MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

V. N. KARAZIN KHARKIV NATIONAL UNIVERSITY

CONFIRMED

Academic Council of

V. N. Karazin Kharkiv National University

“\_\_\_\_” \_\_\_\_\_\_\_\_\_\_\_\_\_ 20\_\_\_

protocol №\_\_\_

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Vice-Rector for Research and Academic Affairs

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

MICRO-SQUALIFICATION PROGRAM

***Biodiversity of Urban Landscapes***

NATIONAL QUALIFICATIONS FRAMEWORK LEVEL \_\_\_\_\_7\_\_\_\_\_\_\_\_\_\_\_\_\_

(5, 6, 7, 8 level)

QUALIFICATION TYPE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_professional\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(educational or professional)

CATEGORY OF QUALIFICATION \_\_\_\_\_\_\_\_\_\_\_microqualification\_\_\_\_\_\_\_\_\_\_\_

(partial qualification or micro-qualification)

QUALIFICATION \_\_\_\_\_\_\_\_\_Specialist in Urban Green Space Planning \_\_\_\_\_\_\_\_\_\_\_\_

(title of qualification)

**Kharkiv 2026**

**Profile of the program**

|  |  |  |
| --- | --- | --- |
| **1. General information** | | |
| **Head of the program** | | Maksymenko Nadiya, Doctor of Geography, Professor, Head of the Department of Environmental Monitoring and Protected Areas Management.  Hrechko A. A., PhD in Earth Sciences, Associate Professor of the Department of Environmental Monitoring and Protected Areas Management. |
| **Members of the program development working group** | | 1. Klieshch A. A., PhD in Geographical Sciences, Associate Professor of the Department of Environmental Monitoring and Protected Areas Management. 2. Koval I. M., Doctor of Agricultural Sciences, Leading Researcher of the Department of Silviculture and Forest Economics, Forest Ecology Sector, Ukrainian Research Institute of Forestry and Forest Melioration named after H. M. Vysotskyi; Professor of the Department of Environmental Monitoring and Protected Areas Management. |
| **Full name of the higher education institution and structural unit where the program is implemented** | | V. N. Karazin Kharkiv National University, Institute of Environmental Sciences, Green Energy, and Sustainable Develoment, Department of Environmental Monitoring and Protected Areas Management |
| **National Qualifications Framework Level** | | 7 (NQF Ukraine), Second cycle (QF-EHEA),  7 (EQF-LLL) |
| **Official name of the program** | | Biodiversity of urban landscapes |
| **Type of document issued and scope of the program in ECTS credits and academic hours** | | Certificate  3 ECTS, 90 hours |
| **Language(s) of teaching /assessment** | | Ukraine, English / Ukraine |
| **2. Program goal** | | |
| *The aim of the educational programme is to provide learners with systematic knowledge of biodiversity in urban landscapes, its structural and functional organization, and ecological role, as well as to develop practical skills in monitoring, assessing the condition, and designing measures for the conservation and restoration of biodiversity in urbanized environments. The programme is focused on training specialists capable of integrating the principles of sustainable development into the management of urban ecosystems and implementing nature-based solutions to enhance the environmental resilience of urban areas.* | | |
| **3. Characteristics of the programmes** | | |
| **Orientation, features and objectives of the program** | | *The micro-credential programme has an applied focus and provides training for specialists to perform professional duties related to the assessment, conservation, and restoration of biodiversity in urban landscapes in the context of sustainable development and environmental planning of territories. The programme is aimed at developing practical competencies in monitoring the condition of urban ecosystems, designing nature-based solutions, and implementing elements of green-blue infrastructure. The programme includes international participation in its development and delivery within the framework of the Erasmus+ project «DOMANI – Developing Micro-credentials Ecosystems in Ukraine and Mongolia for Competitive and Resilient Green Economies».* |
| **The main focus of the program** | | *The development of professional competencies in the field of conservation and restoration of biodiversity in urban landscapes, as well as the integration of nature-based solutions into the planning of a sustainable urban environment.*  *Keywords: biodiversity, urban environment, green infrastructure, climate change adaptation.* |
| **4. Teaching and assessment** | | |
| **Teaching and learning** | | *Main approaches: student-centred, activity-based, and value-oriented; e-learning, distance learning, and self-directed learning. Educational technologies: problem-based and developmental, interactive, information and communication, and project-based.* |
| **Assessment** | | *The 100-point grading system is based on the accumulation of points from the following types of assessment: ongoing (oral and written questioning), intermediate (defense of practical and independent work, seminar activities, tests), and final assessment in a test format.* |
| **5. Program competencies or job functions** | | |
| **General competencies** | *GC01. Ability to learn and acquire contemporary knowledge. GC02. Ability to make well-founded decisions.* | |
| **Professional competencies** | *PC1. Ability to apply new approaches to the analysis and forecasting of complex phenomena, and to critically assess problems in professional activities. PC2. Ability to communicate knowledge and personal conclusions effectively to both specialists and non-specialists. PC3. Ability to engage in self-education and professional development based on innovative approaches in ecology, environmental protection, sustainable natural resource management, and nature conservation. PC4. Ability to establish clear legal and scientific criteria and priorities when identifying territories with different protection statuses, using knowledge of ecological network design principles, spatial differentiation of various categories, and objects of the protected areas system in a given region. PC5. Ability to apply acquired knowledge in the field of nature conservation, modern methods, and technologies to develop measures for the preservation of biodiversity and landscape diversity when forming structural elements of ecological networks, based on national and international legislation.* | |
| **DOMANI Competence** | *DC1. Ability to solve multidimensional sustainable development challenges by integrating approaches from different fields, forecasting trends, and adapting strategies to changing conditions.*  *DC2. Ability to collect, analyze, and interpret data related to sustainable development to support well-founded decision-making. DC3. Ability to work productively in diverse teams, resolve conflicts constructively, and maintain focus on shared goals. DC4. Ability to apply GIS, green/blue infrastructure, and climate-resilient design to integrate sustainability into land use, urban development, and regional planning.* | |
| **6. Program learning outcomes** | | |
| **Program learning outcomes** | *PLO08. Ability to clearly and unambiguously communicate professional knowledge, personal justifications, and conclusions to specialists and the general public.*  *PLO10. Ability to demonstrate awareness of the latest principles and methods of environmental protection.*  *PLO11. Ability to utilize modern information resources in ecology, natural resource management, environmental protection, and nature conservation. PLO17. Ability to critically analyze theories, principles, methods, and concepts from various subject areas to solve practical problems in ecology and nature conservation.* | |
| **DOMANI Program Learning Outcomes** | *DPL01. Ability to objectively analyze situations, identify opportunities for value creation, and develop strategies that balance impact, feasibility, and ethics. DPL02. Ability to clearly define problems, identify key stakeholders and their interrelationships, and pinpoint leverage points for systemic change. DPL03. Ability to shape a vision of a desired future, generate and test solution ideas, and determine intervention points with the greatest impact. DPL04. Ability to work effectively in a team, resolve conflicts constructively, and maintain alignment toward shared goals.* | |
| **7. Resource provision for program implementation** | | |
| **Human resources** | Lecturers have a scientific degree and/or academic title, including Doctors of Geographical Sciences, Doctors of Philosophy. All lecturers are full-time employees of V. N. Karazin KhNU, who regularly take advanced training. | |
| **Material and technical support** | Equipment and supplies necessary for field research, technical training aids (multimedia projectors, laptops, printers; scanners, personal computers with software) for the formation of subject competencies in the learning process; use of bases for conducting educational and practical classes. | |
| **Information and educational and methodological support** | Official websites KKhNU (<https://karazin.ua/>), Institute of Post-Qualifying Education and Part-Time (Distance) Learning ([http://moodle.karazin.uа](http://moodle.karazin.xn--u-8sb/)), Institute of Environmental Sciences, Green Energy, and Sustainable Develoment (<http://ecology.karazin.ua>) contain information about the microcredit educational program. | |

