

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
TERNOPIL NATIONAL PEDAGOGICAL UNIVERSITY
THE NAMES OF VOLODYMYR HNATYUK**

APPROVED

The Scientific Council of the university
Protocol no. 13 of June 28, 2022,
Put into effect by order of the rector
No. 127-r dated June 28, 2022

With changes and additions,
approved by the Scientific Council
university
protocol No. 10 dated 30.05.2023,
put into effect by order of the rector
Order No. 146-r dated May 30, 2023

With changes and additions
approved by the Scientific Council
university
protocol No. 13 dated May 28, 2024.
put into effect by order of the rector
No. 157-r dated May 28, 2024.

With changes and additions
approved by the Scientific Council
university
protocol No. 3 dated October 22, 2024.
put into effect by order of the rector
No. 330-r dated October 22, 2024



Acting rector


Nadia DROBYK

**EDUCATIONAL AND SCIENTIFIC PROGRAM
"PROFESSIONAL EDUCATION"
third (educational and scientific) level of higher education
in specialty 015 Professional education
fields of knowledge 01 Education/Pedagogy**

Ternopil, 2024

**LETTER OF AGREEMENT
EDUCATIONAL AND SCIENTIFIC PROGRAMS OF HIGHER
EDUCATION**

FIELD OF KNOWLEDGE 01 Education/Pedagogy	SPECIALTY 015 Professional education (by specialization)
SUBJECT SPECIALIZATION -	SECOND SPECIALTY (SUBJECT SPECIALIZATION) –
SPECIALIZATION -	LEVEL OF HIGHER EDUCATION Third (educational and scientific)
DEGREE Doctor of Philosophy (PhD)	QUALIFICATION Doctor of philosophy (PhD) in professional education
FIELD OF KNOWLEDGE 01 Education/Pedagogy	SPECIALTY 015 Professional education (by specialization)
SUBJECT SPECIALIZATION -	SECOND SPECIALTY (SUBJECT SPECIALIZATION) –
SPECIALIZATION -	LEVEL OF HIGHER EDUCATION Third (educational and scientific)
DEGREE Doctor of Philosophy (PhD)	QUALIFICATION Doctor of philosophy (PhD) in professional education

AGREED

Chairman of the scientific and
methodical council

Volodymyr Hnatyuk

Ternopil National

Pedagogical University

 Nadia DROBYK

October 16, 2024

DESIGNED AND RECOMMENDED

by the ONP project group

"Professional education"

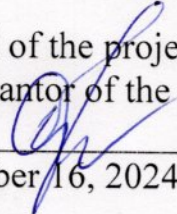
Ternopil National

Pedagogical University

named after Volodymyr Hnatyuk

Head of the project group

(guarantor of the educational program)

 Olha SOROKA

October 16, 2024

I. PREFACE

Developed by the project group consisting of:

Soroka Olha Viktorovna, Doctor of Pedagogical Sciences, Professor, Head of the Department of Social Work and Cultural Activity Management of Ternopil National Pedagogical University named after Volodymyr Hnatyuk - guarantor;

Halyna Mykhaylivna Meshko, Doctor of Pedagogical Sciences, Professor, Head of the Department of Pedagogy and Educational Management of Ternopil National Pedagogical University named after Volodymyr Hnatyuk;

Sitkar Stepan Viktorovych, Candidate of Pedagogical Sciences, Associate Professor, Associate Professor of the Department of Mechanical Engineering and Transport of Ternopil National Pedagogical University named after Volodymyr Hnatyuk;

Roman Oleksandrovich Lutsyshyn, graduate of the third (educational and scientific) level of higher education, graduate student of the 1st year of the Department of Mechanical Engineering and Transport of Ternopil National Pedagogical University named after Volodymyr Hnatyuk.

External stakeholders:

Ihor Stanislavovych Voytovych, Doctor of Pedagogical Sciences, Professor, Head of the Department of Information and Communication Technologies and Computer Science Teaching Methods of the Rivne State Humanitarian University;

Vasyl Mykolayovych Mulyarchuk, director of the Ternopil Cooperative Vocational College.

Reviewers:

Iryna Ivanivna Dobroskok - Doctor of Pedagogical Sciences, professor, corresponding member of the National Academy of Sciences of Ukraine, head of the Department of Professional Education of the State Higher Educational Institution

"Pereyaslav-Khmelnytskyi State Pedagogical University named after Hryhoriy Skovoroda";

Vasyl Ivanovych Kovalchuk - Doctor of Pedagogical Sciences, Professor, Professor of the Department of Vocational Education and Technologies of Agricultural Production at the Oleksandr Dovzhenko Hlukhiv National Pedagogical University.

