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# IMPLEMENTING MICRO-CREDENTIALS: GOOD PRACTICE BLUEPRINT

## case UKRAINE

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## List of Abbreviations

ECTS - European Credit Transfer and Accumulation System

HEI - Higher education institution

MC - Micro-credential

MOOC - Massive open online course

TPD - Teacher professional development



## 1. Purpose and Scope of the Blueprint

This Blueprint has been developed as guidance for relevant Ukrainian stakeholders engaged in the field of micro-credentials. It systematizes the experience of developing and delivering micro-credentials for teacher professional development (TPD) obtained through the implementation of the Erasmus+ project **MOOC-based Micro-credentials for Teacher Professional Development (CRED4TEACH, [www.cred4teach.eu](http://www.cred4teach.eu))**.

In doing so, the Blueprint outlines principles for the design, assessment, certification, and recognition of micro-credentials that were validated during the project. Its methodological foundations are therefore based on the piloting of micro-credentials across participating Ukrainian higher education institutions (HEIs). This includes participants' feedback on the effectiveness and impact of the developed micro-credentials, observations and interviews with micro-credential instructors at participating Ukrainian HEIs and the National Qualifications Agency of Ukraine, and a detailed analysis of relevant institutional and national documents.

The purpose of this Blueprint is to promote good practices in the implementation of micro-credentials developed through the CRED4TEACH project. A wide range of educational and non-educational stakeholders could benefit from this Blueprint, in particular:

- higher education institutions: They receive a model for developing and implementing micro-credentials using an MOOC-based pedagogical approach, consistent with the National Qualifications Framework and the requirements of the National Qualification Agency;
- employers: The Blueprint supports employers in identifying and realising the added value of micro-credentials as an innovative tool for rapid staff development, while opening opportunities to cooperate with HEIs in shaping the content of micro-credentials in accordance with labour market needs;
- qualification and quality assurance agencies: They receive ideas for developing industry recommendations for the implementation of micro-credentials, aligning educational outcomes with professional standards, and supporting professional mobility and the recognition of qualifications;
- policymakers: They gain input for formulating policies in the field of continuing education, the harmonisation of micro-credentials with European recommendations, and the national qualifications framework.



The Blueprint was jointly developed by Ukrainian stakeholders participating in the CRED4TEACH project as follows:

- V. N. Karazin Kharkiv National University: Outlined the sections “Pilot implementation and quality assurance” and collaborated on the sections “Outlook” and “Annexes”;
- Cherkasy State Technological University: Developed the sections “Policy and strategic context” and “Issuing and certification of micro-credentials” and collaborated on the sections “Outlook” and “Annexes”;
- Bogdan Khmelnytsky Melitopol State Pedagogical University: Crafted the sections “Purpose and scope of the Blueprint” and “Design of MOOC-based micro-credentials” and collaborated on the sections “Outlook” and “Annexes”
- Drohobych Ivan Franko State Pedagogical University: Created the sections “Institutional framework for micro-credentials” and “Recognition of micro-credentials” and collaborated on the sections “Outlook” and “Annexes” “Outlook”, and “Annexes”;
- the National Qualifications Agency: Developed the section “National Frameworks for Micro-credentials Provision” and collaborated on the sections “Outlook” and “Annexes”.

With this Blueprint, the Ukrainian team of the CRED4TEACH project sincerely hopes to make a meaningful contribution to strengthening national efforts to establish micro-credentials as a reliable instrument for professional staff development.

## 2. Policy and strategic context

### Baseline situation at the start of the project

At the beginning of the CRED4TEACH project implementation in 2022, the system of teacher professional development (TPD) in Ukraine was undergoing gradual reform. The concept and implementation of micro-credentials remained largely undeveloped, although Ukraine had begun to modernise teacher professional development frameworks. A number of national legal documents regulate teacher education and continuing professional development, including the Law of Ukraine “On Education” (2017), the Law “On Complete General Secondary Education”, the Law “On Vocational Education”, the Law “On Higher Education”, the Procedure for professional development training of pedagogical and academic staff (2019). Even though these documents do not mention micro-credentials as a form of teacher professional development directly, they establish the general principles of teacher certification, professional development, and qualification upgrading.

### Key policy documents existing at the start of the project

Document	Year	Relevance to MC/TPD	Implication for the project
The Law of Ukraine “On Education” <a href="https://zakon.rada.gov.ua/laws/show/2145-19#Text">https://zakon.rada.gov.ua/laws/show/2145-19#Text</a>	2017	This Law regulates public relations arising while realising the individual's constitutional right for education, rights, responsibilities and liabilities of individuals and legal entities participating in this basic right, as well as the competence of state authorities and local self-government bodies in the field of education.	Defines the terms, subjects, actors, policies, principles, rights and liabilities of the actors involved in education thus underpinning every following national provision, regulation, framework, and procedure developed within the project to implement MCs in Ukraine.



<p>The Law of Ukraine “On Complete General Secondary Education”</p> <p><a href="https://zakon.rada.gov.ua/laws/show/463-20#Text">https://zakon.rada.gov.ua/laws/show/463-20#Text</a></p>	<p>2020</p>	<p>This Law defines the legal, organizational and economic principles of the functioning and development of the general secondary education system. The Law guarantees professional development training and internships, free choice of forms of training, educational institutions, organizations, and other entities conducting educational activity that offer advanced training of pedagogical staff.</p> <p>The Law interprets restrictions to implementing the right to choose educational programs, forms of education, educational institutions, institutions and organizations, and other education providers that offer professional development training of pedagogical and academic staff as a violation.</p> <p>The total amount of academic hours for TPD training of a school teacher (pedagogical staff) over a period of five years cannot be less than 150 hours.</p>	<p>The document served as a general reference. Both the National MC Framework and institutional frameworks have been aligned with the requirements of the Law. The duration and workload of the MCs under the project were offered within the range 120-180 hours (4-6 ECTS) to comply with the range set out by the law. The freedom guaranteed by the Law for the teachers to choose the TPD forms and providers allowed for the obtained MCs recognition.</p>
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<p>The Law of Ukraine “On Vocational Education”</p> <p><a href="https://zakon.rada.gov.ua/laws/show/2745-19#Text">https://zakon.rada.gov.ua/laws/show/2745-19#Text</a></p>	<p>2019</p>	<p>Guarantees professional development training and internships, free choice of forms of training, educational institutions, organizations, and other entities conducting educational activity that offer advanced training of pedagogical and academic staff.</p> <p>The Law interprets restrictions to implementing the right to choose educational programs, forms of education, educational institutions, institutions and organizations, and other education providers that offer professional development training of pedagogical and academic staff as a violation.</p> <p>The Law specifies that the total number of academic hours for TPD training of a pedagogical and/or academic employee in a VET institution over a period of five years cannot be less than 120 hours.</p>	<p>The document served as a general reference. Both the National MC Framework and institutional frameworks have been aligned with the requirements of the Law. The duration and workload of the MCs under the project were offered within the range 120-180 hours (4-6 ECTS) to comply with the range set out by the law. The freedom guaranteed by the Law for the teachers to choose the TPD forms and providers allowed for the obtained MCs recognition.</p>
<p>The Law of Ukraine “On Higher Education”</p> <p><a href="https://zakon.rada.gov.ua/rada/show/1556-18#Text">https://zakon.rada.gov.ua/rada/show/1556-18#Text</a></p>	<p>2014</p>	<p>Guarantees professional development training and internships, free choice of forms of training, educational institutions, organizations, and other entities conducting educational activity that offer advanced training of pedagogical and academic staff.</p> <p>The Law specifies that the total number of academic hours for TPD training of a pedagogical and/or academic employee in a HEI over a period of five years cannot be less than 6 ECTS.</p>	<p>The document served as a general reference. Both the National MC Framework and institutional frameworks have been aligned with the requirements of the Law. The duration and workload of the MCs under the project were offered within the range 120-180 hours (4-6 ECTS) to comply with the range set out by the law. The freedom guaranteed by the Law for the teachers to choose the TPD forms and providers allowed for the obtained MCs recognition.</p>



<p>PROCEDURE for professional development training of pedagogical and academic staff (August 21, 2019 No. 800)</p> <p><a href="https://zakon.rada.gov.ua/laws/show/800-2019-%D0%BF#Text">https://zakon.rada.gov.ua/laws/show/800-2019-%D0%BF#Text</a></p>	<p>2019</p>	<p>This Procedure determines the procedure, types, forms, volume (duration), frequency, and conditions for advanced training of pedagogical and academic staff at educational institutions and institutions, other entities of educational activity of all forms of ownership and spheres of management, including the payment mechanism, conditions, and procedure for recognizing the learning outcomes achieved through professional development training in formal, informal and non-formal education.</p>	<p>In accordance with the laws “On Education”, “On Higher Education”, “On Vocational Education”, the Procedure specifies the volume of TPD (at least 120 hours for teachers in VET, 180 for university teachers every 5 years, which was taken into account when planning the MC syllabi), allows stackability of the obtained partial qualifications, guarantees recognition of learning achievements obtained through distant studies, as well as through informal studies, guarantees free choice of the TPD service providers by the teachers, defines educational (TPD) services providers.</p>
<p>Council of the EU (2022). Council Recommendation on a European approach to micro-credentials for lifelong learning and employability.</p> <p><a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(02)">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(02)</a></p>	<p>2022</p>	<p>The Recommendation defines micro-credentials, establishes quality assurance for MCs, encourages integrating micro-credentials into national qualification frameworks, empowers individuals with flexible pathways to gain new skills for the evolving job market, highlights stackability and applicability across formal, non-formal, and informal learning environments.</p>	<p>The document has become a foundation both for the National Framework and for the institutional frameworks. The definition of micro-credentials, their specifics differentiating them from other types of professional development, integration into the national qualification framework, implementation, quality assurance, recognition procedures, certification, accreditation mechanisms have been aligned both with the national legislation and the EU Recommendation.</p>

The reforms that were in progress at the time when the project was launched, introduced a more flexible approach to professional development by allowing teachers to accumulate learning hours gradually through different providers and training formats rather than completing a long course. Training may include seminars, workshops, webinars, internships,



master classes, or short-term courses offered by higher education institutions, training centres, enterprises, or other accredited providers. Upon successful completion of a training activity, providers must issue a certificate describing the learning outcomes achieved by the participant. The reform also introduced the concept of “partial qualifications”, encouraging teachers to build their lifelong professional development pathways through smaller learning units delivered by different providers.

Despite these reforms, teacher professional development opportunities in Ukraine at the beginning of the project predominantly remained linked to traditional formats and institutional practices. A number of national surveys conducted by the Institute of Vocational Education of the National Academy of Pedagogical Sciences in Ukraine<sup>12</sup>, previous projects<sup>3</sup>, materials presented and discussed at the annual conference dedicated to professional education in the sustainable development of society<sup>4</sup> also revealed that teachers frequently faced barriers to accessing professional development opportunities due to rigid scheduling, geographic constraints, and the cost of training programmes.

The concept of micro-credentials, which was gaining prominence in Europe as a mechanism for flexible and targeted skills development (Recommendations of the Council of the EU on a European approach to micro-credentials for lifelong learning and employment (Council of the EU, 2022<sup>5</sup>), had not yet been systematically introduced in Ukraine. While the newly introduced approach to partial qualifications created a conceptual basis for modular learning and certification, there were no standardized national practices, regulatory definitions, or systematic mechanisms for implementing micro-credentials, particularly within the field of teacher professional development.

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<sup>1</sup> Professional (vocational and technical) education of Ukraine in the context of European integration processes (comparative analysis with the countries of the European Union): research and analytical materials / V. O. Radkevych, O. V. Borodienko, S. G. Kravets; National Academy of Sciences of Ukraine, Institute of Vocational and Technical Education. Kyiv, 2021. <https://ivet.edu.ua/index.php>

<sup>2</sup> Professional (vocational-technical) and specialized pre-higher education: informational and analytical materials / Ed. V. O. Radkevych, L. M. Yershova. Zhytomyr, 2021. <https://ivet.edu.ua/index.php>

<sup>3</sup> The current state of teacher training for vocational education at the South Ukrainian National Pedagogical University K.D. Ushynsky - Institutional Report <https://pagoste.eu/uk/rezultati/zdobutki/>

<sup>4</sup> Educational reform in Ukraine. Information and analytical support: abstracts of the III International Scientific and Practical Conference (scientific electronic publication), Oct. 28, 2021. Kyiv: DNU "Institute of Educational Analytics", 2021. [https://iea.gov.ua/wp-content/uploads/2021/12/Tezi\\_III-konf\\_2021-FINAL.pdf](https://iea.gov.ua/wp-content/uploads/2021/12/Tezi_III-konf_2021-FINAL.pdf)

<sup>5</sup> Council of the EU (2022). Council Recommendation on a European approach to micro-credentials for lifelong learning and employability. [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627\(02\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(02))

Overall, the baseline analysis conducted at the stage of preparing the application confirmed that while Ukraine had initiated important reforms in teacher professional development and lifelong learning, micro-credentials were largely absent from the national education and training system in 2022, especially in relation to teacher training. The regulatory framework remained fragmented, and implementation practices were still emerging, which created both a need and an opportunity to introduce structured approaches to micro-credentials aligned with European developments.

### **Key challenges**

Despite the gradual reform of teacher professional development and the introduction of more flexible training formats, several systemic challenges existed in Ukraine at the start of the project in 2022 that limited the development and implementation of micro-credentials, particularly in the field of teacher professional development.

One of the main challenges concerned the absence of a clear and comprehensive legal framework regulating micro-credentials. While Ukrainian education legislation had introduced more flexible approaches to teacher professional development, including the possibility of accumulating professional development hours through different training providers and formats, there was no official definition or regulatory status of micro-credentials within the national education system. As a result, training providers lacked common guidelines regarding the structure, documentation, and recognition of short learning experiences corresponding to micro-credentials.

Furthermore, the national regulatory framework did not yet establish standardized requirements for describing learning outcomes, defining workload, ensuring quality assurance, or linking short-term training programmes to the National Qualifications Framework. Practical mechanisms for recognising micro-credentials within qualification systems or professional standards were not yet operational. Consequently, institutions lacked clear procedures for validating micro-credentials or integrating them into formal professional development pathways for teachers.

Another challenge related to the limited practical experience in implementing modular, competence-based training formats similar to micro-credentials. Professional development opportunities for teachers were largely organised through traditional courses, seminars, workshops, or internships, often delivered through fixed formats and schedules.

The baseline study and publication analysis also revealed that teachers often encountered difficulties participating in training programmes due to rigid scheduling, geographical distance from training providers, and the cost of participation. In many cases, available courses did not fully correspond to teachers' individual professional development needs, particularly in rapidly evolving areas such as digital competence, innovative pedagogical methods, and inclusive education.

HEIs' engagement was another challenge that this project aimed to solve. While universities were encouraged to modernise their training services and obtain accreditation as certified providers of professional development through the National Qualifications Agency, most institutions had limited experience in designing modular training programmes linked to professional standards and competence-based certification systems.

Institutional procedures for developing, documenting, and recognising short learning programmes were still evolving. In many cases, universities lacked internal policies, methodological frameworks, and technical infrastructure necessary for implementing micro-credential-based training. Partnerships with industry, qualification centres, and other stakeholders that could support recognition of micro-credentials within the labour market were also not yet sufficiently developed. In addition, many institutions faced constraints related to limited technological infrastructure, insufficient access to advanced educational technologies, and the need to strengthen staff capacities in digital teaching methods and innovative pedagogical practices.

