

Short Learning and Training Programs for Obtaining Micro-Credentials in Slovenian Higher Education

Lovro Kutija

International School for Social and Business Studies, Slovenia
kutija.lovro@gmail.com

Vesna Skrbinjek

International School for Social and Business Studies, Slovenia
vesna.skrbinjek@mfdps.si

Abstract

Slovenia's initiative to deploy short learning programmes as micro-credentials into its higher education system represents a strategic shift towards strengthening higher education fourth dimension focusing on lifelong learning at higher education institutions. Pilot projects targeted to experiment with implementation of short teaching and learning programs for obtaining micro-credentials are being implemented at University of Ljubljana, University of Maribor, University of Primorska, and the Faculty of Information Studies, supported by Recovery and Resilience Plan. This research assesses an evaluation of the current number of micro-credentials offered under the pilot projects and by study field. The variety and complexity of deployed short teaching and learning programs for obtaining micro-credentials implies that challenges remain, including the need for systematisation and standardization into existing qualification frameworks and national legislation, integration with current qualification system and also the need for additional financial resources.

Keywords: Micro-credentials, Higher Education, Slovenia, Lifelong Learning, flexible learning units.

INTRODUCTION

The short-targeted learning units known as micro-credentials supply people with specific knowledge on key competencies that could fulfil quick-changing workplace requirements (*A European Approach to Micro-Credentials - European Education Area*, 2024). The European Commission supported these flexible learning units targeted at digital, sustainable and green competencies enabling people to learn beyond traditional formal academic programs through lifelong learning (*Micro-Credentials Brochure - European Education Area*, n.d.). In the Slovenian Higher education Act proposal (April, 2025), *micro-credential is defined as a public document with a record of learning outcomes that an individual has achieved through short-term education and training for obtaining micro-evidence in the amount of 1 to*

a maximum of 9 ECTS, evaluated with the European Credit Transfer System (hereinafter: ECTS). Short-term education and training for obtaining micro-evidence in the form of a public document are intended to acquire specific knowledge, skills and competencies that meet social, personal, cultural or labour market needs in the broadest sense. They are based on quality assurance in accordance with agreed standards in the relevant sector or in the relevant field of educational activity.

The European definition in contrast with Slovenian is broader and more flexible, without specifying the exact workload or credit value. While the European approach emphasizes portability and stack ability, the Slovenian approach further reinforces quality assurance by linking it directly to established standards within the quality assurance system of formal education. The development of internal quality assurance systems remains a responsibility entrusted to each higher education institution (HEI) offering micro-credentials. There are altogether 10 principles that must be covered when we deal with micro-credentials: quality, transparency, relevance, valid assessment, learning pathways, recognition, transferability, learner-centredness, authenticity, information and guidance (Gergorić, 2024).

In this paper we will describe the current state of micro-credentials in Slovenia. Micro-credentials as part of lifelong learning can be regarded as the fourth dimension of higher education institutions and are currently not meant for any formal education recognition. We only analysed what is currently in place in Slovenian Higher education while the process of implementation is still ongoing. The approach assesses micro-credentialing from different angles to develop a system which fulfils educational and workforce demands at European and national levels.

INTRODUCTION OF MICRO-CREDENTIALS INTO SLOVENIAN HIGHER EDUCATION SYSTEM

Slovenia has recently taken key steps to systematically integrate micro-credentials into higher education. The implementation of micro-credentials stands as a vital element for Slovenia to match national school standards with European directives while following future workforce requirements. The new proposal of Higher Education Act (April 2025) explicitly defined micro-credentials as flexible learning units within higher education and stipulates that HEIs will be authorized to issue micro-credentials based on short learning programs. Individuals will thus be able to complete a short training program at a university or HEI and receive a micro-credential, enabling them to upgrade or complement their existing knowledge—especially in response to the continuous demands of the labor market for new skills. Simultaneously, the act foresees that the Slovenian Quality Assurance Agency for Higher Education (SQAA) will adjust its operations to support this field (e.g., by developing new quality criteria) and that the national system will incorporate the necessary changes for monitoring the quality of micro-credentials.

