

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**  
**FERENC RAKOCZI II TRANSCARPATHIAN HUNGARIAN UNIVERSITY**

**APPROVED BY THE ACADEMIC COUNCIL**

of Ferenc Rakoczi II Transcarpathian  
Hungarian University,  
protocol No. 5 dated May 27, 2026.

Put into effect by the Rector's order  
No. 62 of May 28, 2026

Chair of the Academic Council, Rector of UR  
\_\_\_\_\_ István Csernicskó

**EDUCATIONAL AND PROFESSIONAL PROGRAMME**  
***«Natural Sciences»***

|                                    |                                                                                                                                                     |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LEVEL OF HIGHER EDUCATION:</b>  | <b>First (Bachelor's) Level</b>                                                                                                                     |
| <b>DEGREE OF HIGHER EDUCATION:</b> | <b>Bachelor</b>                                                                                                                                     |
| <b>FIELD OF KNOWLEDGE:</b>         | <b>A Education</b>                                                                                                                                  |
| <b>SPECIALTY:</b>                  | <b>A4 Secondary Education</b>                                                                                                                       |
| <b>SUBJECT SPECIALIZATION:</b>     | <b>A4.15 Natural Sciences</b>                                                                                                                       |
| <b>QUALIFICATION:</b>              | <b>Bachelor of Secondary Education<br/>(Natural Sciences). Bachelor-Level<br/>Teacher of Natural Sciences, Physics,<br/>Chemistry, and Biology.</b> |

**APPROVAL SHEET**  
of the Educational and Professional Programme  
«Natural Sciences»

**1. Academic Programme Guarantor:**

István HADNAGY, PhD in Natural Sciences, Associate Professor, Associate Professor of the Department of Biology and Chemistry. \_\_\_\_\_

**2. Programme Developers:**

Erzsébet KOHUT, Head of the Department of Biology and Chemistry, PhD in Botany, Associate Professor, Associate Professor of the Department of Biology and Chemistry. \_\_\_\_\_

Mihály FILEP, Candidate of Chemical Sciences, Senior Research Fellow, Associate Professor of the Department of Biology and Chemistry \_\_\_\_\_

Gábor LOVÁSZ, Candidate of Physical and Mathematical Sciences, Department of Biology and Chemistry \_\_\_\_\_

\_\_\_\_\_ 2026

**3. Head of the Department of Biology and Chemistry**

\_\_\_\_\_ 2026 \_\_\_\_\_ Erzsébet KOHUT

**4. Head of the Student Records Office**

\_\_\_\_\_ 2026 \_\_\_\_\_ Zsuzsanna FIZESI

**5. Head of the Higher Education Quality Assurance Office**

\_\_\_\_\_ 2026 \_\_\_\_\_ Adalbert RAC

**6. Vice-Rector for Science and Quality Assurance Work**

\_\_\_\_\_ 2026 \_\_\_\_\_ Sándor BERGHAUER

**7. Vice-Rector for Education and Methodology**

\_\_\_\_\_ 2026 \_\_\_\_\_ Imre SZAKAL

**8. Rector**

\_\_\_\_\_ 2026 \_\_\_\_\_ István CSERNICKSKÓ

## CONTENTS

|                                                                                 |    |
|---------------------------------------------------------------------------------|----|
| Preamble.....                                                                   | 4  |
| Profile of the Educational and Professional Programme .....                     | 7  |
| List of Educational Programme Components and Their Logical Sequence .....       | 20 |
| Forms of Attestation of Higher Education Students .....                         | 26 |
| Internal Quality Assurance System of Higher Education .....                     | 28 |
| Requirements for the Structure of Course Syllabi of Educational Components..... | 30 |
| List of Regulatory Documents Underlying the Educational Programme .....         | 31 |
| Appendices .....                                                                | 34 |

## PREAMBLE

The Educational and Professional Programme (hereinafter -EPP) has been developed in accordance with the Laws of Ukraine “On Education” ([«Про освіту»](#)) and “On Higher Education” ([«Про вищу освіту»](#)), the Resolution of the Cabinet of Ministers of Ukraine No. 1341 of 23 November 2011 (as amended by Resolution of the Cabinet of Ministers of Ukraine No. 519 of 25 June 2020) “On Approval of the National Qualifications Framework” ([«Про затвердження Національної рамки кваліфікацій»](#)). It is based on regulatory documents governing the development of the components of the system of higher education standards and regulating the provision of educational activities in higher education institutions of Ukraine, as well as on the “Methodological Recommendations for the Development of Higher Education Standards” ([«Методичних рекомендацій щодо розроблення стандартів вищої освіти»](#)), approved by Order of the Ministry of Education and Science of Ukraine No. 512 of 27 March 2025; the Resolution of the Cabinet of Ministers of Ukraine No. 266 of 29 April 2015 “On Approval of the List of Fields of Knowledge and Specialties for the Training of Applicants for Higher and Professional Pre-Higher Education” ([«Про затвердження переліку галузей знань і спеціальностей, за якими здійснюється підготовка здобувачів вищої та фахової передвищої освіти»](#)) (as amended by Resolution of the Cabinet of Ministers of Ukraine No. 188 of 21 February 2025); and the Regulations on the Development and Revision of Educational Programmes at Ferenc Rakoczi II Transcarpathian Hungarian University ([Положення про складання та оновлення освітніх програм](#) у Закарпатському угорському університеті імені Ференца Ракоці II) (hereinafter referred to as the “University”).

For determining the professional types of work of graduates, the national classifiers were used (National Classifier of Ukraine DK 009:2010 “Classification of Types of Economic Activity” ([Національний класифікатор України ДК 009:2010 «Класифікація видів економічної діяльності»](#))) and National Classifier of Ukraine DK 003:2010 “Classifier of Professions” ([Національний класифікатор України ДК 003:2010 «Класифікатор професій»](#)), Appendix to the Resolution of the Cabinet of Ministers of Ukraine No. 1341 of 23 November 2011, as amended by Resolutions of the Cabinet of Ministers of Ukraine [No. 509 of 12 June 2019](#) and [No. 519 of 25 June 2020](#)).

During the development of the Educational Programme, in particular when defining general and special (professional) competencies and learning outcomes, the achievements of the European Union project “[Tuning Educational Structures in Europe](#)” and the [Standards and Guidelines for Quality Assurance in the European Higher Education Area \(ESG\)](#) were used, as well as the Order of the Ministry of Education and Science of Ukraine No. 1225 of 29 August 2024 “On Approval of the Professional Standard for the Professions ‘Teacher of a General Secondary Education Institution’” ([«Про затвердження професійного стандарту за професіями "Вчитель закладу загальної середньої освіти"»](#)).

EPP takes into account the requirements of the Law of Ukraine “On Higher Education” ([«Про вищу освіту»](#)) and the National Qualifications Framework and establishes:

- the duration of study and the number of ECTS credits required for obtaining the first (Bachelor’s) level of higher education;
- the standardised content of higher education students’ training, formulated in terms of learning outcomes;
- competencies (integral, general, and special (professional and subject-specific)) and programme learning outcomes;
- the list of educational components and their logical sequence;

- forms of attestation of higher education students;
- conditions for the award of a professional qualification;
- the employability of graduates of the relevant higher education degree and their opportunities for further study;
- requirements for the existence of an internal quality assurance system in higher education.

The Educational Programme is used for:

- the planning and organisation of the educational process (including the development of the curriculum, course syllabi, practice programmes and attestation procedures for students pursuing the first (Bachelor's) level of higher education);
- the development of tools for diagnosing the quality of learning;
- the determination of the content of education within the system of retraining and professional development; and the vocational guidance of students;
- the conduct of internal evaluation of the quality of educational activities;
- the conduct of external quality evaluation (accreditation review) of educational activities and the inspection of educational activities;
- the vocational guidance of higher education students.

Users of the Educational Programme:

- the Admissions Committee of Ferenc Rakoczi II Transcarpathian Hungarian University and prospective students;
- the academic staff of Ferenc Rákóczi II Transcarpathian Hungarian University involved in the education and training of higher education students;
- higher education students;
- the Attestation Commission.

The EPP is based on the competence-based, student-centred and problem-oriented approaches to the training of higher education students at the first (Bachelor's) level of higher education in Specialty A4 Secondary Education, Subject Specialty A4.15 Natural Sciences, Field of Knowledge A Education, and was developed by the Project Group of the Department of Biology and Chemistry consisting of:

1. **István HADNAGY**, Educational Programme Guarantor, Doctor of Philosophy (PhD) in Natural Sciences, Associate Professor of the Department of Biology and Chemistry of Ferenc Rakoczi II Transcarpathian Hungarian University, Head of the Project Group
2. **ERZSÉBET KOHUT**, Head of the Department of Biology and Chemistry, Doctor of Philosophy (PhD) in Botany, Associate Professor of the Department of Biology and Chemistry of Ferenc Rakoczi II Transcarpathian Hungarian University
3. **MIHÁLY FILEP**, Candidate of Chemical Sciences, Senior Research Fellow, Associate Professor of the Department of Biology and Chemistry of Ferenc Rakoczi II Transcarpathian Hungarian University
4. **GÁBOR LOVÁSZ**, Candidate of Physical and Mathematical Sciences, Department of Biology and Chemistry of Ferenc Rakoczi II Transcarpathian Hungarian University
5. **MELINDA POPOVICS**, Higher education student of the first (Bachelor's) level of higher education enrolled in the Educational Programme "Natural Sciences", Department of Biology and Chemistry, Ferenc Rákóczi II Transcarpathian Hungarian University.

Involved External Stakeholders and Employers:

1. **OLHA MEKHED**, Doctor of Biological Sciences, Professor, Head of the Department of Biology, Taras Shevchenko National University “Chernihiv Collegium”.
2. **EMESE ZSELTVAY-VEZSDEL**, Teacher of Biology of the Highest Qualification Category, director of the Lajos Kossuth Lyceum of Bereghove.

Head of the Project Team (Guarantor of the Educational Programme)

---

**István HADNAGY**

## PROFILE OF THE EDUCATIONAL PROGRAMME

| 1. General Information                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Full Name of the Higher Education Institution                      | Ferenc Rakoczi II Transcarpathian Hungarian University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Level of Higher Education                                          | First (Bachelor's) Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Degree of Higher Education                                         | Bachelor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Official Title of the Educational Programme                        | Природничі науки<br>Natural Sciences<br>Természettudományok                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Field of Knowledge                                                 | A Освіта<br>Education<br>Oktatás                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Specialty                                                          | A4 Середня освіта<br>Secondary education<br>Középfokú oktatás                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Subject Specialization                                             | A4.15 Природничі науки<br>Natural sciences<br>Természettudományok                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| International Standard Classification of Education<br>ISCED-F 2013 | <p>Broad field: A Education<br/>Narrow field: 011 Education<br/>Detailed field: 0114 Teacher training with subject specialisation – natural sciences (physics, chemistry, biology)</p> <p>The programme prepares teachers of integrated natural sciences by combining pedagogical components, methodologies for teaching natural science subjects, and practical training. The learning objectives and learning outcomes are focused on teaching activities in schools. According to the regulations of the Ministry of Education and Science of Ukraine and the ISCED-F classification, the dominant orientation is determined by the professional role of the graduate; in this case, it is pedagogical with a subject specialization. Therefore, the programme is classified under ISCED-F 0114 – Teacher Training with Subject Specialisation.</p> <p>Classification and Positioning of the Educational Programme: The educational programme is classified within the relevant field of knowledge and specialty in accordance with the List of Fields of Knowledge and Specialties approved by Resolution No. 266 of the Cabinet of Ministers of Ukraine, as amended by Resolution No. 1021 of 30 August 2024.</p> <p>To ensure international comparability, transparency, and accurate identification of the educational content, the educational programme has been aligned with the detailed field of the International Standard Classification of Education (ISCED-F 2013) in accordance with the Methodological Recommendations approved by Order No. 1734 of the Ministry of Education and Science of Ukraine dated 31 December 2025. The correspondence of the educational programme has been determined according to the principle of dominant content,</p> |

|                       |                                                                                                                                                                                                              |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | taking into account the programme objectives, programme learning outcomes, and the expected professional activities of graduates.<br>ISCED-F 2013 Code: 0114 – Teacher Training with Subject Specialisation. |
| <b>Modes of Study</b> | Institutional: Full-time (Daytime), Part-time (Distance, Network-Based)                                                                                                                                      |

|                                                                       |                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Educational Qualification</b>                                      | Bachelor of Secondary Education (Natural Sciences)                                                                                                                                                                                                                                                   |
| <b>Professional Qualification</b>                                     | Bachelor-Level Teacher of Natural Sciences, Physics, Chemistry, and Biology                                                                                                                                                                                                                          |
| <b>Qualification Awarded</b>                                          | Bachelor of Secondary Education (Natural Sciences). Bachelor-Level Teacher of Natural Sciences, Physics, Chemistry, and Biology.                                                                                                                                                                     |
| <b>Type of Diploma and Volume of the Educational Programme</b>        | Bachelor's Diploma, Single Degree; 240 ECTS Credits; Duration of Study: 3 Years and 10 Months                                                                                                                                                                                                        |
| <b>Cycle / Level</b>                                                  | National Qualifications Framework of Ukraine – Level 6;<br>QF-EHEA – First Cycle;<br>EQF for Lifelong Learning (EQF-LLL) – Level 6                                                                                                                                                                   |
| <b>Admission Requirements</b>                                         | Complete General Secondary Education.<br>Admission requirements are determined by the document “Admission Rules of Ferenc Rakoczi II Transcarpathian Hungarian University”.<br><a href="https://kme.org.ua/uk/vstupna-kampanija/vstup-2026/">https://kme.org.ua/uk/vstupna-kampanija/vstup-2026/</a> |
| <b>Language(s) of Instruction and Assessment</b>                      | Hungarian, Ukrainian                                                                                                                                                                                                                                                                                 |
| <b>Accreditation Status</b>                                           | Conditional (Deferred) Accreditation Certificate of the Educational Programme No. 21235 dated 13 May 2026.<br>Validity Period: until 12 May 2027.                                                                                                                                                    |
| <b>Permanent Web Address of the Educational Programme Description</b> | <a href="https://kme.org.ua/uk/strukturni-pidrozdily/kafedri/kafedra-biologii/kepzesi-programok-bkt/">https://kme.org.ua/uk/strukturni-pidrozdily/kafedri/kafedra-biologii/kepzesi-programok-bkt/</a>                                                                                                |

