waste, energy, and water consumption, the reuse and recycling of products, and the engagement in the sharing economy. The mindset to proactively develop effective policies and implement changes into a circular	http://data.europa.eu/esco/skill/4c3ab565-747c-4db3-8c47-

	Title	Short description	Long description	ESCO skills
	7.1 Verbal Communication skills	Expressing and understanding ideas effectively through speech.	The ability to communicate effectively with others. To be able to consider other perspectives, reflect, and clearly communicate one's opinions. The ability to actively listen carefully to others, understand points being made, and formulate appropriate questions, without interrupting at inappropriate times. Patiently listen to the needs of customers, clients, passengers, service users or others, and provide solutions accordingly.	
	7.1.1 Active listening	Attentive and engaged listening for effective communication	The ability to actively listen and comprehend the the meaning of other's messages with attentiveness, empathy, and engagement. The ability to paraphrase message to ensure understanding and clarify any points of confusion.	http://data.europa.eu/esco/skill/a17286c5-238d-4f0b-bc24-29e9121345de
	7.1.2 Active discussion	Participation in collaborative dialogue for effective communication	The ability to participate actively in dialogue with others effectively to reach a desired outcome. The ability to listen, consider points, and ask appropriate questions to contribute to a productive, healthy discussion.	http://data.europa.eu/esco/skill/S1.7.3
	7.2 Non-verbal communication skills	Expressing and understanding ideas effectively without speech	The ability and awareness to notice and interpret the non-verbal signals that people send out with their body, including oneself. The active communication with colleagues and others using body language and other non-verbal cues in order to ensure effective and clear working relationships.	http://data.europa.eu/esco/skill/8813bf9b-86f3-47d1-849d-399121e6d429
	7.3 Empathy	Showing empathy and understanding through sensitive communication and emotional awareness	The ability to act in an understanding and supportive manner that is sensitive to others' needs and feelings. The ability to communicate and demonstrate empathy and consideration for others and their perspective. This includes a capacity to understand various verbal and non-verbal communication of sentiment, feeling, and emotions.	http://data.europa.eu/esco/skill/77b636e8-fab3-41a8-8022-1e0a354059dc
	7.4 Teamwork	Collaborating with others to achieve goals.	The ability to effectively and confidently work within a group. The mindset and ability to cooperate with each other and handle the team dynamics required for everyone to do their part for the whole. The ability to cooperate, negotiate meanings with each other, and build knowledge together to achieve a shared goal. The knowledge of how to structure teams, depending on the context, to effectively work towards cooperation for group goals.	http://data.europa.eu/esco/skill/60c78287-22eb-4103-9c8c-28deaa460da0
	7.5 Conflict resolution	Resolving disputes and disagreements peacefully	The ability to navigate and resolve conflicts or disputes between people or groups. The mindset to understand perspectives and aspects of the conflict, and work to improve the situation. This encompasses reducing the negative aspects of a conflict and increasing the positive outcomes of it by learning from the errors made.	http://data.europa.eu/esco/skill/afd49651-9119-4327-91fc-844a6dda1254

Learning Outcomes



Basic principles of data and software business

Student understands the basic principles of data and software business, and the special characteristics of software industry

Related ESCO Skills

identify opportunities, evaluate information, business knowledge

Show less

Collaboratively develop a data or software concept

He/she can analyze the feasibility of software business models. Student can apply theoretical knowledge and understanding of the data and software business characteristics to collaboratively create a solid lean canvas model for a software start-up.

Related ESCO Skills

work in teams, interact with others, perform business analysis

Show less

Monetizing with data and software

He/she can critically analyse how it is possible to monetize with data and software

Related ESCO Skills

think creatively

Show less

ESCO skills

identify opportunities

Download

identify opportunities >

Description

Description

Look beyond the current and visualise what the future can bring to those with initiative.

interact with others

Download

interact with others >

Description

Description

Engage with others face-to-face in a wide range of situations, using strategies appropriate to context and purpose.