1. Profile of the educational and scientific program "Professional Education"

1.1. General information	
Full name of the higher education institution and structural division	Volodymyr Hnatyuk Ternopil National Pedagogical University, Department of Mechanical Engineering and Transport; department of doctoral studies and postgraduate studies
Degree of higher education and title of qualification	Third (educational and scientific) level of higher education, doctor of philosophy (PhD) in professional education
The official name of the educational program	"Professional education"
Type of diploma and scope of the educational program	Diploma of Doctor of Philosophy (PhD), single, 60 ECTS credits, study period 4 years
Availability of accreditation	National Agency for Quality Assurance of Higher Education, Ukraine Certificate of accreditation of the educational and scientific program "Professional education" Certificate No. 790 dated November 19, 2020. Valid until July 1, 2026
Cycle / level	FQ-EHEA – third cycle, EQF-LLL – 8th level / NRK – 8th level
Prerequisites	Possession of a master's degree or specialist educational qualification
Specialty	015 Professional education
Language(s) of instruction	Ukrainian
The Internet is the address of permanent placement of the description of the educational and scientific program	https://tnpu.edu.ua/about/public_inform/akredytatsiia%20ta%20litsenzuvannia/osvitni_prohramy/PhD/ONP_015_profesijna_osvita.php?
1.2. The purpose of the educational program	
To ensure that the recipient of the educational and scientific program studies	

the methodology of scientific knowledge, methodological and theoretical foundations of higher professional education, the formation of professional readiness, independent research and teaching activities, improvement of knowledge of foreign languages and philosophical education, oriented to professional activity, formation of competencies necessary for successful pedagogical and practical activities in educational institutions and the scientific and research sphere.

Training of highly qualified scientists and scientific and pedagogical personnel in the field of education through conducting scientific research, obtaining new and/or practically oriented results, as well as preparing and defending theses.

1.3. Characteristics of the educational and scientific program

Subject area (field of knowledge, specialty, specialization (if available))	<p>01 Education/Pedagogy 015 Vocational education (by specialization) General level:</p> <ul style="list-style-type: none"> – substantiation of theoretical foundations and improvement of existing educational technologies, which makes it possible to improve the quality of an individual's knowledge at a higher theoretical and methodological level; – identification of regularities, substantiation of methodological approaches and principles of organization of the educational process in educational institutions; – scientific substantiation of the content, methods, organizational forms and means of professional education; – research and development of standards in professional education; – scientific substantiation of the problems of the modern textbook for professional education; – study of continuity of education in professional education institutions; – study, generalization of advanced pedagogical experience in professional training of adults and unemployed population; – research of innovative processes in professional education; - development of pedagogical principles of professional and creative development of the individual in the system of continuous professional education; - substantiation of the foundations of the formation of pedagogical skills of scientific and pedagogical and pedagogical workers; – development and substantiation of the scientific research component of the training of specialists for the purposeful formation of research competence of students of higher education; – organization of educational and industrial, industrial and
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	<p>educational practices in educational institutions;</p> <ul style="list-style-type: none"> - scientific foundations of training and retraining of specialists in the distance education system; - by the level of organization of the pedagogical process - professional (vocational and technical) education, higher education, postgraduate education, distance education, self-education, adult education, vocational training on the job; - by types of objects of pedagogical influence - students of vocational and technical education institutions, students (cadets) of higher education institutions of all specialties, pedagogical, scientific and pedagogical workers; students of the postgraduate professional education system; listeners of employment centers and training units at the workplace; - according to the structural component of pedagogical science - history and theory of professional education, partial didactics; - by branch component of pedagogical science, (by branch of specialist training) - all types of branches of knowledge; - according to the psychophysical condition of subjects of education - subjects of education in the norm, subjects of education with special needs.
<p>Academic rights of graduates</p>	<p>A doctor of philosophy can continue his education at the scientific level of a doctor of sciences, acquire any other forms of education, improve his qualifications, engage in self-education.</p>
<p>Orientation of the educational program</p>	<p>Educational and scientific</p>
<p>The main focus of the program</p>	<p>General:</p> <ul style="list-style-type: none"> - substantiation of theoretical foundations and improvement of existing educational technologies, which makes it possible to improve the quality of an individual's knowledge at a higher theoretical and methodological level; - scientific substantiation of the content, forms, methods, means of professional education; - scientific substantiation of the problems of modern professional education; - study of continuity in educational institutions; - study, generalization and implementation of advanced pedagogical experience in educational institutions; - substantiation of the foundations of the formation of pedagogical skills of scientific and pedagogical and pedagogical workers;