Overall, the analysis demonstrated that the Ukrainian teacher professional development system in 2022 faced a combination of regulatory, institutional, and pedagogical challenges that limited the adoption of micro-credentials. Addressing these challenges required structured approaches to designing micro-credentials, strengthening institutional capacity within higher education institutions, and aligning training programmes with professional standards and qualification frameworks.

## **Project solutions**

In response to the regulatory, institutional and pedagogical challenges identified in the baseline analysis, the CRED4TEACH project introduced a structured approach to designing and implementing micro-credentials for teacher professional development (TPD). The project focused on establishing MOOC-based micro-credentials as flexible, competence-based learning opportunities for in-service teachers in Ukraine and partner countries.

A key element of the project was the use of Massive Open Online Courses (MOOCs) as the primary delivery format for micro-credentials. MOOC-based learning supports competence-oriented instructional design and encourages learner-centred, self-paced learning. At the same time, participation in MOOCs strengthens teachers' digital competences through interaction, communication and collaboration in online learning environments. Importantly, online delivery significantly improves accessibility of training opportunities, particularly for teachers working in remote or rural areas who may otherwise face barriers related to time, travel or financial constraints.

To operationalise this approach, the project pursued four interrelated objectives. First, it aimed to strengthen institutional capacity within participating higher education institutions and partner organisations for designing and delivering MOOC-based micro-credentials. Academic and administrative staff were trained as MOOC and micro-credential designers, enabling institutions to independently develop and implement such programmes in the future.

Second, the project supported the development of "National Framework for Micro-Credentials Launching in Ukraine"<sup>6</sup> by the National Qualifications Agency. Based on the national framework, participating higher education institutions developed institutional policies that established internal procedures for the creation, delivery and certification of micro-credentials.

Third, the project implemented pilot micro-credential programmes addressing key competence gaps identified during the needs analysis. Five MOOC-based micro-credentials (4–6 ECTS each) were developed by Ukrainian HEIs participating in the project (six more micro-credentials were developed in Albania and Montenegro) and delivered to teachers from secondary education, vocational education and training (VET), and higher education institutions. The pilot courses focused on areas such as digital and collaborative learning, critical and creative thinking, inclusive education, and innovative teaching strategies. In addition, a specialised micro-credential for training university staff as MOOC designers was developed to ensure the sustainability and future expansion of micro-credential-based learning.

Finally, the project aimed to encourage the wider adoption of micro-credentials by disseminating pilot results and developing blueprint documents outlining practical recommendations for integrating micro-credentials into teacher professional development

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<sup>6</sup> National Qualifications Agency (2024). National Framework for Micro-Credentials Launching in Ukraine. [https://nqa.gov.ua/proekt-cred4tech/?fbclid=IwZXh0bgNhZW0CMTAAAR1pEsSaozfHc7FNK\\_rSrPgNEWceGXYWIVZobsO6ZjQx61A\\_Xmx7juHjr14\\_aem\\_In\\_OUN4WLAwKOWkxk2bQwQ](https://nqa.gov.ua/proekt-cred4tech/?fbclid=IwZXh0bgNhZW0CMTAAAR1pEsSaozfHc7FNK_rSrPgNEWceGXYWIVZobsO6ZjQx61A_Xmx7juHjr14_aem_In_OUN4WLAwKOWkxk2bQwQ)



systems. Through these actions, CRED4TEACH contributed to establishing both institutional practices and policy foundations for the systematic use of micro-credentials, supporting more flexible, accessible and competence-based professional development for teachers.

Overall, the baseline analysis demonstrates that, at the start of the project, Ukraine had established important legal foundations for teacher professional development and lifelong learning yet lacked a framework for micro-credentials. The coexistence of progressive policy intentions (such as flexibility, partial qualifications, and recognition of non-formal learning) with fragmented regulations, limited institutional capacity, and absence of standardized practices created a systemic gap between policy and implementation. In this context, a project-based, framework-oriented approach was essential to bridge this gap by simultaneously addressing regulatory alignment, institutional capacity building, and practical piloting of micro-credentials. The CRED4TEACH project thus initiated structuring an emerging ecosystem, enabling the translation of European principles into national and institutional practice and laying the groundwork for the sustainable integration of micro-credentials into Ukraine's teacher professional development system.

### 3. National Frameworks for Micro-Credentials Provision

Currently, the term ‘micro-credentials’ and its definition are not included in Ukrainian legislation. However, as part of the relevant research conducted within the CRED4TEACH project, the approach defined in the Recommendations of the Council of the EU on a European approach to micro-credentials for lifelong learning and employment is considered. According to this approach, a micro-credential is a certified record of learning outcomes achieved after completing a short-term educational experience, which are assessed based on transparent and clearly defined criteria.

Educational activities that lead to the provision of micro-credentials should be aimed at developing specific knowledge, skills, abilities and competences relevant to personal, social or professional needs, including labour market needs. Micro-credentials are seen as an individual achievement that can be used in different contexts, characterised by transferability and accumulation potential.

In a practical sense, micro-credentials are small, specialised educational programmes that enable the rapid acquisition of specific competences. They can be implemented in both formal and non-formal education and based on learning outcomes and provide for their standardised assessment and recognition.

Thus, at the conceptual level, national approaches to the short-term educational programmes correspond to the key characteristics embedded in the EU approach. At the same time, certain technical and legal aspects (in particular, terminological consolidation, details of stackability and recognition mechanisms) require further investigation to determine the implementation mechanisms and application procedures.

As a result, it can be stated that, from the point of view of content and principles, the level of alignment with the European approach is quite high, and further work aims to enhance harmonisation and improve existing tools for ensuring the quality of the National Qualifications System in line with European Standards.

The National Framework for Micro-Credentials Launching in Ukraine<sup>7</sup> is a project-produced recommendation document designed for national-level implementation. It focuses on

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<sup>7</sup> National Qualifications Agency (2024). National Framework for Micro-Credentials Launching in Ukraine. [https://nqa.gov.ua/proekt-cred4tech/?fbclid=IwZXh0bgNhZW0CMTAAAR1pEsSaozfHc7FNK\\_rSrPgNEWceGXYWIVZobsO6ZjQx61A\\_Xmx7juHjrI4\\_aem\\_In\\_OUN4WLAwKOWkxk2bQwQ](https://nqa.gov.ua/proekt-cred4tech/?fbclid=IwZXh0bgNhZW0CMTAAAR1pEsSaozfHc7FNK_rSrPgNEWceGXYWIVZobsO6ZjQx61A_Xmx7juHjrI4_aem_In_OUN4WLAwKOWkxk2bQwQ)

establishing a comprehensive approach to developing and implementing micro-credentials as a part of the National Qualifications System in Ukraine. It serves as the basis for the practical implementation of the EU Recommendation on micro-credentials.

This document defines the basic concepts, principles and key elements of the micro-credentials implementation in Ukraine. Specific attention is focused on the description of the National Qualifications Framework and the definition of the place of micro-credentials in its structure.

Taking into account that the current regulatory framework of Ukraine does not yet include specific rules and regulatory procedures in the field of micro-credentials, the provisions and regulatory approaches enshrined in European Union acts were reflected in the document.

The Framework is primarily addressed to educational institutions, which can use them to develop internal regulations for the organisation of short-term learning, in particular in the format of massive open online courses (MOOCs), as well as to regulate the procedures for assessing and recognising the results of such learning. The provisions of the document may also be useful for other providers of short-term learning.

A special section sets out recommendations on policy and legal developments for introducing micro-credentials in Ukraine and integrating them into the National Qualifications Framework.

Educational institutions may implement short educational programmes that potentially result in the provision of micro-credentials within the framework of postgraduate education in the forms specified by the Law of Ukraine 'On Education' or in other forms not prohibited by the law.

The activities of short-term training providers contribute to the rapid adaptation of educational services to the dynamic needs of the labour market.

Based on the developed recommendations (National Framework), higher education institutions develop their own institutional procedures, which are conceptually implemented within the provisions of the Law of Ukraine 'On Education' in terms of the established right of educational institutions to autonomy, including academic autonomy. Academic autonomy includes the level of independence of the university in matters of student enrolment, educational programmes and quality assurance. Therefore, higher education institutions may, within the limits of their autonomy, recognise various short-term learning outcomes, and the provision of micro-credentials based on MOOC video courses for the teachers professional development, as well as further training may be regulated by internal documents of higher education institutions (e.g. regulations).



It should be emphasised that this document is primarily designed for higher education institutions that have already used these recommendations to develop their own regulations for the organisation of short-term learning, including MOOC-based ones, and the recognition of the results of such learning.

As a part of the CRED4TEACH project, Ukrainian partners – higher education institutions, namely, V. N. Karazin Kharkiv National University, Bogdan Khmelnytsky Melitopol State Pedagogical University, Drohobych Ivan Franko State Pedagogical University, and Cherkasy State Technological University, have already developed Institutional Frameworks based on the National Framework. These frameworks solidified the methodological basis for the development of MOOC-based micro-credentials.

The National Framework for the micro-credentials implementation in Ukraine is designed to promote the development of comprehensive approaches to the development and implementation of micro-credentials for HEIs in Ukraine.

The assessment of the practical value of the National Framework (recommendations) for higher education institutions and other stakeholders relies on the results of their practical implementation and is confirmed by the following established benefits:

1. *Harmonisation of micro-credentials development approaches.* The National Framework for Micro-Credentials Launching in Ukraine, developed on the basis of the EU Recommendation on micro-credentials, provided unified methodological guidelines for the formation of learning outcomes, scope and structure of micro-credentials, that will contribute to their comparability and transparency.
2. *Institutional capacity of higher education institutions.* Based on the National Framework, higher education institutions have developed their own institutional frameworks, which has allowed them to systematise internal procedures for the micro-credentials development and implementation.
3. *Flexibility of educational pathways.* The introduction of micro-credentials has expanded the possibilities for building individual educational trajectories, the step-by-step competences provisions and their stackability.
4. *Support for lifelong learning.* The National Framework has ensured the conditions for the integration of short-term educational products into the system of continuous professional development.

*Table 3.1 Comparative Matrix: Alignment of Ukrainian Approach with EU Micro-credentials Framework*

<b>EU Element</b>	<b>Ukrainian Project Interpretation (Cred4Teach / National Framework)</b>	<b>Degree of Alignment</b>	<b>Remaining Gap</b>
Definition of micro-credentials	Micro-credentials understood as certified records of learning outcomes from short-term learning, based on EU Council Recommendation	Moderate	Not yet formally assigned in legislation
Learning outcomes approach	Focus on learning outcomes, transparent assessment criteria and certification	High	Lack of regulation regarding the implementation of standardized national assessment and validation procedures.
Short-term learning provision	Implemented through short educational programmes (incl. micro-credentials) in informal and non-formal education	Moderate	Lack of standardized procedures for all providers
Relevance to labour market	Emphasis on skills aligned with labour market and professional needs	Moderate	Systematic mechanisms for stakeholders involvement are required
Transferability and portability	Recognised conceptually; micro-credentials seen as usable in different contexts	Moderate	Limited practical mechanisms for cross-institutional recognition
Stackability (accumulation)	Acknowledged as a principle in the National Framework	Moderate-Low	Lack of clear mechanisms for accumulation and transferability
Quality assurance	Embedded via institutional procedures and alignment with institutional quality assurance mechanisms	Moderate	Absence of dedicated QA framework specifically for micro-credentials
Recognition of learning outcomes	Supported within institutional autonomy and existing legislation	Moderate	No unified national recognition system for micro-credentials
Integration into NQF	Conceptually linked to the National Qualifications Framework	Moderate	Lack of referencing mechanisms
Legal and policy framework	Based on EU approaches and reflected in the recommendation document	Moderate	Lack of established regulations



Institutional autonomy	HEIs develop internal frameworks and procedures	High	HEIs have full autonomy in recognition procedures.
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#### 4. Institutional Frameworks for Micro-credentials

Within the framework of the Cred4Teach project, four institutional frameworks on micro-credentials were developed at partner universities in Ukraine:

- *Bogdan Khmelnytsky Melitopol State Pedagogical University* <https://is.gd/SAbenZ>
- *V. N. Karazin Kharkiv National University* <https://compmath.uepa.karazin.ua/wp-content/uploads/2026/05/KKNU-Regulations-on-micro-credentials.pdf>
- *Cherkasy State Technological University* <https://surl.li/qifyyy>
- *Drohobych Ivan Franko State Pedagogical University* <https://is.gd/BGYkDI>

These documents regulate the procedures for the development, implementation, and awarding of micro-credentials.

The purpose of developing the institutional frameworks was to establish procedures for the internal regulation of acquiring micro-credentials, to expand the range of educational services provided by universities, and to create conditions for flexible responses to shifting competence requirements in the labour market. The frameworks are aimed at supporting lifelong learning and ensuring opportunities for professional development through short-term educational programmes.

The objectives of the institutional regulations are to formulate a consistent definition of micro-credentials, establish common principles for their development and implementation, ensure transparency of procedures and high standards of quality, and harmonise approaches to awarding micro-credentials within the educational system. The frameworks are also aimed at aligning micro-credentials with current educational needs and the professional demands of target groups.

*Table 4.1. Comparative overview of institutional frameworks for micro-credentials*

<b>Parameter</b>	<b>DSPU</b>	<b>BK MSPU</b>	<b>ChSTU</b>	<b>KKhNU</b>
Workload range (ECTS)	4–6 ECTS	4–6 ECTS	1–6 ECTS	4–6 ECTS
Approval body	Academic Council	Academic Council	Academic Council	Academic Council
Accreditation period	up to 5 years	up to 2 years	up to 5 years	up to 2 years
Review cycle	Monitoring, feedback, re-accreditation	Feedback and stakeholder input	Monitoring, reporting, re-accreditation	Monitoring and post-accreditation review

Governance model	Working group (development) → Department (review) → QA commission (evaluation) → Academic Council (approval) → Programme coordinator (implementation)	Working group (development) → Department (review) → QA commission (evaluation) → Academic Council (approval) → Programme coordinator (implementation)	Working group (development) → Department (review) → QA commission (evaluation) → Academic Council (approval) → Programme coordinator (implementation)	Working group (development) → Department (review) → QA commission (evaluation) → Academic Council (approval) → Programme coordinator (implementation)
Quality assurance	QA (quality assurance) commission, feedback mechanisms	Institutional QA (quality assurance) procedures	Formal QA (quality assurance) criteria, scoring, reporting	QA (quality assurance) group, monitoring mechanisms
Verification mechanism	Certificate + database verification	Database-based verification	Searchable registry (name/ID)	Institutional verification procedures
Data storage & security	Institutional LMS and databases	Institutional LMS and databases	Institutional LMS and databases	Institutional LMS and databases
Accessibility	Digital access via LMS	Digital access via LMS	Digital access via LMS	Digital access via LMS

### Governance model and distribution of responsibilities

The institutional frameworks for micro-credentials define a clear governance model that covers the stages of initiation, development, review, approval, implementation, and monitoring of programmes. The initiation of micro-credential development is usually driven by an analysis of labour market needs and the educational demands of target groups. Universities conduct surveys of employers, teaching staff, and learners in order to identify relevant competencies. Programme development is carried out by a working group consisting of at least three members. Specialists from other departments, industry experts, and representatives of employers may also be involved in the process. The programme is discussed at a meeting of the department or at an interdepartmental meeting. Based on the discussion, the department recommends or declines to recommend the programme for approval. The next stage involves a review within the university quality assurance system. The final decision on programme approval is made by the Academic Council of the university and enacted by a Rectoral decree.

After approval, the programme is published on the official website of the university. The implementation of the programme is administered by the programme coordinator, who is a member of the working group and is appointed by a decision of the department. They are responsible for organising the learning process, coordinating instructors' activities, ensuring compliance with programme requirements, and conducting the final assessment. Quality assurance mechanisms include the regular collection of feedback from participants, instructors, and employers, analysis of programme completion indicators, and, if necessary, updating the content.

