INGENIUM
European University

Deliverable 5.7:

INGENIUM MICRO-CREDENTIALS AND MATERIALS

Work Package 5 – Innovative Teaching and Lifelong Learning

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Description of the deliverable (3-5 lines)	In the first phase of collaboration, the INGENIUM European University Alliance will promote open and lifelong learning by providing Micro-Credentials and open learning materials through a joint learning and innovation platform. These Micro-Credentials can be used for informal learning or as part of formal education. High-quality open access learning materials, produced by alliance members and peer-reviewed, will support these credentials. The Alliance has developed a joint platform for Micro-Credentials, defined qualification (ECTS, EQF) criteria, and outlined quality assessment practices. The Innovation Committee coordinates the criteria and quality assessment of learning materials and pedagogical solutions in line with the Alliance QA policy.
Key words	Micro-Credentials, lifelong learning, OER, flexible learning pathways.

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Definitions & Acronyms

Definition/Acronym	ECTS: European Credit Transfer System EQF: European Quality Framework EHEH: European Higher Education Area MC: Micro-Credential OER: Open Educational Resources QA: Quality Assurance LMS: Learning Management System Oviedo, University of Oviedo MUS, Medical University of Sofia UoC, University of Crete HKA, Hochschule Karlsruhe University of Applied Sciences Xamk, South-Eastern Finland University of Applied Sciences Ud'A, University 'G. d'Annunzio', Chieti-Pescara HIS, University of Skövde MTU, Munster Technological University URN, University of Rouen, Normandy TUIASI, Gheorghe Asachi Technical University of Iasi
Micro-Credential	*A record of the learning outcomes that a learner has acquired following a small volume of learning which has been assessed against transparent and clearly defined criteria (EU Commission 2022).*
Innovation Committee	*Includes Innovation Leaders who are persons responsible or well-known experts for pedagogical development in their universities.*

EXECUTIVE SUMMARY

The INGENIUM European University Alliance, funded by the European Union, aims to promote innovative teaching and lifelong learning through the development and implementation of Micro-Credentials. This initiative is part of Work Package 5, focusing on creating flexible learning pathways and enhancing the quality of education across the Alliance's ten partner institutions.

The key objectives of this deliverable include establishing a comprehensive framework for creating, delivering, and accrediting Micro-Credentials within the INGENIUM Alliance, fostering lifelong learning opportunities by providing accessible, high-quality educational resources and Micro-Credentials, and enhancing collaboration among partner institutions to share best practices and develop innovative educational solutions.

The document outlines the diverse regulatory and policy frameworks across partner institutions, highlighting the challenges and opportunities in harmonising Micro-Credentials. Insights from the European Universities Alliance community, particularly the ECIU and YUFE alliances, have served as a helpful foundation for INGENIUM's Micro-Credentials strategy. It provides a detailed analysis of existing Micro-Credential creation processes and quality assurance systems within partner institutions and identifies primary target groups, including current degree students, lifelong learners, and industry professionals.

Micro-Credentials are integrated into the INGENIUM strategy to support student-centred learning, flexible education pathways, and innovative teaching methods. Micro-Credentials are designed to support lifelong learning, enhance the social dimension of higher education, and foster collaboration with societal actors. Clear definitions and delivery modes for INGENIUM Micro-Credentials are established, including realigned, jointly developed, and decentralised models. Robust quality assurance mechanisms have been created to ensure the credibility and transferability of Micro-Credentials across the Alliance.

The implementation and collaboration section discusses the development of incentive systems and support mechanisms to encourage the creation and delivery of Micro-Credentials. It explores administrative and academic collaboration opportunities to facilitate joint Micro-Credential offerings and outlines strategies for promoting INGENIUM Micro-Credentials and engaging stakeholders.

In conclusion, the INGENIUM Alliance is well-positioned to create and implement joint Micro-Credentials leveraging the strengths and expertise of its partner institutions. The initiative aims to provide flexible, high-quality learning opportunities that meet the needs of diverse learners and support the broader goals of lifelong learning and educational innovation.

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Part One: The INGENIUM Micro-Credential Environment

The National Development of Micro-Credentials within INGENIUM

Micro-Credentials are at the core of the INGENIUM strategy, constituting a key instrument to achieve the alliance's objectives in the areas of lifelong learning and the creation of lifelong learning pathways. INGENIUM seeks to build on the unique diversity of its 10 partner institutions to pool together resources and ideas, creating a wide range of new learning opportunities and improving existing ones.

Although Micro-Credentials are now widely known and debated, and despite the considerable milestone reached with the approval of the Council Recommendation on a European Approach to Micro-Credentials, INGENIUM has experienced firsthand the challenges and opportunities posed by the diversity and divergence of institutional definitions, understandings, and processes surrounding Micro-Credentials.

To better understand the current state of play in its partner universities, the Alliance conducted a survey among its partners, complemented by bilateral meetings between the work package leaders responsible for the activity and the different institutional leaders responsible for Micro-Credentials.

The survey was conducted in October 2024, complementing an initial exploratory survey in 2023. A review of the available information on the regulatory frameworks of EU Member States and relevant literature on the topic of Micro-Credentials also supported the information shared by the partners.

Seven out of ten partners answered the 2024 survey. Those partners had, however, answered the 2023 survey, so their answers were used for the initial questions related to the regulatory framework. This report includes information from all the aforementioned sources. In each case, the source of the information is indicated.

Lessons learned from the European Universities Alliance community

INGENIUM has taken inspiration from the broader European University community to develop its own Micro-Credentials strategy. Micro-Credentials are part of the plans of almost all European University's alliances in one way or another, but some of them have these types of programmes as a key part of their strategy.

The main source of inspiration for INGENIUM has been the ECIU university alliance, which has been at the forefront of the discussions around the topic of Micro-Credentials for the last 5 years. Over this period, ECIU has produced a series of papers which have helped INGENIUM to define its own strategy.

The paper "A vision for European learners, values, and priorities" from 2022 has been particularly helpful. It explains how the ECIU university alliance conceives the role of Micro-Credentials in building flexible learning pathways, where learners

have a key role in defining their own learning journeys. This understanding is fully aligned with INGENIUM's vision, and the experiences of ECIU operationalising such a concept will be invaluable as INGENIUM moves to implement its Micro-Credentials strategy.

INGENIUM also notes the "recognition accord" mentioned in the paper as a way to ensure effective recognition procedures between INGENIUM universities in the Micro-Credentials field. To make progress in that direction, the INGENIUM Micro-Credentials survey collected information on whether partners believe they can recognise the quality assurance procedures for Micro-Credentials done by other partners. The findings are detailed in the section below. The experience of ECIU in awarding European Digital Credentials for Learning, described in the paper, is also highly relevant to INGENIUM. The alliance will start to award digital badges throughout 2025 while exploring the implementation of the EDCL.

INGENIUM invited the ECIU alliance to its Micro-Credentials webinar as a way to foster the exchange of best practices and develop collaboration between the European University Alliances. ECIU spoke about their definition of Micro-Credentials, which is divided into two parts: **learning opportunities** and the actual **digital credential**. In INGENIUM, we are primarily speaking of Micro-Credentials as being learning opportunities comprising learning material, courses, and certification. The digital credentialing and verification, for example, using Europass Digital Credentials for Learning, is not something we have planned to implement at the moment. However, it is something we aim for, as it would enable learners to collect and showcase their INGENIUM Micro-Credentials alongside other learning achievements. This distinction comes from the confusing definition of the EU Commission, which defines it as "a record of the learning outcomes that a learner has acquired following a small volume of learning which has been assessed against transparent and clearly defined criteria" (2022). Our record of learning outcomes will be ECTS and a Micro-Credential certificate.

Another European University alliance whose Micro-Credentials policies and flexible learning pathways area are inspirational to INGENIUM is YUFE. The "Open YUFE" concept can help INGENIUM develop its own systems to integrate micro-credentials into more extensive degree programmes. YUFE partners have implemented policies such as "pre-approved" courses that students can integrate into their courses with automatic recognition, an initiative that INGENIUM partners could explore for the INGENIUM Open Degrees, as well as to make the existing offer of national degree programmes more flexible.

Lastly, the Micro-Credential template from the ENHANCE European Universities Alliance has also been extremely useful in defining some of the more technical elements of the INGENIUM Micro-Credential strategy and in analysing how the European Universities Alliance have already turned the principles of the European Approach to Micro-Credentials into concrete institutional policies. Although the Template document was published before the adoption of the Council

Recommendation by EU ministers, the document was created following the recommendations of the Micro-Credentials consultation group.

The distinction between ECTS-bearing Micro-Credentials and other types of learning experiences, such as Open Badges, has also been beneficial. INGENIUM is also developing Open Badges in a working group led by the University of Skövde, which will be a complementary system of recognising and rewarding the achievement of learning outcomes which do not fulfil the criteria to be recognised as Micro-Credentials.

Regulatory and Policy Frameworks

INGENIUM is developing its work in the area of Micro-Credentials in full alignment with the Council Recommendation European Approach to Micro-Credentials (2022), which has been used as a basis for the creation of all the relevant materials and guidelines, including the proposed descriptor.

The experience of working with 10 partners from 10 EU Member States has also shed light on the different regulatory frameworks for Micro-Credentials, as well as the existence – or lack thereof of national programmes supporting the creation of those Micro-Credentials.

The two surveys conducted in 2023 and 2024 show that many countries lack a specific regulatory framework for Micro-Credentials. At least URN, MTU, Ud'A, and MUS report no specific legal framework covering Micro-Credentials, although the situations are very different in each country. For instance, MTU reports that in Ireland, programmes such as the Human Capital Initiative "provide full or part funding to potential students to undertake programmes in skills critical areas."

The other most frequent option, reported by UNIOVI, TUIASI, and UoC, is the existence of a very general framework for Micro-Credentials in higher education at the national level, which is included in the overarching higher education legislation. In these three cases, these references have been included in relatively recent higher education laws that have entered into force in the last three years. However, the situation related to Micro-Credentials is still very different in these three countries.

The situation in the Nordic countries appears to be different. These countries have a long tradition of Micro-Credentials and flexible learning pathways in general, and due to the structure of their academic programmes, courses are created in a way that makes it simpler to turn them into Micro-Credentials, compared to Southern European countries such as Spain or Italy.

Table 1: Regulatory Frameworks in the INGENIUM Partner Universities

Partner	State of implementation	Regulatory framework
UNIOVI	MCs exist. There is a broad offering.	HE law refers to MC – basic regulation.
MUS	No MCs presently, but there are plans to develop them.	No data available
UoC	MCs exist and are delivered by the KEDIVIM institute.	HE Law refers to MCs – links to EU frameworks.
HKA	Two types of MCs exist: working life (through a different legal entity - IWW) and MCs for students.	No data available
Xamk	MCs exist as part of open university studies.	National framework under development now.
Ud'A	No MCs – lifelong learning offer available at the postgraduate level.	No national legislation presently. Although micro-qualifications have been adopted as a term for ET policies.
HIS	Two types: open university courses/Training for industry, product of direct agreements between companies and the universities.	General programme and course regulations apply.
MTU	MCs exist. Each department offers their own.	No specific regulation at the national level – support programmes exist and are common.
URN	No MCs as such, but range of LLL opportunities.	No national legislation at the moment
TUIASI	No MCs nor LLL studies presently.	HE Law refers to general MC principles.