	<ul style="list-style-type: none"> - organization of various types of practices (introduction to the profession, educational, pedagogical, industrial, pre-diploma) in educational institutions. <p>Special:</p> <ul style="list-style-type: none"> - research of innovative processes in professional education; - development of new and improvement of existing learning technologies to improve the quality of the educational process; - development of pedagogical principles of professional and creative development of personality in the system of professional education; - development and substantiation of the research component of specialist training for purposeful formation of students' research competence; <p>- justification of the scientific basis of training and retraining of specialists in the distance education system.</p>
<p>Features of the program</p>	<p>The program is implemented in Ukrainian or its individual parts may be taught in foreign languages. Provides for the possibility of maintaining the academic mobility program thanks to distance education.</p> <p>The educational component of the program is implemented over the course of eight semesters, with a duration of 60 credits, includes disciplines in the appropriate cycles that provide: language competences; general training; knowledge of the chosen specialty; disciplines of the free choice of the student of higher education.</p> <p>The program is implemented in small groups of researchers and involves a differentiated approach to applicants of full-time, part-time and evening forms of education.</p> <p>The program provides 35 ECTS credits for compulsory academic disciplines and 9 credits of assistant pedagogical practice, of which 19 ECTS credits are general training disciplines (organization of scientific activity, philosophy: historical, philosophical and modern semantic parameters of knowledge and academically, professionally oriented communication) , which involves the acquisition of general scientific (philosophical) competences, language competences, and universal skills of a researcher by a graduate student (acquirer). 32 ECTS credits are provided for professional training disciplines, of which 16 ECTS credits are for elective disciplines within the educational and scientific program.</p> <p>Scientific component of the program. The scientific</p>

	<p>component of the educational-scientific program involves the implementation of own scientific research under the guidance of one or two scientific supervisors with the appropriate presentation of the obtained results in the form of a qualifying scientific work. This component of the program is not measured by ECTS credits, but is drawn up separately in the form of an individual plan of the graduate student's (recipient's) scientific work and is a component of the curriculum.</p> <p>The peculiarity of the scientific component of the educational-scientific training program for doctors of philosophy in the specialty 015 Professional education (by specialization) is that graduate students will be able to perform individual components of their own scientific research during practical and seminar classes in the discipline of professional training.</p>
1.4. Graduates' suitability for employment and further education	
Suitability for employment	<p>Research and teaching activities in the field of education. Administrative and management activities in the field of education.</p> <p>Positions according to the classification of professions of Ukraine DK 003:2010.</p> <p>Heads of enterprises, institutions and organizations (12), director (head) of an organization (research, design, project) (1210.1), director (head) of a professional educational institution (vocational and technical school, vocational school, etc.) (1210.1), director (head, other head) of an enterprise (1210.1), director (rector, head) of a higher educational institution (technical school, college, institute, academy, university, etc.) (1210.1), director of advanced training courses (1210.1), director of research of the institute (1210.1), head of the study office (1229.4; 21897), head of the department (1229.4; 21909), head of courses (1229.4; 21951), head of the laboratory (education) (1229.4; 21958), heads of projects and programs (1238), managers (managers) in the field of research and development (1474), head (head) of a department (research, design, project, etc.) (1237.2), head of a department in a college (1229.4), head of a laboratory (research, production preparation) (1237.2), researcher (2213.1), teachers (23).</p> <p>Place of employment. The Ministry of Education and Science of Ukraine, institutions of higher education, professional educational institutions (vocational and technical schools, vocational schools), research institutions</p>

	(stations, laboratories), regional administrations, colleges, general secondary education institutions, postgraduate education institutions.
Further education	<p>Training for development and self-improvement in scientific and professional spheres of activity, as well as other related fields of scientific knowledge:</p> <ul style="list-style-type: none"> – training at the 9th (doctoral) level of the National Academy of Sciences of Ukraine in the field of education; - studies at the 9th (doctoral) level of the National Academy of Sciences of Ukraine in related fields of scientific knowledge; – educational programs, research grants and scholarships (including abroad) containing additional educational components.
1.5. Teaching and assessment	
Teaching and learning	<p>Student-centered learning, problem-oriented learning, e-learning in the Moodle system, self-learning, research-based learning.</p> <p>The volume of the educational component of the educational-scientific program for training a doctor of philosophy is 60 ECTS credits.</p> <p>Preparation and defense during the first year of study of a dissertation research project with the study of approaches and methods of achieving the goal. Discussion during the second, third and fourth years of study of the intermediate results of the study. Mastering the methodology of scientific work, the skills of presenting its results. Conducting independent scientific research using the university's resource base and other resources. Individual scientific guidance, support and counseling by a scientific supervisor.</p> <p>The approach to teaching and learning involves:</p> <ul style="list-style-type: none"> - application of modern educational technology methods (interactive, critical thinking, project, portfolio, training, problem-based learning, simulation-game, case study, quests, etc.) for the productive mastery of learners of different levels of competences, which ensure their personal-oriented approach and development of thinking ; – application of educational design technology with paired or group implementation of projects and their protection in the conditions of a broad group discussion; – organization of productive pedagogical interaction with academic supervisors, scientific and pedagogical workers