**2. List of program components**

| **Code** | **Program Components (modules, topics, assignments, practical component, assessment)** | **Credits / Hours** | **Assessment Form** |
| --- | --- | --- | --- |
| EC1 | Introduction to biodiversity of urban landscapes: concepts, structure, functions, contemporary challenges | 0.5 / 15 | Test |
| EC2 | Urban flora: structure, fractional analysis, anthropogenic transformation | 0.5 / 15 | Test |
| EC3 | Urban ecosystems: features of organization, influencing factors, ecological condition assessment | 0.5 / 15 | Test |
| EC4 | Green-blue infrastructure and nature-based solutions for biodiversity conservation | 0.5 / 15 | Test |
| PC1 | Practical component | 1 / 30 | Differentiated credit |
| A1 | Final assessment / Exam | — | — |
| **TOTAL PROGRAM VOLUME** |  | **3 / 90** |  |

**3. Form of attestation according to the program**

1. Oral control method: individual interview at the beginning and end of training; individual or frontal interview during the course, final control.

2. Written control method (checking written assignments, tests)

3. Taking a final test for certification

The following methods are used to control the performance of independent work: survey, testing, and performance of tests.

The system of control of students' knowledge in the discipline consists of current control, intermediate and final control of knowledge. Assessment of students' success in the discipline is carried out in points.

Assessment of students' knowledge, skills and abilities in the discipline takes into account all types of classes provided for by the curriculum, namely lectures, practical classes, and performance of independent work. Current control in the discipline involves assessing students' knowledge and skills during practical work (30 points), intermediate control is carried out through testing and performance of tests (2\*10=20) points.

Final control in the discipline is carried out in the form of test control (40 points)

**4. Program verification**

Head of the program \_\_\_\_\_\_\_\_\_\_\_\_\_ Nadiya MAКSYMENKO

(signature) (Name, SURNAME)

Considered at the department meeting \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

from «\_\_\_» \_\_\_\_\_\_ 20\_\_ , protocol № \_\_\_

Head of the Department \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Nadiya MASKYMENKO

(signature) (Name, SURNAME)

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