*Table 4.2. Governance model across partner universities*

<b>Stage</b>	<b>Responsible actors (common model)</b>	<b>Institutional variation</b>
Initiation	Centres for continuing education / academic units / stakeholders	In some universities initiation is driven by dedicated centres; in others by departments or external demand
Programme development	Working group ( $\geq 3$ academic staff), with possible involvement of external experts	Level of stakeholder involvement varies
Departmental review	Department / interdepartmental meeting	Common across all institutions
Quality review	Quality assurance bodies / commissions	Sometimes formalised as accreditation groups with scoring
Approval	Academic Council	Standardised across institutions
Formal enactment	Rector (order/decreed)	Common procedural step
Implementation	Programme coordinator (member of working group)	Role present in all institutions, formalisation varies
Administration	Centres (continuing education, digital learning units)	May include registration, certification, technical support
Quality monitoring	QA units, programme coordinators, stakeholder feedback	Some require annual reporting; others rely on feedback
Certification and registry	Administrative units/centres managing databases	Centralised or distributed responsibility depending on HEI

### **Management of the micro-credentials life cycle**

The life cycle of a micro-credential begins with the identification of needs. Before programme development, a labour market analysis, consultations with stakeholders, and an assessment of

the university's internal capacity are carried out. In several cases, this process is conducted regularly and is accompanied by monitoring the needs of employers, professional communities, and learners. Programme development is carried out by a working group that determines the learning outcomes, content structure, workload in ECTS credits, teaching methods, and assessment methods. Initial accreditation is carried out before the start of programme implementation and involves an expert analysis of the programme content, its compliance with quality criteria, and institutional standards. Accreditation groups include representatives of quality assurance units. In some universities, a scoring system and minimum compliance thresholds are applied, which increases the transparency and objectivity of the procedure.

The final decision on accreditation is made by the Academic Council of the university. Programmes are granted accreditation for a specified period – from two to five years, depending on the institutional model.

During programme implementation, mechanisms for systematic quality monitoring are provided. Surveys of participants, instructors, and employers are conducted, and indicators of enrolment, academic performance, and programme completion are analysed. In some universities, the programme coordinator submits an annual report to the educational activity monitoring commission, which contains information on quantitative indicators, introduced changes, survey results, and problematic aspects of implementation. The results of the review of the reports may be used to update the programme content or be submitted for discussion to the methodological bodies of the university.

The institutional frameworks provide for both scheduled and unscheduled programme reviews. A scheduled review is associated with the expiration of the accreditation period. An unscheduled review or re-accreditation may be initiated in the event of justified appeals, identified non-compliance, or significant changes in professional requirements. In some universities, a post-accreditation monitoring mechanism has been introduced, which may be conducted no earlier than one year after accreditation at the initiative of the programme coordinator, representatives of the quality assurance group, or other stakeholders.

Across institutions, the review cycle is generally linked to the accreditation period, which typically ranges from two to five years, and defines the timeline for scheduled programme revision. In addition to this, continuous monitoring mechanisms operate throughout programme implementation, including feedback collection and performance analysis, which may inform interim updates. Unscheduled reviews may be triggered by several factors, such as



significant changes in labour market needs, stakeholder feedback, identified quality issues, or formal appeals. Responsibility for initiating and conducting reviews is typically shared between programme coordinators, quality assurance units, and relevant academic bodies. Changes to programmes are subject to internal approval procedures, which may include departmental discussion and, where required, formal re-accreditation or approval by the Academic Council, ensuring controlled and transparent modification of programme content.

### **Recognition policies**

The institutional frameworks for micro-credentials are integrated with mechanisms for the internal recognition of learning outcomes, primarily in the field of professional development for teaching and academic staff. Documents confirming the completion of micro-credentials are recognised by universities as evidence of professional development and are counted towards the overall requirements of professional development activities in accordance with the current internal regulations on professional development.

The institutional frameworks also provide for the recognition of documents confirming the completion of similar programmes in other educational or research institutions, including those outside Ukraine (taking into account the limitations defined by legislation).

Regarding the possibility of recognising micro-credentials within educational programmes, the regulations provide for the potential integration of micro-credentials into existing educational components, in particular as elective disciplines or parts of academic courses. Such recognition is carried out in accordance with the internal procedures of the university and provided that the learning outcomes correspond to the programme learning outcomes of the relevant educational programme. At present, recognition within degree programmes remains a developing practice and is applied on a case-by-case basis depending on programme alignment and institutional procedures.

At the same time, the criteria and procedures for recognition are defined not only within the micro-credential frameworks themselves but also in other institutional regulations, such as policies on the organisation of the educational process, professional development, and recognition of prior learning (RPL/APL). This ensures consistency of decision-making, alignment with quality assurance mechanisms, and integration of micro-credentials into the overall institutional framework.

In practice, recognition decisions are based on documented evidence, primarily certificates containing information on learning outcomes, workload (ECTS credits or hours), and the

provider institution. When considering recognition, universities take into account the relevance of learning outcomes to the respective educational programme or professional activity, the documented workload, and the verifiability of the certificate. Recognition may also be subject to institutional limits, including restrictions on the volume of credits that can be recognised within a degree programme.

Where applicable, recognition may also be linked to procedures for the recognition of prior learning (RPL/APL), in accordance with general institutional policies. In cases where recognition decisions are contested, they may be reviewed through existing academic appeals procedures defined by university regulations.

### **Risks and compliance requirements**

The institutional frameworks for micro-credentials focus primarily on the procedural and quality aspects of programme development and accreditation. Issues of personal data protection, information storage, intellectual property, and accessibility in most cases are not detailed in separate sections of the regulations; however, they are implemented within the general regulatory and technical infrastructure of universities.

The implementation of micro-credential programmes is carried out using university LMS platforms (in particular the Moodle system), access to which is provided on the basis of registration. Personal data of participants is collected only to the extent necessary for enrolment, organisation of the learning process, and issuance of certificates. Registers of issued certificates are stored in electronic university databases and are used to verify documents.

Personal data collected typically include full name, contact details, enrolment information, learning progress and assessment results, and certificate identification data. Data processing is carried out for educational and administrative purposes only. Access to such data is restricted to authorised university staff, including programme coordinators, administrative personnel, and quality assurance units. Certificate records are stored in institutional databases for verification purposes, with retention periods aligned with university record-keeping policies. Where necessary, data may be anonymised for analytical use, and deletion or anonymisation is carried out in accordance with institutional procedures. Institutional systems are supported by IT services and include controlled access and backup mechanisms to ensure data integrity and continuity.

With regard to intellectual property, the content of micro-credential programmes is created by academic staff of universities in compliance with the requirements of current legislation in the field of copyright. The use of third-party materials requires compliance with licensing conditions and proper referencing of sources. Rights to developed learning materials are governed by the universities' internal regulations on intellectual property.

Accessibility is ensured through the use of LMS platforms and digital learning environments that support remote access, compatibility with different devices, and continuous availability of learning materials. Technical support and maintenance of programmes are carried out by relevant university units responsible for the functioning of digital infrastructure.

### **Common and distinctive features of institutional frameworks**

The developed institutional frameworks are based on a common conceptual approach to understanding micro-credentials as a formalised educational outcome with a defined workload in ECTS credits, clearly formulated learning outcomes, structured content, and an assessment procedure. In all universities, programmes are developed by working groups, undergo departmental discussion, and are approved by the Academic Council. Mandatory initial accreditation before the start of implementation and further quality monitoring through feedback and analysis of results are provided. Certificates are recognised as confirmation of professional development, and programmes are publicly available.

These shared elements can be considered transferable good practices, as they ensure standardisation, transparency, and quality assurance across institutions. In particular, the use of ECTS-based workload, clearly defined learning outcomes, formal approval procedures, and mandatory pre-delivery accreditation create a reliable framework that supports trust in micro-credentials and facilitates their recognition.

Differences mainly concern the level of detail in procedures and organisational solutions. Universities determine different ranges of programme workload (from 1-6 or 4-6 ECTS credits), different accreditation periods (2 or 5 years), and different levels of formalisation of assessment criteria. In some cases, mandatory annual reporting by the programme coordinator and post-accreditation monitoring have been introduced, while in others the emphasis is placed on re-accreditation and feedback mechanisms.

### **Recommendations for further use**



The developed institutional frameworks may be used as models for other HEIs. They clearly describe the sequence of actions – from programme initiation to its approval, implementation, monitoring, and documentation of results. As a result, universities gain a clear procedure for launching micro-credentials without additional informal approvals or uncertainty. The presence of defined roles and responsibilities simplifies the process of developing new courses and contributes to increasing their number.

For programme managers and developers, the frameworks serve as a practical tool for organising work and ensuring compliance with internal quality standards. For quality assurance units, they provide a basis for regular monitoring and analysis of results. For administrative staff, they offer a clear model for documentation, maintaining registers, and verifying issued documents.

Thus, the institutional frameworks make it possible to move from isolated initiatives to systematic work with micro-credentials. They can be used by other universities as a basis for developing their own regulations and introducing micro-credentials into the practice of lifelong learning.

## 5. Design of MOOC-based Micro-credentials

This section describes the pedagogical approaches and basic principles that were implemented in the process of developing MOOC-based micro-credentials.

### MOOC-based pedagogical approach

The CRED4TEACH project implemented an approach to the development of educational programs, in particular with the assignment of qualifications, based on a combination of MOOCs as a priority source of educational content, a means of organizing independent learning activities of applicants and assessing their learning outcomes, and pedagogical support.

We followed a person-centered approach, i.e. the trainees were not unknown individuals who learn independently and are automatically assessed, communication with them was maintained using e-mail, introductory video conferences, personal presentation on online boards, personalized interaction during the assessment of practical tasks and providing support in case of complications.

The implemented approach is also based on the principles of multimodal information presentation (video, sound, graphics, text), interactivity (means are provided for interaction between course participants and teachers), practice orientation (the result of the courses is the formation of practical skills that are the basis of micro-credentials that can be recognized in the workplace or in the process of further training), compliance with the current state of educational science and practice (new educational materials have been developed that take into account modern trends in the development of education), transparency and objectivity of assessment (an automated test assessment has been implemented to verify theoretical knowledge and evaluate practical tasks by teachers based on defined and fixed criteria), personalization (students independently form their educational path).

“MOOCs are distance learning courses that use the Internet to deliver lectures and assignments.” (Saltzman, p. 349)<sup>8</sup>. MOOCs are usually described by the following four characteristics:

- massiveness - theoretically unlimited number of course participants and high scalability without geographical or time restrictions;

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<sup>8</sup> Saltzman, G.M. (2020). Economics of Massive Open Online Courses, Higher Education. In P.N. Teixeira & J.C. Shin (Eds.), *The International Encyclopedia of Higher Education Systems and Institutions* (pp. 349-352). Springer. <https://doi.org/10.1007/978-94-017-8905-9>



- openness - no access restrictions on payment, qualifications, and affiliation;
- online learning - predominantly or exclusively online delivery of educational content and interaction between participants and instructors;
- a course is a defined environment in which educational activities take place, with fixed start and end dates, predetermined content, structure, and assessment tools. (Koddebusch, Halsbenning, & Becker, 2025)<sup>9</sup>

These characteristics determine the differences between the MOOC-based approach and traditional online learning (Table 5.1). However, the proposed approach has certain specificities, since it is implemented within the framework of the CRED4TEACH project.

Table 5.1. MOOC-based approach vs. traditional online learning

Criterion	MOOC-based approach	Traditional online learning
Audience scale	Unlimited number of learners (within the provider's human resources)	Limited group of students
Type of learning content	Video lectures, audio and graphic information, learning texts, assignments	Online classes in videoconference format, video lectures, audio and graphic information, learning texts, assignments
Access	Open, without strict admission requirements	Usually the learner must be enrolled in an educational institution
Organizer	Educational institutions, training centers	Educational institutions, training centers
Course structure	Standardized, modular	Adapted to a specific programme
Personalization	Minimal, mass format	Higher, individual support possible
Feedback	Automated, peer assessment, instructor feedback with defined frequency (within the assessment of certain assignments)	Instructor provides personal feedback

<sup>9</sup> Koddebusch, M., Halsbenning, S., & Becker, J. (2025). Design principles for MOOC platforms: a public sector perspective. *Transforming Government: People, Process and Policy*, 19(1), 1–21. <https://doi.org/10.1108/TG-05-2023-0065>



Control and assessment	Automatically graded tests, some assignments checked and graded by instructors	Tests, oral interviews, written assessments, projects, etc.
Communication	Forum, platform-based discussions, support from course administrators	Synchronous classes, consultations
Certification	Official certificate from the course provider (may be paid)	Learner receives an official education document (diploma) after completing the defined study period and accumulating the full number of ECTS credits required by the educational programme
Time flexibility	Mostly asynchronous format	Asynchronous or synchronous format
Cost	Often free or cheaper	Usually paid (funded by the state budget or by individuals/legal entities)
Completion rate	Low completion rate	Higher due to supervision and support
Accreditation	Internal accreditation by the course provider; possibility of external accreditation after full regulation of procedures	Officially accredited programmes

We adhere to the following model of MOOC-based micro-credentials (see fig. 5.1):

- Stage I. Decision-making by an individual about studying a micro-credential programme.
- Stage II. Studying the selected programme using the MOOC platform.
- Stage III. Recognition of micro-credential.

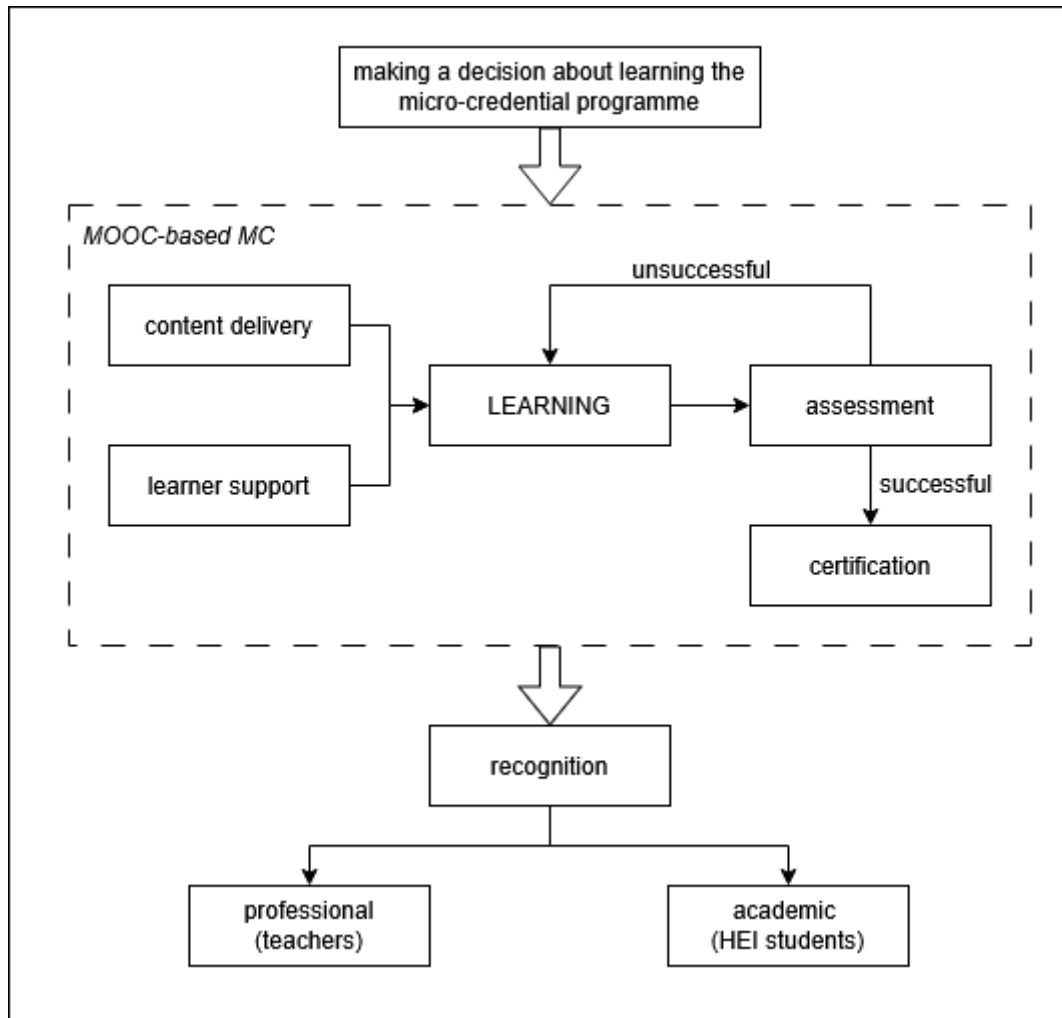


Figure 5.1. The model of MOOC-based micro-credentials

The main stage is studying the selected programme using the MOOC platform, access to which is provided by the HEI. This stage consists of the following components:

1) *Content delivery*. Students are provided with educational content in digital format using LMS tools. It includes educational videos, texts and presentations, tasks for practical implementation, assessment tools.