Scope note

May include formal or informal conversation, meeting, transactions, information exchange.

work in teams

Download

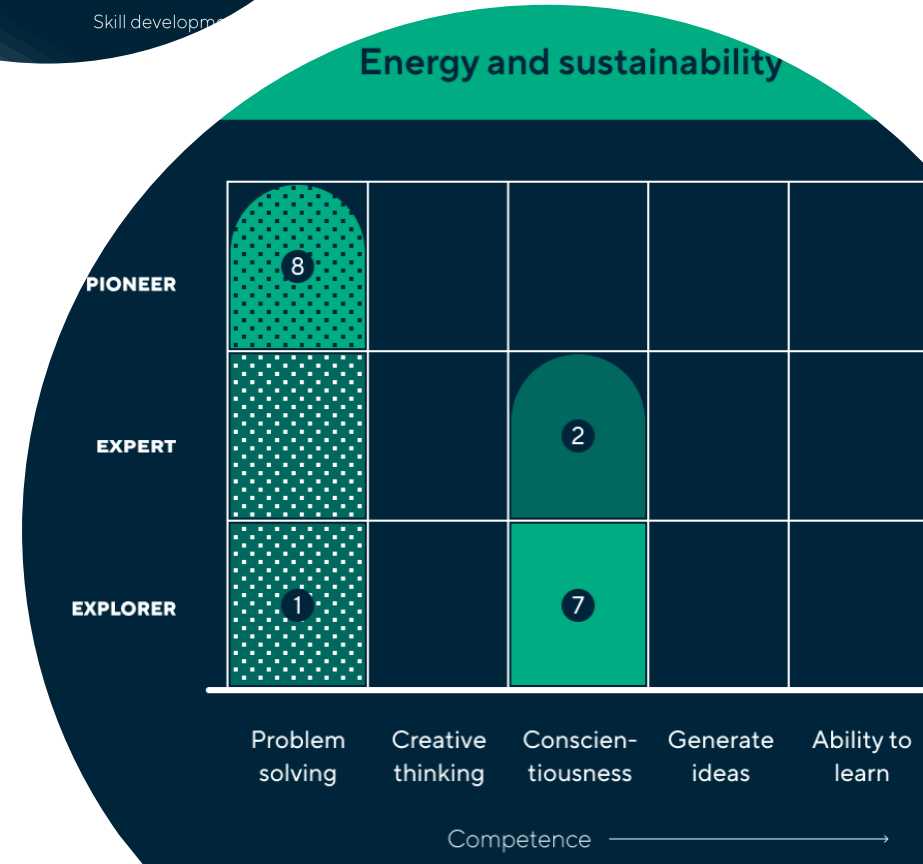
transversal skills and competences >
social and communication skills and competences > collaborating in teams and networks >
work in teams >

Description

Description

Work confidently within a group with each doing their part in the service of the whole.