At the strategic level, the implementation of micro-credentials is embedded in Slovenia's broader vision for the development of education and society. The Resolution on the National Programme for Higher Education until 2030 (ReNPVŠ30) commits Slovenia to making its higher education system more responsive, innovative, and high-quality, which includes new forms of education. These goals are also aligned with Slovenia's commitments within the European Education Area by 2025 and the European Commission's vision for 2030—both emphasizing the importance of lifelong learning, digital transformation of education, and cooperation with industry. Micro-credentials are recognized as one of the areas for achieving these goals.

In recent two years, several pilot projects and national consultations on micro-credentials have taken place. Slovenia has participated in the OECD-EC project on the implementation of micro-credentials, receiving analyses and recommendations for developing this field. The University of Ljubljana (UL), University of Maribor (UM), University of Primorska (UP) and Faculty of Information Studies (FIS) have been granted this project to experiment with the implementation of micro-credentials.

Professional guidelines and orientation documents have also been prepared. One such document is the *Guide for the Development of the Micro-credentials System in Slovenian Higher Education* (Gergorić, 2024), which provides a shared definition of micro-credentials and outlines their elements based on European and national frameworks. Additionally, efforts are underway to integrate micro-credentials into the Slovenian Qualifications Framework (SQF), which would facilitate their recognition within the official national qualifications system. Including micro-credentials in SQF will assign them a specific qualification level, allowing for easier understanding of their value both domestically and abroad, and for interoperability with existing qualifications (e.g., recognizing a micro-credential as part of a formal study program or as a prerequisite for further training).

STEPS FOR DESIGNING SHORT LEARNING AND TRAINING PROGRAMS FOR OBTAINING MICRO-CREDENTIALS

The implementation of short learning and training programs for obtaining micro-credential requires thoughtful planning and execution. HEIs must follow several sequential steps when designing such programs:

1. **Identification of Needs and Target Groups:** HEIs first determine what skills or knowledge gaps exist and who the program is intended for. This includes collaboration with employers and stakeholders to ensure relevance to labor market demands.
2. **Define Learning Outcomes and Competencies:** Next, clearly formulated learning outcomes describe what learners will know or be able to do. These are paired with specific competencies, and the scope of the program is determined—usually expressed in ECTS credits (e.g., 1–5 ECTS).
3. **Design Content, Methods, and Assessment:** The curriculum includes appropriate teaching methods (e.g., workshops, case studies) and ways to assess whether outcomes are achieved (exams, projects, demonstrations).
4. **Internal Approval:** The institution ensures the program meets internal and national quality standards, following new legislation. Internal bodies (e.g., senates) approve the program before it is offered.
5. **Implementation and Evaluation:** The program is delivered by qualified educators or practitioners. After completion, institutions evaluate the effectiveness, using participant feedback and performance data to improve future versions.
6. **Issuance and Recognition:** Participants receive an official micro-credential certificate that includes key information (learning outcomes, ECTS, issuing body). Recognition is supported by integration into qualification frameworks, ensuring value in both educational and employment contexts.

It is also worth noting that HEIs may offer micro-credentials individually or in partnership with other organizations. In practice, collaboration with a company or professional association often leads to better outcomes, as it combines academic knowledge with real-world needs. OECD research shows that

partnership-based delivery (e.g., university + company) makes micro-credentials particularly relevant and impactful, especially in contexts like Slovenia—ensuring that programs align directly with current workplace demands or technological developments.

PILOT PROJECTS TARGETING MICRO-CREDENTIALS

University of Ljubljana

The UL deployed 80 micro-credential programs across 30 scientific and professional fields by 17 different faculties (*Krajša izobraževanja in usposabljanja za mikrodokazila*, n.d.; *Vseživljenjsko učenje in mikrodokazila*, 2025). The array of micro-credentials at UL extends from arts, education and teaching to informatics and veterinary science as well as engineering disciplines which demonstrates interdisciplinary learning (*Krajša izobraževanja in usposabljanja za mikrodokazila*, n.d.; *Vseživljenjsko učenje in mikrodokazila*, 2025).

The Faculty of Mechanical Engineering stands out with fourteen micro-credentials while focusing on applying an industry-based approach to innovation. Secondly, the Faculty of Social Sciences and the Faculty of Sports which both provide 10 micro-credentials covering communication, sociology, political science and physical training (see Figure 1) (*Krajša izobraževanja in usposabljanja za mikrodokazila*, n.d.; *Vseživljenjsko učenje in mikrodokazila*, 2025).