***Source**: survey among INGENIUM partners conducted in 2023 & 2024*

Existing Micro-Credential Creation Processes

The survey asked partners about their institutional processes for creating micro-credentials, with an additional question on the total length from inception to delivery. The processes differ in their characteristics and also the length. It is possible to make a clear categorisation between those universities that have processes that are common to all courses, regardless of whether they lead or not to Micro-Credentials and those that are specific to their Micro-Credentials offer.

Some partners, like HKA, report two clearly different processes: one more focused on students and the other on professionals. These two processes are led by different bodies. In their process for ECTS-bearing Micro-Credentials, Senate approval is required, which makes it longer than the other.

The processes common to all types of courses, such as those from MTU and HIS, seem to be more decentralised, as the initial steps happen at the faculty level. Instead, the processes at UNIOVI and Xamk are more centralised, although UNIOVI has expressed its intention to boost faculty engagement as part of its creation processes.

Some processes (MTU, Xamk) clearly embed mechanisms for continuous improvement. Although these mechanisms might also exist in other universities, they were not clearly specified in the answers. Another relevant component of the creation process is stakeholder involvement in creating Micro-Credentials. Several partners, such as UNIOVI and HKA, mention this external aspect directly.

Processes also differ with regard to their lengths from inception to delivery. Although all of them last less than a year, there are considerable differences between UNIOVI's 3 months process to several institutions that can take up to 10 months (HIS, HKA if Micro-Credentials are ECTS bearing). Some partners report that their processes can be speeded up in certain cases: for instance, Xamk explains that if professors from outside of the university can be used for teaching, the process can be reduced in half, from 6 to 2-3 months. This is particularly relevant for INGENIUM, as joint teaching is one of the strategic opportunities for the alliance.

Table 2: Existing Micro-Credential Creation Processes

Partner	Type and Length of Process from design to delivery	Explanation
UNIOVI	Distinct process compared to regular courses **Length:** **3 months**	At the moment, they follow this process: a panel of experts + a specific committee + a delegated committee of the main governing council + the external advisory committee. We are planning to improve the first step, including school/faculty representatives relevant to the micro credential.

MTU	Process for all types of programmes Length: **6 months** **3 months with accelerated process**	The validation process for a new programme consists of six main steps, each with distinct requirements. Steps 1 to 3 may be completed in any sequence, but all must be finalised before Step 4 (Validation Approval) is granted. Readying the Programme Specification: The Proposers prepare the programme specification by setting up a draft on Course Builder and linking it with relevant module descriptors. New module content requires prior approval through standard or moderated processes. Resource Approval from Faculty/College: A signed statement from the Head of Faculty/College confirms resource availability. If resource limitations apply to certain intakes, this must be noted. Application for Validation Review: The Proposers apply to the Registrar's Office, providing materials at least two weeks before the planned validation date. This includes a completed application form, resource approval statement, preliminary panel arrangements, and any special requests. Obtaining Approval to Validate: The Dean of Academic Quality Enhancement reviews the application, generally within three working days, and may seek clarifications or further documentation. The possible outcomes are: Unconditional Approval: Proposers proceed with validation arrangements. Approval with Requirements: Proposers adjust based on specific requirements. Rejection: Fundamental issues require significant redevelopment; proposers may appeal. Conducting the Validation Review: A validation panel, appointed by the Faculty/College, reviews the programme through peer review and documentation provided a week in advance. The panel, chaired by a senior academic, provides a preliminary decision and actions for the proposers. A formal Validation Report summarises the panel's findings and recommendations. Finalising the Programme: Proposers implement required changes and submit an Implementation Report. The Registrar's Office then forwards the final reports to the Academic Council for formal validation. Upon approval, the programme status is set to "Approved", allowing learner registration.
Xamk	Process for the Xamk Pulse Open University of Applied Sciences (Unit responsible for the continuous education).	Production model of the Xamk Pulse Open University of Applied Sciences: IDEA CONCEPTUALISATION

	The creation of new courses goes by the annual plan of the education of Xamk. The course offering for next calendar year must be decided already in the previous spring. For example, if the decision is made in the spring 2024 usually the teachers have time to make the course only next spring 2025 because the working hours of 2024 have been decided earlier. The course will be in offering in autumn 2025. **The usual timeline for course creation is 6 months (more or less) but in the cases we can use teachers from outside the university, the timeline is only 2-3 months.** The challenge is that the same teachers are teaching in degrees so their schedules can be very full, and schedules are not always flexible.	Person with idea contacts the education coordinator at Xamk Pulse, who will record the idea. EVALUATION OF THE IDEA Pulse training coordinator together with a specialist/teacher/trainer/lecturer in charge of continuous learning evaluates the training idea in relation to existing trainings, pending ideas and Xamk's goals. The idea is placed in the right "product basket" (Open UAS courses, other courses, training for companies etc). DECISION ON IMPLEMENTATION Based on the proposal of the training coordinator, educational director and/or director of continuous learning makes the decision to add the course to the course offering of the educational department. PLANNING AND PREPARATION FOR IMPLEMENTATION Teacher prepares a course description on the Pulse template and submits it to the education coordinator of Pulse who creates the course in Peppi study registration system. The teacher writes the teaching and evaluation details for the course in Peppi. IMPLEMENTATION OF TRAINING The course is implemented by the teacher(s). The result is the number of credits achieved or turnover. EVALUATION AND DEVELOPMENT Courses will be evaluated as part of the training delivery. As a result of the evaluation, the course remains in the course offer, it is updated or withdrawn. The decisions are made in cooperation between training coordinator, educational director and director of continuous education. Support: foresight model of continuous education, legislation, goals of Xamk, statistics, roadmaps, budgets, action plans, strategy, product cards, teacher's guidelines, course quality guidelines and quality criteria for online delivery etc
HKA	Two different processes: Institute for Scientific Continuous Education (IWW), mostly targeted at working people. Centre of competence, mostly targeted at students. Length: if no ECTS are given, around **4 months.**	The process includes the following steps: Creation of concept Need analysis and target group definition Detailed elaboration (qualification objectives, defining target group, examination, concept, teachers, fees if applicable) Opinion of external expert Internal evaluation by the vice rector for study and teaching

	If it's an ECTS bearing courses, **up to 10 months** due to the need for senate approval.	Senate consideration (Examination regulations, admission regulations, fee regulations) Concrete organization of the offer (if necessary, public relations, registration procedures, time and space planning) Implementation of the offer
HIS	Process for all types of courses (no separation between regular courses and Micro-Credentials) **Length**: Normal timeline **is 10 months** before the course begins, but there are exceptions and it could be created faster	To be able to establish a course, the following values are required: course name, scope, level of progression, grading scale, entry requirements, subject, main field of study and disciplinary domain. Besides information about these values, a syllabus must contain information about objectives, course content, forms of teaching, examination, date for approval of the course and the date from when the course syllabus is valid, overlapping courses, course literature and other educational material. In addition to the information above a course syllabus also must contain an education and outreach text, search terms, free text words and area of education. **Administrative workflow** The Course Coordinator, in consultation with the Examiner, the Head of Subject (or equivalent) and Programme Coordinator (for programme courses) is responsible to design a course and a course syllabus. When designing a course, the Course Coordinator registers the information to the course syllabus directly in the syllabus database. There must be an English translation of the course syllabus for courses that are given in English. The translation should be registered in the syllabus database at the same time. When the Head of Subject has reviewed the course syllabus, he or she submits a proposal for the establishment of a new course and ratifying of course syllabus to the Educational Issues Officer. The Head of Subject then notifies the Educational Issues Officer at least two weeks before the meeting. The Educational Issues Officer then, if needed, has a dialogue with the Head of Subject and ensures that the course syllabus is complete and achieves the formal requirements. Then the Educational Issues Officer provides the course with a course code. The Head of Subject (or equivalent) presents the course syllabus that is a part of her or his subject in the Curriculum Committee Curriculum Committees - University of Skövde. If needed, Programme Coordinator or Course Coordinator can be invited to the meeting to present the matter.

		After the meeting in the Curriculum Committee it is the Educational Issues Officer's responsibility to ensure that the ratified course syllabus becomes completed in the syllabus database. The next step is for the Heads of Divisions decide which courses that are to be given. The form for a course instance is prepared by a course coordinator or teacher and is then signed by the Head of Division and sent to concerned Educational Issues Officer, the course is then prepared by admission so that students can apply for the course.
Ud'A	Not awarding Micro-Credentials at the moment – planning to do so	To create a Micro-Credential at the University G. d'Annunzio, a teaching staff member proposes the idea, outlining intended skills and audience. After departmental review, learning outcomes and course structure are defined, followed by content development. An Open Badge is then set up via Open Badge Factory to digitally certify achievements. Once approved, the programme is launched, participants enrol, complete assessments, and receive a digital badge through Open Badge Passport. Finally, feedback is gathered for improvements.
MUS	Not awarding Micro-Credentials at the moment – planning to do so	**Note:** *MUS does not award Micro-Credentials at the moment, so this is a theoretical approach that the university plans to implement:* 1. Proposal - A faculty member submits a proposal outlining the Micro-Credential's content, learning outcomes, and target audience. 2. Review - The proposal is reviewed by the relevant department and faculty committees. 3. Approval - If approved, it goes to the university's academic council for final approval. 4. Development - The faculty member develops the course content and assessment methods. 5. Quality Assurance - The course undergoes internal quality assurance review. 6. Delivery - The Micro-Credential is offered to students. 7. Evaluation - Post-delivery evaluation and potential refinement.

***Source**: survey among INGENIUM partners conducted in 2024*

Existing Quality Assurance and Accreditation systems

Robust and fit-for-purpose quality assurance is one of the building blocks of the European Approach to Micro-Credentials. It is particularly important in a transnational context where partners seek to build on each other's systems and processes.

The bodies responsible for approval and QA processes differ completely between partners. In some cases, responsibility is concentrated in a single body, while in others, it is divided among several bodies.