	<p>involved in the educational process;</p> <ul style="list-style-type: none"> - involvement of well-known experts in the field of pedagogical science and practice in advising post-graduate students; - informational support for applicants' participation in competitions for receiving scientific scholarships, prizes, grants (including international ones); - giving the applicants the opportunity to participate in the preparation of scientific projects for competitions of the Ministry of Education and Science of Ukraine; - direct participation in the execution of budgetary and initiative research works.
Assessment	<p>Educational component of the program. The final control of the success of the graduate student (acquirer) study is carried out in the form:</p> <ul style="list-style-type: none"> - examination - based on the results of the study of normative and selective educational disciplines of the educational and scientific program; - credit - based on the results of studying all other disciplines provided for in the curriculum. <p>Evaluation of educational achievements is carried out according to the 100-point (rating) ECTS scale, the national 4-point scale ("excellent", "good", "satisfactory", "unsatisfactory") and verbal ("passed", "failed") systems.</p> <p>Types of control: preliminary, current, final, self-control.</p> <p>Scientific component of the program. The final result of a graduate student's studies is a properly prepared, based on the results of scientific research, a dissertation manuscript, its public defense and the awarding of a higher education recipient the scientific degree of Doctor of Philosophy in the specialty 015 Professional education (by specialization).</p>
1.6. Software competencies	
Integral competence	<p>The ability to solve complex tasks and problems in the field of education and/or research and innovation activity, which involves conducting scientific research and/or implementing innovations and is characterized by the uncertainty of conditions and requirements.</p>
General competences (CG)	<p>Synthesis and analysis</p> <p>ZK 1. The ability to make generalizations, critical thinking, analysis and synthesis to understand processes and phenomena in the field of education, the ability to establish cause-and-effect relationships.</p> <p>Scientific and research competences</p>

ZK 2. Ability to develop and manage projects; to improve and develop the professional, intellectual and cultural level; professionally analyze information, evaluate its completeness and possibilities of its use; to conduct scientific and applied research at a professional level.

Interpersonal interaction

ZK 3. Ability to work in a team, conduct scientific discussions, convince and influence other team members; determine the purpose and tasks of one's own and collective activities, foresee alternative solutions in professional activities; find compromise solutions and take responsibility for their implementation.

Instrumental competences

ZK 4. Ability to communicate (including in a foreign language); generate new ideas and non-standard approaches to their implementation (creativity).

Social and personal competences

ZK 5. The ability to self-manage (planning and solving problems of one's own professional and personal growth), the presence of a scientific worldview, perseverance in achieving the goal.

ZK 6. Ability to establish social interaction, cooperation, prevent and resolve conflicts.

ZK 7. Ability to observe research ethics, as well as the rules of academic integrity in scientific research and scientific-pedagogical activity.

Professional competences of the specialty (FC)

FC 1. Ability to understand and use modern theories, methodologies and methods of socio-psychological and other sciences in relation to the tasks of fundamental and applied research in professional activity.

FC 2. The ability to identify progressive ideas of foreign experience in the functioning of professional education and to determine, on this basis, possible directions for the introduction of these ideas into the domestic education system.

FC 3. The ability to communicate with representatives of various structures, to establish interaction between state, public and commercial organizations on the basis of social partnership.

FC 4. The ability to evaluate the process and the result of the work performed, to develop and implement programs for ensuring the quality of professional education. Ability to professional reflection.

FC 5. Ability to develop and manage international projects.

FC 6. The ability to show initiative and entrepreneurship to solve professional problems through the introduction of innovations.

FC 7. The ability to create new knowledge through original research, the quality of which can be recognized at the national and international levels.

FC 8. Ability to publicly present and defend the results of dissertation research in compliance with the principles of academic integrity.

FC 9. The ability to participate in scientific discussions at the international level, to defend one's own position.

FC 10. Ability to implement procedures for designing, organizing and monitoring pedagogical systems and technologies, taking into account the necessary transformations in the educational field (professional education), in the activities of scientists, managers and practicing teachers.

FC 11. Ability to teach within the scope of the specialty "Professional Education"; to build constructive interaction with pupils/students, to create a favorable psychological climate in the student group and to form a healthy educational environment.

1.7. Program learning outcomes

PRN 1. Ability to operate with basic concepts, theories, problems of philosophy and methodology of science, content of modern philosophical discussions on problems of social development and education; to reflect on current problems of social and individual existence.

PRN 2. The ability to analyze complex phenomena of social life, to connect general philosophical problems with the solution of tasks arising in professional and scientific and innovative activities, to apply empirical and theoretical methods of cognition.

PRN 3. The ability to identify modern methodological problems of pedagogical science and scientific activity and carry out their critical analysis, to determine the methodology of theoretical and applied scientific research, to characterize the structure and levels of methodology, conceptual approaches.

PRN 4. Knowledge of the current state and trends in the development of world and domestic theory and methods of professional education.