## 2. Purpose of the Educational Programme

To provide fundamental theoretical and practical training for bachelor's degree students who are preparing to become teachers of Natural Sciences, Physics, Chemistry, and Biology, enabling them to successfully perform professional duties and organize the educational process in general secondary education institutions. The programme aims to create a safe, barrier-free, and student-centred educational environment for first-cycle (Bachelor's level) higher education students, fostering the development of general and professional competences in the fields of Natural Sciences, Physics, Chemistry, Biology, Pedagogy, and Psychology. This will enable graduates to be competitive in the labour market, gain unrestricted access to employment in the field of education and/or continue their studies at the second (Master's) level of higher education, as well as acquire additional qualifications through the adult education system.

## 3. Description of the Subject Area

|                                                                             |                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject Area (Field of Knowledge, Specialty, Subject Specialization)</b> | A Education<br>A4 Secondary Education<br>A4.15 Natural Sciences<br><i>Object of Study:</i> The educational process in Natural Sciences, Physics, Chemistry, and Biology in general secondary education institutions. |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 | <p><i>Learning Objectives:</i> To prepare qualified and competitive teachers of Natural Sciences, Physics, Chemistry, and Biology who possess integral, general, and professional competences and are capable of solving complex specialized tasks and practical problems in the field of professional activity.</p> <p><i>Theoretical Content of the Subject Area:</i> Concepts, categories, scientific theories, and principles of fundamental and applied natural sciences that are sufficient for the development of subject-specific competences within the specialty; contemporary psychological, pedagogical, and methodological foundations for teaching Natural Sciences, Physics, Chemistry, and Biology within the educational environment of general secondary education institutions.</p> <p>Традиційні та інноваційні технології навчання ефективних способів партнерської взаємодії суб'єктів освітнього процесу в ЗЗСО.</p> <p><i>Methods, Methodologies and Technologies:</i> Theoretical and empirical methods of scientific inquiry into nature (general scientific and discipline-specific methods), as well as psychological and pedagogical methods. Educational technologies and methodologies aimed at developing special (professional and subject-specific) competences, monitoring professional pedagogical activities, analysing teaching practice, fostering the ability for self-organization of professional pedagogical activity, professional development, and reflective practice. Traditional and innovative teaching technologies designed to develop effective forms of partnership interaction among participants in the educational process within general secondary education institutions.</p> <p><i>Tools and Equipment:</i> Equipment and facilities necessary for the development of special (professional and subject-specific) competences; teaching and methodological resources, educational and general-purpose equipment for school laboratories and classrooms of Physics, Chemistry, Biology, and Natural Sciences; multimedia and computer equipment, modern educational universal and specialized information resources; library collections; training facilities for practical placements, including teaching practice and practical training in natural science disciplines.</p> |
| <b>Orientation of the Educational Programme</b> | <p>Educational and Professional Programme focused on the theoretical and practical preparation of specialists for professional activities in general secondary education institutions. The programme equips graduates with modern methods and technologies for organizing the educational process, as well as with general and special (professional) competences required for effective teaching practice. Graduates are prepared to perform the professional duties of teachers of Natural Sciences, Physics, Chemistry, Biology, and integrated courses such as „Natural Sciences”, „Exploring Nature”, „Environment”, and related subjects; to serve as class teachers in general secondary education institutions; and to organize extracurricular science-oriented clubs and activities in out-of-school education institutions. The programme also aims to develop graduates' readiness for lifelong learning, self-education, further study at the second (Master's) level of higher education, and continuous professional development.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Main Focus of the Educational Programme</b>  | <p>The programme is focused on preparing teachers for integrated natural science subjects, including Natural Sciences, Physics, Chemistry, and</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>and Specialization</b>                                                          | <p>Biology. The programme is focused on preparing teachers for integrated natural science subjects, including Natural Sciences, Physics, Chemistry, and Biology. It provides higher education based on a broad understanding of various fields of natural sciences and their integration in addressing socially relevant issues, evaluating contemporary achievements in Natural Sciences, Physics, Chemistry, and Biology, and applying modern teaching methodologies in general secondary education, with an emphasis on practical training and leading European and international experience. Keywords: education, bachelor, general secondary education institution, teacher, teaching methodology, natural sciences, physics, chemistry, biology.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Programme Features</b>                                                          | <p>The programme provides opportunities for the preparation of interdisciplinary and multidisciplinary specialists capable of solving complex specialized tasks related to the organization of the educational process, taking into account the principles and specific features of contemporary educational theory and teaching methodology. The programme is delivered within an active student-centred learning environment and supports international academic mobility.</p> <p>The Educational and Professional Programme takes into account regional characteristics and the key provisions of the Comprehensive Development Plan and the Concept of Internal Quality Assurance of Education of Ferenc Rakoczi II Transcarpathian Hungarian University for 2025–2029 (<a href="#">План комплексного розвитку та концепція внутрішнього забезпечення якості освіти УР на 2025-2029 р.</a>).</p> <p>A distinctive feature of the programme, reflecting the mission upon which the institution was founded, is the preparation of teaching professionals for work in the multiethnic environment of the region. Accordingly, the programme places special emphasis on preparing future teachers to teach in both Ukrainian and Hungarian languages. Within the framework of the educational programme, some courses may be delivered in English or other official languages of the European Union. The existence and implementation of the programme are justified by the needs of both the region and the state as a whole.</p> |
| <b>ECTS Credits Required for the Award of the Relevant Higher Education Degree</b> | <p>For applicants holding a certificate of complete general secondary education or a qualification of Junior Bachelor (Junior Specialist), the programme comprises 240 ECTS credits. The mandatory component of the programme, including its general, professional, and practical training elements, amounts to 180 ECTS credits (75%), whereas the elective component amounts to 60 ECTS credits (25%).</p> <p>In accordance with the Regulations on the Recognition and Transfer of Academic Credits and the Determination and Elimination of Academic Differences, Ferenc Rakoczi II Transcarpathian Hungarian University recognizes and transfers ECTS credits and learning outcomes achieved through educational components completed under another educational programme at the University or at another higher education institution.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>4. Employability and Opportunities for Further Study</b>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Employability</b>                                                               | <p>Graduates are prepared for employment in the field of education and are qualified to perform professional activities in accordance with the National Classifier of Ukraine DK 009:2010 “Classification of Types of</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | <p>Economic Activity” and the National Classifier of Ukraine DK 003:2010 “Classifier of Occupations”.</p> <p>Types of Economic Activity (according to NACE DK 009:2010):</p> <p>P Education</p> <p>85 Education</p> <p>85.3 Secondary Education</p> <p>85.31 General Secondary Education</p> <p>Professional Occupations (according to DK 003:2010):</p> <p>2 Professionals</p> <p>23 Professionals in Education and Training</p> <p>232 Teachers of Professional Pre-Higher Education Institutions, Vocational (Vocational and Technical) Education Institutions, and Teachers of General Secondary Education Institutions</p> <p>2320 Teacher of a General Secondary Education Institution</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Academic Rights of Graduates</b> | <p>Graduates are eligible to continue their studies at the second (Master’s) level of higher education (Level 7 of the National Qualifications Framework of Ukraine), corresponding to the second cycle of the Qualifications Framework of the European Higher Education Area (QF-EHEA) and Level 7 of the European Qualifications Framework for Lifelong Learning (EQF-LLL). Graduates may also obtain additional qualifications through postgraduate and continuing education programmes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>5. Teaching and Assessment</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Teaching and Learning</b>        | <p>Teaching, learning and assessment are conducted in accordance with the provisions of the Concept for Quality Assurance in Education at Ferenc Rakoczi II Transcarpathian Hungarian University (<a href="#">Концепції забезпечення якості освіти</a> в Університеті Ракоці).</p> <p><i>Main Approaches:</i> student-centred, activity-oriented, and values-oriented approaches; e-learning, distance learning, and independent learning.</p> <p><i>Educational Technologies:</i> problem-based and developmental, interactive, information and communication, project-based, and contextual learning technologies.</p> <p><i>Forms of Learning:</i> classroom instruction, independent and individual work, teaching practice, assessment procedures and final attestation (attestation examination and defence of the qualification thesis).</p> <p><i>Main Types of Learning Activities:</i> lectures, laboratory classes, practical classes, seminars, individual instruction, and consultations.</p> <p><i>Main Teaching Methods:</i> verbal methods (explanation, discussion, debate, brainstorming, rapid questioning, etc.); visual methods (demonstration, observation, experimentation); practical methods (training sessions, case studies, projects); interactive and information and communication technology (ICT)-based teaching methods, including online learning delivered through a variety of educational platforms and technical and software tools.</p> <p><i>Main Learning Methods:</i> presentations, discussions, essay writing, laboratory experiments, small-group work, role-playing educational games, microteaching, reflection on the activities of the teacher and peers, self-reflection and self-directed learning (including analysis, synthesis, observation, measurement, comparison, abstraction, generalization, modelling and other cognitive methods).</p> |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Assessment</b>                | <p>Control and assessment of the quality of bachelor students' professional competence development are based on the systematic monitoring of their academic achievements, which <i>includes</i>:</p> <p><i>Current assessment</i> includes the evaluation of a higher education student's learning outcomes achieved during individual classroom sessions, the completion of independent extracurricular assignments and thematic assessment.</p> <p><i>Module assessment</i> is conducted upon completion of a logically structured unit of a course (module) and may take the form of computer-based testing, a written examination, creative assignments, or other assessment activities.</p> <p><i>Final assessment</i> includes semester assessment and certification. The following forms of semester assessment are used: examination, graded pass/fail assessment, and pass/fail assessment.</p> <p><i>Forms of Assessment</i>: oral questioning, written essays, presentations, portfolios, case studies, tests, written examinations, colloquia; presentation of research work; defence of laboratory and computational assignments; defence of course papers; pass/fail assessments and examinations; reports on the results of educational, teaching (pedagogical), field and other practical placements.</p> <p>Final certification of higher education students is conducted in the form of a comprehensive certification examination and the defence of a qualification thesis.</p> <p>Assessment of students' academic achievements is carried out using the 100-point ECTS grading scale; the 5-point national grading scale (for examination-based courses, teaching practice, and course papers assessed by a graded pass/fail assessment: "Excellent" – 90–100/A; "Good" – 82–89/B, 75–81/C; "Satisfactory" – 64–74/D, 60–63/E; "Unsatisfactory, with the right to retake the assessment" – 35–59/FX; "Unsatisfactory, requiring compulsory repetition of the course" – 0–34/F); and the 2-level national grading scale (for pass/fail courses: "Pass", "Fail").</p> |
| <b>6. Programme Competencies</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Integral Competence (IC)</b>  | <p><b>IC.</b> Ability to solve complex specialized practical tasks in the field of secondary education and in the domains of natural sciences, physics, chemistry, biology, and educational sciences, involving the application of theories and methods of natural sciences, pedagogy, psychology, and the theory and methodology of teaching, and characterized by the complexity and uncertainty of the conditions under which the educational process is organized in secondary education institutions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>General Competences (GC)</b>  | <p><b>GC1.</b> Ability for abstract thinking, analysis and synthesis, and to apply knowledge in practical situations.</p> <p><b>GC2.</b> Knowledge and understanding of the subject area and professional activity.</p> <p><b>GC3.</b> Ability to communicate effectively in the state language, both orally and in writing; ability to communicate in a foreign language within the subject specialization; commitment to fostering Ukrainian national and civic identity.</p> <p><b>GC4.</b> Ability to provide instruction to learners taking into account the specific features of the linguistic environment of an educational</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>institution in the language of the relevant indigenous people or national minority of Ukraine.</p> <p><b>GC5.</b> Ability to navigate the information space; search for, analyse and process information from various sources; effectively use digital resources and technologies in the educational process in compliance with ethical and legal standards within the context of European integration processes.</p> <p><b>GC6.</b> Ability to act autonomously, make well-founded decisions in professional activities and take responsibility for their implementation, and to act responsibly and conscientiously on the basis of current legislation and ethical considerations.</p> <p><b>GC7.</b> Ability to engage in interpersonal interaction and teamwork with relevant specialists in order to provide additional support for learners with special educational needs, and to identify signs indicating the need for medical assistance among participants in the educational process.</p> <p><b>GC8.</b> Ability to exercise one's rights and responsibilities as a member of society; awareness of the value of a civil (free and democratic) society and the need for its sustainable development, the rule of law, and the protection of human and civil rights and freedoms in Ukraine.</p> <p><b>GC9.</b> Ability to preserve and enhance the moral, cultural, and scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place within the general system of knowledge about nature and society, and its significance for the development of society, science, and technology; and to recognize the interdependence of people and systems in a globalized world.</p> <p><b>GC10.</b> Ability to maintain personal physical and psycho-emotional well-being, lead a healthy lifestyle, manage one's emotional states; to interact constructively and safely with participants in the educational process; to use various types and forms of physical activity for active recreation.</p> <p><b>GC11.</b> Ability to respect diversity and multiculturalism in society and to take into account the rights of every individual, while recognizing the need to ensure equal opportunities for all participants in the educational process.</p> <p><b>GC12.</b> Ability to participate in public life, the activities of local self-government bodies and governance at various levels, including through volunteering activities.</p> <p><b>GC13.</b> Ability to foster value-based attitudes among learners and to develop critical thinking and media literacy skills in order to prevent the dissemination of misinformation.</p> <p><b>GC14.</b><br/>Ability to make decisions and act in accordance with the principle of zero tolerance for corruption and any other forms of academic or professional misconduct.</p> <p><b>GC15.</b> Ability to act responsibly and safely in emergency and crisis situations; to recognize one's civic duty to protect Ukraine, its independence and territorial integrity; to comply with the norms of international humanitarian law and the rules of personal and collective safety; to provide first aid; to counter information influence and manipulation; and to maintain psychological resilience.</p> |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p style="text-align: center;"><b>Professional Competences (PC)</b></p> | <p><b>PC1.</b> Ability to apply a system of scientific knowledge in professional practice and in the teaching of the subject area.</p> <p><b>PC2.</b> Ability to provide instruction to learners in the state language and to develop their language and communication skills and competences within the subject specialization.</p> <p><b>PC3.</b> Ability to set goals, plan and design the processes of teaching and educating learners, taking into account their age and individual characteristics, educational needs, and psycho-emotional state; to select and apply modern and effective methods and technologies for teaching, education and learner development.</p> <p><b>PC4.</b> Ability to create and maintain a supportive educational environment that provides favourable conditions for each learner, taking into account their age-related and other individual characteristics.</p> <p><b>PC5.</b> Ability to form and develop learners' key and subject-specific competences through subject teaching and integrated learning.</p> <p><b>PC6.</b> Ability to carry out objective monitoring, analysis and assessment of learning outcomes; to develop learners' capacity for self-assessment and peer assessment of their learning achievements.</p> <p><b>PC7.</b> Ability to analyse, plan and predict the outcomes of the educational process.</p> <p><b>PC8.</b> Ability to build and foster a learning community among learners; to identify effective strategies for motivating them toward self-development, positive self-esteem and self-identity (self-determination, engagement, a conscious attitude toward learning); to promote progress and achievement in accordance with the abilities and interests of each learner.</p> <p><b>PC9.</b> Ability to create conditions that ensure the functioning of an inclusive educational environment and provide pedagogical support for learners with special educational needs.</p> <p><b>PC10.</b> Ability to engage in subject–subject (equal and learner-centred) interaction with learners in the educational process and to involve parents in the educational process on the basis of partnership.</p> <p><b>PC11.</b> Ability to analyse one's own pedagogical activity and its outcomes, and to conduct objective self-assessment and self-correction of one's professional qualities.</p> <p><b>PC12.</b> Ability to organise a safe educational environment and apply health-preserving technologies; to carry out preventive and awareness-raising activities with participants in the educational process regarding life safety, sanitation and hygiene; to foster a culture of healthy and safe lifestyles among learners.</p> <p><b>PC13.</b> Ability to organise the processes of teaching, education and development, as well as various types and forms of learners' educational and cognitive activities.</p> <p><b>PC14.</b> Ability to pursue one's own professional development, to receive support from colleagues and to provide support to colleagues in their professional development.</p> <p><b>PC15.</b> Ability to design educational content in accordance with the mandatory learning outcomes for learners established by state educational standards.</p> |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Subject-Specific Competences (SC)</b></p> | <p><b>SC1.</b> Ability to characterise the achievements of the natural sciences, identify their role in society in ensuring the sustainable development of natural and social systems, and implement the principles and strategies of sustainable development of the biosphere and society.</p> <p><b>SC2.</b> Ability to analyse the physical and chemical properties of matter, its various states and the theories used to describe them.</p> <p><b>SC3.</b> Ability to analyse the nature and properties of the main classes of inorganic and organic compounds, their chemical and physical properties, and their genetic relationships.</p> <p><b>SC4.</b> Ability to analyse the structure, functions and life processes of living organisms, to investigate various levels of biological organisation and to examine biological phenomena and processes.</p> <p><b>SC5.</b> Ability to characterise natural systems at different levels of organisation based on an understanding of the interrelationships among the fundamental laws of nature and society; readiness to apply ecological knowledge and experience in professional and everyday situations; ability to assess the state of the environment; ability to foster environmental awareness and ecological thinking among learners.</p> <p><b>SC6.</b> Ability to operate modern instruments and equipment for conducting scientific research and to carry out natural science investigations safely in laboratory and field settings.</p> <p><b>SC7.</b> Ability to obtain information from physical, chemical, biological, and physical-geographical sources through various methods, including scientific investigation, to work with such information in order to characterise and compare the dynamics of natural phenomena and processes at different stages of their development.</p> <p><b>SC8.</b> Ability and readiness to apply comprehensive knowledge of contemporary human biology, understand the vital processes of the human organism, maintain a conscious and responsible attitude towards one's own health.</p> <p><b>SC9.</b> Ability to apply regulatory documents governing the organisation and safety of work, and to ensure the safe conduct of educational and research activities in the natural sciences in laboratory and field settings.</p> |
| <p><b>7. Programme Learning Outcomes</b></p>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>Programme Learning Outcomes (PLO)</b></p> | <p><b>PLO1.</b> Demonstrate knowledge and understanding of the fundamental concepts and principles of pedagogy and psychology; take into account the developmental patterns, age-related and individual characteristics of learners, as well as their psycho-emotional state in the educational process.</p> <p><b>PLO2.</b> Demonstrate the ability to teach learners in the state language and in the language of the relevant indigenous people or national minority of Ukraine; able to develop their language and communication skills and competences through subject teaching and integrated learning.</p> <p><b>PLO3.</b> Identifies and analyses methods of goal setting, planning and designing the processes of teaching and education on the basis of the competence-based approach, taking into account learners' educational needs; classifies the forms, methods and instructional resources used in subject teaching in general secondary education institutions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**PLO4.** Selects and applies modern and effective educational methods and technologies for teaching, education and learner development; critically evaluates learners' learning outcomes and the effectiveness of lessons.