Table 3: Approval Bodies and QA Process

Partner	Bodies in charge of approval and QA process
UNIOVI	A panel of experts + a specific committee + a delegated committee of the main governing council + the external advisory committee. We are planning to improve the first step, including school/faculty representatives relevant to the Micro-Credential.
MTU	Academic Council and the Office of the Vice-President for Academic Affairs and Registrar
Xamk	Pulse training coordinators Lecturers in charge of continuous learning (in every educational department) Educational directors of the departments Director of continuous learning
HKA	HKA has two different "offices" to offer Micro-Credentials: One is located at the Institute for Scientific Continuing Education (the abbreviation we use is IWW), The other is located with our centre of competence and the target group is students, this offer combined in what is called the "Studium generale" is taken in part from our general course catalogue and in part by external lecturers who are paid to provide a specific course. The offers by IWW are mostly targeted at working life people. Mostly, the IWW creates the offers, but sometimes also a company approaches them to develop a targeted course for their employees. Whenever this happens, there is an additional stakeholder involved in the development. Vice-president for Academic Affairs: Internal evaluation External Experts: usually there are experts from the working life, other universities and the student body, they are doing the external evaluation The senate is also involved in the evaluation whenever we are awarding ECTS. Whenever a new offer is being created the respective institute or offices must be involved along the way. Additionally, the office of academic affairs is also involved.
HIS	The Curriculum Committees are responsible for the quality assurance of the education provided at the University. The Faculty Board has delegated certain responsibilities to the Curriculum Committees for education at first, second and third cycle.
Ud'A	Equivalent responsibilities in Ud'A, as reported by the university:

	At the University 'G. d'Annunzio', Chieti-Pescara, the approval process for a Micro-Credential involves several key bodies: Departmental Review: The initial proposal is evaluated by the relevant department to ensure alignment with academic objectives and standards. Academic Senate: This governing body assesses the proposal's academic rigour and it's fit within the university's educational framework. Quality Assurance Committee: This committee ensures that the Micro-Credential meets established quality standards and adheres to accreditation requirements. Administrative Council: This council reviews the proposal for resource allocation, financial viability, and compliance with institutional policies.
MUS	Equivalent responsibilities in MUS as reported by the university: - Department Committee - Initial review of the proposal - Faculty Council - Secondary review and recommendation - Academic Council - Final approval - Quality Assurance Unit - Ensures the Micro-Credential meets university standards - External Advisory Board - Could include industry experts to ensure relevance to job market needs

***Source**: survey among INGENIUM partners conducted in 2024*

Target audiences

The survey shows a high level of alignment regarding the target audiences of Micro-Credentials of INGENIUM partner universities. All the universities offering Micro-Credentials at the moment report that their current and prospective target audiences include current students, internal staff and lifelong learners in their different configurations. They also include INGENIUM students and staff from the whole alliance.

The only university out of the seven that filled out the survey that does not include these categories is Ud'A, which does not offer Micro-Credentials at the moment. Their answer is focused on INGENIUM students and degree students.

In the "other" section, some partners report interesting findings that can be useful to fine-tune the different approaches to reach common target audiences:

- In HKA, the target group generally defines which body is in charge of the creation of the Micro-Credentials. Micro-credentials for professionals and internal staff are provided by the IWW (a separate legal entity connected to the university), while students receive the specialised certificate courses
- In Xamk, staff can study at the Open University of Applied Sciences' courses for free.
- UNIOVI also points to people with fewer opportunities as one of the Micro-Credential target groups.

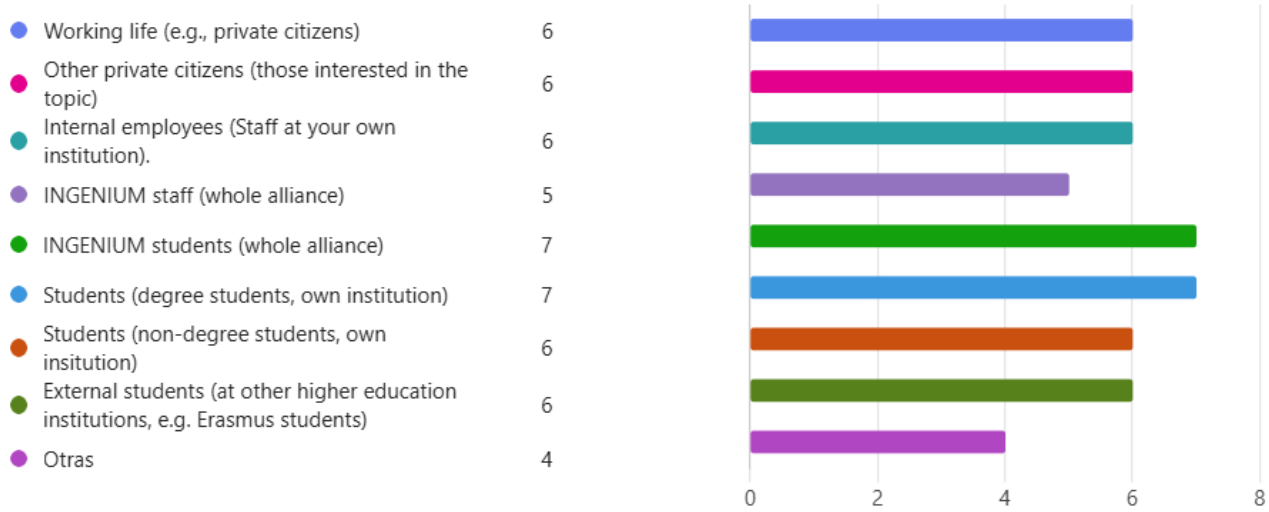

Figure 1: Current and potential target groups of Micro-Credentials in INGENIUM

***Source**: survey among INGENIUM partners conducted in 2024*

Involvement in the design and delivery of Micro-Credentials

The INGENIUM European University seeks to create joint Micro-Credentials of different kinds, including professors from different institutions who work together to design and deliver the academic content.

One of the simplest ways to boost this collaborative design and delivery from an administrative perspective is to have one university responsible for all administrative processes on behalf of the consortium involved in the Micro-Credential. For that to be feasible, universities need a certain degree of flexibility in aspects such as teaching involvement and payment to staff.

In order to have a clear picture of the existing possibilities within the INGENIUM Alliance, the survey asked institutions about their room to manoeuvre regarding the involvement of different staff profiles in the design and delivery of Micro-Credentials.

The results show that most partners can involve staff from outside the university in the teaching, either professors from other institutions (such as INGENIUM partners) or from industry in the teaching component. In Oviedo and HKA, they can even co-direct Micro-Credentials together with teaching staff.

Table 4: Design and Delivery of Micro-Credentials

Partner	Only university teaching staff are responsible for teaching and coordinating Micro-Credentials	Only university teaching staff are responsible for coordinating Micro-Credentials, but external professionals can teach	University teaching staff from other institutions can teach	External professionals can coordinate Micro-Credentials and teach
UNIOVI				Professionals can be co-directors with a teaching staff member as main responsible
MTU				
Xamk				
HKA				
HIS				
MUS				
Ud'A	Ud'A reported this part as not applicable since Micro-Credentials haven't yet been implemented			

***Source**: survey among INGENIUM partners conducted in 2024*

Staff Compensation Possibilities

Supporting the creation of joint Micro-Credentials at the INGENIUM level requires staff compensation mechanisms that offer the necessary flexibility to properly compensate staff for the extra effort which is needed to design, coordinate, and deliver innovative educational products of this kind.

The Council Recommendation on attractive and sustainable careers in higher education, approved by EU higher education ministers in November 2025, recognises the importance of fair compensation mechanisms for involvement in areas such as transnational cooperation and innovative teaching methods. Joint Micro-Credentials are a great example of that.

In order to properly design future compensation mechanisms, the survey asked institutions about their current compensation systems for staff involved in Micro-Credentials. A distinction that has appeared in other parts of the survey is also present here: the difference between those systems where Micro-Credentials follow processes that are identical or considerably similar to those for regular courses and those where Micro-Credentials follow a differentiated process. This duality is clearly reflected in the case of HKA, which has two systems: staff does not get any compensation for teaching Micro-Credentials to regular students as this is part of their regular teaching duties, but they can be paid extra to teach in IWW courses.

Of the universities that currently deliver Micro-Credentials., only UNIOVI reports offering differentiated compensation for coordination as a lump sum next to the payment for participation in the teaching. MUS also reports that this would be their preferred approach once their Micro-Credentials are in place.

These differences between coordination and teaching in terms of compensation can be particularly relevant in the case of joint Micro-Credentials, as coordination responsibilities are higher and more challenging than in the case of regular national Micro-Credentials. Having that possibility can facilitate a more effective distribution of tasks between partners.

Table 5: Staff Compensation

Partner	Based on the teaching hours, with a pre-defined amount per teaching hour	A lump sum for coordination/design of the Micro-Credential.	Based on the teaching hours and the number of learners.	No extra payment (part of their usual teaching duties)
UNIOVI				
MTU				
Xamk				
HKA				
HIS				
MUS				
Ud'A				

***Source**: survey among INGENIUM partners conducted in 2024*

Limitations for staff to participate in Micro-Credential creation and delivery

The survey asked partner institutions about the potential limitations their staff faces regarding their participation in Micro-Credentials. These limitations can be linked to a fixed maximum number of teaching hours that is easily covered by regular courses or to another type of restriction on the type of teaching. Three partners that currently offer Micro-Credentials reported different kinds of limitations. In the case of UNIOVI, this limitation comes in the form of a fixed limit of extra hours beyond regular teaching (75). However, that number does not include coordination.

HKA's limitations are also two-folded because of their two systems offering Micro-Credentials. By law, their teaching staff can only spend 20% of their weekly working time on additional secondary employment. That limitation comes into play for teaching at the IWW, because it is a separate legal entity. For courses that are offered by the Centre of Competence/Studium Generale, courses would have to be added to their regular working hours.

Xamk reports that teaching staff can automatically get 40 hours/1 ECTS for planning and 10 hours/ECTS/year for implementation. However, for tailor-made training for companies, the hours are defined based on the client's needs and capacity to pay, depending on the case.

MUS also shared the potential limitations they are considering once their Micro-Credentials are in place. They would likely include a maximum number of Micro-Credentials a staff member can teach per semester, ensure that involvement does not interfere with regular teaching duties, and require approval from heads of department for staff participation.

The shared limitations do not seem so insurmountable that they would prevent staff from partner universities to participate in joint Micro-Credentials.

Micro-Credential Fees

The different policies and practices to define the fees and Micro-Credentials are extremely relevant to INGENIUM for two reasons: Flexible processes to set up the fees are fundamental in the context of deep transnational collaboration, as they can facilitate the involvement of several partners and also provide opportunities to use INGENIUM Erasmus+ funds or other sources of funding to facilitate access.

As INGENIUM seeks to use Micro-Credentials to offer learning opportunities to learners from all backgrounds, it is important to ensure that Micro-Credentials are offered at affordable prices without requiring learners to bear all the financial burden.

Most partners report that Micro-Credentials, especially those targeting lifelong learners and collaborating with industry, do have a cost. HIS and HKA report a dual system: those for students are free, while those in collaboration with industry have a cost, which is normally paid by the company. Xamk reports that while Micro-Credentials have a cost, they are also funded by the state.

UNIOVI and MTU also report collaboration with governmental agencies. These programmes offer important possibilities to widen access to Micro-Credentials, and INGENIUM should explore whether existing national funding programmes could support the design and delivery of INGENIUM joint Micro-Credentials involving several partners.