PRN 5. The ability to critically consider problems in scientific or professional activities at the border of subject areas, to solve complex tasks and problems that require updating and integration of knowledge in conditions of incomplete/insufficient information and conflicting requirements.

PRN 6. Ability and skills to identify and solve scientific tasks and problems in the field of theory and methodology of professional education; to formulate a categorical and conceptual research apparatus; to form the structure of the dissertation research and the classification of its content.

PRN 7. Knowledge and understanding of the theory and methodology of system analysis, knowledge and understanding of the stages of implementation of the system approach during the study of processes and phenomena in the educational environment; ability and skills to use the methodology of system analysis in pedagogical science.

PRN 8. Knowledge and understanding of a foreign language, ability and skills to use it to present scientific results in oral and written forms, understanding of foreign language scientific and professional tests; skills and communication skills in foreign-language scientific and professional environments, the ability to work together with

researchers from other countries.

PRN 9. Ability and skills to work with modern bibliographic and reference databases, scientometric platforms Web of Science, Scopus, etc.; identify contradictions and previously unsolved problems or their parts, formulate working hypotheses.

PRN 10. The ability to determine the stages of conducting experimental work; organize information search, independent selection and quality processing of scientific information, empirical data and their interpretation; to organize research work on the generalization of the pedagogical experience of an educational or educational institution, educational structure, etc.; design, organize and evaluate the implementation of the stages of pedagogical experimental work using innovative technologies.

PRN 11. Knowledge of the basic concepts of mathematical statistics and mathematical modeling methods; ability and skills to apply methods of mathematical processing of experimental data and assessment of their accuracy and reliability.

PRN 12. Ability to show initiative, independence, originality, generate new ideas for solving tasks of professional activity.

PRN 13. The ability to critically evaluate the results of scientific research and various sources of knowledge about professional activity, formulate conclusions and recommendations for their implementation.

PRN 14. Ability and skills to create new knowledge through original research, the quality of which can be recognized at the national and international levels; to participate in scientific discussions at the international level, to defend one's own position at conferences, seminars and forums.

PRN 15. Ability and skills to publicly present, defend the results of dissertation research, discuss them and debate with the scientific and professional community; use modern tools for visualization of the presentation of the results of the dissertation research.

PRN 16. The ability to organize the teaching of educational disciplines of professional training in accordance with the tasks and principles of modern professional education, to use various forms of organizing the educational activities of pupils/students, diagnosis, control and evaluation of its effectiveness.

	PRN 17. Ability to implement research self-improvement strategies and choose means of personal and professional self-development.
1.8. Resource support for program implementation	
Staff support	<p>The high-quality composition of scientific and pedagogical workers who carry out the professional training of doctors of philosophy of the educational and scientific program "Professional Education" corresponds to the licensing conditions (according to the current regulations for the training of applicants for higher education at the third (educational and scientific) level of the doctor of philosophy (PhD) (Decree of the Cabinet of Ministers of Ukraine No. 1187 of December 30, 2015 "On approval of licensing conditions for conducting educational activities of educational institutions").</p> <p>The educational process is provided by 14 scientific and pedagogical workers of the university departments: 11 of them are doctors of science, professors, three candidates of sciences, associate professors. The teachers who ensure the implementation of this program have the appropriate basic education, the required number of publications in Scopus, Web of science, specialized publications, actively participate in scientific and practical conferences of various levels (international, all-Ukrainian, regional). All scientific and pedagogical workers, in accordance with the agreed schedules, undergo advanced training at higher education institutions and scientific research institutes.</p>
Material and technical support	<p>Material and technical support for the professional training of doctors of philosophy of the educational program "Professional Education" corresponds to the licensing conditions. The teaching of academic disciplines of the educational program "Professional Education" is carried out in laboratories and specialized offices, which are equipped with appropriate equipment and installations. The areas of the premises used in the educational process meet sanitary standards and the requirements of fire safety rules. According to the current regulations for the training of higher education seekers at the third (educational and scientific) level of Doctor of Philosophy (PhD) (Resolution of the Cabinet of Ministers of Ukraine No. 1187 dated December 30, 2015 (with amendments and additions made in accordance with the Resolution of the Cabinet of Ministers of Ukraine dated 24 March 2021 No. 365) "On the approval of licensing conditions for conducting</p>