2) *Student support*. It aimed at creating conditions for the successful completion of training by students. It includes the following types of interaction with them: providing consultations on technical issues; providing consultations on the rational organization of training; clarifying individual problematic educational issues. Support is provided in the form of help documents,

FAQs, communication via email, communication on the forum and in comments, and scheduled online meetings.

3) *Assessment*. It solves two main tasks: 1) identifying existing gaps in knowledge and guiding students to overcome them (formative); 2) establishing the correspondence of students' academic achievements to the planned learning outcomes (summative). The results of practical tasks are evaluated by teacher. Tests are evaluated automatically by the LMS. Assessment is carried out on the basis of clearly defined criteria published on the course page.

4) *Certification*. In case of fulfilling all requirements and successful completion of the programme, the student receives a certificate. The form of certificate is determined by HEI's Regulations on the micro-credentials programme. The certificate is an evidentiary document used at the next stage of recognition of learning outcomes.

Recognition of learning outcomes obtained under the micro-credential programme takes two forms: 1) professional recognition, which is carried out by the employer; 2) academic recognition, which is carried out by the HEI.

MOOCs allow an individual to receive a full-fledged educational experience in a flexible way, thanks to the use of the Internet, which is extremely relevant for citizens of Ukraine in the conditions of Russian aggression. MOOCs are mainly developed as a set of video lectures, text materials, individual tasks, tools for interaction with other course participants, tools for formative and summative assessment. Learning takes place mainly independently using peer assessment and automated assessment, sometimes guided learning is implemented with the support of a teacher or assistant. Due to their flexibility, inclusiveness and efficiency, MOOCs are widely used in the educational process of different countries, in particular for professional training and advanced training of teachers. At the same time, in order to minimize existing limitations, such as loneliness, high dropout rates, lack of cooperation, etc., the integration of MOOCs into formal or non-formal education is often preferred.

MOOC-based learning is a strategy for organizing the educational process, according to which participants are invited to master one or more MOOCs mostly independently, with some interaction with a teacher. Since one of the objectives of the CRED4TEACH project is to develop teachers' abilities to develop and implement MOOC-based micro-credentials, using the same strategy for teacher professional development is a reasonable solution.

Using a MOOC-based approach provides the following benefits:



- for HEIs: expanding the student audience without increasing infrastructure, which is especially important for relocated HEIs; increasing international visibility; digitalization of educational processes; use of MOOC as an element of blended learning; analytics of educational data; optimization of costs for scaling courses;
- for citizens: access to high-quality educational courses; flexible study schedule; lower cost compared to traditional education; possibility of rapid updating of competencies; individual learning trajectory; obtaining certificates recognized by employers; development of self-organization skills;
- for employers: access to a wider range of candidates with confirmed competencies; possibility of developing corporate training; rapid staff training; reduction of training costs; focus on relevant market skills; transparency of training content and assessment results.

At the same time, the piloting phase of the developed MOOC-based micro-credentials revealed the necessity to overcome the following pedagogical challenges, which are generally consistent with the research data:

- The development and implementation of MOOCs requires a transition from a lecture-seminar model to a modular, result-oriented one with clearly defined learning outcomes, activity scenarios and transparent assessment criteria. It is necessary to ensure the methodological integrity of the course in an asynchronous format.
- The teacher acts not only as the author of the content, but also as a designer of the educational experience, a facilitator of online interaction, a moderator of forums and an analyst of educational data, who, however, is quite separated from the educational process itself. Ensuring these processes requires digital and methodological competence.
- Ensuring the quality of the content and combining academic content with the accessibility of the presentation of the material, adapting complex theoretical positions to the format of short video lectures and interactive tasks without losing meaning.
- Organizing effective interaction in a mass environment. The scale of the audience limits the possibilities of individual support, which requires the use of automated assessment mechanisms, peer assessment and learner support systems.



- Problems of learner motivation and engagement. It is necessary to develop pedagogical mechanisms for maintaining attention, forming academic discipline and achieving a high level of course completion.
- Ensuring academic integrity in the online environment using personal identification tools, monitoring the independence of task completion.
- Expedient use of analytics of educational data that require pedagogical interpretation to improve the content, methodology and structure of the course.

### **MOOCs as constitutive elements of micro-credentials**

The development of the MOOCs was carried out by autonomous teams of partner universities. Therefore, different ways of internal organization of work were used, depending on the number of employees involved and the functioning of the university (in offline, mixed or fully remote format). All teams followed the following main stages:

1. Definition of learning outcomes.
2. Choice of technological platform and pedagogical approach.
3. Design of course structure and curriculum.
4. Development of content and its multimedia implementation.
5. Choice of assessment strategy and learner engagement.
6. Testing and quality assurance.
7. Launch and testing.

In the process of developing the MOOCs, the teams followed the design principles defined in (Koddebusch, Halsbenning, & Becker, 2025)<sup>10</sup> and (Drake, O'Hara, & Seeman, 2015)<sup>11</sup>:

1. The principle of easy access and use: the courses are created on the Moodle platform, which provides easy and understandable means of accessing the content.

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<sup>10</sup> Koddebusch, M., Halsbenning, S., & Becker, J. (2025). Design principles for MOOC platforms: a public sector perspective. *Transforming Government: People, Process and Policy*, 19(1), 1–21. <https://doi.org/10.1108/TG-05-2023-0065>

<sup>11</sup> Drake, J. R., O'Hara, M., & Seeman, E. (2015). Five principles for MOOC design: With a case study. *Journal of Information Technology Education: Innovations in Practice*, 14, 125-143. Retrieved from <http://www.jite.org/documents/Vol14/JITEv14IIPp125-143Drake0888.pdf>



2. The principle of professional exchange of experience: the courses have tools for exchanging information and communicating between users within the framework of one-to-one, one-to-many and many-to-many interactions.
3. The principle of protected space: students have the opportunity to work privately on the content, when the active user is the only recipient of system data and feedback, which provides participants with the opportunity to evaluate their acquired knowledge and skills without negative consequences.
4. The principle of focus on the subject area: all the content of the MOOCs is oriented towards the professional needs of teachers and corresponds to the selected topics of micro-credentials.
5. Content: the content of the MOOCs provides exactly the information that contributes to the professional development of teachers, in the necessary, but not excessive amount.
6. Engagement: to reduce the risk of high dropout rates, cognitive engagement tools (presentation of educational material in the form of short lectures, interactive tasks) and social engagement tools (provided means for students to communicate, receive feedback, and have scheduled video meetings) were used.
7. Measurability: the courses have tools for students to track their own progress, the teacher can review the progress of students, and the large amount of data received on the work of students makes statistical analysis possible and useful.
8. Accessibility: using different ways of presenting information simplifies its perception by different groups of students; setting restrictions on participation in courses only by teachers and lecturers ensures a more or less equal level of preliminary preparation of applicants.
9. Scalability: the developed MOOCs have the potential both in terms of content expansion, since teachers have the ability to edit educational content, and to increase the number of students.

We use the the model of restricted-access institutional MOOCs. That is, access to the MOOC platform is provided to the student by the administrator of the HEI after registration.

The number of MOOCs within micro-credentials varies from one to six. The number of ECTS credits within micro-credentials varies from four to six.

This difference is caused by the following factors: 1) Academic freedom and autonomy of universities in determining the scope, content and structure of educational programs. 2) Requirements for advanced training of pedagogical and scientific-pedagogical employees in the amount of 150 and 180 hours over 5 years, respectively.

All MOOCs included in one micro-credential are integrated to build up a consistent and coherent unit. Another approach to forming the content and volume in ECTS credits of a micro-credential is also possible, which involves providing learners with greater independence in building an educational trajectory, namely: from the general set of MOOCs, one is mandatory for all learners, and the rest are selective.

At the same time, MOOCs are completed courses with certain forms of control, therefore, by decision of the university, they can be used as separate educational units with the provision of appropriate certificates (in most cases, the final MC assessment would be excluded).

## **Implications for assessment**

### ***Assessment formats***

Assessment within the MOOCs is implemented using different mechanisms, but common aspects can be identified that are recommended for use:

- formative and summative assessment is used, which contributes to the learner involvement and the transparency of assessment;
- formative assessment is carried out in the form of quizzes and/or short tasks with the possibility of mutual assessment, its results are mostly not taken into account in the final course rating, the number of forms of control is arbitrary, but at least one formative control within the topic;
- summative assessment is carried out at the end of studying the topic and the course as a whole in the format of testing with automated verification and performing practical tasks (cases) with teacher verification;
- for the final assessment, the learners are given several attempts (at least two) within the established period.

### ***Thresholds***



The levels of achievement of learning outcomes and assessment criteria also vary within micro-credentials, which ensures the diversity of courses and academic freedom of developers. Shared parameters:

- the maximum number of points that a trainee can receive at the end of the study is 100;
- the minimum threshold score for assigning a micro-credential is 60;
- the tasks that must be completed are defined.

### ***Integrity controls***

To ensure academic integrity, measures were implemented that supported the reliability, transparency and trust in the assessment process:

- individual user accounts and controlled access to the platform;
- time-limited online assessments;
- randomized sets of questions in tests;
- monitoring of submitted tasks by teachers.

### ***Resit rules***

The resit rules are established by the university - the provider of the micro-credential programme. The following basic approach is used:

1. The number of attempts to pass both formative and final test control is unlimited, i.e. the student can take the tests until a satisfactory result is obtained.
2. The number of attempts to complete practical tasks assessed by teachers is limited by the teacher, i.e. revision is not required if the student get a minimum positive assessment.
3. Resit is allowed throughout the entire period of studying the programme. After completing the programme, retaking is impossible.

The basic approach can be adjusted by setting the number of attempts to pass the final control, for example, within the MC "Teacher in Inclusive Education Environment", students are given two attempts.

### **Selection and preparation of the LMS platform**

LMS Moodle served as the technological platform for the development and implementation of MOOCs, based on the following reasons:



- personalized learner access to the courses;
- the ability to create high-quality structured educational content: classes of various forms, placement of additional materials, integration of third-party resources, etc.;
- the ability to create various forms of control and assessment: tests, quizzes, surveys, peer assessment, checking of tasks by the teacher;
- the ability to track the learners' progress and collect educational analytics;
- communication and group work tools: forum, chats, boards, classes, etc.

LMS Moodle is deployed in all partner universities to organize the distance education process, is supported on an ongoing basis, and the project implementers have in-depth skills in working with it.

## **Underpinning principles of Micro-credential design**

### **Entry requirements and prior knowledge assumptions**

Main target groups: pedagogical workers of preschool, general secondary and vocational (vocational and technical), professional pre-higher education institutions, scientific and pedagogical workers of higher education institutions, employees of inclusive resource centers.

Others: students of institutions of higher education specializing in STEAM education, information technologies and computer sciences, postgraduate students, trainers of continuing education centers, methodologists of educational and methodological centers of secondary, vocational and technical education, all persons interested in improving their qualifications or acquiring new skills.

The main requirement is professional activity as a teacher or lecturer. In this regard, it is expected that trainees have background knowledge of the basics of psychology and pedagogy, as well as possess digital skills at a level sufficient for effective learning and obtaining micro-credentials. Preliminary testing is not provided.

### **Requirements for obtaining the certificate**

The training period was determined by the project and covered 8-9 months depending on the conditions issued by the course provider (from June 2025 to January-February 2026).



The requirements for assigning micro-credentials and assessment criteria are formulated in the relevant syllabi of educational programmes and published on the pages of the MOOCs.

Here is a brief summary:

1. **MC Creative Teaching Methods in STEAM-education.** To successfully complete the MOOC, you must score at least 60 points. To successfully complete the programme and assign a micro-credential, you must pass all three MOOCs. When taking tests, the number of attempts is unlimited, no penalty points are awarded for incorrect answers, no penalty points are awarded for multiple attempts. The number of attempts to complete a case-based task is unlimited. Penalties are not applied for multiple attempts.
2. **MC Teacher in Inclusive Education Environment.** Formative assessment is mandatory and must be completed satisfactorily to gain access to the final assessment. To be awarded the micro-credential, a score of over 61% in the final assessment is required. Participants who have met all completion requirements receive a certificate. Participants who have not reached the minimum threshold in the final assessment are given one additional resit opportunity within a predetermined period.
3. **MC Effective online teaching.** To complete the programme and receive a certificate of awarding the micro-credential, four courses (120 hours, 4 ECTS) out of six must be successfully completed. The first course, "Development of a set of digital educational resources", is mandatory. The other three courses can be chosen at will. The courses include educational video lectures, text and presentation materials, ongoing and final tests and assignments. After successfully completing the courses, learners are offered a final certification test. If the courses and the final test are mastered by at least 60 points each, allowing the participants to receive a micro-credential certificate.
4. **MC Technology-enhanced learning in the classroom:** To successfully complete the MOOC, the participant must score at least 60 points out of 100. The final assessment of the MOOC study results consists of two parts: two practical final tasks - 20 points each (total 40 points); two final test papers - 30 questions / 30 points each (total 60 points). To successfully complete the programme and receive a micro-credential, it is necessary to pass all three MOOCs. When completing the tests, the number of attempts is unlimited, no penalty points are accrued for incorrect answers, and no penalty points are accrued for multiple attempts.
5. **MC How to create and implement MOOCs.** Assessment is carried out using tests and tasks to create your own digital educational products after each topic. At the end of each



MOOC, a final test is administered. The test is designed to provide a limited number of attempts and a certain time for their completion. To successfully pass each test and task, learners must score at least 60% correct answers. The study of the programme as a whole also ends with a final test, in which learners must score at least 60% correct answers. To successfully complete the programme and be awarded a micro-credential, it is necessary to pass all four MOOCs and the final test.

### **Stackability**

**CPD accumulation.** Certificates of micro-credentials are recognised by Ukrainian institutions of general secondary education, vocational education and training (VET), professional pre-higher education, and higher education as evidence of continuing professional development. They may be counted toward teachers' professional development records in accordance with institutional regulations and quality assurance procedures, including certification of teaching staff, annual performance and rating indicators, and workload reporting.