**PLO5.** Selects appropriate forms and methods of learner education in classroom and extracurricular activities; analyses the dynamics of learners' personal development; identifies effective ways to motivate them towards self-development and to promote their progress and achievement in accordance with their individual abilities and interests.

**PLO6.** Identifies and explains the principles of designing a psychologically safe and supportive educational environment in compliance with legislation on the protection of learners' life and health (including learners with special educational needs); explains health-preserving technologies used in the educational process, methods of preventing and combating bullying, and approaches to establishing effective cooperation with learners and their parents.

**PLO7.** Applies integrated STEAM approaches to solve complex educational and practical tasks by combining knowledge from science, technology, engineering, the arts and mathematics.

**PLO8.** Generates well-reasoned opinions and communicates professional knowledge to both specialists and the general public in the state and foreign languages.

**PLO9.** Applies modern information and communication technologies (ICT) and digital technologies in professional practice.

**PLO10.** Demonstrates proficiency in modern scientific information retrieval technologies for self-directed learning and their application in professional practice.

**PLO11.** Demonstrates interpersonal and teamwork skills, as well as the ability to adapt and act effectively in new situations; explains the importance of ensuring equal opportunities for all participants in the educational process.

**PLO12.** Analyses their own teaching practice and its outcomes, and carries out objective self-assessment and self-improvement of their professional competences.

**PLO13.** Demonstrates knowledge of the key provisions of legal and regulatory documents governing professional activity; justifies the importance of using the instruments of a democratic state governed by the rule of law in professional and civic activities; and makes decisions based on respect for human rights and freedoms in Ukraine.

**PLO14.** Demonstrates knowledge and understanding of biological, chemical, physical and physical-geographical terminology, as well as the fundamental concepts, theories and general structure of the natural sciences.

**PLO15.** Applies knowledge of the contemporary theoretical foundations of the natural sciences to explain the structure and functional characteristics of organisms at different levels of biological organisation, as well as their interactions, interrelationships, origin, classification, significance, use and distribution.

**PLO16.** Able to conduct demonstration experiments with appropriate commentary, demonstrates knowledge of the methodology for their implementation and assessment; able to develop learners' experimental



|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  | <p>skills.</p> <p><b>PLO17.</b> Performs laboratory and field experiments, investigations and observations in physics, chemistry and biology; interprets the results of scientific investigations; prepares biological specimens, collections and herbaria.</p> <p><b>PLO18.</b> Understands and explains the principles of sustainable development and demonstrates an understanding of the interrelationships between the natural environment and human beings.</p> <p><b>PLO19.</b> Is able to systematise knowledge about nature and to develop in learners the foundations of a holistic scientific understanding of the natural world through interdisciplinary connections.</p> <p><b>PLO20.</b> Applies mathematical tools and mathematical and numerical methods in the natural sciences; solves problems of varying complexity in chemistry, physics and biology.</p> <p><b>PLO21.</b> Demonstrates knowledge of the fundamentals of life safety and the safe use of equipment in physics, chemistry and biology laboratories.</p> <p><b>PLO22.</b> Demonstrates knowledge of the fundamental principles of corruption prevention, public and academic integrity at a level sufficient to foster intolerance of corruption and dishonest conduct among learners and applies these principles in professional practice.</p> <p><b>PLO23.</b> Demonstrates basic knowledge and practical skills necessary for safe behaviour and effective action in crisis situations: applies first-aid algorithms, navigates using modern navigation tools, recognises mine-related and other safety threats, complies with the requirements of international humanitarian law, uses communication tools effectively, maintains psychological resilience, and critically evaluates information influences.</p> |
| <b>8. Resources for Programme Implementation</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Human Resources</b>                           | <p>The academic and teaching staff responsible for the implementation of this Educational and Professional Programme comply with the staffing requirements of the licensing conditions governing educational activities in higher education institutions.</p> <p>All academic and teaching staff of the Educational and Professional Programme have active profiles in professional academic and research networks, such as ORCID, Google Scholar and other scholarly platforms. Academic and teaching staff have the necessary number of publications in the scientometric databases Scopus/Web of Science/Category „A” and in Category „B” journals.</p> <p>In accordance with the Regulations on the Professional Development of Academic and Teaching Staff of Rakoczi University, academic and teaching staff actively participate in scientific and practical conferences at various levels (international, national and regional), undertake continuing professional development, participate in professional development programmes offered by Rakoczi University’s partner institutions in Ukraine and abroad, and take part in international projects. Academic integrity is ensured among both academic and teaching staff and higher education students. An effective system for the prevention and detection of academic plagiarism has been established and is maintained, including the use of the StrikePlagiarism.com system.</p>                                                                                                                                                                                                                                                                                                                                                        |