Table 6: Micro-Credential Fees

Partner	UNIOVI	HKA	MTU	HIS	Xamk
Do Micro-Credentials generally have a cost for participants	Most of them do, although some are linked to funded programmes.	Micro-Credentials for students are free; those for working life usually cost.	Some programmes are funded by students/employer, others via government funding.	Free for EU students. Micro-Credentials in collaboration with industry have a cost paid by the company.	They cost, but they are supported by the state.
What is the process to define the fee for the participant?	The academic person responsible determines the cost, taking into account the actual costs (for the break-even number of students).	The Institute for Scientific Continuous education, for those that have a cost.	The University ultimately sets the price, but the market heavily influences this price. As some are government funded, the price is set/agreed with government agencies.	The vice chancellor decides the tuition fee, and the Head of the school decides on contract education.	Educational coordinators, based on max prices defined in state regulations.

***Source**: survey among INGENIUM partners conducted in 2024*

Strategic Possibilities

The final questions of the survey sought to identify the different collaboration possibilities to build INGENIUM Micro-Credentials, as well as gather existing practices and future ideas on how to promote INGENIUM Micro-Credentials to motivate staff to take part in them.

INGENIUM Collaboration: Possibilities and Barriers

INGENIUM Micro-Credentials will build on the existing strengths and possibilities provided by the 10 INGENIUM partners, ensuring that the right administrative processes can be used to support collaborative academic work.

The survey shows that there are many possibilities for administrative collaboration that can underpin the academic one. Most partners can, for instance, pay staff from other institutions to teach in Micro-Credentials accredited by their own institution (all partners that currently offer Micro-Credentials except MTU). This shows that having one institution accredit a Micro-Credential on behalf of the consortium, assuming the administrative responsibilities in accordance with a consortium agreement that follows the INGENIUM QA framework, can be one of the feasible options for making joint Micro-Credentials a reality.

The stackability of Micro-Credentials also appears to be perfectly feasible for INGENIUM partners, as most of them report that they can either recognise ECTS of Micro-Credentials awarded by other institutions and/or recognise the quality assurance arrangements of other INGENIUM institutions. All partners report being able to turn existing courses into Micro-Credentials, which could make this process more frequent in INGENIUM Institutions, in accordance with the alliance's commitments related to INGENIUM flexible education.

These findings show that even staff from partner universities that do not currently offer Micro-Credentials could contribute to the design and delivery of Micro-Credentials in other partner institutions. This would widen the pool of possible collaborators and ensure that all partners can contribute. INGENIUM partners should build on these possibilities while making their internal regulations as flexible as possible to facilitate intra-alliance collaboration in joint education.

Table 7: Potential Avenues for Collaboration

Partner	Pay staff from your institution to teach in an INGENIUM Micro-Credential accredited by another INGENIUM institution.	Pay external staff to teach an INGENIUM Micro-Credential accredited by your own institution.	Recognise the ECTS of an INGENIUM Micro-Credential from another institution in a degree programme.	Recognise the quality assurance process of a Micro-Credential done at other INGENIUM institution.	Turn an existing course/module into an INGENIUM Micro-Credential.
UNIOVI	May be possible if there is a funding source (such as INGENIUM funds)				
MTU	Contracts are rigid and negotiated at the national level, this can present challenges				
Xamk					
HKA	Payments to staff for complementary projects can only be done through the IWW				
HIS				There is national discussion now on changing this policy	
MUS	Not applicable (no Micro-Credentials at the moment)				
Ud'A					

***Source**: survey among INGENIUM partners conducted in 2024*

Promoting INGENIUM Micro-Credentials

INGENIUM partners were asked in the survey about their current practices to promote INGENIUM Micro-Credentials and the potential steps that can be taken at the institutional level to facilitate their creation.

Since the concept of INGENIUM Micro-Credentials has been in an inception phase until now, partners have not taken many measures to promote them yet. However, there have been initiatives that can serve as a base for future INGENIUM Micro-Credentials, such as the INGENIUM Challenge Labs 4 created by INGENIUM's work package 7.

INGENIUM has already started to launch initiatives to support the creation of Micro-Credentials, such as the Education Labs. This programme seeks to foster educational innovation, both in terms of teaching methods and formats. There will be three rounds of Education Labs calls in 2024, 2025 and 2026.

Partners see a lot of possibilities ahead of time in this regard. The use of INGENIUM funds to support the creation of Micro-Credentials, in line with INGENIUM's commitments, is mentioned by Xamk. HKA mentions that a common pool of external experts can be very beneficial for them. This option is particularly interesting as it offers the possibility to involve INGENIUM's associate partners. UNIOVI also refers to aligned quality assurance processes as a way to boost INGENIUM joint Micro-Credentials.

MUS also proposes a series of ideas that can be beneficial for them as they work to launch their own Micro-Credentials, benefitting from the momentum created by INGENIUM. They include incentive systems, integration in degree programmes, and pilot programmes for testing, among others.

Conclusions

The partner surveys have shown that the INGENIUM alliance is in a good position to create joint Micro-Credentials building on the existing systems of some of their partners, even if many of them are not in a position to act as accrediting institutions.

Flexible and supportive higher education legislation is more important than detailed regulations to facilitate the creation of Micro-Credentials. INGENIUM partners that have the most adequate frameworks for the creation of Micro-Credentials in accordance with the European Approach to Micro-Credentials.

Existing processes can allow INGENIUM to create new Micro-Credentials in a timeline of less than one academic year, allowing the alliance to reach its joint education targets. Partners could agree on going with one particular university as a leading institution for administrative purposes and define the details of the collaboration in the consortium agreement and complementary documents provided in the INGENIUM Quality Assurance framework.

Several INGENIUM universities are in a good position to involve staff from other universities in the teaching of future INGENIUM Micro-Credentials. This ensures that all partner universities could be involved in the teaching of INGENIUM Micro-Credentials through their staff members, regardless of their own regulatory frameworks. The only limitation to keep into account would be potential limitations on complementary work for public servants that may apply in some countries. The survey also shows that stackability and recognition of ECTS acquired through Micro-Credentials is feasible for most partners.

Most INGENIUM partners have room for manoeuvre in defining Micro-Credentials fees, as well as experience working with government programmes. This can open the door to Micro-Credentials that are made more affordable for learners through INGENIUM funds, as well as searching for new sources of funding that can boost outreach.

INGENIUM
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Part Two: Towards INGENIUM Micro-Credentials

Micro-Credentials as part of the INGENIUM Innovation strategy

The INGENIUM European University seeks to build on the strengths of its ten partner institutions to support institutional transformation across the "knowledge square" of education, research, innovation and service to society. The Mission Statement, Innovation Strategy, and work plan contain numerous references to the interaction between the different missions and how the INGENIUM alliance is committed to fostering synergies between them.

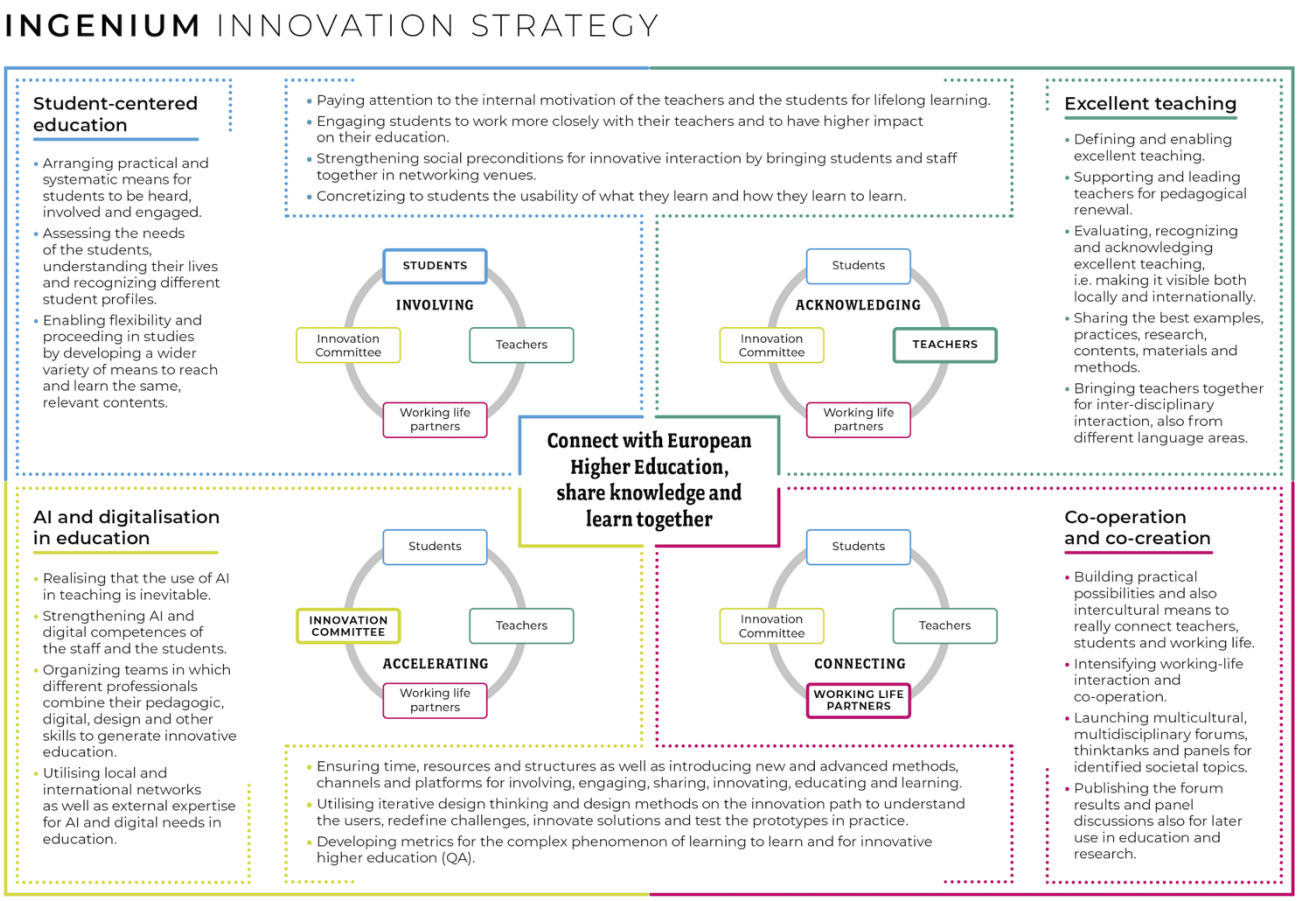

Figure 2: INGENIUM Innovation Strategy

Micro-Credentials interact with almost every element of INGENIUM's objectives and areas of work, in many cases with a synergistic dimension that links to different priority areas at the same time. However, it is possible to make a categorisation that helps the INGENIUM community and external stakeholders to fully understand this role, so they better use and benefit from this tool.