**Recognition of prior learning or prior achievement.** Ukrainian HEIs recognise learning outcomes acquired through micro-credentials according to their institutional frameworks. Micro-credentials may be recognised as elective educational components or as parts of relevant learning modules. Where an institution decides to use a micro-credential within a formal educational programme, recognition for credit transfer, exemption, or inclusion in an individual study pathway must be governed by the institution's academic regulations and programme-level decisions on learning outcomes, workload, level, and assessment equivalence.

Certificates have registration numbers that are stored in the databases of the relevant providers of micro-credentials. They are handed out to the successful trainees as e-documents, and can be printed on request. Responsible persons of educational institutions that carry out the recognition of micro-credentials are provided with access to the repositories for the purpose of data verification.

General information on the developed MOOC-based micro-credentials is provided in Appendix 5.



## 6. Pilot Implementation and Quality Assurance

The pilot implementation of micro-credentials in Ukraine took place from June 1, 2025, to January 31 (national MC until February 15), 2026. The table 6.1 provides an overview of enrollment and results in Ukrainian-language micro-credentials programs.

*Table 6.1. Enrolment and performance indicators of micro-credential programmes*

No	MC title	Registrations	Completions	Completion rate (in %)	Main challenge	Main lesson learned
1	Effective online teaching	95	42	0,44	It needs more time for promotion	Using a separate platform for training greatly simplifies administration
2	Creative Teaching Methods in STEAM Education	195	23	0,24	Assignments that require teacher evaluation require regular tutor involvement	Avoid assignments that require a teacher's evaluation
3	Technology-enhanced learning in the classroom	60	24	0,4	Many questions about the terms and teaching process	Create an FAQ section and short video guide for the LMS
4	Teacher in an Inclusive Educational Environment	49	27	0,55	The number of registered participants is insufficient	Intensify the information campaign and use more diverse communication channels to reach the target audience



5	How to create and implement MOOCs	183	29	0,16	Participants sent emails to the contact person regarding technical issues, such as lost passwords, requests for extensions due to power outages, and questions about receiving a course completion certificate	Integrate Q&A into the MOOC
	Total	482	145	0,3		

### Pilot implementation of micro-credentials

Prospective participants were informed and encouraged to participate both in person and through the information resources of partner universities. In particular, round tables were held for representatives of general education and vocational training institutions, at which the role of micro-credentials in the overall system of educational achievements was explained, as well as their relationship to the professional development system. Announcements about the possibility of studying for micro-credentials were posted on all partner websites, both at the university and faculty levels. Letters were sent to vocational education centers and schools with invitations to participate in the training. As a result, each channel for attracting participants made a contribution, with none dominant in terms of results.

The trainees registered for training at partner universities using a Google form. Then, with the help of technical specialists, participants were added to the Moodle LMS user list and sent registration information by email. It is important to note that participant registration was not a one-time process; it continued until the end of 2025.

At the beginning of the training, introductory meetings were held, during which the organizers explained the training format, the conditions for successful completion, and the communication channels to the participants.

Each micro-credential consisted of several MOOCs that learners completed asynchronously. Apart from the introductory meeting, no synchronous or mixed meetings were held. In other words, MOOC courses on the popular platforms Coursera and Udemy were chosen as examples.

Various feedback channels were used during the training. Based on experience, email proved to be the most popular channel. Since registration information was sent via email, participants saved the contact information and used this channel when necessary. Email proved to be the most convenient means of communication, in particular, it was widely used by participants outside of the training. Despite messengers being predominant for other communication modes in Ukraine, they ranked second in popularity in the project because the participants' phone numbers were not published and were available only to the teaching staff. Regular phone calls ranked third in frequency of use and were used in exceptional cases. Communication via the Moodle short message system was the least popular. In blended learning, this channel is the most frequently used, but in the MOOC format, course instructors did not log in regularly, leading to delays in responding via this channel. Forums also did not work. Course participants did not use this communication format.

Feedback was obtained through a survey. The survey aimed to assess the quality of the MC and its impact on the development of competencies (specific knowledge, skills, attitudes, and values), as well as motivation for lifelong learning and employment. The relevance and practical impact of the innovative learning formats used in the courses were investigated.

The MOOC content included video lectures, presentations, text materials, tests, and practical exercises. The main problem was the use of practical tasks that were graded by the instructor. Given the format of the courses (MOOC), trainees expected that practical tasks would be checked instantly, just like tests. In practice, delays of up to a week were, unfortunately, the norm. Therefore, in the future, we consider it advisable to reduce the number of tasks that demand the instructor's personal involvement and possibly even abandon them altogether. Such a decision will, of course, lead to a decrease in the quality of education, since tests significantly narrow the assessment scope, and, therefore, objectivity. On the other hand, it will enable learners to study autonomously.



### Effective online teaching

Indicator / aspect	Planned	Implemented	Evidence (data sources)	Changes for the next cycle
Enrolment	100	95	Google registration lists	no changes
Completion	15	42	Certificates issued	no changes
Engagement	Regular participation in all course tasks, all materials viewed, tests and tasks completed	Collecting statistics on user actions in the LMS	LMS statistics by task and by trainee, task completion statistics, and number of views	no changes
Support requests	by emails	by emails, by messengers	The participants emailed the contact person regarding technical issues, such as lost passwords, requests about deadline extension due to power outages, and inquiries about receiving the certificate of completion	Integrate a FAQ section in the MCs
Satisfaction	Satisfaction surveys	The survey was established in a centralized manner, and interviews	Course design and clarity received the highest rating (4.47/5), 99.5% of participants reported competence development	no changes
Assessment results	Expecting all users to be active in completing tests and assignments	The results are better with tests than with practical assignments. When practical assignments had to be done, such as editing videos, the number of successful completions decreased.	Statistics on the successful completion of all types of tasks	no changes



Accessibility and equity	Password access to materials and a flexible learning schedule	Significant barriers related to internet stability and power cuts; psychological stress due to the national situation affected the learning pace.	Self-assessment, complaints, data on access barriers	Provide access to educational materials via a mobile app. This will simplify access in conditions of military instability.
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### Creative Teaching Methods in STEAM Education

Indicator / aspect	Planned	Implemented	Evidence (data sources)	Changes for the next cycle
Enrolment	100	195	Google registration lists	No changes
Completion	15	23	LMS statistics, test grades, completed and submitted individual tasks, and certificates issued	Consider e-mailing inactive trainees, especially those who have not even started) personally to find out their intention to continue with the course
Engagement	Regular participation in all course tasks, all materials viewed, tests and tasks completed	Regular logins, all materials viewed (number of views for many tasks exceeds the number of viewers three times), tasks completed and given feedback	LMS statistics by task and by trainee, task completion statistics, number of views, and forum activity)	No changes
Support requests	by emails	By emails to the contact person	The participants emailed the contact person regarding technical issues, such as the codeword to access one of the tests was	Integrate a FAQ section in the MOOCs



			not working, lost passwords, requests about deadline extension due to power outages, and inquiries about receiving the certificate of completion	
Satisfaction	satisfaction surveys	anonymous surveys that were integrated into the MOOCs and made an obligatory task to complete the training	The survey results available on Moodle demonstrate a high level of satisfaction with the MC content and organisation. The scope of survey questions was relevant for understanding which practices were successful and should be maintained, and which of them should be improved, eliminated, or substituted	no changes
Assessment results	The majority of participants successfully complete quizzes and practical assignments	Most learners achieved passing scores; some had difficulties with practical tasks (they proved to be more time-consuming than expected)	LMS statistics: scores per task, scores per participant	Less practical assignments or their lower complexity
Accessibility and equity	Open access to materials and flexible learning schedule	Organising the MC as a series of MOOCs ensured flexibility. The cloud Moodle server provided access to the materials even during power outages.	Complaints from the trainees and requests to extend the deadline for completion because	Consider more flexible deadlines, especially for the periods when longer and more frequent power outages are expected, inform the trainees about the



		However, there were barriers related to internet stability and power outages on the users' end		possibility of extension in advance, before they start complaining
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### Technology-enhanced learning in the classroom

Indicator / aspect	Planned	Implemented	Evidence (data sources)	Changes for the next cycle
Enrolment	30	60	Google registration lists	Increase promotion through university channels, partner networks, and social media; clarify MC content and benefits.
Completion	15	24	LMS statistics, certificates issued	Consider extending the enrolment period to attract more participants.
Engagement	Active participation in LMS activities and online sessions	Moderate activity: regular logins, viewing of materials	LMS activity, views, session attendance	Form a unified MOOC structure and combine some elements.
Support requests	Requests related to technical	Several requests related to platform access,	Emails/chats, types of requests	Create an FAQ section and short video



	access and course navigation	deadlines, and clarification of assignments		guide for the LMS.
Satisfaction	High level of satisfaction with course content and organisation	Generally positive feedback from participants	Surveys, interviews, and focus groups	Provide additional optional materials.
Assessment results	The majority of participants successfully complete quizzes and assignments	Most learners achieved passing scores; some had difficulties with analytical tasks	Score distribution, pass rates, typical errors	Replace practical assignments with tests
Accessibility and equity	Ensure open access to materials and a flexible learning schedule	No significant complaints; some participants reported limited internet connectivity	Self-assessment, complaints, data on access barriers	Provide downloadable materials

### Teacher in an Inclusive Educational Environment

Indicator / aspect	Planned	Implemented	Evidence (data sources)	Changes for the next cycle
Enrolment	50	49	Google registration lists	Intensify the information campaign and use a wider range of communication channels to reach the target audience.



Completion	15	27	LMS statistics, certificates issued	The completion rate significantly exceeded the initial target, proving the high value of the module's practical focus, where situational tasks effectively helped participants visualize real-world inclusive scenarios
Engagement	Regular participation in all modules	Fluctuating activity due to frequent electricity outages and the unstable security situation; tasks often took longer to complete than expected.	LMS activity, views, session attendance	Provide more flexible deadlines and implement "low-bandwidth" versions of materials for easier access during outages.
Support requests	General technical assistance	Numerous requests regarding lost Moodle logins/passwords and inquiries about the process of generating/receiving the final certificate.	Emails, types of requests	Develop a simple "Quick Start" guide with automated password recovery instructions and a visual guide on certificate downloading.
Satisfaction	Positive feedback on content	High satisfaction with situational and practical tasks; participants found the	Surveys, interviews, focus groups	Increase the number of situational case studies and interactive practical



		lectures and study materials highly relevant and engaging.		exercises, as they were the most valued components.
Assessment results	Standardized passing rate	Participants found quizzes and final tests easy to pass after studying the materials; certificates were awarded to those reaching the 60% threshold.	Pass rates, typical errors	Retain the current assessment structure and the 60% passing threshold, but add more formative self-check questions.
Accessibility and equity	Open access to materials and flexible learning schedule	Significant barriers related to internet stability and power cuts; psychological stress due to the national situation affected the learning pace.	Self-assessment, complaints, data on access barriers	Provide downloadable offline versions of lectures and reading materials (PDFs/Audio) for learning during blackouts.

### Implementation of the National micro-credential

The national micro-credential was implemented jointly by all Ukrainian partner universities. To launch this MC, a joint memorandum was signed that regulated the distribution of work, responsibilities, and intellectual property rights for the materials. The educational programme for the national micro-credential was prepared jointly by the partner universities and approved by the Academic Council of V.N. Karazin Kharkiv National University, which set out the agreed requirements for the micro-credential. The national micro-credential was hosted on the LMS KGNU. The user registration process was organized by KGNU technical staff. Each partner university's team independently configured their MOOC, graded assignments, and provided consultation to the trainees. Certificates of completion were generated by KGNU staff.

This division of labor allowed for an equal distribution of work in configuring and supporting the national micro-credential. One of the shortcomings was that the training materials for different MOOCs had completely different styles. They were slightly unified, but due to a lack

of time, it was not possible to fully correct this. This will be a task for the period after the micro-credential test implementation.

### How to create and implement MOOCs

Indicator / aspect	Planned	Implemented	Evidence (data sources)	Changes for the next cycle
Enrolment	100	183	Google registration lists	
Completion	60	29	LMS statistics, certificates issued	
Engagement	Regular participation in all course tasks, all materials viewed, tests and tasks completed	Collecting statistics on user actions in the LMS	LMS statistics by task and by trainee, task completion statistics, and number of views	no changes
Support requests	by emails	by emails, by messengers	The participants emailed the contact person regarding technical issues, such as lost passwords, requests about deadline extension due to power outages, and inquiries about receiving the certificate of completion	Integrate a FAQ section in the MOOCs
Satisfaction	satisfaction surveys	The survey was established in a centralized manner, and interviews	Course design and clarity received the highest rating (4.47/5), and 99.5% of participants reported competence development	no changes
Assessment results	Expecting all users to be active in completing tests and assignments	The results are better with tests than with practical assignments. When practical assignments had	Statistics on the successful completion of all types of tasks	no changes

		to be done, such as editing videos, the number of successful completions decreased.		
Accessibility and equity	Password access to materials and a flexible learning schedule	Significant barriers related to internet stability and power cuts; psychological stress due to the national situation affected the learning pace.	(self-assessment, complaints, data on access barriers)	Provide access to educational materials via a mobile app. This will simplify access in conditions of military instability.

### Quality assurance and academic integrity

Throughout the training process, the learners' progress was constantly monitored, and they were periodically encouraged to continue their studies. Only those participants who had successfully mastered all components of the micro-credentials were admitted to the final certification test.

To uphold the principles of academic integrity, a time-limited test was created and a special, secure browser was built into the Moodle system that prevented copying the question text. To promote ethical behavior and prevent cheating or misrepresentation, we implemented:

- randomization of questions: Moodle quizzes use scrambled question banks;
- randomization of answer options: Moodle quizzes use scrambled answer options;
- time-limited tests: quizzes and exams are limited in time frames to discourage the use of external help;
- restrictions on the number of attempts.

The last month of the most intense training coincided with heavy shelling and power cuts for consumers in Ukraine. In some regions and cities, power supply was available for less than 2 hours a day. This became a real complication for all participants in the MC pilot implementation: both trainers and trainees. In this situation, the trainees who were in-service teachers at various

educational institutions prioritized their workplace obligations and postponed their training. As a result, the number of successful completions was slightly lower than expected.

### **MC evaluation through pilot participants and instructors**

The results of the survey on completed MCs revealed the trainees' high estimation of the content and organization of the training.

The course participants were predominantly women (90.7%) with significant teaching experience (65% with more than 10 years). This suggests that the learners were quite competent in organizing educational activities and were able to professionally evaluate their training. The distribution between school teachers and HEI and VET teachers was approximately equal.

Although the design of the courses varied, overall it received a rating of 4.74 out of 5. It can be assumed that the main contribution to the high rating has been made by the use of LMS Moodle, which, firstly, is able to represent the content in a well-structured way, and, secondly, is well known to more than half of the participants. 99.5% of those who successfully completed the MOOCs note that their competencies have improved as a result. The results primarily relate to knowledge and digital competence.

MC participants are convinced that this form of learning surpasses traditional learning in terms of flexibility (4.58 out of 5 points) and engagement (4.55 out of 5 points). This indicates the promising prospects for the development of this training mode. Therefore, participants intend to use micro-credentials for their professional growth in the future. On a five-point scale, training under the CRED4TEACH project received 4.66 for overall satisfaction, 4.64 for willingness to recommend to colleagues, and 4.59 for willingness to continue training in this form.

## 7. Issuing and Certification

### Certificate format

Upon successful completion of the MC, the trainees were awarded a hard (paper) or/and digital document. Issuance of documents on the obtained MC was only for the MCs/MOOCs /courses accredited by the University.

The requirements that a trainee is obliged to fulfil for their training to be considered successfully completed are laid out in the syllabi of the respective MCs. Generally, the requirements include completing all the work (tasks) of the MC (watching the video-lectures, reading the supplementary materials, independent reading and research, completing tests and/or individual tasks etc.) and achieving the threshold score (60-80% in most cases).

