

## Review Paper

for the educational and scientific program "Applied Mathematics" at the third (educational and scientific) level of higher education in the specialty 113 "Applied Mathematics", within the field 11 "Mathematics and Statistics", which is implemented for the training of doctoral students at the Faculty of Mathematics and Computer Science of Yuriy Fedkovych Chernivtsi National University.

The competencies outlined in the educational program (integral, general, and professional) are sufficient for the attainment of the proposed learning outcomes (1–15) by a doctoral candidate. These learning outcomes are ensured through the corresponding components of the educational program. The competencies are aligned with these components, as evidenced by the analysis of the relevant matrix.

The curriculum appropriately includes courses for both general and professional training, as well as a selection of elective disciplines. This structure enables doctoral students to acquire in-depth professional knowledge that meets the current level of scientific research in applied mathematics. Notably, the general training cycle includes Academic Writing and Rhetoric of Communication (6 credits). The professional training cycle encompasses Mathematical Modeling of Systems and Processes and Models and Methods of Applied Mathematics (4 credits each). Additionally, the elective course cycle comprises Differential-Functional Equations and Their Applications and Machine Learning Models, which constitute 26% of the total educational component (46 credits).

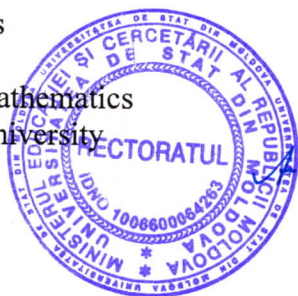
Doctoral students have the opportunity to gain pedagogical experience through a teaching practicum during the third semester, amounting to 90 hours (4 credits).

An essential mandatory component of the program is the Doctoral Seminar (3 credits), where candidates can present their research findings and attend scientific reports related to their area of study.

In terms of structure, content, general and professional competencies, as well as mandatory and elective components, the educational program "Applied Mathematics", developed at Yuriy Fedkovych Chernivtsi National University, meets the requirements for the training of PhD candidates in the specialty 113 "Applied Mathematics". The program provides doctoral students with the solid foundation in scientific research, the necessary skills for conducting applied mathematics investigations, and the pedagogical competencies required for their future academic and research careers.

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Doctor habilitatus  
Professor  
Department of Mathematics  
Moldova State University  
Andrei Perjan



*Perjan*