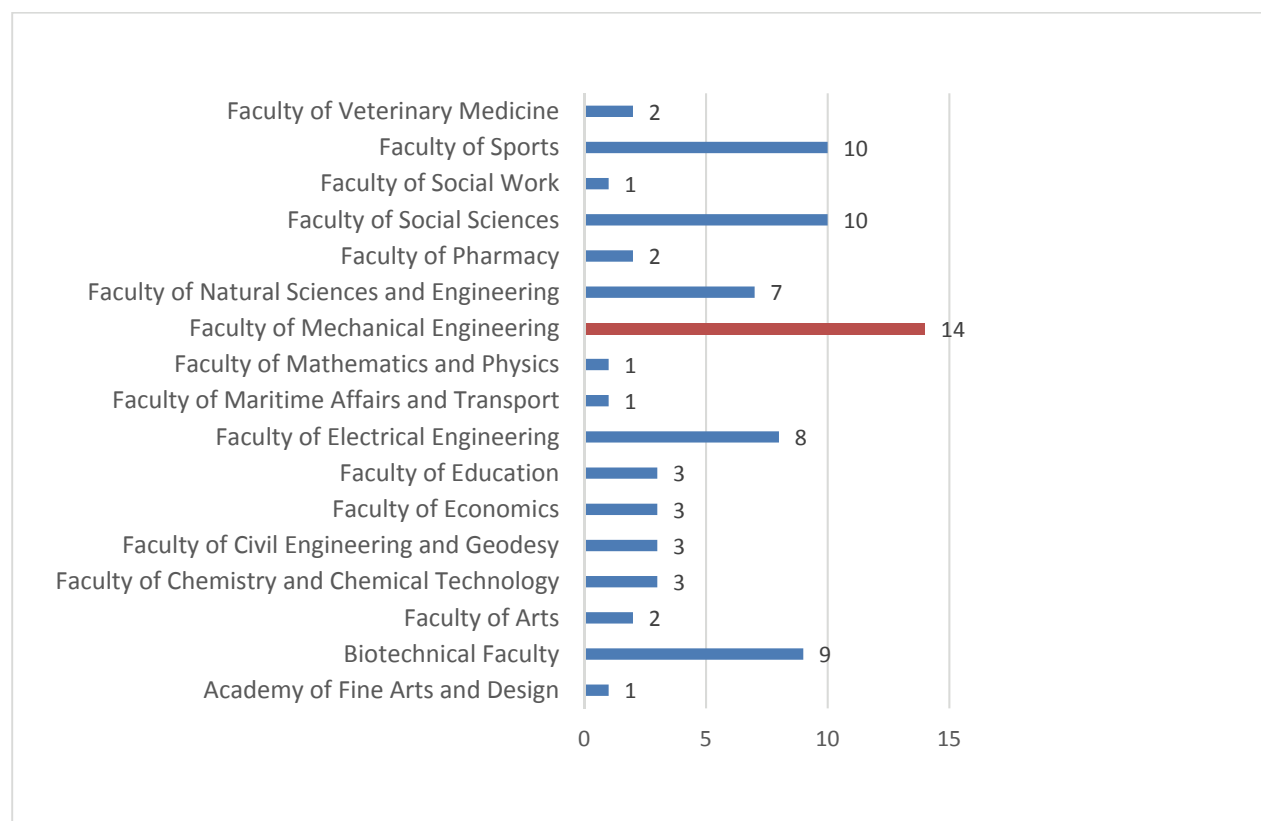


Figure 1: No. of short learning and training programs for obtaining micro-credentials by study fields by HEI at the UL

The Biotechnical Faculty provides nine micro-credentials that cover agricultural studies along with microbiology and ecological sciences. The Faculty of Electrical Engineering provides eight micro-credentials that cover technical training and at the Faculty of Natural Sciences and Engineering seven

programs were deployed involving metallurgy together with geotechnics and chemical technology. A cluster of small no. of short learning and training programs for obtaining micro-credentials within the UL provides more focus to specialized groups at the Academy of Fine Arts and Design and Faculty of Social Work and Faculty of Maritime Affairs and Transport.