Certificates issued upon completion of micro-credential programmes at the four Ukrainian universities participating in the project may differ in design, colour scheme, or format. However, all certificates contain a standardized set of mandatory information ensuring consistency, transparency, and recognition across institutions.

The procedure of issuing a document certifying a learner's achievement is also uniform across the participating institutions and includes the following steps.

After the trainees fulfill all the necessary requirements and complete the training under the MC programme, the programme manager forwards the list of their names and credentials in Ukrainian and English to the responsible department responsible for issuing the certificates (e.g., Department of Educational Activities and Methodology, Department of Information Activities and Youth Policy). The designated person at the department prepares an order to issue certificates. Certificates of obtaining micro-credentials are generated automatically and contain all the relevant details for instant verification, including unique digital identifiers and QR codes. After signing the order, the designated person at the corresponding department generates certificates through the system in place at their respective HEI, makes entries in the registration journal and enters information about the issued certificates into the verification system (for example, in the Unified Attestation System (UAS)). The certificates are then forwarded to the programme manager to notify the learners. The signed certificates are e-mailed to the participants.

The document on obtaining an MC is issued in the form of a certificate which can be issued as an e-document and/or a hard copy. In case of issuing a hard (paper) certificate, it is printed on an A4 format blank on both sides (in Ukrainian on the face side, in English on the back). The

texts on both sides must be identical. In case of any discrepancies, the text in Ukrainian is decisive.

No electronic signature or electronic seal is provided for electronic versions. The means of verifying the certificate is a link and/or QR code to the verification system.

To comply with the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability, the document on obtaining MC (certificate) must contain the following mandatory information:

- the name of the University;
- the title of the document;
- the registration/journal entry data (series and number) of the document;
- the name and surname of the person who has obtained the MC;
- the title of the Programme;
- the duration of the Programme in ECTS credits and academic hours;
- the level of MC according to the NQF;
- the form of training;
- the language(s) of training;
- learning outcomes (competencies);
- the issuance date of the document (certificate);
- a link and/or QR code with a link to the official website where information about the issued document is stored and can be verified;
- the name and surname of the rector of the University, their signature validated by the seal.

Information about the issued certificates is stored in the electronic database, which is accessible for verifying the validity of the certificate. Certificates can be searched by name and surname or by certificate number and are available at the relevant page of the University's website. Hard copies of certificates bear the rector's signature and a wet stamp. The means of verification for electronic copies are a link and/or QR code directing to the official HEI's website where information about the issued document is stored and can be verified. The electronic signature can be applied if deemed necessary and technically possible.



In case a learner studies a part of a MC, if such an option is provided by the selected Programme, the certificate indicates the amount of ECTS credits (hours) and competencies acquired by the learner.

The documents on obtained MC are recognized by the University as confirmation of professional development by the employee and are included in the volume of professional development activities. The documents certifying the results of completing MCs/courses/programmes in educational or research institutions outside the university and/or outside Ukraine (except for the aggressor state and states against which Ukraine has applied sectoral sanctions).

### **Certificate status management**

The certificates obtained are valid for an indefinite period and have no expiration date. The learner should produce the obtained certificates to the employer (or to the relevant department) shortly upon receiving them. The date when the employee is to undertake another round of training is agreed upon by the employer or is stipulated by state regulations in place.

Revocation, as the procedure of a formal withdrawal or cancellation of a certificate previously awarded upon successful completion of the micro-credential, is not prescribed by the issued provisions on micro-credentials, although it may be initiated according to other regulations and/or provisions existing in the universities, for example, codices of academic integrity or provisions on anti-plagiarism measures.

Generally, such a procedure might be initiated if credible evidence emerges that the certificate was obtained in violation of the programme's rules or academic integrity standards. Typical grounds for revocation may include proven plagiarism or other forms of academic misconduct, falsification of identity or assessment results, failure to meet mandatory course requirements, or administrative errors in the certification process. Revocation may also be considered if the participant is later found to have breached ethical or participation requirements defined by the training provider.

The procedure begins with the identification and verification of the issue, followed by a formal review conducted by the responsible academic or administrative body/committee. The certificate holder should be informed of the concerns and given an opportunity to provide clarification or additional evidence. After evaluating all relevant information, the responsible authority makes a reasoned decision regarding whether revocation is justified. If revocation is confirmed, the certificate is declared invalid and the participant is formally notified, with the



decision documented in the university's records. The procedure should be transparent, fair, and consistent with the university's academic regulations. However, the requirements to organise MC delivery, laid out in HEIs' institutional frameworks (formally called "provisions on micro-credentials"), put in place all necessary mechanisms and measures to exclude any course of action that potentially may bring about the necessity of revocation in future.

Re-issuance and corrections, if necessary, follow the standard procedures established at the issuing institutions applicable to all kinds of documents issued by the institution. Re-issuance cases may include loss of access to the digital credential platform, accidental deletion of the certificate, technical failures affecting the issuance system, or requests for an updated copy containing corrected personal details. The procedure normally begins with a formal request submitted by the certificate holder to the issuing institution, accompanied by proof of identity and relevant supporting information. The responsible administrative unit (Department of Education and Methodology, Department of Information Activities and Youth Policy) verifies the original completion record and confirms the authenticity of the request before issuing a replacement certificate. The re-issued certificate retains the same certificate identifier, retrieved from the registration journal. The document may be marked as a "re-issued" or "duplicate" version in the institutional records. A new identifier or certificate version may be generated only when substantial corrections are required (for example, correction of personal data or administrative errors). All re-issuance events should be recorded in the issuing institution's registry to ensure traceability and transparency.

Corrections to an already issued certificate may be required when errors are identified in personal data, course information, dates, or other administrative details after the certificate has been issued. A corrected certificate is issued while the original record remains archived for reference. The corrected certificate should normally receive a new version number or revision label to distinguish it from the original document. In addition, the certificate registry should maintain an audit trail documenting the nature of the correction, the date of the change, and the authority approving the modification. Where possible, the original certificate identifier may be retained with an added version indicator to preserve traceability. The previously issued certificate should be marked as 'superseded' or 'invalid' in the institutional records to prevent parallel use. This process ensures transparency, accountability, and the integrity of the certification system.

## **Integration into the European and/or national platforms**

Europass is the European Union project aimed at presenting professional skills, competences and qualifications in a form that is clear in all European countries. The main purpose of Europass is to provide citizens with access to easy-to-use and standardised tools that are understandable in the European area of education and labour, in order to present their knowledge, skills, educational achievements and professional experience.

On 1 July 2024, the National Europass Centre (Ukraine) was launched as an important step towards simplifying the transparency of qualifications and access to new opportunities in education and employment. The Centre currently operates under the National Qualifications Agency.

Therefore, as part of the CRED4TEACH project, the NQA has proposed an accessible way to facilitate the portability of micro-credentials, allowing individuals to transfer their achievements and obtain recognition for their efforts. This is possible through the integration of the certificate into the Europass system.

### **Integration of certificates into the Europass library:**

The Europass platform allows users to store their documents in the Europass library. This is a user's personal online archive where they can securely store and organise:

- diplomas, certificates, and training certificates;
- test results and language certificates;
- documents confirming participation in mobility programmes;
- other validation of skills and qualifications.

All files are available for download in PDF format, as images, or as digital certificates from authorised institutions. Users can:

- attach certificates to their profile entries;
- share documents with employers or educational institutions via secure links.

Thus, the integration of certificates into Europass allows the creation of a unified electronic portfolio of qualifications that is recognised across Europe.

The Diploma Supplement is one of the tools of the Europass system – a document issued to graduates of higher education institutions of all types and subordination in order to provide information necessary for an objective assessment of the higher education qualifications

obtained by a person who has received a higher education Diploma. The Diploma Supplement contains information about:

- the status of the educational institution;
- the type, level and content of the programme;
- the learning outcomes acquired during the programme;
- the educational components;
- the grades;
- the number of ECTS credits earned;
- information about the higher education system in Ukraine.

The Diploma Supplement is not a substitute for a Diploma, but it provides explanations that help foreign educational institutions or employers understand the content of the qualification.

### **Certificate Supplement:**

Our system does not yet have such a document, but the situation is changing.

The Law of Ukraine 'On Vocational Education' provides that an integral part of a specialist diploma is an Diploma Supplement, which contains information on the awarding of professional qualifications (professional qualifications) of the relevant level of the National Qualifications Framework, a list of programme learning outcomes, educational components and the number of ECTS in them.

The Europass system includes a Digital Test that allows users to assess their level of digital competence. The test is based on the European Digital Competence Framework and covers five key areas, including information processing, communication, digital content creation, safe working in a digital environment, and cyber security. Based on the test results, the user receives a certificate that corresponds to European standards and confirms the level of digital skills acquired.

### **Advantages of using Europass for storing and integrating certificates**

- International recognition – documents stored in Europass comply with European standards, which simplifies their recognition abroad.
- Secure storage – the Europass library provides reliable protection of personal data in accordance with GDPR requirements.



- Accessibility and control – users decide for themselves which documents to make available to others.
- Convenient sharing – digital documents can be easily transferred to employers, institutions or job search platforms.

The integration of the certificate into the Europass system is an important step towards ensuring international recognition of qualifications, simplifying employment abroad and supporting the mobility of professionals. The platform allows users to store, structure and verify educational documents in digital format, ensuring transparency and data reliability.

Europass is a key tool for building a personal educational and professional path in the modern European area of learning and labor.

## 8. Recognition of Micro-credentials

The recognition of micro-credentials plays a vital role in ensuring the continuous professional development (CPD) of teaching and academic staff. The relevance of this recognition for teachers is directly linked to regulatory requirements for professional development. In accordance with current Ukrainian legislation, professional development is a mandatory prerequisite for the certification of teaching staff and is carried out between certification procedures. Legislation defines the minimum workload and frequency of such professional development.

In particular, teaching staff at general secondary and professional pre-higher education institutions must undertake professional development annually, accumulating at least 150 hours of training over five years, which is equivalent to 5 ECTS credits. For teachers in preschool, extracurricular, and vocational (vocational-technical) education institutions, professional development must be carried out at least once every five years with a minimum workload of 120 hours or 4 ECTS credits. For academic staff at higher education institutions, the minimum workload for professional development usually amounts to at least 6 ECTS credits within five years.

Within this regulatory system, micro-credentials create a flexible mechanism for accumulating validated learning outcomes. They enable teachers to gradually develop individual learning trajectories through participation in short specialised programmes aimed at acquiring specific professional competences, including digital literacy, innovative pedagogical methods, inclusive education, and other relevant areas. Thus, micro-credentials not only contribute to continuous professional development but also support teachers' career advancement and enhance their professional mobility.

An important feature of national regulation is the guarantee of freedom of choice regarding professional development providers by teaching and academic staff. Ukrainian legislation provides that teachers may independently choose institutions and organisations that provide professional development, as well as the format and thematic focus of learning in accordance with their professional needs. The total workload of professional development includes all hours of training irrespective of the provider, the form, type, or field of educational activity. This approach facilitates the recognition of learning outcomes acquired through micro-credential programmes, which may be delivered by a variety of educational providers, including higher education institutions.



To ensure transparency and trust in such documents, partner universities implement electronic registers of issued certificates. Information on completed programmes and issued documents is stored in internal electronic databases that allow for the verification of certificate validity. In some universities, in particular at Cherkasy State Technological University and Bohdan Khmelnytsky Melitopol State Pedagogical University, it is possible to verify certificates through the university websites using the document number or the participant's surname. Such mechanisms significantly enhance the transparency and reliability of the micro-credential recognition system.

In cases where a participant completes only part of a micro-credential programme, if such a possibility is provided for in the programme, the certificate specifies the actual number of ECTS credits obtained and the list of competencies developed. This ensures transparent documentation of learning outcomes and creates a basis for further recognition of such outcomes within other educational programmes or professional development procedures.

Thus, the recognition of micro-credentials creates a flexible and reliable mechanism for teachers to accumulate validated learning outcomes, which contributes to continuous professional development, supports career advancement, and expands opportunities for lifelong learning.

### **Internal recognition**

Internal recognition of micro-credentials at partner universities is conducted in accordance with their institutional regulations and is integrated into the university's internal quality assurance system. Recognition procedures are governed by regulations pertaining to micro-credentials, the organisation of the educational process, and the professional development of teaching and academic staff, as well as documents establishing procedures for the recognition of prior learning outcomes.

The primary mode of internal recognition is the integration of micro-credentials into the professional development system for teaching and academic staff. Documents confirming the completion of micro-credentials are recognised by universities as evidence of participation in professional development programmes and are credited towards the overall workload of professional development in accordance with the internal regulations of the educational institution.

In addition, for HEI students, institutional frameworks provide the possibility of recognising learning outcomes acquired through micro-credential programmes as part of university

educational programmes. In such cases, micro-credentials may be recognised as elective educational components or as parts of learning modules, provided that the learning outcomes align with the programme learning outcomes of the relevant educational programme. The decision on such recognition is made by the relevant academic structures of the university, including departments, programme leaders (guarantors), educational and methodological commissions or councils, and, where necessary, the Academic Council of the university.

The decision-making process for the internal recognition of micro-credentials is based on specific criteria applied at partner universities. A key prerequisite for recognition is the provision of a certificate or other supporting document confirming the completion of the micro-credential. Such a document, as a rule, contains essential information on learning outcomes, including the full name of the programme participant, the name of the educational institution or training provider, the title of the programme, the workload in hours or ECTS credits, the date of completion, and the document's registration number. The availability of this information ensures the possibility of verification and subsequent recognition of learning outcomes within the universities' institutional procedures.

*Table 8.1. Internal recognition matrix*

<b>Element</b>	<b>Description</b>
Decision-making body	Educational and methodological commissions, Academic Council (where required)
Evidence required	Certificate containing information on learning outcomes, workload (ECTS/hours), provider, and completion date
Relevance threshold	Alignment of learning outcomes with programme learning outcomes or professional development objectives
Maximum recognisable volume	5 ECTS for teachers, 6 ECTS for HEI academic staff
Validity period	5 years
Appeal route	Existing academic appeal procedures defined by university regulations

### Interinstitutional recognition

Decisions on the interinstitutional recognition of learning outcomes acquired through micro-credential programmes are made in accordance with the internal regulations of each university and on the basis of official documents confirming learning outcomes. This approach aligns with the general principles of academic autonomy of higher education institutions and the practices of recognising the outcomes of non-formal and informal education.

An important example of interinstitutional cooperation in the field of micro-credentials is the joint activity of partner universities within the Cred4Teach project. A memorandum of cooperation has been concluded between the higher education institutions, which provides a framework for collaboration in the development and implementation of micro-credentials, including the joint programme “How to Create and Implement Massive Open Online Courses (MOOC)”. In accordance with the provisions of the memorandum, each party has the right to issue certificates confirming the successful completion of this micro-credential. Such an approach effectively facilitates the mutual recognition of learning outcomes among partner universities, since certificates issued by one institution may be used as confirmation of the acquired learning outcomes at other universities participating in the partnership.

*Table 8.2. Cross-institutional recognition matrix*

Element	Description
Recognition model	Facilitated and case-by-case (not automatic)
Decision-making body	Receiving institution
Basis for recognition	Certificate and internal procedures
Verification	Institutional registries and certificates

### Professional Recognition

There is no definition of micro-credentials providers, their tasks and functions in Ukrainian legislation. Indirectly, information is contained in legislation relating to educational activities and qualification certification for certain types of professional activities.