Micro-Credentials foster student-centred learning, flexible education pathways and innovative education

INGENIUM has at its core the "student-centred learning" paradigm, which is based on the idea that students should have a leading role in shaping their own learning experience. This concept has only become more relevant over the last few years, as

technological developments and societal challenges require citizens to be better prepared to navigate and uncertain world. In a world of disruption, interdisciplinary approaches are more important than ever, and no field of knowledge can operate in a silo. This is particularly relevant for INGENIUM as a European University which is committed to contributing to sustainable development, promoting inclusion and tackling global challenges through local action. INGENIUM is committed to transforming its educational provisions, **both in terms of structure and content, to ensure that society can not only cope but also thrive in these uncertain times.**

INGENIUM plans to integrate Micro-Credentials into larger degree programmes through its feature "Open Degrees", which will be created based on national programmes. Besides those specific programmes, **INGENIUM will also strive to ensure that the majority of the student population enrolled in regular degree programmes can also benefit from INGENIUM's joint Micro-Credential offe**r, allowing them to boost the international and interdisciplinary component of their learning experience. **In order to achieve this objective, partners should review their internal regulations and try to make them as flexible as possible within the limits of their national legislation.** This is one of the main ways to ensure that the "INGENIUM European campus" becomes a reality for the majority of students.

Besides, the alliance is also committed to using Micro-Credentials **as a way to foster educational innovation in line with its innovation in education strategy.** By bringing academics together, both between themselves and with other societal actors, such as industry, the public sector and civil society, new education content targeted to the needs of society can emerge in all kinds of learning formats and methodologies.

The topics and methodologies tested through Micro-Credentials can also pave the way **for future larger programmes and pedagogical formats that can be scaled up within INGENIUM.** INGENIUM provides a range of opportunities to support this innovation, such as the INGENIUM Staff Academies and the Joint Education Labs. These spaces should be used to encourage the creation of joint Micro-Credentials.

Micro-Credentials also play an important role in the creation of clear links between research and education. INGENIUM will seek to use the results of joint research groups and other research collaborations to turn research outputs into Micro-Credentials, benefiting from the administrative flexibility offered by this learning format.

Micro-Credentials as a tool to foster lifelong learning, the social dimension of higher education, and INGENIUM's collaboration with societal actors

The short, flexible and adaptable character of Micro-Credentials makes them the perfect instrument to provide lifelong learning opportunities suitable for a wide range of profiles. INGENIUM seeks to gradually build a joint Micro-Credentials offer that caters to the different kinds of needs within this broad lifelong learning

dimension. The variety of formats that the alliance is considering for its Micro-Credentials, explained in the dedicated section of this document, will facilitate the creation of targeted opportunities that match the different profiles.

INGENIUM Micro-Credentials will contribute to supporting the social dimension of higher education, bringing international learning opportunities to learners coming from disadvantaged backgrounds. For this type of programme, **the Alliance should seek to make opportunities fully free and to create targeted outreach and promotion strategies so learners who do not normally engage with higher education can learn about them and take part.** The provision of open educational resources accessible to the public will also be a key pillar of INGENIUM's social dimension objectives.

Micro-Credentials will also be one of the main instruments for INGENIUM's collaboration with industry and the world of work. Many INGENIUM partners have considerable experience in co-creating targeted learning opportunities for companies, as well as implementing governmental programmes targeting workers. INGENIUM can help boost Europe's competitiveness by building Micro-Credentials in areas of common interest and launching co-creation models that involve associate partners and other relevant industry representatives from the INGENIUM partners' ecosystem.

Besides the collaboration with the world of work, INGENIUM Micro-Credentials will also seek to provide broader international lifelong learning opportunities for all types of interested citizens, in line with INGENIUM's societal objectives. INGENIUM will also strive to design these opportunities collaboratively with societal actors such as public institutions and civil society.

What is an INGENIUM Micro-Credential?

As the Micro-Credential landscape is developing across Europe, with different national regulations and institutional practices, we have developed a common definition for INGENIUM Micro-Credentials. This definition is based on the Council of the European Union EU recommendation on Micro-Credentials (Council of the European Union, 2022) and draws upon the diverse regulatory environments of the INGENIUM European University partners. This definition is the starting point for the creation of INGENIUM Micro-Credentials as it provides a vision for the alliance to follow:

> *Micro-Credentials support professional development and employability. Micro-Credentials prove that a learner has completed the required learning outcomes to be certified in a specific topic, perhaps by completing courses or having their prior learning recognised. Micro-Credentials are focused learning experiences that certify specific skills or knowledge. They are not degree programmes. Micro-Credentials are not the same as courses; several courses can make up an individual Micro-Credential.*

INGENIUM Micro-Credentials are transparently produced, flexible, transferrable, and quality assured. They complement degree studies but are not necessarily part of any formal education provision. Some are targeted to meet the needs of working life and other lifelong learning goals. INGENIUM Micro-Credentials are open to all alliance members, though some may charge a fee for specific courses.

This definition was the starting point for developing the INGENIUM Micro-Credential Descriptor (Annex 2), which is a supporting document for teachers and educational content creators who are planning to create Micro-Credentials for the INGENIUM European University. The descriptor creates a common classification for Micro-Credentials and ensures that these are transparently produced and quality-assured, with a common look and feel. The Micro-Credential descriptor defines the difficulty of the learning provision in terms of EQF level and the learning workload in terms of ECTS. This ensures the transferability of the Micro-Credential on offer and makes it easier for learners to have a Micro-Credential issued by one INGENIUM partner to be accredited and recognised at their home institution. This is especially important when the creation of Micro-Credentials is still decentralised, and the burden of responsibility rests upon the associated partners. This is a solid foundation for us to build upon in the future and create INGENIUM Micro-Credentials that are pedagogically sound and desired by learners.

Modes of delivery

INGENIUM Micro-Credentials are characterised by their jointness, which means they are the product of **collaboration between INGENIUM institutions in either their design or their delivery, or both.** However, this jointness can take many forms. This part of the Micro-Credentials blueprint seeks to categorise INGENIUM Micro-Credentials that can help INGENIUM academics, educational content creators, and stakeholders conceptualise what they could develop and offer to the alliance. To that end, we have developed three types of Micro-Credentials that can be used as a guide without limiting the emergence of other joint models:

1. **Realigned Micro-Credential**
    - An existing institutional Micro-Credential is offered to the INGENIUM alliance after being realigned to INGENIUM quality assurance policies and approved by the innovation committee, potentially incorporating improvements thanks to the INGENIUM collaboration.
2. **Jointly Developed Micro-Credential**
    - Several experts from different partner institutions create a common curriculum for a Micro-Credential. This Micro-Credential might be taught jointly or in parallel by different INGENIUM partner institutions.
3. **Decentralised Micro-Credential**
    - A leading partner coordinates the micro-credential, which is comprised of educational content offered by different partner institutions.

Realigned Micro-Credential

A realigned Micro-Credential is developed based upon an institution's existing Micro-Credential, upscaled and adapted, before being offered to the INGENIUM alliance. Rather than opening up the entire course catalogue of learning provisions to the alliance, it is important to develop Micro-Credentials and courses based on the expertise available within the INGENIUM alliance, which include the Micro-Credential Descriptor (Annex 2), pedagogical sparring and feedback, and quality assurance. In this way, INGENIUM can offer a curated, high-quality selection of Micro-Credentials rather than an incredibly vast and uncountable section of variable-quality courses. With realigned micro-credentials, it is also recommended that they are updated using the expertise within the alliance, **this might include the Micro-Credential being taught with staff from several different INGENIUM institutions or making use of the research and teaching material available within the Alliance.**

For example, an existing Micro-Credential from Oviedo (Spain) that has received good student feedback and would benefit the needs of the INGENIUM alliance could be chosen to be developed into an INGENIUM Micro-Credential. First, the responsible academic or professional staff would submit a proposal to the Innovation Committee that they would like to offer the Micro-Credential to the INGENIUM alliance. Once approved, they would develop the course content, perhaps translate it into one or more of the alliance languages, and improve the pedagogical content in collaboration with others. The EQF level and ECTS workload will be elaborated in detail in the Micro-Credential Descriptor. It could be created in the common INGENIUM learning environment or the institution's learning environment. Once the Micro-Credential is finished, it will be sent to the Innovation Committee for peer review, and the content will be checked using the quality assurance process. Once all these steps are finished, they could open to the entire alliance and stakeholders.

Jointly-Developed Micro-Credential

A jointly developed Micro-Credential is characterised by its jointness, where two or more partners come together to develop a common curriculum utilising their diverse expertise. This might refer to a Micro-Credential offered by one institution and developed in collaboration with expertise available within a partner institution or a joint learning provision that two or more INGENIUM partner institutions accredit. These might be taught simultaneously, in parallel, or autonomously and offered continuously. A possibility here is producing an INGENIUM Micro-Credential as an open educational resource, allowing other institutions to develop and deploy it in their own contexts.

For example, the creation of a jointly developed Micro-Credential may happen through a Joint Educational Lab Project proposal (WP5.3). In this, academic teaching staff from MTU (Ireland) might submit a proposal for a Micro-Credential on Student Leadership that will be entirely created during the Education Lab

project. They have asked Xamk (Finland) to be a partner and have prepared the project application together. The Micro-Credential, in this case, is a one-time offering in its first iteration, which will be taught simultaneously and offered to all students within the alliance. They have decided to jointly accredit the Micro-Credential and have signed the relevant bilateral agreements. The Innovation Committee assesses the proposal and approves the funding, and the partners work on preparing the content. The academic content will be delivered on INGENIUM's LMS. Once the Micro-Credential is finished, it will be sent to the Innovation Committee for peer review, and the content will be checked using the quality assurance process. Once all these steps are finished, they could open to the entire alliance and stakeholders.

Decentralised Micro-Credential

The third model is a decentralised Micro-Credential, which embodies the spirit of a European university alliance. In this model, different parts of the Micro-Credential are taught by different institutions, with a leading partner or several coordinating the process.

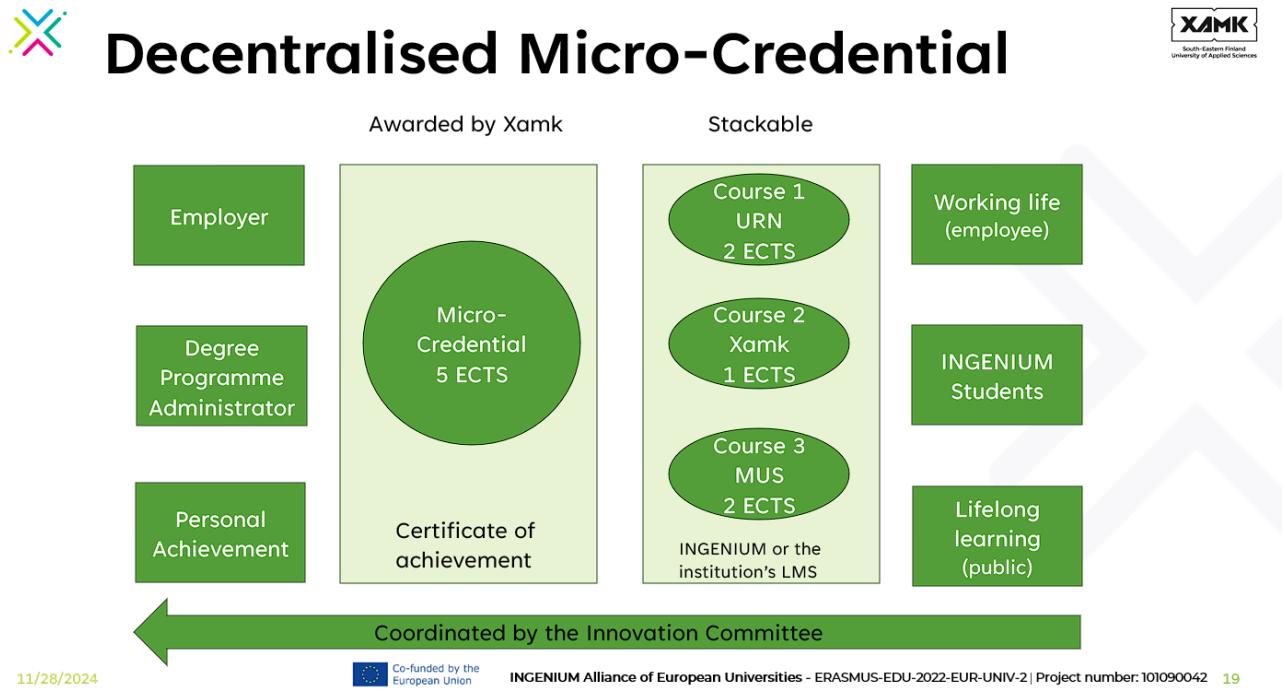

Figure 3. An Example of a Possible Decentralised Micro-Credential.