	educational activities of educational institutions").
Informational and educational and methodological support	<p>Education seekers can use the funds of the scientific library of Ternopil National Pedagogical University named after V. Hnatyuk.</p> <p>According to the current regulations for the training of higher education seekers at the third (educational and scientific) level of Doctor of Philosophy (PhD) (Decree of the Cabinet of Ministers of Ukraine No. 1187 of December 30, 2015 "On approval of licensing conditions for conducting educational activities of educational institutions"), the library's funds include textbooks, study guides, periodicals, reference and other educational literature. The volume of funds is sufficient for the independent and individual work of graduate students. Applicants have the opportunity to use the funds of the electronic library, which includes scientific and scientific-methodical publications of leading domestic and foreign scientists, university teachers. The educational program is fully equipped with educational and methodological complexes from all educational disciplines, which are located in the educational space of the university.</p>
1.9. Academic mobility	
National credit mobility	TNPU named after V. Hnatyuka creatively cooperates with research institutions of Ukraine, the National Academy of Sciences of Ukraine, the National Academy of Sciences of Ukraine, maintains close ties with related educational institutions of Ukraine and the countries of the European Union on the basis of bilateral agreements.
International credit mobility	According to TNPU agreements on international credit mobility, including ERASMUS+: with Marmara University (November 20, 2019 - November 19, 2024); Warsaw University (May 15, 2019 – unlimited); Higher Linguistic School in Częstochowa (October 27, 2014 – unlimited); Catholic University in Ruzhomberok (July 23, 2018 - July 22, 2028) and others. http://tnpu.edu.ua/about/pidrozdily/partners.php
Education of foreign students of higher education	It is being carried out

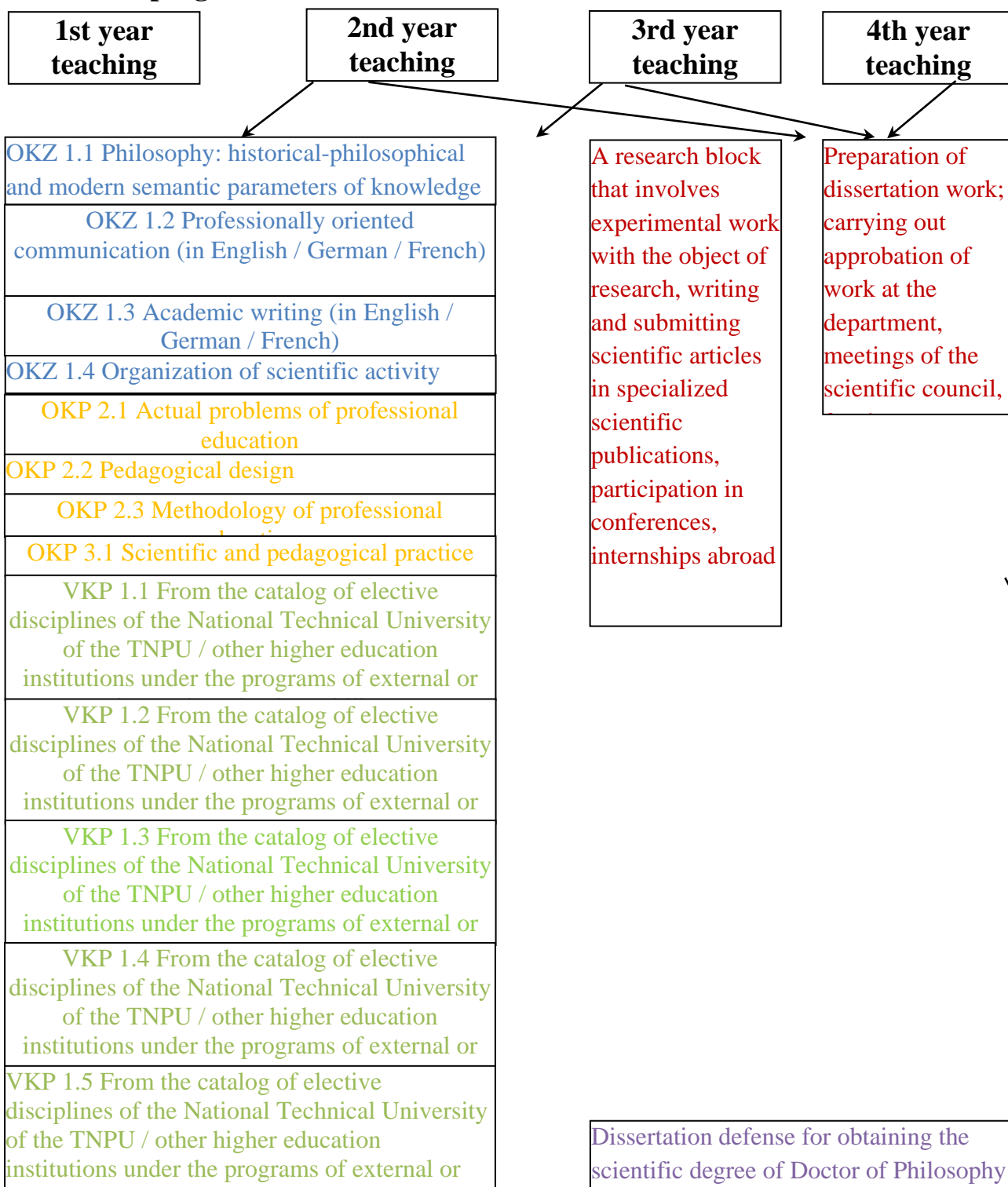
2. List of components of the educational and scientific program and their logical sequence