Some public organisations have created an educational environment based on their own resources, where short-term training ideas are successfully implemented. The Expert Interbranch Association of Ukraine is a public union that implements short-term educational

programmes covering various areas of activity: from developing marketing strategies for enterprises to managing apartment buildings. After completing the training, participants can pass an independent professional certification exam and receive a qualification certificate as a ‘Manager (administrator) of an apartment building’.

The State Employment Service implements a variety of training courses for registered unemployed persons and provides opportunities to recognise the results of informal learning.

Some government bodies (the Ministry of Social Policy of Ukraine; the Public Health Centre of Ukraine) have their own online learning platforms offering relevant short-term courses, the results of which are recognised by employers.

Ukraine also has a number of commercial and non-commercial online platforms offering general and subject-specific educational programmes, training courses, workshops, etc., followed by certification and the award of a digital certificate. For example, Evopro is an educational platform for doctors that implements a series of educational activities to prepare for certification for the awarding of the qualification category of medical workers, with the awarding of a certificate.

The activities of the above-mentioned entities, as well as other providers, ensure that educational services are adapted to the rapidly changing demands of the labour market, promoting continuous professional development.

Therefore, professional recognition of short-term training is carried out by various categories of labour market stakeholders, as well as by organisations that provide professional certification or advanced training. Such recognition is based on the assessment of learning outcomes, their relevance to professional activities, and the possibility of validating the acquired competences as proof of a specialist's professional development.

*Table 8.3. Professional recognition matrix*

<b>Element</b>	<b>Description</b>
Recognition context	Teacher CPD, certification, labour market upskilling
Recognition actors	Schools, institutions, employers, certification bodies
Basis for recognition	Certificates from accredited university programmes
Evidence required	Certificate with learning outcomes, workload, provider
Regulatory alignment	Aligned with national CPD regulations



Level of formalisation	Formal in CPD; informal for employers
Verification	Institutional registries and validation mechanisms



## 9. Outlook

By aligning institutional procedures with the national guidelines for micro-credentials developed within the project and with relevant European recommendations, partner institutions created a structured framework enabling the sustainable provision of micro-credentials for teacher professional development. As a result, higher education institutions strengthened their organisational capacity to design flexible learning opportunities and to integrate micro-credentials into existing professional development systems. In future, micro-credentials as a mode of upskilling, re-skilling and continuing professional development, may be offered to non-academic partners, such as professional development centres, enterprises and administrative bodies.

In addition, the project supported the development of cooperation between higher education institutions and key stakeholders involved in teacher education and professional qualification systems. Partnerships were established with qualification agencies, educational authorities, professional associations, and other organisations engaged in teacher training and professional standards development. Such cooperation helped ensure that the learning outcomes embedded in the newly developed micro-credentials correspond to professional competence requirements and evolving labour market needs. These partnerships also facilitated dialogue between higher education institutions and the broader educational ecosystem, supporting recognition and potential future scaling of micro-credential-based training formats. Through this collaborative approach, the project contributed to strengthening links between higher education, professional communities and policy actors, thereby creating favourable conditions for the wider institutionalisation of micro-credentials in teacher professional development systems.



## **Annexes**

Annex 1: Glossary of terms

Annex 2: Templates for micro-credential design

Annex 3: Certificate templates (exclude any personal data)

Annex 4: Quality assurance tools

Annex 5: Overview of the developed MOOC-based Micro-credentials

Annex 6: Template for a micro-credential recognition decision

## Annex 1: Glossary of terms

**Access to education and training:** Conditions, circumstances or requirements (e.g. qualification, education level, skills or work experience, etc.) governing admittance to and participation in education and training institutions or programmes.

**Accreditation of an education or training programme:** A process of quality assurance through which accredited status is granted to a programme of education or training, showing it has been approved by the relevant legislative or professional authorities by having met predetermined standards.

**Accreditation of Prior Learning (APL):** A process through which previously achieved learning outcomes, regardless of where they were acquired, are assessed and formally recognised for credit or exemption.

**Adaptability:** The capacity of an organisation or of an individual to adapt to new technologies, new market conditions and new work patterns.

**Adult education:** General or vocational education provided for adults after initial education and training for professional and/or personal purposes, and which aims to: provide general education for adults in topics of particular interest to them (e. g. in open universities); provide compensatory learning in basic skills which individuals may not have acquired earlier in their initial education or training (such as literacy, numeracy) and thus to; give access to qualifications not gained, for various reasons, in the initial education and training system; acquire, improve or update knowledge, skills or competences in a specific field: this is continuing education and training.

**Assessment of Learning Outcomes:** The process of appraising knowledge, know-how, skills and/or competences of an individual against predefined criteria (learning expectations, measurement of learning outcomes).

**Authenticity (of Credentials):** The assurance that a credential has been issued by a recognised provider and can be verified through secure mechanisms.

**Certificate / diploma:** An official document, issued by an awarding body, which records the achievements of an individual following an assessment and validation against a predefined standard.



**Certification:** The formal confirmation by a provider that a learner has achieved specific learning outcomes following assessment.

**Certification of learning outcomes:** The process of issuing a certificate, diploma or title formally attesting that a set of learning outcomes (knowledge, knowhow, skills and/or competences) acquired by an individual have been assessed and validated by a competent body against a predefined standard.

**Continuing education and training:** Education or training after initial education and training – or after entry into working life aimed at helping individuals to: improve or update their knowledge and/or skills; acquire new skills for a career move or retraining; continue their personal or professional development.

**Continuing Professional Development (CPD):** Learning activities undertaken to maintain, upgrade, and extend professional knowledge, skills, and competences throughout a professional career.

**Credit (ECTS Credit):** A quantitative measure expressing the volume of learning based on defined learning outcomes and associated workload, typically using the European Credit Transfer and Accumulation System.

**Credit system:** An instrument designed to enable accumulation of learning outcomes gained in formal, non-formal and/or informal settings, and facilitate their transfer from one setting to another for validation and recognition.

**Digital Credential:** A credential issued in digital format containing structured, machine-readable metadata that enables verification, portability, and interoperability.

**European Credit Transfer and Accumulation System (ECTS):** A systematic way of describing a higher education programme by attaching credits to its components (modules, courses, placements, dissertation work, etc.), to: make study programmes easy to read and compare for all students, local and foreign; encourage mobility of students and recognition of formal, non-formal and informal learning; help universities to organise and revise their study programmes.

**European Qualifications Framework (EQF):** A common European reference framework that makes qualifications more transparent and comparable by linking them to defined levels based on learning outcomes.

**Formal Learning:** Learning that takes place in an organised and structured environment and leads to recognised qualifications or credits.

**Formal qualification:** The formal outcome (certificate, diploma or title) of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards and/or possesses the necessary competence to do a job in a specific area of work. A qualification confers official recognition of the value of learning outcomes in the labour market and in education and training.

**Informal Learning:** Learning resulting from daily activities related to work, family, or leisure that is not organised or structured.

**Learning content:** The topics and activities which make up what is learned by an individual or group of learners during a learning process.

**Learning Outcomes:** The set of knowledge, skills and/or competences an individual has acquired and/or is able to demonstrate after completion of a learning process, either formal, non-formal or informal.

**Learning Experience:** A structured set of learning activities designed to achieve defined learning outcomes.

**Lifelong Learning:** All learning activities undertaken throughout life to improve knowledge, skills, and competences within personal, civic, social, and employment-related perspectives.

**Micro-credential:** A record of the learning outcomes that a learner has acquired following a short learning experience. These outcomes are assessed against transparent standards and are quality assured.

**Mobility:** The ability of an individual to move and adapt to a new occupational environment.

**Modular Learning Pathway:** A flexible learning structure composed of smaller units of learning that can be combined or accumulated towards broader learning objectives or qualifications.

**National Qualifications Framework (NQF):** An instrument for the development, classification and recognition of skills, knowledge and competencies along a continuum of agreed levels..

**Non-formal learning:** Learning which is embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support).

**Portability:** The ability of a credential to be shared, transferred, and recognised across different institutions, sectors, or countries.

**Provider:** An organisation responsible for designing, delivering, assessing, and issuing a credential.



**Quality Assurance (QA):** A set of processes and procedures ensuring that learning provision meets defined standards and supports continuous improvement.

**Recognition:** The process through which learning outcomes are validated and accepted by a competent authority for academic, professional, or employment purposes.

**Recognition of Prior Learning (RPL):** A process that allows individuals to have learning outcomes acquired through formal, non-formal, or informal learning assessed and recognised.

**Self-assessment:** Assessment by which the learner gathers information about and reflects on his or her own learning, judges the degree to which it reflects explicitly stated goals or criteria, identifies strengths and weaknesses, and revises accordingly. It is the learner's own assessment of personal progress in knowledge, skills, processes, and attitudes.

**Stackability:** The possibility of accumulating micro-credentials or learning units to build towards larger credentials, qualifications, or professional recognition.

**Transferability of learning outcomes:** The degree to which knowledge, skills and competences can be used in a new occupational or educational environment, and/or to be validated and certified.

**Transparency:** The clear and accessible presentation of information on learning outcomes, assessment methods, credit value, level, and quality assurance to support understanding and trust.

**Transparency of qualifications:** The degree of visibility and legibility of qualifications, of their content and value on the (sectoral, regional, national or international) labour market and in the education and training systems.

**Trust:** Confidence among stakeholders that a credential is reliable, quality assured, and based on transparent standards.

**Upskilling:** Short-term targeted training typically provided following initial education or training, and aimed at supplementing, improving or updating knowledge, skills and/or competences acquired during previous training.

**Validation of learning outcomes:** Confirmation by a competent body that learning outcomes (knowledge, skills and/or competences) acquired by an individual in a formal, non-formal or informal setting have been assessed against predefined criteria and are compliant with the requirements of a validation standard).



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**Verification:** The process of confirming the validity and authenticity of a credential through secure and reliable systems.



## Annex 2: Templates for micro-credential design

### Example micro-credential proposal template (in the stage of planning and design)

Recommended Course Info	
<b>Field (Category)</b>	
<b>Title</b>	
<b>Rationale:</b>	
<b>Primary Target Group</b>	<input type="checkbox"/> Formal (Please specify): <input type="checkbox"/> Informal (Please specify): <input type="checkbox"/> Non-formal (Please specify):
<b>Secondary Target Group</b>	<input type="checkbox"/> Formal (Please specify): <input type="checkbox"/> Informal (Please specify): <input type="checkbox"/> Non-formal (Please specify):
<b>Other Target Group</b>	<input type="checkbox"/> post-graduate learners ] Formal (Please specify): <input type="checkbox"/> Informal (Please specify): <input type="checkbox"/> Non-formal (Please specify):
<b>Instructional Model:</b>	<input type="checkbox"/> Self-Paced <input type="checkbox"/> Guided
<b>Instructional Strategy:</b>	<input type="checkbox"/> Explanatory <input type="checkbox"/> Exploratory <input type="checkbox"/> Other (Please specify):
<b>Length and Content (must be specified in hours and titles of the MOOCs):</b>	
<b>Goal (Terminal Objective):</b>	
<b>Learning Objectives and Subordinate Objectives (Learning Outcomes):</b>	
<b>Learning Objectives and Course Relation</b>	



**Example template for a MOOC proposal (for MOOC-based micro-credentials. In case when a MC consists of more than one MOOC, should be prepared for each MOOC)**

MOOC TEMPLATE	
<b>Field (Category)</b>	
<b>Title</b>	
<b>Target Group</b>	
<b>Instructional Model:</b>	<input type="checkbox"/> Self-Paced <input type="checkbox"/> Guided
<b>Instructional Strategy:</b>	<input type="checkbox"/> Explanatory <input type="checkbox"/> Exploratory <input type="checkbox"/> Other (Please specify):
<b>Length (must be specified in hours and modules):</b>	
<b>Goal:</b>	
<b>Learning Objectives (Outcomes):</b>	
<b>Assessment:</b> <i>Briefly describe how you will measure the achievement in the course</i>	
<b>Micro-Credentials:</b> <i>Briefly describe the micro-credential you will be using this MOOC in:</i>	



**Example template for a micro-credential programme (at the stage of approvals and realisation)**

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
XXXXXXXXXX UNIVERSITY

**«APPROVED»**

by the Academic Council of XXXX  
protocol No. \_ dated \_\_\_\_\_

Chairman of the Academic Council of XXXX  
\_\_\_\_\_ Xxxx XXXXXX

Order of XXXX No. \_\_\_\_ dated \_\_\_\_\_

MICRO-CREDENTIAL  
PROGRAMME

**«Programme Title»**

(full title of the programme)

NATIONAL QUALIFICATION FRAMEWORK LEVEL (5, 6, 7, 8) \_\_\_\_\_

XXX  
20\_\_



## Approvals

Programme manager

\_\_\_\_\_

\_\_\_\_\_

(signature)

(Name, SURNAME)

Approved by the department of xxx meeting on « \_\_\_ » \_\_\_\_\_ 20\_\_ . Protocol No \_\_\_\_

Department head

\_\_\_\_\_

\_\_\_\_\_

(signature)

(Name, SURNAME)

« \_\_\_ » \_\_\_\_\_ 20\_\_ p.

## Programme Profile

<b>1. General Information</b>	
<b>Programme manager</b>	<i>Last name, first name, patronymic, academic degree, academic title, position of the programme manager</i>
<b>Working group members</b>	<i>Last name, first name, patronymic, academic degree, academic title, position of the team member</i>
<b>Higher education institution and structural units involved in the programme</b>	<i>Full name of the university and full name of the department(s) implementing the programme</i>
<b>National Qualifications Framework Level</b>	<i>Compliance of the program with the NQF of Ukraine, FQ-EHEA, and EQF-LLL, as in Appendix H.</i>
<b>Formal Programme title</b>	<i>Programme Title</i>
<b>Volume in ECTS credits and academic hours</b>	<i>Programme workload in ECTS credits and academic hours, for example, 6 ECTS credits, 180 hours</i>
<b>Language(s) of instruction / assessment</b>	<i>Language(s) of instruction / assessment. Example: Ukrainian, English</i>
<b>2. Programme's Objective</b>	
<i>Clear and concise formulation of the program's main objective</i>	
<b>3. Programme Characteristics</b>	
<b>Directions, specifics and tasks</b>	<i>Brief description of the orientation and professional (specialized) educational focuses of the programme. Specificity and features of the programme, its main tasks</i>
<b>Main focus</b>	<i>Brief description of the main focus of the programme, keywords</i>
<b>5. Teaching and Assessment</b>	
<b>Teaching and learning</b>	<i>Main approaches, methods, and technologies used in the programme</i>
<b>Assessment</b>	<i>Forms and procedures to assess learning outcomes delivered by the programme</i>
<b>6. Learning Outcomes (Competencies)</b>	
<i>Knowledge, skills, abilities, ways of thinking, views, values, and other personal qualities acquired during the learning process</i>	
<b>7. Resources and Support</b>	
<b>Staffing</b>	<i>Specific staff characteristics, including probable involvement of foreign specialists.</i>



<b>Material and Technical Support</b>	<i>Specific characteristics of material and technical support</i>
<b>Information, Educational and Methodological Support</b>	<i>Specific characteristics of information, educational, and methodological support</i>

### Programme Components

<b>Code</b>	<b>Programme components (modules, topics, tasks, practical component, certification)</b>	<b>Number of credits / hours</b>	<b>Form of assessment</b>
<b>OK. 1</b>	<i>Component title</i>		
<b>OK. 2</b>	<i>Component title</i>		
...			
<b>PC. 1</b>	<i>Practical component</i>		
<b>A. 1</b>	<i>Name of certification control</i>		
<b>TOTAL WORKLOAD</b>			