|                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Material and Technical Resources</b>                   | <p>The material and technical resources comply with the licensing requirements for the provision of higher education services. The educational process is carried out in the <a href="#">laboratories and specialised classrooms of the Department of Biology and Chemistry</a>. <a href="#">The structural units, infrastructure</a>, facilities and equipment of the University used in the educational process comply with sanitary regulations and fire safety requirements (<a href="https://kmf.uz.ua/uk/infocenter/">https://kmf.uz.ua/uk/infocenter/</a>).</p> <p>In accordance with the instruction of the Prime Minister of Ukraine No. 14529/0/1-22 of 10 June 2022 concerning the creation of safe conditions for children, pupils, students and staff in educational institutions, and following the recommendations of the State Emergency Service of Ukraine, Rakoczi University has specially equipped shelters. This makes it possible to ensure a safe face-to-face educational process during air-raid alerts.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Information and Educational-Methodological Support</b> | <p>The necessary resources are available to support the organisation and delivery of the educational process:</p> <ul style="list-style-type: none"> <li>• <a href="#">the official website</a> of Rakoczi University provides information on educational programmes, teaching, research and student development activities, structural units, admission regulations, the academic calendar, institutional regulations, document templates and contact details;</li> <li>• <a href="#">the „IRIS” electronic information system for educational process management is used</a>. Its various modules, including the administrative, teaching staff and student interfaces, support a wide range of functions for the organisation and delivery of the educational process. The „IRIS” system contains, among other things, the list of elective courses, class schedules and students’ individual study plans;</li> <li>• teaching staff and students have unrestricted access to the Internet;</li> <li>• scientific library and reading rooms;</li> <li>• virtual learning environments: Google Classroom and Google Meet;</li> <li>• study plans and course work plans;</li> <li>• academic calendars and schedules of the educational process;</li> <li>• course syllabi;</li> <li>• integrated practical training programme;</li> <li>• methodological materials for students’ independent and individual work in academic disciplines, as well as practical training programmes;</li> <li>• methodological guidelines for the preparation of qualification theses;</li> <li>• programme of attestation examination.</li> </ul> <p>Students of the Educational and Professional Programme may use the collections of the Apáczai Csere János Library and Information Centre, which includes the Central Reading Room, the Specialized Literature Lending Department, the Fiction Lending Department, the Periodicals Reading Room and Media Library and the Manuscripts Archive. The library collections are sufficient to support the independent and individual study of both full-time and part-time students. The library’s total book collection comprises more than 147,000 catalogued and accessible volumes. The library’s acquisitions include textbooks, study guides, specialised periodicals, reference works and other educational literature.</p> |

|                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                             | <p>Students have access to the resources of the electronic library, which contains scientific and methodological publications authored by leading national and international researchers and academics.</p> <p>The Puskás Tivadar Centre of Informatics of Ferenc Rakoczi II Transcarpathian Hungarian University is responsible for maintaining and supporting the institution's information network and computer infrastructure. The institution's information system users have daily access to more than 450 personal computers and laptops. More than 160 personal computers are installed in classrooms and are freely available for student use. Rakoczi University has a broadband wired and wireless (Wi-Fi) network covering the entire campus.</p> <p>In addition to the facilities and resources listed above, Rakoczi University operates a number of specialised <a href="#">structural units</a> that support the effective organisation, delivery and quality assurance of the educational process, as well as the professional, cultural, physical and psychological development of higher education students. These include practical training facilities (the <a href="#">Lowland Base for Field Practices and Open-Air School</a> and the <a href="#">Mountain Practice Base</a>), <a href="#">a botanical garden with a plant collection and seed bank</a>, scientific and teaching herbaria (<a href="https://surl.li/vnxydr">https://surl.li/vnxydr</a>), a zoological collection (<a href="https://surl.li/hpddyx">https://surl.li/hpddyx</a>), a Sports and Recreation Centre (<a href="https://surl.li/xomewv">https://surl.li/xomewv</a>), a Sports and Educational Complex (<a href="https://surl.li/vcetci">https://surl.li/vcetci</a>), a Tourist Information Centre (<a href="https://surl.li/hamted">https://surl.li/hamted</a>), medical (<a href="https://surl.li/hdeqfw">https://surl.li/hdeqfw</a>) and psychological (<a href="https://surl.li/atfaop">https://surl.li/atfaop</a>) support services, and student dormitories.</p> |
| <b>9. Academic Mobility</b>                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>National Credit Mobility</b>                             | In accordance with applicable legislation and <a href="#">agreements between higher education institutions</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>International Credit Mobility</b>                        | <p>In accordance with the European Union's Erasmus+ Programme, which supports cooperation projects, partnerships, mobility activities and initiatives in the fields of education, training, youth and sport.</p> <p>In accordance with agreements between higher education institutions of the Carpathian Basin under the Makovecz Mobility Programme, which supports the academic mobility of higher education students as well as academic and teaching staff.</p> <p><a href="#">Academic Mobility Programmes</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Education of International Higher Education Students</b> | Not applicable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

# LIST OF EDUCATIONAL PROGRAMME COMPONENTS AND THEIR LOGICAL SEQUENCE

## 1. List of Educational and Professional Programme (EPP) Components

| Code E/C    | EPP Components (academic courses, course projects/papers, practical training, qualification thesis) | Number of Credits | Form of Final Assessment             |
|-------------|-----------------------------------------------------------------------------------------------------|-------------------|--------------------------------------|
| 1           | 2                                                                                                   | 3                 | 4                                    |
| <b>1.</b>   | <b>Compulsory EPP Components</b>                                                                    |                   |                                      |
| <b>1.1.</b> | <b>Compulsory General Training</b>                                                                  | <b>20</b>         |                                      |
| EC 1        | History and Culture of Ukraine                                                                      | 3                 | Pass/Fail Assessment                 |
| EC 2        | History and Culture of the Hungarian People                                                         | 3                 | Pass/Fail Assessment                 |
| EC 3        | Philosophy                                                                                          | 3                 | Pass/Fail Assessment                 |
| EC 4        | Ukrainian language for professional purposes                                                        | 3                 | Pass/Fail Assessment                 |
| EC 5        | Foreign Language for Professional Purposes                                                          | 3                 | Examination                          |
| EC 6        | Fundamentals of National Resistance *                                                               | 5                 | Pass/Fail Assessment                 |
| <b>1.2.</b> | <b>Обов'язкова професійна підготовка</b>                                                            | <b>130</b>        |                                      |
| EC 7        | Psychology                                                                                          | 4                 | Examination                          |
| EC 8        | Pedagogy                                                                                            | 6                 | Pass/Fail Assessment/<br>Examination |
| EC 9        | Higher Mathematics                                                                                  | 3                 | Pass/Fail Assessment                 |
| EC 10       | Methodological principles for organising and conducting scientific and educational research         | 3                 | Pass/Fail Assessment                 |
| EC 11       | General Methods of Teaching Natural Science                                                         | 4                 | Examination                          |
| EC 12       | Modern information technologies in teaching natural sciences                                        | 3                 | Pass/Fail Assessment                 |
| EC 13       | Methods of Teaching Natural Sciences (Biology)                                                      | 4                 | Examination                          |
| EC 14       | Methods of Teaching Natural Sciences (Physics)                                                      | 4                 | Examination                          |
| EC 15       | Methods of Teaching Natural Sciences (Chemistry)                                                    | 4                 | Examination                          |
| EC 16       | Botany                                                                                              | 8                 | Pass/Fail Assessment/<br>Examination |
| EC 17       | Zoology                                                                                             | 8                 | Pass/Fail Assessment/<br>Examination |
| EC 18       | Human Anatomy and Physiology, General Health Theory                                                 | 4                 | Examination                          |
| EC 19       | Basics of Genetics and Molecular Biology                                                            | 3                 | Examination                          |
| EC 20       | General and Inorganic Chemistry                                                                     | 9                 | Examination                          |
| EC 21       | Analytical chemistry                                                                                | 5                 | Examination                          |
| EC 22       | Organic and bioorganic chemistry                                                                    | 7                 | Examination                          |
| EC 23       | Physics                                                                                             | 20                | Examination                          |

|                                                           |                                                                            |            |                                      |
|-----------------------------------------------------------|----------------------------------------------------------------------------|------------|--------------------------------------|
| EC 24                                                     | Astronomy                                                                  | 3          | Examination                          |
| EC 25                                                     | General earth science                                                      | 4          | Examination                          |
| EC 26                                                     | Ecology and Environmental Management                                       | 4          | Examination                          |
| EC 27                                                     | Biogeography                                                               | 4          | Examination                          |
| EC 28                                                     | Methodology for Teaching Integrated Natural Science Subjects               | 3          | Examination                          |
| EC 29                                                     | Natural values of Transcarpathia                                           | 4          | Examination                          |
| EC 30                                                     | Modern Ukrainian natural science terminology                               | 3          | Examination                          |
| EC 31                                                     | Coursework: natural sciences and their teaching methodology                | 6          | Pass/Fail Assessment                 |
| <b>1.3.</b>                                               | <b>Compulsory Practical Training and Final Attestation</b>                 | <b>30</b>  |                                      |
| EC 32                                                     | Field practicum                                                            | 3          | Pass/Fail Assessment                 |
| EC 33                                                     | Practice (school physics and chemistry experiments)                        | 3          | Pass/Fail Assessment                 |
| EC 34                                                     | Teaching internship                                                        | 21         | Pass/Fail Assessment/<br>Examination |
| EC 35                                                     | Preparation of qualifying paper                                            | 3          | Pass/Fail Assessment                 |
| A                                                         | Attestation (Attestation examination; Defence of a Qualification Project), | ---        | Examination                          |
| <b>Total Number of Credits for Compulsory Components:</b> |                                                                            | <b>180</b> |                                      |
| <b>2.</b>                                                 | <b>Elective EPP Components **</b>                                          |            |                                      |
| ELC                                                       | <b>Total Number of Credits for Elective Components:</b>                    | <b>60</b>  |                                      |
| <b>TOTAL ECTS CREDITS OF THE EPP</b>                      |                                                                            | <b>240</b> |                                      |

\*In accordance with the Law of Ukraine No. 4826-IX of 25 March 2026 “On Amendments to Certain Laws of Ukraine Concerning Specific Issues of Preparing Citizens of Ukraine for National Resistance” («Про внесення змін до деяких законів України щодо окремих питань підготовки громадян України до національного спротиву» (<https://zakon.rada.gov.ua/laws/show/4826-20#n84>), students enrolled in educational institutions of all forms of ownership are exempt from studying the academic course “Fundamentals of National Resistance” if they:

- have completed military service;
- have successfully completed this academic course during their previous studies in professional pre-higher education or higher education programmes;
- possess a certificate confirming completion of Basic General Military Training and the acquisition of a military occupational specialty;
- are enrolled in a mode of study other than full-time or dual education;
- reside in territories of Ukraine that are temporarily occupied.