Our analysis shows the following representation of average ECTS in different study fields (see Figure 2) (*Krajša izobraževanja in usposabljanja za mikrodokazila*, n.d.; *Vseživljenjsko učenje in mikrodokazila*, 2025). Food Technology field has the most extensive duration with the highest average of ECTS credits, while other fields of study have shorter durations in terms of ECTS. Art and Agriculture provide 3.5 ECTS and fields like Microbiology, Informatics, Ecology, and Energy offer on average 3 ECTS. In contrast, areas such as Aeronautics, Anatomy, Bioproduction, and Maritime offer shorter programs (1 ECTS), likely serving as introductory or highly specific skills.

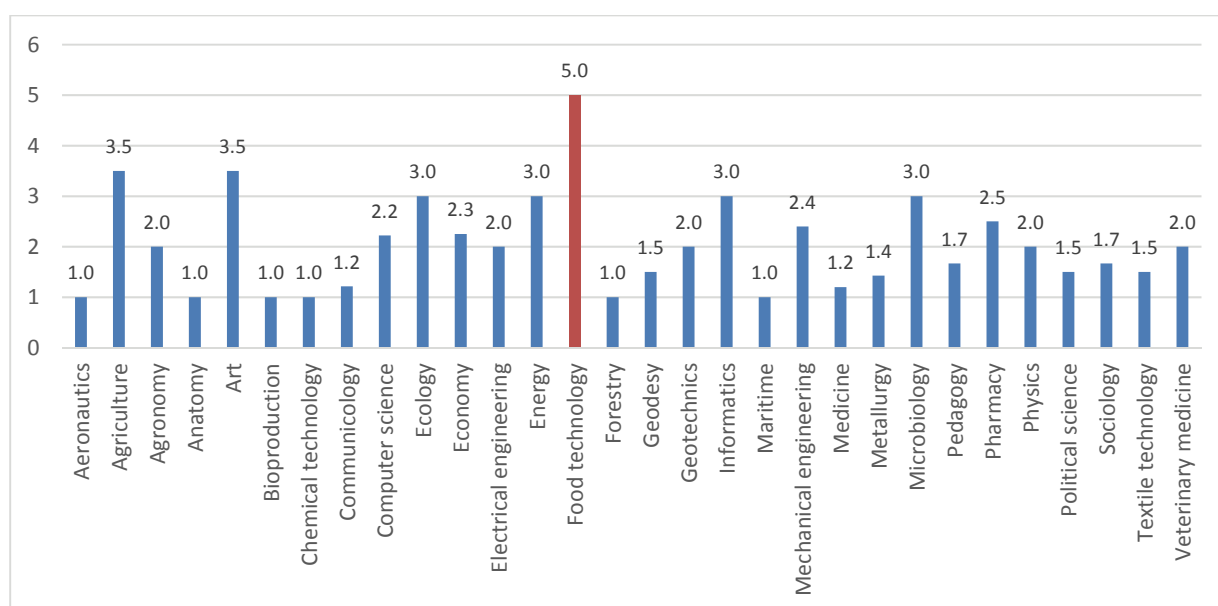


Figure 2: Average ECTS of short learning and training programs for obtaining micro-credentials by study field at the UL

On average, 1.9 ECTS are required to obtain a short learning and training programs for micro-credentials at UL. The Faculty of Arts stands out with the highest average value of 4.5 ECTS when designing short learning and training programs for micro-credentials. Similarly, the Academy of Fine Arts and Design and the Faculty of Social Work on average offer on average 3 ECTS long short learning and training programs for micro-credentials. In contrast, HEIs with a technical or natural science focus, such as the Faculty of Mathematics and Physics and the Faculty of Mechanical Engineering, aimed for only 1 ECTS on average. (see Figure 3) (*Krajša izobraževanja in usposabljanja za mikrodokazila*, n.d.; *Vseživljenjsko učenje in mikrodokazila*, 2025).