In this decentralised Micro-Credential example, Xamk Finland is the lead partner, and they take responsibility for coordinating the individual courses. This example includes courses from URN (France), Xamk (Finland), and the Medical University of Sofia, Bulgaria. Each course follows the institution's regular processes and is aligned with other courses in the Micro-Credential and INGENIUM's Quality assurance criteria.

Each course should be built and developed through cooperation with the other partners involved. Each course and the Micro-Credential are open to the entire alliance. The target audiences are determined at the beginning. They might include people in the working world, INGENIUM students, or the general public with an interest in the topic. Once each individual course is finished, they are awarded ETCS for that course.

Once the module is finished, the Micro-Credential is awarded.

Stacking Individual Micro-Credentials into Modules

While the first step is to create individual INGENIUM Micro-Credentials, we see a longer-term vision for our continuous learning provision: developing these smaller, focused offerings into Micro-Credential Modules. In other words, we want to eventually see the creation of larger learning units targeted at specific skill sets.

This is possible because INGENIUM Micro-Credentials are focused on specific skills or knowledge. Thus, they can be stacked into larger but still focused modules to meet the needs of working life, lifelong learning, or providing additional studies for students.

For example, a Micro-Credential about Language Inclusion in Multilingual Organizations could be expanded into an entire Diversity, Equity, and Inclusion in Modern Working Life module with different stackable Micro-Credentials up to 59 ECTS.

The Lifecycle of an INGENIUM Micro-Credential

The INGENIUM initiative adopts a comprehensive lifecycle approach to the development and implementation of Micro-Credentials, ensuring that educational offerings maintain high standards of quality and coherence across participating institutions. This structured process involves multiple stages—Design, Production, and Finalisation—each designed to enhance collaboration and leverage the unique strengths of the alliance's institutions. By aligning educational materials with established standards and procedures, INGENIUM not only fosters innovation but also guarantees that the diverse range of Micro-Credentials provided embodies a consistent quality and experience for learners. This commitment to excellence is central to the ethos of INGENIUM and serves as the backbone of its educational framework.

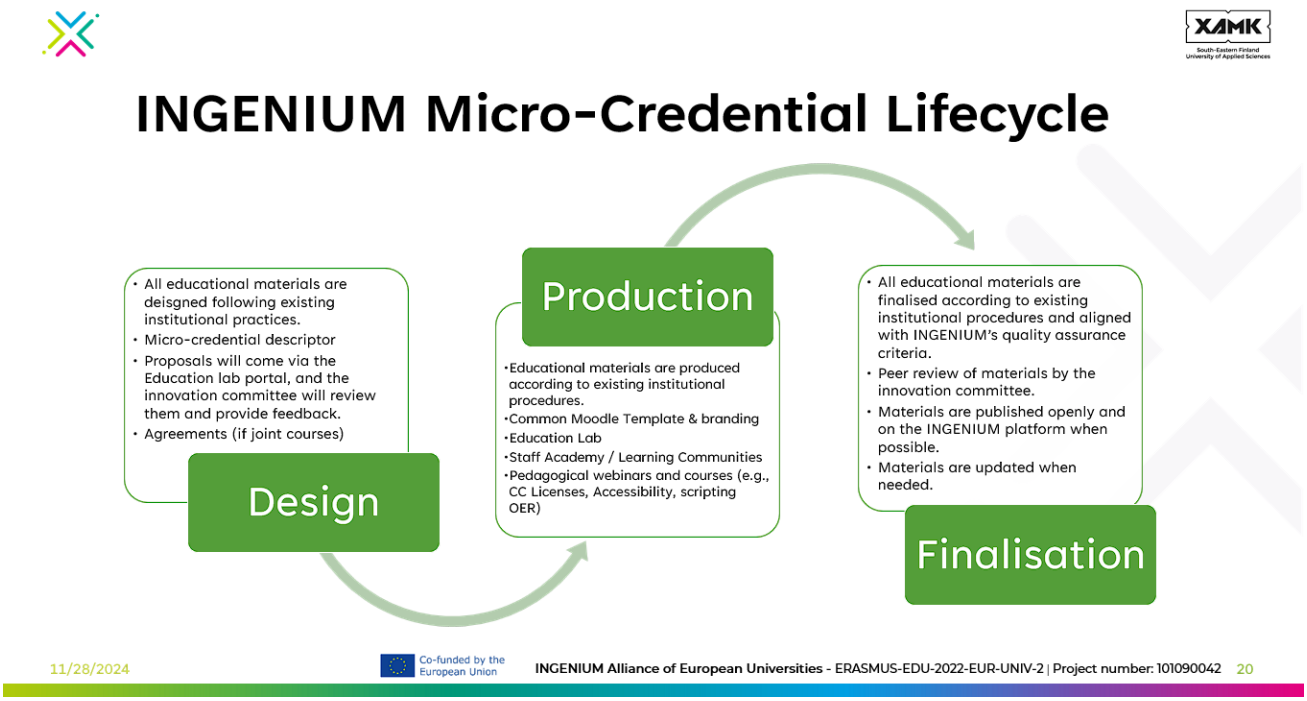

Figure 4. The Lifecycle of an INGENIUM Micro-Credential.

In the **Design** stage, all educational materials are created in alignment with existing institutional practices. We have drafted a Micro-Credential descriptor to ensure a common standard. While we value the diversity of educational offerings within the alliance, we feel it's important that there is a common look, feel, and quality to INGENIUM Micro-Credentials. Once the proposal is ready, it is submitted through the Education Lab portal or proposed straight to the INGENIUM innovation committee, who will review it and offer feedback to help develop the idea. And any necessary agreements are drafted, for example, if it will be jointly produced or accredited.

Next is the **Production** stage, where materials are developed according to existing institutional procedures. We trust in the individual institutions existing practices and their commitment to quality education. It's important, however, that we consider INGENIUM's quality assurance and policies during this stage. For example, we have developed common templates for Moodle, branding, and the Micro-Credential descriptor. In terms of support for content creation, we organise different pedagogical webinars on things like CC licences and good pedagogical practices. We will offer open courses for the joint educational platform on accessibility and creating educational content, for example. We also have the education lab, which is a sort of pedagogical innovative space where partners can create educational material together and receive funding for doing so. Through our staff academy programme, we are trying to create learning communities for idea sparring and peer support and review.

Then, in the **Finalisation** stage, the materials are reviewed to ensure alignment with INGENIUM's standards. The Innovation Committee reviews the Micro-Credential as a whole and ensures all the right boxes are ticked. In addition, this review process will include subject experts and students from the target group. The involvement of students is crucial. Once approved, the Micro-Credential is published on the INGENIUM LMS, with periodic updates as needed. A feedback section will be developed to add to the INGENIUM LMS so that it is possible to gather feedback from students on how the Micro-Credential was implemented and taught, and this feedback will be used to develop the content in the future. This will form a compulsory part of the LMS template for all content offered on the INGENIUM platform.

This lifecycle approach to Micro-Credentials helps maintain high quality and consistency across INGENIUM's educational offerings. In 2025, the mechanisms mentioned here will be further developed to encourage and support the development of Micro-Credentials. It is important to produce practical step-by-step instructions for this process and guidance on how to complete the necessary documentation, such as the Micro-Credential Descriptor.

Quality assurance of Micro-Credentials

The INGENIUM Quality Assurance Framework for collaborative delivery of academic programmes is comprehensive. It is intended to support collaborative delivery and joint awarding of full Bachelor and Master awards by consortiums of INGENIUM partners. However, the Framework is not limited to such large-scale awards. The Innovation Committee coordinates the criteria and quality assessment of learning materials and pedagogical solutions of Micro-Credentials in line with Alliance Quality Assurance.

It is understood that the scale of the quality assurance processes for collaborative delivery of Micro-Credentials is likely to be several orders of magnitude less in terms of detail, due diligence, and financial arrangements, simply due to the much smaller quantity of content and shorter duration. However, the same QA principles will apply. This is supported by relevant EU literature which urges providers of Micro-Credentials to ensure that these awards follow the Bologna process as well as EHEA guidelines for QA. Therefore, the INGENIUM QA Framework is applicable as a framework for the joint provision and award of Micro-Credentials in the INGENIUM Alliance. Furthermore, the Micro-Credentials are created based on **trust in the pedagogical excellence of each institution** and their own **existing policies and practices**, which are **complemented by INGENIUM good practices**. For example,

- University where the Micro-Credential will be accredited takes the lead. The institutional procedure is followed.
    - In the case of a Jointly-Delivered Micro-Credentials, all relevant institutional procedures and policies must be followed, and the

burden of responsibility rests on the institutions where the Micro-Credentials are accredited.

- Support by the Work package 5 Innovative Pedagogy and Lifelong Learning: INGENIUM peer review with student participation and subject experts nominated on a case-by-case basis.
- Guidance documents from Work Package 2 – INGENIUM QA framework. They will serve as a base for a "mini consortium agreement".

The Micro-Credential Descriptor (Annex 2) provides information about the Micro-Credential workload (ECTS), difficulty (EFQ), expected learning outcomes, and prior knowledge needed by both the students and the institution accrediting the learning. In this way, all Micro-Credentials will be produced transparently, with a similar look and feel, and will be recognised as high-quality learning experiences by academic institutions and working life alike.

Peer Review Practices

The Innovation Committee serves as a pedagogical oversight board and working group. They are the first point of contact for everything related to Micro-Credential. All Micro-Credentials will first be proposed to the Innovation Committee for approval before work begins on creating learning content; they will offer peer feedback already during the proposal stage, which will help the educational content creators produce the learning material. Once the proposal is approved, the creation of the Micro-Credential content can be started. Before the Micro-Credential is offered to students or learners, it must be reviewed in its entirety by the Innovation Committee again. This review process should also provide constructive feedback and the educational content creators should be ready to make changes to their material based on this feedback. Once the peer review process is completed and all parties are satisfied, the Micro-Credential can then be opened up to participants.