These students are entitled to choose additional educational components of the Educational and Professional Programme in a volume equivalent to that allocated for the study of this academic course

\*\* Higher education students have the right to freely select elective courses totalling 60 ECTS credits from the range of courses offered by the University’s academic departments: <https://kmf.uz.ua/uk/studentam/disciplini-vilnogo-viboru/>

## 2. Structural and Logical Sequence of EPP Components

### Sequence of Learning Activities for Higher Education Students (Full-Time and Part-Time Modes of Study):

| (Full Time and Part Time Modes of Study): |          |                                                                                                        |                                            |         |
|-------------------------------------------|----------|--------------------------------------------------------------------------------------------------------|--------------------------------------------|---------|
| No                                        | Code E/C | EPP Components<br>(academic courses, course projects/papers, practical training, qualification thesis) | Component Type                             | Credits |
| 1                                         | 2        | 3                                                                                                      | 4                                          | 5       |
| <b><i>I semester – 30 credits</i></b>     |          |                                                                                                        |                                            |         |
| 1                                         | EC 1     | History and Culture of Ukraine                                                                         | Compulsory General Education Component     | 3       |
| 2                                         | EC 7     | Psychology                                                                                             | Compulsory Professional Training Component | 27      |
| 3                                         | EC 9     | Higher Mathematics                                                                                     |                                            |         |
| 4                                         | EC 16    | Botany                                                                                                 |                                            |         |
| 5                                         | EC 17    | Zoology                                                                                                |                                            |         |
| 6                                         | EC 20    | General and Inorganic Chemistry                                                                        |                                            |         |
| 7                                         | EC 23    | Physics                                                                                                |                                            |         |
| 8                                         | EC 25    | General earth science                                                                                  |                                            |         |
| <b><i>II semester – 30 credits</i></b>    |          |                                                                                                        |                                            |         |
| 1                                         | EC 2     | History and Culture of the Hungarian People                                                            | Compulsory General Education Component     | 3       |
| 2                                         | EC 8     | Pedagogy                                                                                               | Compulsory Professional Training Component | 27      |
| 3                                         | EC 16    | Botany                                                                                                 |                                            |         |
| 4                                         | EC 17    | Zoology                                                                                                |                                            |         |
| 5                                         | EC 20    | General and Inorganic Chemistry                                                                        |                                            |         |
| 6                                         | EC 23    | Physics                                                                                                |                                            |         |
| 7                                         | EC 26    | Ecology and Environmental Management                                                                   |                                            |         |
| 8                                         | EC 32    | Field practicum                                                                                        |                                            |         |
| <b><i>III semester – 30 credits</i></b>   |          |                                                                                                        |                                            |         |
| 1                                         | EC 3     | Philosophy                                                                                             | Compulsory General Education Component     | 3       |
| 2                                         | EC 8     | Pedagogy                                                                                               | Compulsory Professional Training Component | 19      |
| 3                                         | EC 10    | Methodological principles for organising and conducting scientific and educational research            |                                            |         |
| 4                                         | EC 18    | Human Anatomy and Physiology, General Health Theory                                                    |                                            |         |
| 5                                         | EC 21    | Analytical chemistry                                                                                   |                                            |         |
| 6                                         | EC 23    | Physics                                                                                                |                                            |         |
| 7                                         | ELC 1    | Elective Course No.1                                                                                   |                                            |         |
| 8                                         | ELC 2    | Elective Course No.2                                                                                   |                                            |         |
| <b><i>IV semester – 30 credits</i></b>    |          |                                                                                                        |                                            |         |
| 1                                         | EC 6     | Fundamentals of National Resistance                                                                    | Compulsory General Education Component     | 5       |
| 2                                         | EC 11    | General Methods of Teaching Natural Science                                                            | Compulsory Professional Training Component | 8       |

|                            |        |                                                              |                                            |    |
|----------------------------|--------|--------------------------------------------------------------|--------------------------------------------|----|
| 3                          | EC 23  | Physics                                                      |                                            |    |
| 4                          | ELC 3  | Elective Course No.3                                         | Elective Component                         | 12 |
| 5                          | ELC 4  | Elective Course No.4                                         |                                            |    |
| 6                          | ELC 5  | Elective Course No.5                                         |                                            |    |
| 7                          | EC 31  | Coursework: natural sciences and their teaching methodology  | Compulsory Professional Training Component | 3  |
| 8                          | EC 34  | Teaching internship                                          | Compulsory Practical Training Component    | 3  |
| V semester – 30 credits    |        |                                                              |                                            |    |
| 1                          | EC 12  | Modern information technologies in teaching natural sciences | Compulsory Professional Training Component | 19 |
| 2                          | EC 13  | Methods of Teaching Natural Sciences (Biology)               |                                            |    |
| 3                          | EC 19  | Basics of Genetics and Molecular Biology                     |                                            |    |
| 4                          | EC 22  | Organic and bioorganic chemistry                             |                                            |    |
| 5                          | EC 23  | Physics                                                      |                                            |    |
| 6                          | ELC 6  | Elective Course No.6                                         | Elective Component                         | 8  |
| 7                          | ELC 7  | Elective Course No.7                                         |                                            |    |
| 8                          | EC 34  | Teaching internship                                          | Compulsory Practical Training Component    | 3  |
| VI semester – 30 credits   |        |                                                              |                                            |    |
| 1                          | EC 14  | Methods of Teaching Natural Sciences (Physics)               | Compulsory Professional Training Component | 10 |
| 2                          | EC 24  | Astronomy                                                    |                                            |    |
| 3                          | EC 22  | Organic and bioorganic chemistry                             |                                            |    |
| 4                          | ELC 8  | Elective Course No.8                                         | Elective Component                         | 8  |
| 5                          | ELC 9  | Elective Course No.9                                         |                                            |    |
| 6                          | EC 31  | Coursework: natural sciences and their teaching methodology  | Compulsory Professional Training Component | 3  |
| 7                          | EC 33  | Practice (school physics and chemistry experiments)          | Compulsory Practical Training Component    | 9  |
| 8                          | EC 34  | Teaching internship                                          |                                            |    |
| VII semester – 31 credits  |        |                                                              |                                            |    |
| 1                          | EC 4   | Ukrainian language for professional purposes                 | Compulsory General Education Component     | 3  |
| 2                          | EC 15  | Methods of Teaching Natural Sciences (Chemistry)             | Compulsory Professional Training Component | 7  |
| 3                          | EC 28  | Methodology for Teaching Integrated Natural Science Subjects |                                            |    |
| 4                          | ELC 10 | Elective Course No.10                                        | Elective Component                         | 12 |
| 5                          | ELC 11 | Elective Course No.11                                        |                                            |    |
| 6                          | ELC 12 | Elective Course No.12                                        |                                            |    |
| 7                          | EC 34  | Teaching internship                                          | Compulsory Practical Training Component    | 9  |
| VIII semester – 29 credits |        |                                                              |                                            |    |
| 1                          | EC 5   | Foreign Language for Professional Purposes                   | Compulsory General Education Component     | 3  |



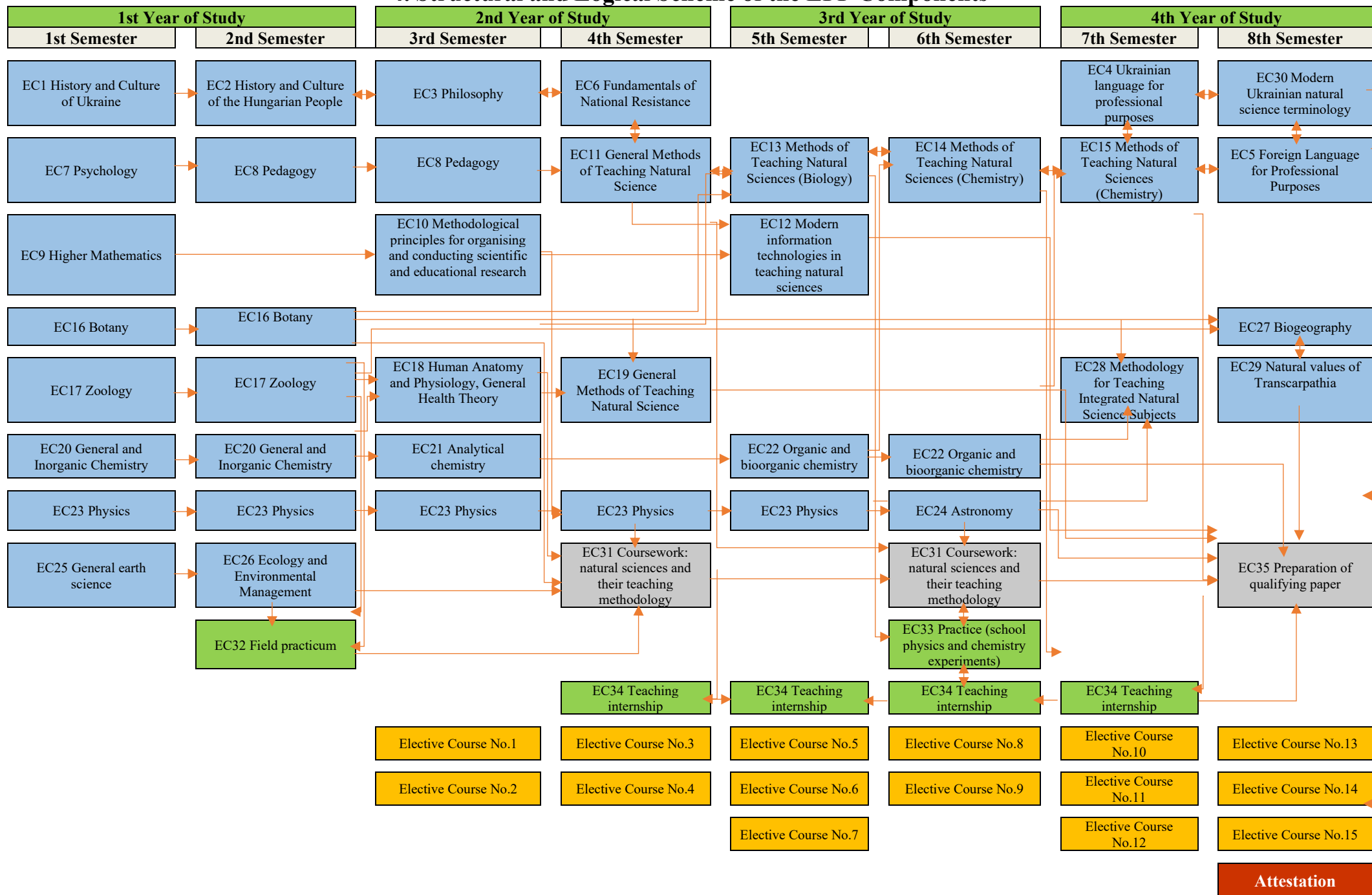
|   |        |                                                                           |                                            |     |
|---|--------|---------------------------------------------------------------------------|--------------------------------------------|-----|
| 2 | EC 30  | Modern Ukrainian natural science terminology                              | Compulsory Professional Training Component | 11  |
| 3 | EC 29  | Natural values of Transcarpathia                                          |                                            |     |
| 4 | EC 27  | Biogeography                                                              |                                            |     |
| 5 | ELC 13 | Elective Course No.13                                                     | Elective Component                         | 12  |
| 6 | ELC 14 | Elective Course No.14                                                     |                                            |     |
| 7 | ELC 15 | Elective Course No.15                                                     |                                            |     |
| 8 | EC 35  | Preparation of qualifying paper                                           | Compulsory Practical Training Component    | 3   |
|   | A      | Attestation (Attestation examination; Defence of a Qualification Project) | Attestation                                | --- |

### 3. Structure of the EPP Components

| Educational Components                             | Hours       | Credits    | Share of Components, % |
|----------------------------------------------------|-------------|------------|------------------------|
| <b>1. Compulsory Components of the EPP</b>         | <b>5400</b> | <b>180</b> | <b>75</b>              |
| 1.1. Compulsory General Training                   | 540         | 20         | 8,3                    |
| 1.2. Compulsory Professional Training              | 3960        | 130        | 54,2                   |
| 1.3. Compulsory Practical Training and Attestation | 900         | 30         | 12,5                   |
| <b>2. Elective Components of the EPP</b>           | <b>1800</b> | <b>60</b>  | <b>25</b>              |
| <b>Total for the EPP</b>                           | <b>7200</b> | <b>240</b> | <b>100</b>             |



#### 4. Structural and Logical Scheme of the EPP Components



## FORMS OF ATTESTATION OF HIGHER EDUCATION STUDENTS

|                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p style="text-align: center;"><b>Form of Attestation of Higher Education Students Leading to the Award of a Professional Qualification</b></p> | <p>Attestation is carried out in the form of an attestation examination in major professional disciplines and the public defence of a qualification project.</p> <p>The award of a professional qualification under the EPP is carried out in accordance with the current legislation, the relevant professional standard and the “Regulations on the Procedure for Awarding Professional Qualifications at Rakoczi University”. (<a href="#"><u>«Положенням про порядок присвоєння професійних кваліфікацій в Університеті Ракоці»</u></a>).</p> |
| <p style="text-align: center;"><b>Procedure for Awarding a Professional Qualification</b></p>                                                   | <p>Procedure for Awarding Professional Qualifications to Higher Education Students (<a href="#"><u>Порядок присвоєння професійних кваліфікацій здобувачам вищої освіти</u></a>), approved by the Academic Council, Minutes No. 4, dated 30 April 2026.</p>                                                                                                                                                                                                                                                                                        |
| <p style="text-align: center;"><b>Full Title and Reference Details of the Relevant Professional Standard</b></p>                                | <p>Professional Standard “Teacher of a General Secondary Education Institution” (« Вчитель закладу загальної середньої освіти »). Order of the Ministry of Education and Science of Ukraine No. 1225 of 29 August 2024 “On Approval of the Professional Standard for the Profession ‘Teacher of a General Secondary Education Institution’” (<a href="#"><u>«Про затвердження професійного стандарту за професіями "Вчитель закладу загальної середньої освіти"»</u></a>.)</p>                                                                    |
| <p style="text-align: center;"><b>List of Competencies Defined by the Professional Standard</b></p>                                             | <p>The following professional competencies specified in the professional standard have been taken into account:</p> <p>A (A1. (A1.1., A1.2., A1.3., A1.4.), A2. (A2.1., A2.2., A2.3., A2.4., A2.5.), A3. (A3.1..A3.2., A3.3.)).</p> <p>B (B1. (B1.1., B1.2., B1.3., B 1.4.), B2. (B2.1., B2.2., B2.3.), B3. (B3.1., B3.2., B3.3.)), C (C1. (C1.1., C1.2., C 1.3.), C2. (C2.1., C2.2., C2.3., C2.4., C2.5.)).</p> <p>D (D1. (D1.1, D1.2.), D2. (D2.1., D2.2., D2.3.), D3. (D3.1., D3.2., D3.3.)), E (E 1. (E 1.1., E1.2.)).</p>                    |
| <p style="text-align: center;"><b>Requirements for the Attestation Examination</b></p>                                                          | <p>The attestation examination is designed to evaluate the extent to which higher education students have achieved the knowledge, skills, competencies and programme learning outcomes specified by the EPP and the relevant Professional Standard.</p>                                                                                                                                                                                                                                                                                           |
| <p style="text-align: center;"><b>Requirements for the Qualification Project</b></p>                                                            | <p>The qualification project shall provide a solution to a complex specialised task or practical problem in the field of secondary education (natural sciences, physics, chemistry, or biology), requiring the application of conceptual methods of educational sciences, subject-specific knowledge, psychology, the theory and methodology of teaching and</p>                                                                                                                                                                                  |

|  |                                                                                                                                                                                                                                                                                                                                                     |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>characterised by the complexity and uncertainty of conditions.</p> <p>The qualification project must not contain academic plagiarism, fabrication, falsification or any other forms of academic misconduct.</p> <p>The qualification project shall be publicly accessible and deposited in the repository and library of Rakoczi University.</p> |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## INTERNAL QUALITY ASSURANCE SYSTEM OF HIGHER EDUCATION