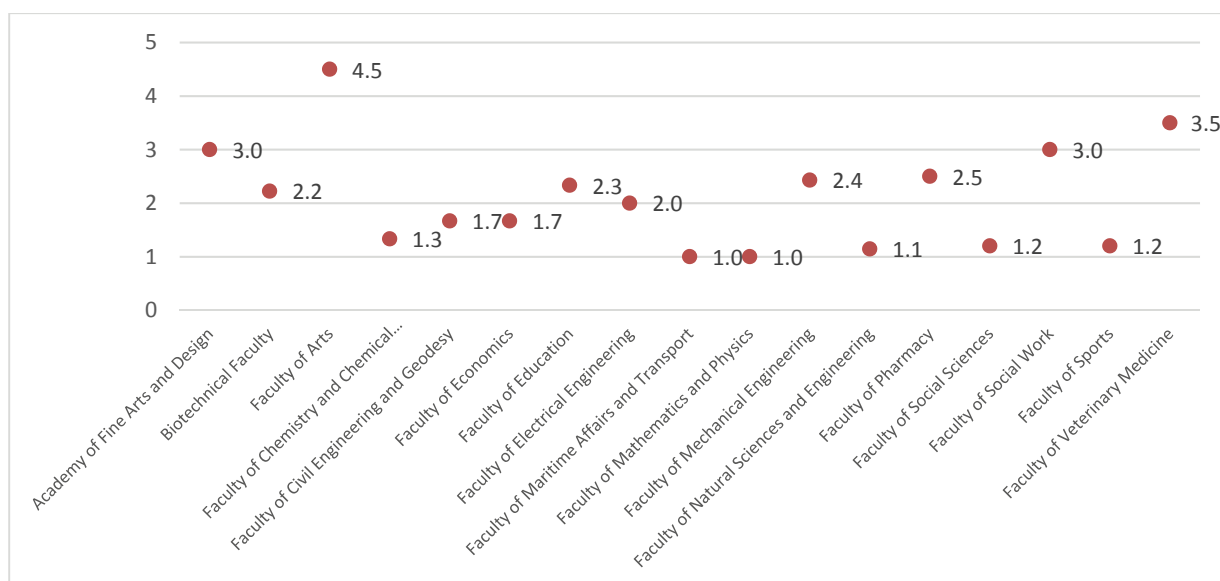


Figure 3: Average ECTS Distribution of short learning and training programs for obtaining micro-credentials by HEIs at the UL

University of Maribor

The UM initiated a total of thirty-three short learning and training programs for obtaining micro-credentials across twenty-three HEIs and academic departments (*O Mikrodokazilih Univerze v Mariboru*, n.d.; 'Pilotni projekti NOO', n.d.).

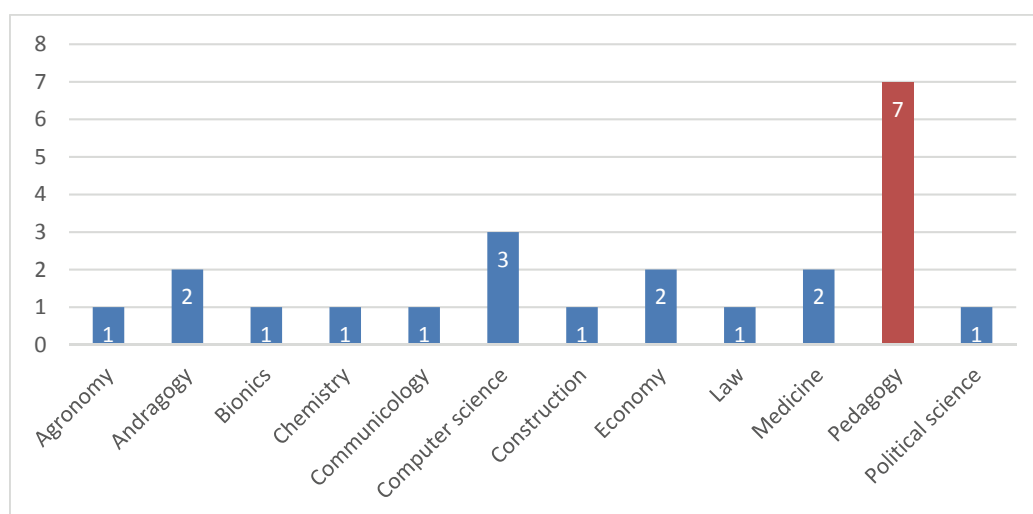


Figure 4: No. of short learning and training programs for obtaining micro-credentials by study field at the UM

The UM drives its short teaching and learning units through seven programs under the Pedagogy study field, secondly Computer Science and Andragogy, Economy and Medicine each added two micro-credential programmes. Seven single programs fell under the subject areas of Agronomy, Bionics, Chemistry, Communicology, Construction, Law and Political Science (*O Mikrodokazilih Univerze v Mariboru*, n.d.; 'Pilotni projekti NOO', n.d.). Out of the 23 total programs sixteen (70%) are designed as blended learning delivery and five as on-line study.

