

## **REVIEW** **of the educational and scientific program**

### **“Geospatial Modelling, Land Monitoring and Territorial Management” of the third (educational and scientific) level of higher education in the specialty 193 “Geodesy and Land Management”**

The educational and scientific program is a system of documents developed and approved by a higher education institution, taking into account the needs of the modern labour market in the field of geodesy and land management, and regulates the objectives, list of general and special (professional) competencies, the normative and variable content of specialist training, formulated in terms of expected learning outcomes, as well as requirements for quality control of higher education in specialty 193 “Geodesy and Land Management” at the third (educational and scientific) level of higher education at Lesya Ukrainka Volyn National University.

The ONP pays special attention to the formation of a sound system of knowledge and skills in the field of geodesy and land management for further scientific and teaching activities among higher education seekers. The main focus is on training specialists capable of applying modern achievements in the field of geodesy, cartography, photogrammetry, geoinformation systems and technologies, land management, land cadastre, land monitoring and protection, and land management for the analysis, assessment, and forecasting of the state of land resources and territories for the purpose of their rational use, protection, and effective management.

The educational and scientific program is structured according to a competency-based approach to the organization of the educational process. The program promotes the development of such professionally significant qualities in applicants as the ability to think abstractly, analyze, and synthesize; the ability to work in an international context; and the ability to present and discuss the results of scientific research in Ukrainian and foreign languages. Special competencies are practical in

nature and involve the use of modern geoinformation systems, remote sensing data, and other geospatial technologies to identify spatial patterns, relationships, and trends, as well as the development of mathematical, statistical, and computational models for simulating spatial phenomena, forecasting changes and assessing the consequences of management decisions.

The educational and scientific program is structured logically, and the educational components of the curriculum reflect current topics in geodesy, cartography, photogrammetry, geoinformation systems and technologies, land management, land cadastre, monitoring, and land protection. The list and scope of basic and elective educational components, as well as the sequence of their study, correspond to the structural and logical scheme of training higher education seekers in specialty 193 “Geodesy and Land Management” and contribute to ensuring that the program learning outcomes meet the needs of stakeholders.

The reviewed educational and scientific program has the necessary structural and content components, considers the current requirements for graduates of specialty 193 “Geodesy and Land Management” in the field of knowledge 19 “Architecture and Construction,” and includes both basic and elective educational components of the professional cycle. An individual educational trajectory is ensured by the selection of four elective educational components from the free choice cycle by applicants. Elective disciplines, teaching practice, and an emphasis on modern research technologies in the field of geodesy and land management create a favourable environment for professional growth.

The resource support for the program deserves special attention. The university has modern material and technical facilities, laboratories, computer classrooms, access to international scientometric databases (Scopus, Web of Science), as well as a developed library system with electronic resources. This allows applicants to conduct high-quality scientific research and test the results of their research.

An important strength of the program is the high publication activity of the educational and scientific program support group. Teachers and scientists involved in the implementation of the program have significant

achievements in the form of publications in leading international and national professional journals indexed in Scopus and Web of Science. Their participation in international conferences, research projects, and editorial boards contributes to the integration of research results into the global scientific space and ensures the high quality of the educational process. It also sets an example of scientific integrity, academic culture, and orientation towards international standards for applicants.

The programme facilitates academic mobility at both the national and international levels, thereby creating avenues for enhanced integration into the global scientific and educational landscape. The programme's commitment to global educational trends is evidenced by the participation of Ukrainian and international experts in public lectures and the integration of distance learning technologies.

#### Conclusion:

The educational and scientific programme, entitled "Geospatial Modeling, Land Monitoring, and Territory Management", has been found to possess all the necessary prerequisites for the training of highly qualified specialists in the field of geodesy and land management. The high publication activity of the programme support group has been identified as a further confirmation of the scientific capacity and competitiveness of the programme at the international level.

Prague, 4.11. 2025



prof. Dr. Ing. Karel Pavelka