The internal quality assurance system is established in accordance with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and Article 16 of the Law of Ukraine “On Higher Education” («Про вищу освіту»). Internal quality assurance is implemented in accordance with the Concept of Quality Assurance in Education at Ferenc Rakoczi II Transcarpathian Hungarian University ([Концепції забезпечення якості освіти](#) в Закарпатському угорському університеті імені Ференца Ракоці II), which is published on the [University's official website](#).

The system for assuring the quality of educational activities, the quality of higher education (the internal quality assurance system) and the quality of the Educational Programme at Rakoczi University is implemented in accordance with the existing [institutional structure](#) and the system for monitoring the quality of education and provides for the following procedures and measures:

- 1) establishing the principles and procedures for quality assurance in higher education;
- 2) monitoring and periodically reviewing educational programmes;
- 3) annual evaluation of higher education students and the academic and teaching staff of Rakoczi University;
- 4) ensuring the professional development of teaching, research and academic staff through internships or advanced training courses;
- 5) ensuring the availability of the resources necessary for the organisation of the educational process, including students' independent study, for each educational programme;
- 6) ensuring the availability of information systems for the effective management of the educational process;
- 7) insuring the public availability of information on educational programmes, higher education levels and qualifications;
- 8) ensuring an effective system for the prevention and detection of academic plagiarism in the academic works of Rakoczi University staff and higher education students;
- 9) other procedures and measures.

At Rakoczi University, the Quality Assurance Office, the Higher Education Quality Assurance Council and the Student Self-Government operate as integral components of the internal quality assurance system.

The mechanism for the design and periodic review of educational programmes is regulated by the Methodological Guidelines for the Development and Updating of Educational Programmes at Rakoczi University.

The Project Group carries out continuous monitoring of the Educational Programme, which includes the analysis and evaluation of the programme's content and relevance, changes in societal and labour market needs, students' workload, academic achievements and performance; the expectations, needs and satisfaction of higher education students with regard to the programme; as well as the alignment of the learning environment with the objectives of the Educational Programme. The Programme Support Group (academic staff) provides organisational support for the training of higher education students throughout the entire period of study, analyses the relevance of the Educational Programme and its compliance with current regulatory documents, recommendations of the Ministry of Education and Science of Ukraine, and the requirements of employers and the student community, and, where necessary, develops amendments to curricula and other programme documentation.

In addition, continuous analysis and evaluation of the Educational Programme are carried out by other participants in the monitoring of the educational process, including higher education students following the completion of academic courses, as well as external

stakeholders, such as graduates employed in the relevant field, employers and other interested parties.

Rakoczi University implements the concept of student-centred learning. In order to enhance the quality of the educational process and improve the quality of the services provided by the University, mandatory surveys are conducted each semester. The results of these surveys are used for the continuous improvement of the Educational Programme. Comments and proposals submitted by interested stakeholders regarding the Educational Programme are published on the official website of Rakoczi University.

A mechanism for evaluating the achievements of higher education students and academic staff has been implemented, based on performance ratings in research, methodological and organisational activities, as well as the ranking of teaching staff according to the results of student surveys. This mechanism is established in the Regulations on the Rating Evaluation System and Attestation of Academic Staff (Положенні про систему рейтингового оцінювання та атестацію науково-педагогічних кадрів).

At Rakoczi University, the professional development of teaching and academic staff is carried out through the following forms: participation in professional development programmes; internships; participation in seminars, workshops, training courses, webinars, master classes and other educational activities. The professional development of academic staff involved in the delivery of the Educational Programme is ensured on a regular basis. Particular attention is paid to strengthening the practical component of their professional development within the system of non-formal and informal education, including through internships at institutions and organisations in Ukraine and abroad, participation in international projects and grant programmes and enrolment in certification programmes.

The promotion of the principles of academic integrity and their implementation in the educational and research activities of the University are carried out in accordance with the Regulations on Academic Integrity at Rakoczi University (Положення про академічну доброчесність в Університеті Ракоці).

The system for assuring the quality of educational activities and the quality of higher education at Rakoczi University (the internal quality assurance system) is evaluated, upon the submission of the higher education institution, by the National Agency for Higher Education Quality Assurance.

## **REQUIREMENTS FOR THE STRUCTURE OF COURSE SYLLABI OF EDUCATIONAL COMPONENTS**

The syllabus of an educational component (academic discipline or practicum) consists of the following elements:

1) General Information: the name of the University; the higher education degree; the mode of study; the title of the academic discipline; the department; the Educational Programme; the type of discipline (compulsory or elective); the number of ECTS credits and contact hours; the surname, first name, academic degree, academic title, e-mail address of the instructor(s); the prerequisites of the academic discipline.

2) Course Description: the role and place of the discipline within the Educational Programme; the objectives and purpose of the course; the expected programme learning outcomes to be achieved through its study; the characteristics of the discipline; other relevant information.

3) Course Topics: the topics of lectures, seminars, laboratory classes and independent study activities.

4) Assessment and Evaluation Criteria: forms of assessment and evaluation; criteria for the successful completion of final assessment; grading requirements; submission deadlines; and other requirements related to the assessment of learning outcomes.

5) Course Policy: the course policy is defined by the system of requirements that the instructor sets for the student in the study of the discipline and is based on the principles of academic integrity. The requirements may relate to class attendance, rules of conduct during classes, completion of the required minimum amount of academic work, etc.

6) Recommended and supplementary literature of the academic discipline and other information resources.

## LIST OF REGULATORY DOCUMENTS UNDERLAYING THE EDUCATIONAL PROGRAMME

1. Закон України «Про вищу освіту» від 05 вересня 2017 р. №2145-VIII (із змінами від 25.09.2020). Режим доступу: <http://zakon5.rada.gov.ua/laws/show/1556-18>;
2. Закон України «Про освіту» (від 05.09.2017 №2145-VIII). – Режим доступу: <http://zakon5.rada.gov.ua/laws/show/2145-19>;
3. Національна рамка кваліфікацій. Постанова КМУ від 23 листопада 2011 р. №1341 «Про затвердження Національної рамки кваліфікацій». Із змінами, внесеними згідно з Постановами КМ № 159 від 05.02.2026. Режим доступу: <https://zakon.rada.gov.ua/laws/show/1341-2011-%D0%BF#Text>;
4. Національний класифікатор України ДК 009:2010 «Класифікація видів економічної діяльності». Режим доступу: <https://zakon.rada.gov.ua/rada/show/vb457609-10#Text>;
5. Національний класифікатор України ДК 003:2010 «Класифікатор професій». Режим доступу: <https://zakon.rada.gov.ua/rada/show/va327609-10#Text> та <https://me.gov.ua/Profession/List?lang=uk-UA&id=d4162ef8-2771-4ac5-99ef-1d4b6f5336af&tag=KlasifikatorProfesii-Poshuk>;
6. Наказ Міністерства освіти і науки України від 01.06.2016 №600 «Про затвердження та введення в дію Методичних рекомендацій щодо розроблення стандартів вищої освіти». Режим доступу: <https://mon.gov.ua/storage/app/media/vishchaosvita/rekomendatsii-1648.pdf>;
7. Постанова Кабінету міністрів України від 23.11.2011 №1341 «Про затвердження Національної рамки кваліфікацій». Режим доступу: <http://zakon4.rada.gov.ua/laws/show/1341-2011-п>;
8. «Розроблення освітніх програм. Методичні рекомендації». Авт.: В.М. Захарченко, В.І. Луговий, Ю.М. Рашкевич, Ж.В. Таланова / За ред. В.Г. Кременя. – Київ: ДП «НВЦ «Пріоритети», 2014. – 120 с. Режим доступу: [http://ibhb.chnu.edu.ua/uploads/files/metodrada/Rozroblennya\\_osv\\_program.pdf](http://ibhb.chnu.edu.ua/uploads/files/metodrada/Rozroblennya_osv_program.pdf);
9. Розроблення освітніх програм. Методичні рекомендації. Режим доступу: [http://ihed.org.ua/images/doc/04\\_2016\\_rozroblennya\\_osv\\_program\\_2014\\_tempusoffi ce.pdf](http://ihed.org.ua/images/doc/04_2016_rozroblennya_osv_program_2014_tempusoffi ce.pdf);
10. Проект Стандарту вищої освіти України за спеціальністю 014 Середня освіта (за предметними спеціальностями), що запропонований робочими групами, створеними науково-методичною комісією з предметної освіти та спорту (Накази Міністерства освіти і науки України №375 від 6 квітня 2016 р., №1041 від 14 липня 2017 р., №582 від 25 квітня 2019 р.). Режим доступу: <https://mon.gov.ua/static-objects/mon/sites/1/gromadske-obgovorennya/2024/04/17/HO-proyekt.stand.VO-014-serednya.osvita-bakalavr.17.04.2024.1.1.docx>
11. Постанова Кабінету міністрів України від від 29 квітня 2015 р. №266 «Про затвердження переліку галузей знань і спеціальностей, за якими здійснюється підготовка здобувачів вищої та фахової передвищої освіти» (із змінами №188 від 21.02.2025). Режим доступу: <https://zakon.rada.gov.ua/laws/show/266-2015-%D0%BF#Text>;
12. Європейська кредитна трансферна накопичувальна система: Довідник користувача. Режим доступу: [http://ihed.org.ua/images/doc/04\\_2016\\_ECTS\\_Users\\_Guide-2015\\_Ukrainian.pdf](http://ihed.org.ua/images/doc/04_2016_ECTS_Users_Guide-2015_Ukrainian.pdf);
13. EQF-LLL – European Qualifications Frameworkfor Lifelong Learning. Режим доступу: [https://ec.europa.eu/ploteus/sites/eac-eqf/files/brochexp\\_en.pdf](https://ec.europa.eu/ploteus/sites/eac-eqf/files/brochexp_en.pdf);