University of Pirmorska

The UP developed 15 pilot short teaching and learning programs for obtaining micro-credentials. The most programmes deployed are targeted at Medicine study field. The remaining programs cover Computer Science, Pedagogy, Construction, Ecology, Economy, Psychology, Sociology, and Statistics, each with one program developed by UP.

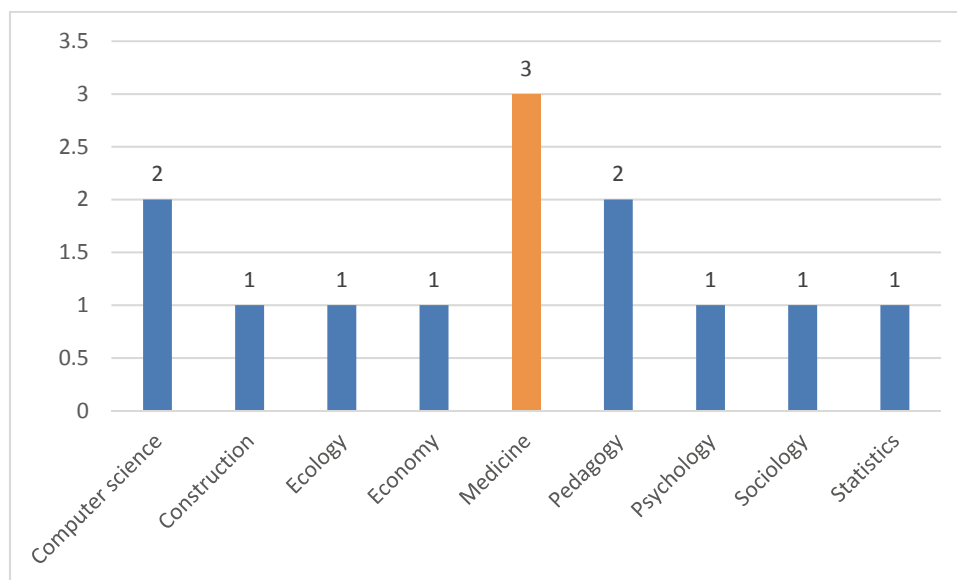


Figure 4: No. of short learning and training programs for obtaining micro-credentials by study field at the UP

FIS

FIS, on the other hand, offers focused two short teaching and learning programs for obtaining micro-credentials at digital education and computer science. One focuses on programming and application development, while the other covers digitalization, the Internet of Things, and industrial automation. ('Brezplačna polletna izobraževanja', n.d.;).

DISCUSSION AND CONCLUSION

Micro-credentials represent a flexible and responsive form of education that enables individuals to acquire specific knowledge and skills in a shorter time frame. In Slovenia, short teaching and learning programs for obtaining micro-credentials are being introduced as a supplement to formal qualifications, primarily in response to labor market needs, digital transformation, and the concept of lifelong learning. One of the primary advantages of micro-credentials is their ability to provide focused skill development. They allow learners to acquire specific competencies that are directly applicable to current job markets, facilitating career advancement and adaptability in a rapidly changing economy (Loewe, 2024). Despite their advantages, micro-credentials face several challenges that hinder their widespread adoption. A significant issue is the lack of universal recognition and standardization ('Continuing Your Education', n.d.). Furthermore, integrating micro-credentials into existing educational structures can be complex. Traditional institutions may struggle with adapting curricula, assessment methods, and administrative processes to accommodate these new forms of learning.

The pilot programs initiated by the UL, UM, UP, and FIŠ have laid a robust foundation for this transformation. These initiatives demonstrate a commitment to flexibility, interdisciplinary collaboration, and responsiveness to societal needs. However, to fully realize the potential of micro-credentials, several challenges must be addressed. Standardization across institutions is essential to ensure the credibility and recognition of micro-credentials both nationally and internationally. Moreover, integrating these credentials into existing qualification frameworks and ensuring their alignment with industry requirements will be crucial for their success.

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