Competence and skill tagging

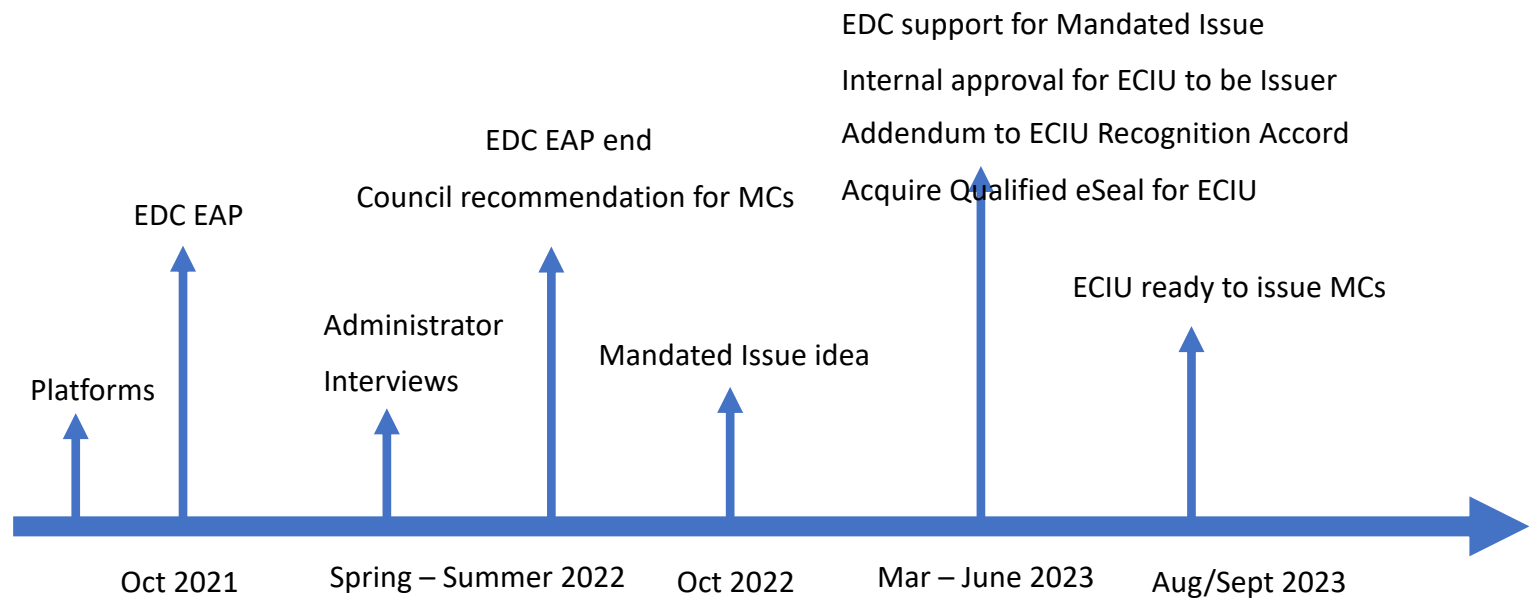


**17 November: Online event about issuing
e-sealed micro-credentials by ECIU
University**



Digital Ecosystem - from EDC to Europass

- <https://www.eciu.eu/news/learning-to-learn-a-snapshot-of-the-continuing-eciu-university-micro-credentialing-journey>



ECIU EDC Micro-credential journey










Introduction to Artificial Intelligence

Valid from: 11/06/2023 | Type: Generic | Credential id: urn:credential:c11943bf-1279-484f-a4e3-93fc876ed1d6

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-  Padmasheela Kiiskilä
-  Stichting European Consortium of Innovative Universities
-  Introduction to Artificial Intelligence
-  Create a chatbot using Scratch
-  Use image classification tools to identify different objects in images
-  Recognition for credit
-  Overall assessment



« < 1 / 1 ▾ > »

Authentication and Verification Check

-  **FORMAT**
This credential is technically valid.
-  **SEAL**
The credential is Sealed by Stichting European Consortium of Innovative Universities. This credential has not been tampered with since issue.
-  **REVOCAATION**
Function under development. Contact the awarding body for information about this credential's revocation status.
-  **ACCREDITATION**
The credential does not contain reference to an accreditation record related to the awarding body.
-  **VALIDITY**
The credential is still valid.
-  **VERIFIED**

European Standards

European Learning Model

European Digital Credential

W3C VC data model

EQF levels

Qualified eSeal

DEQAR for accreditation

ESCO framework

Padmasheela Kiiskilä
Stichting European Consortium of Innovative Universities
Introduction to Artificial Intelligence
Create a chatbot using Scratch
Use image classification tools to identify different objects in images
Recognition for credit
Overall assessment

Signed by

Stichting European Consortium of Innovative Universities



Also known as

Stichting European Consortium of Innovative Universities

Seal validation information



The credential is Sealed. This credential has not been tampered with since it was issued by Stichting European Consortium of Innovative Universities KLASS3-SK 2016 AIA OCSP RESPONDER 202311 ; KLASS3-SK 2016 AIA OCSP RESPONDER 202307 ; root-ca ; KLASS3-SK 2016 ; good-tsa ; Stichting European Consortium of Innovative Universities ;, on 7/6/23, 4:11 PM.