*The sequence in which programme components are presented in the table should correspond to the sequence of their teaching or implementation.*

**Annex 3: Certificate templates (exclude any personal data)**





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ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ ІМЕНІ В.Н. КАРАЗІНА

**ДОДАТОК ДО СВДОЦТВА**

МК № 250024

**1. ІНФОРМАЦІЯ ПРО ОСОБУ, ЯКІЙ ПРИСВОЄНО ЧАСТКОВУ КВАЛІФІКАЦІЮ АБО МІКРОКВАЛІФІКАЦІЮ**

1.1. Прізвище – *Ім'я*  
1.2. Ім'я – *Прізвище*  
1.3. Дата народження – *01.01.2000*

**2. ІНФОРМАЦІЯ ПРО ПРИСВОЄНО ЧАСТКОВУ КВАЛІФІКАЦІЮ АБО МІКРОКВАЛІФІКАЦІЮ**

2.1. Вид отриманої кваліфікації – *Мікрокваліфікація*  
2.2. Тип отриманої кваліфікації – *Професійна*  
2.3. Назва отриманої кваліфікації – *Педагог-розробник цифрових освітніх ресурсів*  
2.4. Найменування назавача програми, який присвоїв кваліфікацію – *Харківський національний університет імені В.Н. Каразіна, заклад вищої освіти державної форми власності, у сфері управління Міністерства освіти і науки України*  
2.5. Мова(и) навчання/оцінювання – *Українська*

**3. ІНФОРМАЦІЯ ПРО КВАЛІФІКАЦІЮ І ТРИВАЛІСТЬ ЇЇ ЗДОБУТТЯ**

3.1. Рівень кваліфікації згідно з Національною рамкою кваліфікацій – *7*  
3.2. Тривалість програми в кредитах ЄКТС та академічних годинах – *4 кредитів ЄКТС / 120 академічних годин*

**4. ІНФОРМАЦІЯ ПРО КОМПЕТЕНТНОСТІ, РЕЗУЛЬТАТИ НАВЧАННЯ / ТРУДОВІ ФУНКЦІЇ ТА ОЦІНЮВАННЯ**

**4.1. Компетентності, результати навчання / трудові функції**  
*Програмні компетентності*  
**Цифрова компетентність:** здатність ефективно використовувати цифрові технології, онлайн сервіси та ресурси для організації та підтримки освітнього процесу.  
**Продуктивна компетентність:** здатність розробляти, впроваджувати й адаптувати цифрові освітні ресурси та онлайн курси відповідно до освітніх потреб.  
**Комунікативна компетентність:** вміння організувати взаємодію зі здобувачами освіти у цифровому середовищі, забезпечувати якісний зворотний зв'язок.  
**Оцінювальна компетентність:** здатність застосовувати сучасні цифрові інструменти для оцінювання результатів навчання з урахуванням принципів академічної доброчесності.  
**Педагогічна інноваційна:** вміння впроваджувати інноваційні методи навчання.  
**Компетентність з цифрової етики та безпеки:** знання та дотримання норм етики, безпеки й захисту персональних даних в цифровому освітньому середовищі.

*Програмні результати навчання*  
У результаті успішного завершення програми учасник/ця здатен/на:  
1. **Аналізувати** особливості цифрового освітнього середовища та потреби здобувачів освіти для обґрунтованого вибору інструментів онлайн навчання.  
2. **Планувати та розробляти** цифрові освітні ресурси і навчальні онлайн курси відповідно до дидактичних принципів та вимог сучасної освіти.  
3. **Використовувати** сучасні цифрові платформи, сервіси для підтримки навчального процесу, комунікації та зворотного зв'язку.  
4. **Оцінювати** навчальні досягнення здобувачів освіти з використанням цифрових інструментів,

формувального та підсумкового оцінювання, дотримуючись принципів академічної доброчесності.

5. **Демонструвати готовність до етичної поведінки, дотримання правил цифрової безпеки та поваги до прав учасників освітнього процесу.**

6. **Розробляти стратегії підвищення мотивації до навчання з використанням актичних, інтерактивних і гейміфікованих методів.**

**4.2. Відомості про програму, накопичені індивідуальні кредити та отримані бали/оцінки**

Код освітнього компонента (за наявності)	Назва освітнього компонента або результатів навчання	Кількість кредитів ЄКТС /годин	Оцінка
ОК_1	Розробка комплексу цифрових освітніх ресурсів	1 / 30	Відмінно / 95
ОК_2	Оцінювання навчальних досягнень у цифровому середовищі	1 / 30	Відмінно / 90
ОК_3	Підвищення інтересу студентів до навчання	1 / 30	Відмінно / 100
ОК_4	Етикет і безпека в цифровому освітньому середовищі	1 / 30	Відмінно / 100
А_1	Атестаційний контроль	-	Добре / 85
Загальна кількість кредитів ЄКТС			4 / 120

**4.3. Система оцінювання та, за наявності, таблиця розподілу оцінок**

Оцінка (за національною шкалою)	Мін. бал	Макс. бал
<i>Диференційована шкала</i>		
Відмінно	90	100
Добре	70	89
Задовільно	60	69
Незадовільно	1	59
<i>Недиференційована шкала</i>		
Зарядовано	60	100
Не зарядовано	1	59

**5. ДОДАТКОВА ІНФОРМАЦІЯ**

**5.1. Контактна інформація назавача програми**  
майдан Свободи 4, м. Харків, 61022, Україна  
Телефон: тел. +38(057)341-27-12  
Телефон для дзвінків із-за кордону: +38(044)334-52-36  
Гаряча лінія: +38(080)033-48-73  
E-mail: [univer@karazin.ua](mailto:univer@karazin.ua) Сайт: <https://karazin.ua/>

**5.2. Інформація про акредитацію програми (найменування органу, що акредитував програму та реквізити рішення про акредитацію програми)**  
Рішення Вищої ради Харківського національного університету імені В.Н. Каразіна з питань: «Про затвердження програми з присвоєння часткової кваліфікації» від 29 серпня 2025 року, протокол № 22

**6. ЗАСВІДЧЕННЯ ДОДАТКА СВДОЦТВА**

6.1. Дата – *02.02.2026*

6.2.1. Посада \_\_\_\_\_ 6.2.2. Підпис \_\_\_\_\_ 6.2.3. Ім'я та прізвище \_\_\_\_\_  
*Проректор з науково-педагогічної роботи Харківського національного університету імені В.Н. Каразіна* \_\_\_\_\_ *Заріф НАЗИРОВ*

6.3. Печатка \_\_\_\_\_ *М.П.*

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## **Annex 4: Quality assurance tools**

### **Criteria for Evaluating Programme Quality by Accreditation Procedures**

#### **Criterion 1. Design, Objectives, and Access to the Programme**

- 1.1. The Programme has clearly formulated objectives and learning outcomes.
- 1.2. The Programme provides for achieving learning outcomes (acquiring competencies).
- 1.3. The admission procedures are clear and understandable, allow for the identification of the educational service consumer. The procedures do not contain discriminatory provisions and are published on the relevant page of the university's website.

#### **Criterion 2. Structure, Content, Teaching, and Learning of the Programme**

- 2.1. The workload of the Programme and its individual components is measured in ECTS credits and academic hours. The workload of the programme is 1-6 ECTS credits, 30-180 academic hours.
- 2.2. The workload of the Programme and its individual components (in ECTS credits) corresponds to the actual workload and secures the declared objectives and learning outcomes.
- 2.3. The content of the Programme has a clear structure; the components build up a logically interconnected system and collectively allow achieving the declared objectives and learning outcomes.
- 2.4. The content of the Programme corresponds to:
  - 2.4.1. the specialty or specialties and the level of the NQF,
  - 2.4.2. the profession or group of professions and the level of the NQF.
- 2.5. The Programme includes a practical component that allows acquiring, consolidating, and verifying the competencies needed for further educational/professional activities.
- 2.6. Forms and methods of teaching and learning contribute to the declared objectives and learning outcomes.
- 2.7. The assessment procedure and criteria are clear and accessible.

#### **Criterion 3. Monitoring procedures, Assessment, and Academic Integrity**

- 3.1. Forms of monitoring educational achievements, sequence, and criteria for assessment are clear, understandable, announced in advance, and allow for the verification of the declared objectives and learning outcomes of the Programme, ensuring the identification of the recipient of the educational service.
- 3.2. Clear and understandable rules for achievement monitoring are defined, are made accessible to the recipients of the educational service, ensuring the objectivity of examiners. The procedure for appealing the results of achievement monitoring and retaking assessment is formulated.
- 3.3. The policy, standards, and procedures for maintaining academic integrity are clear.

#### **Criterion 4. Human and Material-Technical Resources**

- 4.1. The academic and/or professional qualifications of the Programme developers ensure the achievement of the Programme's defined goals and learning outcomes.
- 4.2. The technical resources and educational-methodological support of the Programme guarantee the achievement of the Programme's defined goals and learning outcomes.



4.3. The department(s) implementing the Programme provide technical, educational, organizational, informational, and advisory support to the recipients of the Programme.

**Criterion 5. Internal Quality Assurance of the Programme**

- 5.1. The Programme aligns with the mission/strategy of the University or the structural unit involved.
- 5.2. The Programme takes into account labor market needs and the interests of various stakeholder groups.
- 5.3. The Programme developers ensure the maintenance of documentation related to the Programme's development.
- 5.4. The Programme complies with the requirements of internal documents, standards, and policies on Programme development and implementation, internal quality assurance procedures, academic integrity, inclusivity, etc.
- 5.5. The department(s) implementing the Programme have established a quality culture that promotes the continuous development of the Programme and educational activities under this Programme, and have developed mechanisms for self-assessment and organizing feedback from stakeholders.

**Criterion 6. Transparency and Publicity**

- 6.1. Clear and understandable rules and procedures regulating the rights and responsibilities of all participants in the educational process under the Programme are defined. These rules and procedures are accessible.
- 6.2. The department(s) implementing the Programme publish accurate and reliable information about the Programme (including its goals and expected learning outcomes) on the relevant page of the University's website, elaborated to inform interested parties.

**Accreditation Results for the Programme "Title"**

Criteria and Sub-criteria	Recommendations for correction and/or improvement (when applicable)	Score
Criterion 1. Design, objectives, and access to the Programme		
1.1.		
1.2.		
1.3.		
Total for Criterion 1		
Criterion 2. Structure, content, learning and teaching in the Programme		
2.1.		
2.2.		
2.3.		
2.4.		
2.5.		
2.6.		
2.7.		
Total for Criterion 2		
Criterion 3. Monitoring measures, assessment, and academic integrity		



3.1.		
3.2.		
3.3.		
Total for Criterion 3		
Criterion 4. Human, material and technical resources		
4.1.		
4.2.		
4.3.		
Total for Criterion 4		
Criterion 5. Internal quality assurance		
5.1.		
5.2.		
5.3.		
5.4.		
5.5.		
Total for Criterion 5		
Criterion 6. Transparency and publicity		
6.1.		
6.2.		
Total for Criterion 6		
Scored points/percentage of maximum score (72)		

Conclusion on accreditation of the Programme:  
The programme can be accredited for two years – .  
Accreditation denied – .

Accreditation group:

Accreditation group head \_\_\_\_\_ (Name, SURNAME)

Accreditation group members \_\_\_\_\_ (Name, SURNAME)

\_\_\_\_\_ (Name, SURNAME)

## Annex 5: Overview of the developed MOOC-based Micro-credentials

HEI Name	Micro-credential Title	Number of Credits (ECTS)	Number of MOOCs within the Micro-credential	Types of learning content (videos, texts, etc.)	Assessment formats (quizzes, assignments, final test)	Entry requirements / prior knowledge	Accumulation and credit recognition	LMS platform
Cherkasy State Technological University, ChSTU	Creative Teaching Methods in STEAM-education	6	3	videos, texts, presentations, self-study guides, list of independent reading, individual practical tasks (cases), discussion forum	quizzes, individual project-based assignment (a case), final test	Hold a second (Master's) level of higher education. Work as a teacher or lecturer.	Credits are accumulated through the gradual study of modules (MOOCs) - 2 credits for successful completion of each module (MOOC).  Credits are recognised by educational institutions (secondary, higher, VET, pre-higher) across Ukraine according to the state regulations on free choice of courses and providers of the advanced training by an in-service teacher.	Moodle
Drohobych Ivan Franko State Pedagogical University, DSPU	Teacher in Inclusive Education Environment	5	1	videos, texts, practical tasks, interactive presentations, infographics, discussion forum	quizzes, practical assignments and applied tasks, situational tasks, end-of-module tests, final comprehensive online assessment	Work as a teacher, lecturer, or specialist at an Inclusive Resource Center.	Participants who successfully complete all requirements receive 5 ECTS credits. Credits are recognised by general secondary education institutions (schools) and HEI across Ukraine.	Moodle
V. N. Karazin Kharkiv National University, KhNU	Effective online teaching	4-6	6	video lectures, interactive tasks, project activities, discussion forum	self-assessment, tests, practical tasks	Be a pedagogical employee of a general secondary, vocational (vocational-technical), professional pre-higher, or higher	After successful completion of a module (MOOC), the participant receives 1 ECTS credit. The credits are accumulated through the sequential completion of at least four modules (MOOCs).  Credits are accepted for enrolment by general secondary, vocational and pre-higher education institutions in Ukraine	Moodle



						education institution.	as a form of confirmation of professional development results.	
Bohdan Khmelnytsky Melitopol State Pedagogical University	Technology-enhanced learning in the classroom	4	3	short video lectures, texts, discussion forum, interactive Padlet board, set of additional learning resources	formative self-check quizzes, practical final assignments (case-based applied tasks), summative test	Junior Bachelor's degree or Specialist / Junior Specialist qualification. First (Bachelor's), second (Master's), or third (Doctor of Philosophy / educational-scientific) level of higher education.	After successful completion of the MOOC, the participant receives 1 ECTS credit (MOOCs 1 and 2) and 2 ECTS credits (MOOC 3). Credits are accumulated through the sequential completion of all MOOCs.  Credits are recognized by institutions of general secondary education, vocational education, and professional pre-higher education in Ukraine.	Moodle
All partners	How to create and implement MOOCs	4	4	videos, texts, presentations, self-study guides, list of independent reading, individual practical tasks (cases), discussion forum	quizzes, individual project-based assignment (a case), final test	Work as a teacher or lecturer.	Credits are accumulated through the gradual study of MOOCs - 1 credit for successful completion of each MOOC.  Credits are recognised by educational institutions (secondary, higher, VET, pre-higher) across Ukraine according to the state regulations on free choice of courses and providers of the advanced training by an in-service teacher.	Moodle



## Annex 6: Template for a micro-credential recognition decision

Ministry of Education and Science of Ukraine  
XXX

EXCERPT  
from the minutes No. 1  
of the meeting of the Academic Council  
of the XXX  
dated XXX

Present: XX of XX members of the Academic Council of the XXX

1. HEARD: Acting Head of the Department of *Name of Department Surname First name Patronymic* on the approval of professional development in the form of Micro-credentials "XXX" from June 1, 2025, to December 30, 2025, for 120 hours for the associate professor of the Department *Name of department Surname First name Patronymic*.

DECIDED: To approve professional development in the form of Micro-credentials "XXX" from 01.06.2025 to 30.12.2025 for 120 hours for Associate Professor of the Department *Name of the Department Surname First Name Middle Name*.

Voting results:

"For" – XX,

"Against" - XX,

"Abstained" - XX,

The decision was adopted unanimously.

Chair of the Academic Council of the XXX

\_\_\_\_\_  
(Name, SURNAME)

Secretary of the Academic Council of the XXX

\_\_\_\_\_  
(Name, SURNAME)



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