The Innovation Committee includes **Innovation Leaders who are persons responsible or well-known experts for pedagogical development in their universities.** However, for the purposes of facilitating an effective and comprehensive **peer review** of a Micro-Credential, the **Innovation Committee** will also invite **subject experts** (1-2) to review the learning provision and (2-4) **students** from the target group to review the learning journey. The involvement of both subject experts and students helps to ensure that all aspects of the learning material are viewed from the perspective of academic integrity, accuracy and clarity of material, pedagogical delivery, and engaging delivery.

Incentive systems and roll-out strategy

To facilitate the creation of Micro-Credentials, it is important to allocate sufficient time and resources to Micro-Credential creators to ensure that the content is produced to a high quality. Furthermore, there must be formal mechanisms decided to facilitate cooperation and networking, along with monetary support for

ideation, creation, and review, as well as to fund the cost of relevant materials, licenses, or travel. To that end, the INGENIUM European University Alliance has the following measures within its ecosystem that can be leveraged to support the creation of Micro-Credentials and also act as incentive systems. These include:

1. Education Lab
    a. Joint Education Lab Projects
    b. Best New Media Teaching Project
2. Staff Academy
    a. Ten Days of INGENIUM
    b. Webinars
3. Cooperation with Research Groups
4. Innovation, Teaching, and Learning Conference

During the first funding period, the INGENIUM European University will organise seven **Staff Academy workshops** to share, transfer, and showcase selected innovative pedagogical methodologies from the partner universities. The programme of the Staff Academy workshops will be based on proposals submitted by INGENIUM universities' staff who are already implementing innovative learning methodologies or wish to develop them in cooperation with the INGENIUM partners.

As part of Staff Academy networking, INGENIUM organises six **Staff Academy Webinars** annually to share excellent pedagogical practices within the INGENIUM Alliance and beyond. Each webinar includes one to three short case presentations on cutting-edge teaching practices, followed by a lively discussion and Q&A session.

The Education Lab is any space where teaching and learning can be innovated or developed. It is an experimental, decentralised teaching and learning hub that utilises diverse expertise, educational spaces and facilities across the INGENIUM European University. Its primary goal is to encourage **collaboration** and **knowledge-sharing** to develop **innovative teaching methodologies** and products with real-world applications.

The **Joint Education Lab Projects** Call brings together experts from different fields to tackle the common challenges of educators and society. The initiative aims to support innovative teaching and learning and encourage cooperation between INGENIUM's universities. A Joint Education Lab project involves collaboration between teaching personnel and other experts to develop, share or refresh innovative teaching methods, pedagogies or products for the European University. These projects could be based on co-teaching or interdisciplinary collaboration to solve novel problems, develop teaching methods, update or translate courses, or plan and create new Micro-Credentials or courses.

The Competition for the Best New Media Teaching Project will be held once in 2025 and has two categories: Innovation in Participatory Learning and the Young Innovators Award. These could be one option to develop innovative Micro-Credentials in new media. Only one proposal will be selected from each category. The winners will be offered the opportunity to present their proposal at the 10 Days of INGENIUM event in February 2026. The Best New Media Teaching Project categories:

- **Innovations in Participatory Learning**: The Innovations in Participatory Learning awards will be given to designers of new learning environments, including major adaptations of existing gaming models, world-building, social networking, or other virtual environments, and/or the development of entirely new programmes.
- **Young Innovators Award**: These awards will be given to forward-thinking, conceptually exciting, and original participatory learning projects in which young innovators (age 18-25) can bring their most visionary ideas from the "garage" stage to implementation.

INGENIUM allocates specific funds through competitive application processes to encourage the creation and growth of **joint research groups**. This opportunity is available to groups with members from at least three INGENIUM partner institutions and focuses on funding for mobility and potentially other purposes. The research groups aim for sustained research collaboration, clearly defined research goals, resource integration, and strategies for additional funding acquisition. **Leveraging the connections between these research groups and supporting them in creating Micro-Credentials based on the latest research data and innovative research would foster deeper connections between research and education.**

One avenue being explored is organising **a final conference on Innovation, Teaching, and Learning** in Finland in August 2026. This conference would be open to all European University Alliances, facilitating cooperation and knowledge between them and sharing best practices on Micro-Credential development and accreditation. The conference's themes would touch on all aspects of Work Package 5 and encourage collaboration to develop new Micro-Credentials and intranational cooperation beyond the end of this project.

The burgeoning INGENIUM ecosystem is ripe with possibilities for encouraging and supporting the creation of Micro-Credentials.

The INGENIUM Micro-Credentials platform

INGENIUM is committed to the openness of its learning provisions and recommends that high-quality learning material and educational resources are shared openly within the alliance and beyond. To that end, INGENIUM has developed the Open Educational Resources platform and the Micro-Credentials e-

Learning platform, which serve different functions in facilitating learning and knowledge transfer.

The open educational resources will be hosted on INGENIUM's Open Data Repository (https://opendata.ingenium-university.eu/). In this way, INGENIUM is honouring its commitment to making educational resources open to anyone interested, such as learners, teachers, educational institutions, and the general public. The platform has extensive metadata options to ensure the OER is easily indexable by search engines and filterable by subject, institution, and keywords.

All material should be openly available, and we recommend that all OER be licenced using Creative Commons licences, under Creative Commons Attribution 4.0 or the Creative Commons "Attribution-ShareAlike 4.0" license. Both of these ensure the creator's rights and that other users may freely use it as part of their learning, teaching and educational needs. They also allow others to make modifications based on the material you have created. This guarantees the continuity of the resource and ensures others can maintain the material. However, the "NoDerivatives" and "Noncommericaluse" licenses are not recommended with open educational resources as they do not allow updates, derivative works, or translations into other languages by users other than the original creator.

The Micro-Credentials are, when possible, delivered using the INGENIUM e-Learning Platform. This platform uses Moodle as its Learning Management System (LMS), offering an intuitive, flexible, and accessible solution for managing academic activities. This platform accommodates various teaching methods, including instructor-led courses, self-paced learning modules, and blended learning approaches that integrate traditional face-to-face instruction with online resources. The LMS facilitates learning and enhances the learning experience. It accommodates multiple pedagogical approaches, allowing courses to be instructor-led, autonomous or self-paced, blended, or entirely online. Access to the courses can be customised to meet specific needs, ranging from completely open to strictly restricted for certain participants, employing the SAML2 protocol for secure access. User authentication is done through the accounts of participating universities, ensuring security and privacy. The platform encourages collaboration and teamwork, fostering the development of communities within courses. The user-friendly design ensures familiarity for users from partner institutions, and there is an opportunity to reuse existing educational content within the INGENIUM e-Learning Platform when applicable.

Furthermore, the platform includes accessibility options and adheres to stringent security and backup policies. Thus, it is equipped with tools that enhance accessibility for all users, ensuring that courses are inclusive and available to everyone, regardless of individual needs. It also features customisable grade management capabilities, allowing educators to tailor assessment methods to fit their pedagogical approaches. Overall, the INGENIUM e-Learning Platform represents a comprehensive and adaptive solution for Micro-Credentials,

facilitating a diverse array of learning experiences while prioritising user accessibility and engagement. The INGENIUM e-Learning Platform is now fully operational and can be found at https://elearn.ingenium-university.eu/.

Conclusions

The initial groundwork has been done within the INGENIUM European University Alliance to explore the possibility of creating Joint INGENIUM Micro-Credentials. The survey revealed that there are vastly divergent practices and national policy environments; however, as INGENIUM, we see these different environments as possibilities and opportunities to reap the rewards of this diversity. INGENIUM supports the creation of joint Micro-Credentials by trusting in the existing institutional good practices and following the different regulatory frameworks of our partner institutions. With the different types of Micro-Credentials, INGENIUM offers different possibilities for joint cooperation; it is vital that any Micro-Credential offered by the Alliance utilise the expertise of more than one of the INGENIUM partners. INGENIUM Micro-Credentials are aligned with the Innovation Strategy.

INGENIUM Micro-Credentials are stronger from this joint collaboration. Peer review and learner feedback are crucial to the Micro-Credential lifecycle, as open educational resources and learning offerings must continue to be developed with the latest knowledge and improved based on participant feedback. In this way, INGENIUM Micro-Credentials can flexibly respond to the needs of working life and offer meaningful learning experiences. INGENIUM's learning and teaching ecosystem has several mechanisms to facilitate the creation of Micro-Credentials, such as the Joint Education Lab Projects, Joint Research Groups, and Staff Academy. The INGENIUM LMS provides a platform to deliver the Micro-Credentials. In 2025, the first joint INGENIUM Micro-Credentials will be created and offered to the Alliance. Some open questions and points remain to be considered, for example, there is a need for:

1. **Terminology Clarification**:
   Micro-Credentials are often confused with continuous learning provisions, such as lifelong learning or open university courses. Some equate a Micro-Credential with a single course, while others see Micro-Credentials as being larger learning entities up to 59 ECTS.
2. **Inclusion**:
   Micro-Credentials offered by public organisations, such as universities, should not charge fees for participants as this can contribute to unequal access to education. Micro-credentials are conceptualised as one possible way of maintaining your professional competences or retraining to meet the needs of the labour market. If Micro-Credentials are funded, then this might exclude those who would benefit from them the most, such as those not in employment or education at the moment. Therefore, solving the funding issue is crucial not only for the financial sustainability of the institution but also for participation.

3. **Working life and RDI cooperation**:
   Micro-Credentials should respond to the needs of working life and society; as such, they cannot be static entities and must be able to be updated quickly and flexibly. There is real potential for joint creation with industry or working life to ensure Micro-Credentials stay relevant and useful for the learner and for society at large.

4. **Peer Review and Quality Assurance**:
   The creation of a Micro-Credential should be a systematic process. It is beneficial to create different types of production or lifecycle models to ensure a standard look and feel to Micro-Credentials issued by an alliance.

   There is strength in drawing upon the diversity of different practices and knowledge in European University Alliances, but there is also a need to pull these together and create a common model that creates familiar learning entities for learners. With production models, quality assurance is a core part of the process, as there are regular checkpoints, common templates, and documents.

   Using ECTS and EQF ensures commonality and transferability in learning offerings, facilitating accreditation by other institutions in the alliance and beyond. Further, the peer evaluation of Micro-Credentials is easier if the structure is standardised, as the pedagogical delivery can be clearly assessed by the persons responsible for Micro-Credentials, leaving space for subject experts to evaluate the content.

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Annex 1 Micro-Credential Descriptor

Overview

This document opens the concept of Micro-Credentials and provides a common definition to be used by the alliance universities. It is intended for teachers and those who are planning to make courses or offer Micro-Credentials within the INGENIUM European University. As the Micro-Credential landscape is developing across Europe, flexibility and simplicity has been a key design principle in creating this descriptor.