Evidence statement

Every claim inside this credential is to be construed as having been made by the indicated awarding body, who maintains sole responsibility for said claim. By applying its electronic seal, the signing organisation certifies the correctness of origin of each claim, as having been made by the indicated awarding body.

Identifiers

Legal ID

08164880

EIDAS Identifier

NTRNL-08164880

Mandated issue

The European Digital Credentials for Learning Infrastructure allows credential issuers to delegate the sealing role to third parties. Signing a digital credential on behalf of another organisation is called mandated issue, and this is familiar practice in cases where, for example, a national body such as a Ministry of Education or a parent organisation of an awarding body, seals a credential on behalf of the institution that officially issues it. In other cases, it may be a technology provider that, from within its system, formally seals credentials issued by its education and training provider client.

Source: <https://europa.eu/europass/en/stakeholders/european-digital-credentials/stakeholder-information-about-european-digital-credentials>

eSeal



If an institution wants to issue legally admissible digital credentials that pass the EDC Seal verification check, it must acquire an advanced or qualified electronic seal, and once a credential is sealed with that e-Seal, it cannot be tampered with without detection – the slightest change in the file data will result in the e-Seal verification check failure

Source: <https://europa.eu/europass/en/stakeholders/european-digital-credentials/stakeholder-information-about-european-digital-credentials>

Qualified eSeal

- Uniquely linked to the creator of the seal
- Capable of identifying the creator of the seal
- Created using electronic seal creation data that the creator of the seal can, with a high level of confidence under its control, use for electronic seal creation, and
- Linked to the data to which it relates in such a way that any subsequent change in the data is detectable
- Created by a qualified seal creation device (QSCD) and is based on a qualified certificate for electronic seals

Source: <https://ec.europa.eu/digital-building-blocks/wikis/display/ESIGKB/What+are+the+levels+simple+-+advanced+and+qualified+of+electronic+seals>

Conclusions...next steps

- Evolving ECIU Educational Framework embracing 10 principles
- Focus on piloting for continuous learners outside of ECIU University Ecosystem
- Leverage co-construction
- Embed and extend good practices, stackability!
- Facilitate the change and shaping of the micro-credential agenda
- European Digital Credential platform is flexible and easy to use
- EDC follows European Learning Model – paves the way to use European standard frameworks such as DEQAR, EQF, ESCO and more.
- Mandated Issue is a game changer. Now credentials can be issued by individual institutions, or in case of alliances or national level, one organization can issue on behalf of others while the awarding body still have the same responsibilities as a higher education institution.
- Qualified eSeal is the way to go as it gives assurance of the highest level.
- In a micro-credential, content matters and so does the digital credential that accompanies it as proof of learning.
- Excellent team at EDC to provide support and any help needed!





EXPLORE ▾

SEARCH FOR MICRO-CREDENTIALS

FOR EMPLOYERS

ABOUT U

VISIT SITE

MICROCRED

FILTER BY

SUBJECT AREA ▾

TOPICS ▾

DELIVERY MODE ▾

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DESIGNER AND USER
EXPERIENCE FOR
FINTECH



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DIGITALISATION OF
AVIATION OPERATIONS
AND BUSINESS

Ar scáth a chéile a mhaireann na daoine

It is in each others' shadow that people live – community and interdependence





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Dublin City University
ECIU Micro-Credential Lead



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Lots done more to do..!
Go raibh maith agaibh / Thank you



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