2.1. List of components of the educational and scientific program

Code	Components of the educational and scientific program (educational disciplines, practices)	Credits ECTS	Final control form
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1	2	3	4
I. Mandatory components			
General training			
OKZ.1.1	Philosophy: historical-philosophical and modern semantic parameters of knowledge	6	exam
OKZ.1.2	Professionally oriented communication (in English / German / French)	5	test, exam
OKZ.1.3	Academic writing (in English / German / French)	3	test
OKZ.1.4	Organization of scientific and pedagogical activities	5	test
Professional training			
OKP.2.1	Actual problems of professional education	6	test
OKP.2.2	Pedagogical design	5	exam
OKP.2.3	Methodology of professional education	6	exam
Practice			
OKP.3.1	Scientific pedagogical practice	9	test
	The total volume of mandatory components	45	
II. Selective OP components			
Professional training			
VKP.1.1	From the catalog of elective disciplines of the National Academy of Sciences of the TNPU / other higher education institutions under the programs of external or internal academic mobility	3	exam
VKP.1.2	From the catalog of elective disciplines of the National Academy of Sciences of the TNPU / other higher education institutions under the programs of external or internal academic mobility	3	test
VKP.1.3	From the catalog of elective disciplines of the National Academy of Sciences of the TNPU / other higher education institutions under the programs of external or internal academic mobility	3	test
VKP.1.4	From the catalog of elective disciplines of the National Academy of Sciences of the TNPU / other higher education institutions under the programs of external or internal academic mobility	3	test
VKP.1.5	From the catalog of elective disciplines of the National Academy of Sciences of the TNPU / other higher education institutions under the programs of external or internal academic mobility	3	test
	The total amount of sample components	15	
	The total scope of the program	60	

2.2. Structural and logical diagram of the components of the educational and scientific program "Professional Education"



3. Form of attestation of applicants of higher education

Forms of attestation of applicants of higher education	Attestation of candidates for the educational level of Doctor of Philosophy is carried out in the form of a public defense of a dissertation. A mandatory condition for admission to the defense is the applicant's successful completion of his individual study plan.
Dissertation requirements for obtaining the degree of Doctor of Philosophy	<p>The dissertation work of the Doctor of Philosophy involves the solution of an actual theoretical and/or applied problem in the field of professional education and testifies to the ability of the researcher to conduct independent scientific research, formulate new complex ideas and substantiate them.</p> <p>The dissertation should not contain academic plagiarism, falsification, fabrication.</p> <p>The dissertation must meet the requirements established by law.</p>
Requirements for public protection	The defense of the dissertation takes place in public at a meeting of the specialized academic council. A mandatory prerequisite for admission to the defense of a dissertation is the approval of research results and main conclusions at scientific conferences and their publication in specialized scientific publications, including those included in scientometric bases, in accordance with the requirements of the Ministry of Education and Science of Ukraine.
Internal assurance of the quality of education	
Internal support system quality of higher education	<p>The system of internal quality assurance functions, which provides for the implementation of the following procedures and measures:</p> <ul style="list-style-type: none"> - determination of principles and procedures for ensuring the quality of higher education; - implementation of monitoring and periodic review of educational programs; - ensuring the availability of the necessary resources for the organization of the educational process, including the independent work of applicants; - ensuring the availability of information systems for effective management of the educational process; - ensuring publicity of information about educational programs, degrees of higher education and qualifications; - ensuring compliance with academic integrity by employees of higher education institutions and students of higher education, including the creation and operation of an effective system for the prevention and detection of

	<p>academic plagiarism.</p> <p>The system of higher education quality assurance of educational activities and the quality of higher education at the request of the higher education institution is assessed by the National Agency for Quality Assurance of Higher Education or by independent higher education assessment and quality assurance institutions accredited by it for compliance with the requirements for the system of quality assurance of higher education approved by the National Agency for Quality Assurance quality of higher education, and international standards and recommendations for ensuring the quality of higher education.</p> <p>It is regulated by the regulation on the internal system of quality assurance at Ternopil National Pedagogical University named after Volodymyr Hnatyuk, approved by the academic council of the university, protocol No. 7 dated February 23, 2016.</p>
<p>Principles and procedures for ensuring the quality of education</p>	<p>Information about the quality of higher education is open and available to the general public. The University forms and improves the requirements for the quality assurance system of higher education, focusing on the main goals of higher education; has a transparent mechanism for the formation, monitoring and revision of educational, educational and scientific programs, which contain specific goals, focused on the results of training and qualifications; clear rules for the organization of training of higher education applicants; necessary resources for carrying out educational activities and supporting graduate students; collects, analyzes and uses the necessary information for effective management of its educational activities.</p> <p>The principles and procedures for ensuring the quality of higher education at TNPU are presented in the following normative documents:</p> <ul style="list-style-type: none"> • Regulations on the organization of the educational process of Ternopil National Pedagogical University named after Volodymyr Hnatyuk: https://tnpu.edu.ua/about/public_inform/upload/2023/Polozhennia_pro_orhanizatsiiu_osvitnoho_protseesu.pdf • Regulations on the organization and conduct of internships for students of higher education: https://tnpu.edu.ua/about/public_inform/upload/2023/Polozhennia_pro_naukovo-pedahohichnu_praktyku_aspirantiv.pdf • Regulations on academic mobility of higher education applicants and scientific and pedagogical workers.