14. QF-EHEA – Qualification Framework of the European Higher Education Area. Режим доступу: <http://www.ehea.info/article-details.aspx?ArticleId=67>;
15. Наказ Міністерства освіти і науки України від 16.07.2018 р. №776 «Про затверджений Концепції розвитку педагогічної освіти». Режим доступу: <https://mon.gov.ua/ua/npa/pro-zatverdzhennya-koncepciyi-rozvitku-pedagogichnoyi-osviti>;
16. Лист Міністерства освіти і науки України від 11.03.2015, №1/9-120 Керівникам вищих навчальних закладів «Про організацію вивчення гуманітарних дисциплін». Режим доступу: <https://zakon.rada.gov.ua/rada/show/v-120729-15#Text>;
17. Резолюція Генеральної Асамблеї ООН від 25.09.2015 р. №70/1. Перетворення нашого світу: Порядок денний у сфері сталого розвитку до 2030 року. Режим доступу: <http://surl.li/brwrzb>, визначений Указом Президента України від 30.09.2019 р. №722. Про Цілі сталого розвитку України на період до 2030 року. Режим доступу: <http://surl.li/pldimw>;
18. Закон ВР України «Про забезпечення функціонування української мови як державної», документ 2704-VIII, чинний, поточна редакція від 31.12.2023, підстава – 2801-IX. Режим доступу: <https://zakon.rada.gov.ua/laws/show/2704-19#Text>;
19. Наказ Університет Ракоці №17-Вн від 15 лютого 2024 р. Про забезпечення якісного вивчення, викладання та використання англійської мови у ЗУІ. Режим доступу: <https://kme.org.ua/uk/category/nakazi/>;
20. Наказ Міністерства освіти і науки України від 25.07.2023 №898 «Методичні рекомендації щодо забезпечення якісного вивчення, викладання та використання англійської мови у закладах вищої освіти України». Режим доступу: <https://zakon.rada.gov.ua/rada/show/v0898729-23#Text>;
21. Постанова кабінету міністрів України від 15 грудня 2023 р. №1322 «Про схвалення Стратегії утвердження української національної та громадянської ідентичності на період до 2030 року та затвердження операційного плану заходів з її реалізації у 2023-2025 роках». Режим доступу: <https://zakon.rada.gov.ua/laws/show/1322-2023-%D0%BF#n18>;
22. International Standard Classification of Education. Fields of education and training 2013 (ISCED F 2013). Detailed field descriptions, UNESCO, Montreal, Quebec, 2015. Режим доступу: <http://dx.doi.org/10.15220/978-92-9189-179-5-en>;
23. Постанова Кабінету міністрів України від 21 червня 2024 р. №734 «Про затвердження Порядку проведення базової загальної підготовки громадян України, які здобувають вищу освіту, та поліцейських». Режим доступу: <https://zakon.rada.gov.ua/laws/show/734-2024-%D0%BF#Text>;
24. Роз'яснення щодо застосування Критеріїв оцінювання якості освітньої програми: методичний посібник [Електронне видання] / А. Бутенко, Г. Денискіна, О. Єременко, О. Книш, І. Сімшаг, О. Требенко. – Київ: Національне агентство із забезпечення якості вищої освіти, 2024. – 127 с. Режим доступу: [Роз'яснення-щодо-застосування-Критеріїв-оцінювання-якості-освітньої-програми.pdf](#)
25. Наказ Міністерства освіти і науки України від 29.08.2024 №1225 «Про затвердження професійного стандарту за професіями "Вчитель закладу загальної середньої освіти"». Режим доступу: <https://mon.gov.ua/npa/pro-zatverdzhennia-profesiinoho-standartu-vchytel-zakladu-zahalnoi-serednoi-osvity>;
26. Наказ МОН України від 27.03.2025 р. №512 Про затвердження методичних рекомендацій щодо розроблення стандартів вищої освіти. Режим доступу:



<https://mon.gov.ua/static-objects/mon/sites/1/vishcha-osvita/2025/03/27/nakaz-mon-512-vid-27-03-2025.pdf>

27. Закон України №4826-IX від 25.03.2026 р. «Про внесення змін до деяких законів України щодо окремих питань підготовки громадян України до національного спротиву». Режим доступу: <https://zakon.rada.gov.ua/laws/show/4826-20#n84>.

## APPENDICES

**Table 1. Matrix of Correspondence between Educational Components (EC) and the NQF Descriptors**

(<http://zakon4.rada.gov.ua/laws/show/1341-2011-п>)

| <b>NQF Classification of Competencies (Learning Outcomes) / Educational Components (EC)</b> | <b>Knowledge</b><br><b>K1.</b> Conceptual scientific and practical knowledge<br><b>K2.</b> Critical understanding of theories, principles, methods, and concepts in the field of professional activity and/or learning | <b>Skills</b><br><b>S1.</b> Advanced cognitive and practical skills, mastery and innovativeness required for solving complex specialised tasks and practical problems in the field of professional activity or learning | <b>Communication</b><br><b>C1.</b> Communicating information, ideas, problems, solutions, personal experience and arguments to specialists and non-specialists<br><b>C2.</b> Collecting, interpreting and applying data<br><b>C3.</b> Communicating on professional matters, including in a foreign language, both orally and in writing | <b>Responsibility and Autonomy</b><br><b>RA1.</b> Managing complex technical or professional activities or projects<br><b>RA2.</b> Ability to take responsibility for developing and making decisions in unpredictable work and/or learning contexts<br><b>RA3.</b> Forming judgements that take into account social, scientific and ethical aspects<br><b>RA4.</b> Organising and leading the professional development of individuals and groups<br><b>RA5.</b> Ability to continue learning with a significant degree of autonomy |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EC1                                                                                         | K1                                                                                                                                                                                                                     |                                                                                                                                                                                                                         | C1                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| EC2                                                                                         | K1                                                                                                                                                                                                                     |                                                                                                                                                                                                                         | C1                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| EC3                                                                                         | K1; K2                                                                                                                                                                                                                 |                                                                                                                                                                                                                         | C1                                                                                                                                                                                                                                                                                                                                       | RA3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| EC4                                                                                         |                                                                                                                                                                                                                        |                                                                                                                                                                                                                         | C1; C3                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| EC5                                                                                         |                                                                                                                                                                                                                        |                                                                                                                                                                                                                         | C1; C3                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| EC6                                                                                         | K1; K2                                                                                                                                                                                                                 |                                                                                                                                                                                                                         | C1; C3                                                                                                                                                                                                                                                                                                                                   | RA2; RA3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| EC7                                                                                         | K1; K2                                                                                                                                                                                                                 | S1                                                                                                                                                                                                                      | C3                                                                                                                                                                                                                                                                                                                                       | RA2; RA3 RA4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| EC8                                                                                         | K1; K2                                                                                                                                                                                                                 | S1                                                                                                                                                                                                                      | C3                                                                                                                                                                                                                                                                                                                                       | RA2; RA3; RA4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| EC9                                                                                         | K1                                                                                                                                                                                                                     | S1                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                          | RA5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| EC10                                                                                        | K1; K2                                                                                                                                                                                                                 |                                                                                                                                                                                                                         | C1; C3                                                                                                                                                                                                                                                                                                                                   | RA1; RA2; RA5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| EC11                                                                                        | K1; K2                                                                                                                                                                                                                 | S1                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                          | RA4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| EC12                                                                                        | K1; K2                                                                                                                                                                                                                 |                                                                                                                                                                                                                         | C1                                                                                                                                                                                                                                                                                                                                       | RA1; RA4; RA5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| EC13                                                                                        | K1; K2                                                                                                                                                                                                                 | S1                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                          | RA4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|      |        |    |            |                         |
|------|--------|----|------------|-------------------------|
| EC14 | K1; K2 | S1 |            | RA4; RA5                |
| EC15 | K1; K2 | S1 |            | RA4; RA5                |
| EC16 | K1     | S1 | C2         |                         |
| EC17 | K1     | S1 | C2         |                         |
| EC18 | K1     | S1 | C2         | RA3                     |
| EC19 | K1     | S1 | C2         |                         |
| EC20 | K1     | S1 | C2         |                         |
| EC21 | K1     | S1 | C2         |                         |
| EC22 | K1     | S1 | C2         | RA3                     |
| EC23 | K1     | S1 | C2         |                         |
| EC24 | K1     | S1 | C2         |                         |
| EC25 | K1     | S1 | C2         |                         |
| EC26 | K1; K2 | S1 | C2         |                         |
| EC27 | K1     | S1 | C2         |                         |
| EC28 | K1     | S1 | C2         |                         |
| EC29 | K1; K2 | S1 | C2         |                         |
| EC30 | K1     |    | C1         |                         |
| EC31 | K1; K2 | S1 | C1; C2; C3 | RA1; RA2; RA4; RA5      |
| EC32 | K1; K2 | S1 | C1; C2; C3 | RA1; RA2; RA4; RA5      |
| EC33 | K1; K2 | S1 | C1; C2; C3 | RA1; RA2; RA4; RA5      |
| EC34 | K1; K2 | S1 | C1; C2; C3 | RA1; RA2; RA3; RA4; RA5 |
| EC35 | K1; K2 | S1 | C1; C2; C3 | RA1; RA2; RA3; RA4; RA5 |

**Table 2. Matrix of Correspondence between Programme Learning Outcomes (PLOs) and the Descriptors of the National Qualifications Framework (NQF)**

(<http://zakon4.rada.gov.ua/laws/show/1341-2011-п>)

| NQF Classification of Competencies (Learning Outcomes) / Programme Learning Outcomes (PLO) | Knowledge                                                                                                                                                                            | Skills                                                                                                                                                                                          | Communication                                                                                                                                                                                                                                                                               | Responsibility and Autonomy                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                            | K1. Conceptual scientific and practical knowledge<br>K2. Critical understanding of theories, principles, methods, and concepts in the field of professional activity and/or learning | S1. Advanced cognitive and practical skills, mastery and innovativeness required for solving complex specialised tasks and practical problems in the field of professional activity or learning | C1. Communicating information, ideas, problems, solutions, personal experience and arguments to specialists and non-specialists<br>C2. Collecting, interpreting and applying data<br>C3. Communicating on professional matters, including in a foreign language, both orally and in writing | RA1. Managing complex technical or professional activities or projects<br>RA2. Ability to take responsibility for developing and making decisions in unpredictable work and/or learning contexts<br>RA3. Forming judgements that take into account social, scientific and ethical aspects<br>RA4. Organising and leading the professional development of individuals and groups<br>RA5. Ability to continue learning with a significant degree of autonomy |
| PLO1                                                                                       | K2                                                                                                                                                                                   |                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                             | RA2                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PLO2                                                                                       |                                                                                                                                                                                      |                                                                                                                                                                                                 | C1; C3                                                                                                                                                                                                                                                                                      | RA4                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PLO3                                                                                       | K2                                                                                                                                                                                   | S1                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                             | RA1                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PLO4                                                                                       | K2                                                                                                                                                                                   | S1                                                                                                                                                                                              | C1                                                                                                                                                                                                                                                                                          | RA1                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PLO5                                                                                       | K2                                                                                                                                                                                   | S1                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                             | RA2; RA4                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| PLO6                                                                                       | K2                                                                                                                                                                                   | S1                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                             | RA1; RA2                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| PLO7                                                                                       | K1                                                                                                                                                                                   | S1                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| PLO8                                                                                       |                                                                                                                                                                                      |                                                                                                                                                                                                 | C1; C3                                                                                                                                                                                                                                                                                      | RA3                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PLO9                                                                                       |                                                                                                                                                                                      | S1                                                                                                                                                                                              | C2                                                                                                                                                                                                                                                                                          | RA5                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PLO10                                                                                      |                                                                                                                                                                                      |                                                                                                                                                                                                 | C2                                                                                                                                                                                                                                                                                          | RA5                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PLO11                                                                                      |                                                                                                                                                                                      |                                                                                                                                                                                                 | C3                                                                                                                                                                                                                                                                                          | RA4                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PLO12                                                                                      | K2                                                                                                                                                                                   |                                                                                                                                                                                                 | C1; C2; C3                                                                                                                                                                                                                                                                                  | RA2; RA4; RA5                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| PLO13                                                                                      | K2                                                                                                                                                                                   |                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                             | RA2; RA3                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

|       |    |    |    |          |
|-------|----|----|----|----------|
| PLO14 | K1 |    |    | RA5      |
| PLO15 | K1 |    |    | RA5      |
| PLO16 | K1 | S1 | C2 | RA1      |
| PLO17 | K1 | S1 | C2 | RA1      |
| PLO18 | K2 |    |    | RA3      |
| PLO19 | K1 | S1 | C2 | RA5      |
| PLO20 | K1 | S1 | C2 |          |
| PLO21 |    | S1 |    | RA2      |
| PLO22 | K2 |    |    | RA3      |
| PLO23 |    | S1 |    | RA2; RA5 |