The Micro-Credential descriptor supports the design and implementation of Micro-Credentials in the INGENIUM European Universities (and serves as the basics for the Micro-Credential certificate). Micro-Credential is a record of the learning outcomes that a learner has acquired following a small volume of learning which has been assessed against transparent and clearly defined criteria (EU Commission 2022). The intention of this descriptor is to ensure that the learner understands the intended aim of this Micro-Credential. As such, the descriptor aims to convey comfort that the Micro- Credential is well thought out, suitable to their needs and reflective of a solid quality assessment (QA) process. With regard to QA, we advise that every partner university follows the EU recommendation (A European Approach to Micro-Credentials) and their own national guidelines for learning. Further, learners do not need to know the details of such a mechanism. However, clarity regarding the issuer, the learner workload, the assessment involved all combine to convey a sense of QA which may be more important.

Specifically:

- Workload is captured in terms of ECTS and difficulty re-lates to European Quality Framework (EQF).
- Assessment details are included as they are often a key learner concern. Only high-level detail is required.
- There is an emphasis on the nature of the QA process underpinning the Micro-Credential.
- Optional fields are included to account for individual provider needs.

Identification of the learner	(For awarding body(ies)
Title	A Short Meaningful Name – Max 50 Characters
Brief Description	A 2-3 sentence description of the content covered in this Micro-Credential
Country(ies)/Region(s) of the issuer	Which country is this awarding body based in?

Type of credential	• ECTS awarded (learning is evidenced and assessed) • No ECTS awarded (learning must still be evidenced)
EQF level	Please link the programme's content to the corresponding level of the European Framework of Qualifications (EFQ). - EQF 5 - EQF 6 - EQF 7 - EQF 8
Learner Workload	Select the approximate number of hours required to complete this learning: • 1 ECTS Equivalent – Approx 25 Hours • 2 ECTS Equivalent – Approx 50 Hours • 3 ECTS Equivalent – Approx 75 Hours • 4 ECTS Equivalent – Approx 100 Hours • 5 ECTS Equivalent – Approx 125 Hours • Other – Please State
Delivery Details	Describe the delivery details relating to this micro credential: • Date and Time • Instructor • Form of participation in the learning activity
Key Resources	Please list at least 3-4 resources (e.g. books, journals, websites) that may be useful in undertaking this micro credential.
Type of Assessment	Provide a summary of any expected assessments to be undertaken in completing this micro credential. For example, • Assessment 1 – Learning diary 1000 words (50%) • Assessment 2 – Essay 1000 words (50%)
Key Contact Details	Provide the contact details for extra information relating to this micro credential. • Joe.Bloggs@Uni.EU • Phone +01 23 456789
Other relevant information (provider specific)	
Learning Outcomes	Upon completing this programme learners will have: • Learning Outcome 1 • Learning Outcome 2 • Learning Outcome 3
Learner Profile	A short description of the typical learner to whom this micro credential may be relevant
Awarding body(ies)	What is the awarding body (or bodies) of this micro credential?
Date of issuing	

Optional elements (when relevant)

Prerequisites to enrol	**Explain whether there are any requirements to enrol in the Micro-Credential or if it is open to everyone.**
Linked Learning	If this course is linked to any other learning programme or course, please provide details here: • E.g., Bachelor of Arts in Music – Guitar History
Integration and stackability options	Explain whether this Micro-Credential is a stand-alone element or if it is connected to a larger program of framework. - Stand-alone - Stackable towards another credential - Relevant for a degree
Supervision and identity verification during assessment	Explain how supervision and identify verification is implemented if required

Annex 2 Accessibility of Educational Resources and Learning Platform

This document is based on European accessibility act - Employment, Social Affairs & Inclusion - European Commission (europa.eu) and Directive - 2019/882 - EN - EUR-Lex (europa.eu).

Accessibility promotes and enables equity. The content of course platforms must be easily accessible for students. The teacher can make a significant contribution to accessibility by paying attention to the structure of the learning platform (INGENIUM Moodle), the clarity of the language used on the platform, and providing the educational resources in different formats. This document sets out recommendations that can be followed to make the learning platform more accessible. You should also follow the Universal Design for Learning guidelines: https://udlguidelines.cast.org/.

STRUCTURE

Pay particular attention to the structure of the course and clarity of the course materials. Carefully consider all the material you use in your teaching and to support learning. The course content and educational resources should be relevant, understandable, and open (when possible). Explain the purpose of the materials and activities on the platform so that the student understands what the different content is for.

HEADINGS AND TEXTS

1. Use descriptive and informative headings Headings structure the text, and when enough headings are used, the text is easier to understand.	
2. Format titles with the text editor's title style Screen readers recognize headings by their heading style, so simply increasing the font size or making it bold is not enough.	
3. Use lists Lists make it easier to read the content. However, lists that are too long are cumbersome and difficult to understand.	
4. Keep the content on the homepage of the course platform concise and distribute content to sub-pages Excessively long texts on the home page of the course platform make it difficult to see the page at a glance. Use concise and descriptive texts on the homepage and divide long text blocks into sub-pages created with the page tool.	

5. Check the content using the accessibility checker button in the editor Always check the text you have created with Moodle's text editor using the accessibility checker button in the editor. You will receive suggestions for corrections if there is any accessibility-related content that needs to be corrected.	

HIGHLIGHTING AND COLOURS

1. Avoid unnecessary styling Use the default font. If you want to change the font, use the same font systematically across the whole platform. Use caution when changing font size and colour.	
2. Avoid underlining and using blue in the text Underlining and blue colour indicates a link. To avoid misunderstandings, it is not recommended to use them when the text is not a link.	
3. Use bold and italics for emphasis The screen reader recognizes bold and italics and can highlight text correctly.	
4. Avoid using only colour or shape to convey essential information Information communicated by colour or shape alone is not conveyed to the screen reader or colour-blind student. For example, information about an error in the text may not be conveyed to the student if the error is expressed simply by changing the text of the incorrect passage to red.	
5. Pay attention to the contrast between text and background Colours in the text and background that are too close together can make the text difficult to distinguish and read.	

LINKS

1. Use descriptive text in link names The purpose of the link should be clear from the link text or its context. The link should also describe the destination that the user will reach by following the link.	
2. Set links to open in the same browser window It is recommended that links are configured to open in the same browser window. If it is appropriate or clearer that the link opens in a new window, it is useful to inform the user of the opening in a new window, either in the link text or in the link description.	
3. When a link takes you to a file, indicate this in the link text or description When a link opens a file, such as a pdf or word document, instead of a web page, it is a good idea to mention this in the link text or description.	

TABLES

1. Use tables judiciously Tables are difficult to use on screen readers and mobile devices and should therefore be used judiciously only in situations where it is not possible or reasonable to present the information in any other way.	
2. Add a title Give the table a title. Also use row and column headings. Moodle's "create table" feature allows you to give the table a title, and selecting "Both" from the "Titles" option in the table settings will turn the cells in the top row of the table and the first cell in each row into title cells. Use these cells to enter the titles of the rows and columns of the table.	
3. Avoid combining cells It is also a good idea to avoid empty rows and cells.	
4. Check the table with the accessibility checker – button The Accessibility checker button can also check for accessibility problems with tables.	

IMAGES

1. Add a description to images When you add a picture, fill in the field "Describe this image for someone who cannot see it". The text will be displayed in the screen reader. If the image is a decoration, you can use the "This image is decorative only" option. In this case, the screen reader can ignore the image.	
2. Add a text alternative to images When an image shows a diagram or contains other essential information that needs further explanation, a text alternative must be created to show the information contained in the image. The textual equivalent can be linked to the image, for example by linking a broader description in the same context as the image, or by stating under what heading on the same page the broader description can be found.	

VIDEOS

Add subtitles or text alternative to videos If the video is used for a long period of time, i.e. you use the same video for several years or with different groups, the video must have subtitles, or the course platform must provide a text alternative to the video. You can add a text alternative to the video in the same way as you would to the images, i.e. by linking the text alternative to the video or by telling under which title the text alternative can be found on the course platform.	

FILES

Check the accessibility of Word and PowerPoint files Microsoft Office programs include a tool to check the accessibility of documents. The Check Accessibility button can be found on the Review tab or in the File menu, under the "Check for Issues" button in the Info section.	

THIRD PARTY CONTENT AND SERVICES

When using third-party learning materials or digital services such as YouTube videos, podcasts, articles or digital tools, it is recommended to also assess the accessibility. Content produced by a third party is not directly covered by the law, but when using third party services, it is always a good idea to review the accessibility of the service or content and check whether the service provider has an accessibility statement or other accessibility documentation.

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Annex 3 Open Educational Resources Quality Criteria

"Open Educational Resources (OER) are learning, teaching and research materials in any format or medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others." Open Educational Resources | UNESCO

Quality Open Educational Resources

The quality criteria are presented in the form of a checklist to help authors create open educational resources. The quality criteria will:

- help authors create resources of a higher quality from the perspective of openness;
- help users in quality assessment as they are reviewing open educational resources;
- give organisations a tool they can use for facilitating the preparation and evaluation of open educational resources as part of other guidelines and instructions provided by the organisation.

The criteria relate to:

- **Content**. The content of high-quality open educational resources is reliable.
- **Learning and teaching methods**. High-quality open educational resources enable the use of diverse ways to learn and teach.
- **Usability and accessibility**. High-quality open educational resources are as easy to use as possible for everyone and in any situation.
- **Findability and sharing**. High-quality open educational resources are easy to find, and the users know under which terms and conditions they can share them (e.g., copyrights and CC licenses).
- **Lifecycle and adaptability**. High-quality open educational resources are maintained and updated on a regular basis. In addition, other open resources and co-development practices are used in the production of the materials.

The checklist are based on the international TIPS Quality Assurance Framework for open educational resources.

Content

Quality Dimensions Educational resources are based on research-based knowledge and meet the sector-specific quality criteria.	
Copyrights and licences have been taken into account when preparing the educational resources.	

The sources used have been mentioned in the educational resources.	
The educational resources have been peer reviewed.	

Learning and teaching methods

Quality Dimensions The educational resources describe their learning objectives.	
The educational resources and their components can be used in a variety of teaching situations and educational resources	

Usability and accessibility

Quality Dimensions The educational resources are accessible	
The educational resources contain necessary information for using them	
The educational resources have been adapted to meet the needs of the target groups	

Findability and sharing

Quality Dimensions The educational resources have been published on an open platform that enables findability of the educational resources.	
The educational resources describe how they can be linked to existing study modules or curricula.	
The educational resources and their metadata have a CC licence logo.	

Lifecycle and adaptability

Quality Dimensions The authors of the contents used in the educational resources are clearly indicated and separated from each other.	
The educational resources indicate the update cycle or a time when the content is no longer up to date or should be checked.	

Licensing INGENIUM Open Educational Resources

All open education resources produced for INGENIUM should be licensed under CC BY NC SA 4.0 Creative Commons Attribution Non- Commercial ShareAlike 4.0. This means that others may copy and redistribute the material in any medium or format and remix, transform, and build upon the material. You may not use material for commercial use and you have to name the author of the used material and share your remixed material under the same license. For more information you can visit the Creative Commons homepage or watch this video provided by MTU on Licensing Your Reusable Learning Resource.

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