**Table 3. Matrix of Correspondence between the Content of the Educational Programme and the Labour Functions and Competencies of the Professional Standard “Teacher of a General Secondary Education Institution”, approved by Order of the Ministry of Education and Science of Ukraine No. 1225 of 29 August 2024**  
<https://mon.gov.ua/npa/pro-zatverdzhennia-profesiinoho-standartu-vchytel-zakladu-zahalnoi-serednoi-osvity>

| Codes and Titles of Labour Functions of the Professional Standard                         | Codes and Titles of Competencies of the Professional Standard | Corresponding Codes in the Content of the Educational Programme |                                            |                                                                                  |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------|
|                                                                                           |                                                               | <i>General and Professional Competencies</i>                    | <i>Programme Learning Outcomes</i>         | <i>Educational Components</i>                                                    |
| <b>A. Teaching Subjects (Integrated Courses) to Learners</b>                              | A1. Linguistic and Communicative Competence                   | GC1, GC3, GC4, PC2                                              | PLO2, PLO7, PLO8                           | EC1, EC2, EC4, EC5, EC8, EC30, EC34                                              |
|                                                                                           | A2. Subject-Specific and Methodological Competence            | GC1, GC2, GC6, GC9, GC13, PC1, PC3, PC5, PC15                   | PLO1, PLO3, PLO4, PLO5, PLO7, PLO18, PLO19 | EC1, EC2, EC3, EC8, EC11, EC13, EC14, EC15, EC28, EC30, EC34, EC35               |
|                                                                                           | A3. Information and Digital Competence                        | GC5, GC13, PC3                                                  | PLO9, PLO10                                | EC9, EC10, EC11, EC12, EC31, EC35                                                |
| <b>B. Partnership Interaction with Participants in the Educational Process</b>            | B1. Psychological Competence                                  | GC8, GC9, GC10, GC11, GC13, GC15, PC3, PC8                      | PLO1, PLO5, PLO11, PLO23                   | EC1, EC2, EC3, EC6, EC7, EC8, EC18, EC32, EC33, EC34                             |
|                                                                                           | B2. Emotional and Ethical Competence                          | GC6, GC7, GC10, GC14, GC15, PC12                                | PLO1, PLO6, PLO11, PLO13, PLO18, PLO23     | EC1, EC2, EC3, EC6, EC7, EC8, EC26, EC29, EC34                                   |
|                                                                                           | B3. Pedagogical Partnership Competence                        | GC7, GC12, PC9, PC10                                            | PLO6, PLO11                                | EC7, EC8, EC34                                                                   |
| <b>C. Participation in the Organisation of a Safe and Healthy Educational Environment</b> | C1. Inclusive Competence                                      | GC7, GC11, PC4, PC9                                             | PLO1, PLO6                                 | EC7, EC8, EC11, EC18, EC19, EC34                                                 |
|                                                                                           | C2. Health-Preserving Competence                              | GC7, GC10, GC15, PC9, PC12                                      | PLO5, PLO6, PLO12, PLO18, PLO21, PLO23     | EC6, EC7, EC8, EC11, EC13, EC14, EC15, EC18, EC19, EC28                          |
| <b>D. Conducting the Educational Process</b>                                              | D1. Prognostic Competence                                     | GC1, PC3, PC7                                                   | PLO3, PLO12                                | EC8, EC9, EC10, EC12                                                             |
|                                                                                           | D2. Organisational Competence                                 | GC1, GC2, PC3, PC13                                             | PLO3, PLO4, PLO5, PLO6                     | EC8, EC9, EC10, EC11, EC12, EC13, EC14, EC15, EC28, EC31, EC32, EC33, EC34, EC35 |
|                                                                                           | D3. Assessment and Analytical Competence                      | GC1, PC6, PC7, PC11                                             | PLO4, PLO12                                | EC7, EC8, EC9, EC10, EC11, EC12, EC13, EC14, EC15, EC28, EC31, EC34              |
| <b>E. Continuous Professional Development</b>                                             | E1. Lifelong Learning Competence                              | GC2, GC6, PC14                                                  | PLO10, PLO11, PLO12                        | EC7, EC8, EC9, EC10, EC11, EC12, EC13, EC14, EC15, EC28, EC31, EC35              |

**Table 4. Matrix of Correspondence between Programme Competencies (GC, PC, SC) and Educational Components (EC) of the Educational Programme**

| EC / Competencies | EC 1 | EC 2 | EC 3 | EC 4 | EC 5 | EC 6 | EC 7 | EC 8 | EC 9 | EC 10 | EC 11 | EC 12 | EC 13 | EC 14 | EC 15 | EC 16 | EC 17 | EC 18 | EC 19 | EC 20 | EC 21 | EC 22 | EC 23 | EC 24 | EC 25 | EC 26 | EC 27 | EC 28 | EC 29 | EC 30 | EC 31 | EC 32 | EC 33 | EC 34 | EC 35 |   |
|-------------------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| IC                | +    | +    | +    | +    | +    | +    | +    | +    | +    | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |   |
| GC1               |      |      |      | +    | +    | +    | +    | +    | +    | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |   |
| GC2               |      |      |      |      |      |      | +    | +    |      |       | +     |       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       |       | +     | +     |   |
| GC3               |      |      | +    | +    | +    |      |      | +    |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       |       | +     | + |
| GC4               | +    | +    |      | +    | +    |      | +    | +    |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       |       | +     | + |
| GC5               |      |      |      |      |      |      |      |      | +    | +     |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       | +     | + |
| GC6               |      |      | +    |      |      | +    | +    | +    |      |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       | +     | + |
| GC7               |      |      |      |      |      | +    | +    | +    |      |       |       |       |       |       |       |       |       |       | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       | +     | +     | + |
| GC8               | +    | +    |      | +    |      | +    |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |
| GC9               | +    | +    | +    |      |      | +    |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       | +     | +     |       | +     |       | +     |       |       |       |       | + |
| GC10              |      |      |      |      |      | +    | +    | +    |      |       | +     |       |       |       |       |       |       |       | +     | +     |       |       |       |       |       |       | +     | +     |       | +     |       |       |       |       | +     |   |
| GC11              | +    | +    | +    |      |      | +    |      | +    |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |   |
| GC12              | +    | +    | +    | +    | +    |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |   |
| GC13              | +    | +    | +    | +    | +    |      |      |      |      |       |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |
| GC14              | +    | +    | +    |      | +    |      |      |      |      |       |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |
| GC15              |      |      |      |      |      | +    |      |      |      | +     |       | +     |       |       |       |       |       |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |
| PC1               |      |      |      |      |      |      |      | +    |      | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     | + |
| PC2               | +    | +    |      | +    | +    |      |      | +    |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       |       | +     |   |
| PC3               |      |      |      |      |      |      | +    | +    |      |       | +     | +     | +     | +     | +     |       |       |       | +     |       |       |       |       |       |       |       |       |       | +     |       |       | +     |       | +     | +     | + |
| PC4               |      |      |      | +    | +    | +    | +    | +    |      |       | +     |       | +     | +     | +     |       |       |       | +     |       |       |       |       |       |       |       |       |       | +     |       | +     |       |       |       | +     |   |
| PC5               |      |      |      |      |      |      |      |      |      |       | +     |       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | + |
| PC6               |      |      |      |      |      |      |      | +    |      |       | +     |       | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       |       |       |       | +     |   |
| PC7               |      |      |      |      |      |      |      | +    | +    | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       | +     | + |
| PC8               | +    | +    | +    | +    | +    |      | +    | +    |      |       |       |       |       |       |       |       |       |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     | +     | + |
| PC9               |      |      |      |      |      |      | +    | +    |      |       | +     |       |       |       |       |       |       |       | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |   |
| PC10              |      |      |      |      |      |      | +    | +    |      |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |   |
| PC11              |      |      |      |      |      |      | +    | +    |      | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       | +     | + |
| PC12              |      |      |      |      |      | +    | +    |      |      |       | +     |       |       |       |       |       |       |       | +     | +     |       |       | +     |       |       |       | +     |       |       |       |       |       |       |       | +     |   |
| PC13              |      |      |      |      |      |      |      |      |      |       | +     |       | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       | +     | +     | +     | +     |   |
| PC14              |      |      |      | +    | +    |      | +    | +    |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     | +     |       |       | +     | + |
| PC15              |      |      |      |      |      |      |      | +    |      |       | +     |       | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       |       |       |       | + |
| SC1               |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     | +     |       |       | +     |       | +     |       |       |       | + |
| SC2               |      |      |      |      |      |      |      |      |      | +     |       |       |       |       |       |       |       |       |       | +     | +     | +     | +     | +     | +     |       |       |       |       |       |       |       | +     |       | +     |   |

|     |  |  |  |  |  |  |   |  |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----|--|--|--|--|--|--|---|--|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SC3 |  |  |  |  |  |  |   |  |   |   |  |   |   |   |   |   |   |   | + | + | + | + | + |   |   |   |   |   |   |   | + |   | + |   | + |   |
| SC4 |  |  |  |  |  |  |   |  |   |   |  |   |   |   |   | + | + | + | + |   |   | + |   |   |   | + | + |   | + |   | + | + | + |   | + |   |
| SC5 |  |  |  |  |  |  |   |  | + | + |  |   |   |   |   | + | + |   |   |   |   |   |   | + | + | + | + |   | + |   | + | + | + | + | + |   |
| SC6 |  |  |  |  |  |  |   |  |   | + |  |   | + | + | + |   |   |   |   |   |   |   |   | + | + |   |   | + |   |   | + | + | + | + |   |   |
| SC7 |  |  |  |  |  |  |   |  | + | + |  | + |   |   |   | + | + | + | + | + | + | + | + | + | + | + | + | + |   | + |   | + | + | + | + |   |
| SC8 |  |  |  |  |  |  | + |  |   |   |  |   |   |   |   |   |   | + | + |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   | + |   |
| SC9 |  |  |  |  |  |  |   |  |   | + |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | + | + |   | + |



**Table 5. Matrix of Alignment of Programme Learning Outcomes (PLO) with the Relevant Educational Components (EC) of the Educational Programme**

| EC / PLO | EC 1 | EC 2 | EC 3 | EC 4 | EC 5 | EC 6 | EC 7 | EC 8 | EC 9 | EC10 | EC 11 | EC 12 | EC 13 | EC 14 | EC 15 | EC 16 | EC 17 | EC 18 | EC 19 | EC 20 | EC 21 | EC 22 | EC 23 | EC 24 | EC 25 | EC 26 | EC 27 | EC 28 | EC 29 | EC 30 | EC 31 | EC 32 | EC 33 | EC 34 | EC 35 |   |   |
|----------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|
| PLO1     |      |      |      |      |      |      | +    | +    |      | +    | +     |       | +     | +     | +     |       |       | +     | +     |       |       |       |       |       |       |       |       | +     |       |       |       |       |       | +     |       |   |   |
| PLO2     | +    | +    |      | +    | +    |      |      | +    |      |      | +     |       | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       | +     |       |       |       | +     |   |   |
| PLO3     |      |      |      |      |      |      |      | +    |      | +    | +     |       | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       | +     |       |       | +     | + |   |
| PLO4     |      |      |      |      |      |      |      | +    |      | +    | +     |       | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       | +     |       |       | +     | + |   |
| PLO5     |      |      | +    |      |      | +    | +    |      |      |      | +     |       | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       |       | +     | +     | +     | + |   |
| PLO6     |      |      |      |      |      | +    | +    | +    |      |      | +     |       |       |       |       |       |       | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |   |   |
| PLO7     | +    | +    |      | +    | +    |      | +    | +    |      | +    | +     | +     | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       | +     | +     | +     | +     | + |   |
| PLO8     | +    | +    |      | +    | +    |      |      | +    |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     | +     |       | +     | + |   |
| PLO9     |      |      |      |      |      |      |      |      |      | +    | +     | +     | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       |       |       |       | +     | + |   |
| PLO10    |      |      |      |      |      |      |      |      | +    | +    |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       | + | + |
| PLO11    | +    | +    | +    |      |      | +    | +    | +    |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     | +     | + |   |
| PLO12    |      |      |      |      |      |      | +    | +    | +    | +    | +     |       | +     | +     | +     |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       |       |       |       | +     | + |   |
| PLO13    | +    | +    |      | +    |      | +    |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       | + | + |
| PLO14    |      |      |      |      |      |      |      |      | +    |      |       |       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | + |   |
| PLO15    |      |      |      |      |      |      |      |      | +    |      | +     |       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       | +     | +     | +     | +     | +     | +     | +     | +     | +     |       | +     | + |   |
| PLO16    |      |      |      | +    | +    |      |      |      |      |      |       |       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       | +     | +     | +     |   |   |
| PLO17    |      |      |      |      |      |      |      |      | +    | +    |       |       |       |       |       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       | +     | +     | +     | +     | +     | +     | + |   |
| PLO18    |      |      | +    |      |      |      |      |      |      | +    | +     |       | +     | +     | +     |       |       |       |       |       |       |       |       |       | +     | +     | +     | +     | +     | +     |       | +     |       |       |       | + |   |
| PLO19    |      |      |      |      |      |      |      |      |      |      | +     |       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       | +     |       |       |       | + |   |
| PLO20    |      |      |      |      |      |      |      |      |      | +    |       | +     | +     | +     | +     |       |       |       | +     | +     | +     | +     | +     | +     | +     | +     |       |       | +     |       |       | +     | +     | +     |       | + |   |
| PLO21    |      |      |      |      |      | +    |      |      |      |      | +     |       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       |       |       |       | +     |       |       | +     | +     | +     | +     | + |   |
| PLO22    | +    | +    | +    |      |      |      | +    |      |      | +    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       |       |   | + |
| PLO23    |      |      |      |      |      | +    |      |      |      | +    |       | +     |       |       |       |       |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |   |