<p>Monitoring and periodic review of educational programs</p>	<ul style="list-style-type: none"> • Regulation on the realization of the right to academic mobility: https://tnpu.edu.ua/about/public_inform/upload/2019/Polozhennia_pro_poriadok_realizatsii_prava_na_akademichnu_mobilnist.pdf • Regulations on the system of internal quality assurance of education: https://tnpu.edu.ua/about/public_inform/upload/2023/Polozhennia_pro_cystemu_vnutrisnoho_zabezpechennia_yakosti_osvity.pdf • Regulations on the Educational and Scientific Center for the Quality of Education: https://tnpu.edu.ua/about/public_inform/upload/2023/Polozhennia_pro_NNTs_Ja_O.pdf <p>It is governed by the Regulations on the internal quality assurance system at the Ternopil National Pedagogical University named after Volodymyr Hnatyuk, approved with changes and additions by the academic council of the university by the academic council of the university, protocol No. 3 dated 09.26.2023. of higher education throughout the entire period of study, analyzes its relevance, compliance of ONP with current regulatory documents, recommendations of the Ministry of Education and Culture of Ukraine, requirements of employers and the student community and, if necessary, develops changes to curricula and other documentation.</p>
<p>Annual assessment of higher education applicants</p>	<p>The annual evaluation of the educational-scientific level of Doctor of Philosophy is carried out twice a year in the form of attestation and ongoing evaluation of scientific activity at graduate departments.</p> <p>A mechanism for evaluating the achievements of applicants for scholarships has been implemented; evaluation of scientific and pedagogical workers on the basis of ratings of scientific research, methodical and organizational work and rating of teachers based on the results of a questionnaire of applicants. It is laid down in the following normative documents of TNPU:</p> <ul style="list-style-type: none"> • Provisions on rating evaluation of higher education applicants at Ternopil National Pedagogical University named after Volodymyr Hnatyuk: https://tnpu.edu.ua/about/public_inform/upload/2017/Polozhennia_pro_reitynhove_otsiniuvannia_zdobuvachiv_vyshchoi_osvity.pdf; • The procedure for forming a rating of persons studying

	<p>at the expense of the state (local) budget: https://tnpu.edu.ua/about/public_inform/upload/2017/Polozhennia_pro_reitynhove_otsiniuvannia_zdobuvachiv_vyshchoi_osvity.pdf;</p> <ul style="list-style-type: none"> • Rules for awarding scholarships at Ternopil National Pedagogical University named after Volodymyr Hnatyuk https://tnpu.edu.ua/about/public_inform/upload/Vchena_rada_2018-19/%D0%9F%D1%80%D0%B0%D0%B2%D0%B8%D0%BB%D0%B0%20%D0%BF%D1%80%D0%B8%D0%B7%D0%BD%D0%B0%D1%87%D0%B5%D0%BD%D0%BD%D1%8F%20%D1%81%D1%82%D0%B8%D0%BF%D0%B5%D0%BD%D0%B4%D1%96%D0%B9.pdf ; • Regulation on the rating assessment of the professional activity of scientific and pedagogical workers: https://tnpu.edu.ua/about/public_inform/upload/2021/Polozhennia_pro_reitynhove_otsiniuvannia_profesiinoi_diialnosti_naukovo_pedahohichnykh_pratsivnykiv.pdf. <p>The results of evaluation and rating are published on the website of TNPU: https://tnpu.edu.ua/about/pidrozdily/NNTs_JaO/rezults_monitoring.php.</p>
<p>Improving the qualifications of scientific and pedagogical, pedagogical and scientific workers</p>	<p>It is regulated by the regulation on advanced training (internship) of pedagogical and research-pedagogical workers https://tnpu.edu.ua/about/public_inform/upload/2024/Polozhennia_pro_pidvyshchennia_kvalifikatsii_pedahohichnykh_i_naukovo-pedahohichnykh_pratsivnykiv.pdf. Work is underway to strengthen the practical component of professional development of NPP in the post-graduate and non-formal education system, in particular, through internships at enterprises, institutions, organizations within Ukraine and abroad, participation in international projects, grant programs, training under certification programs.</p> <p>TNPU has developed and implemented a program for the professional development of teachers: https://tnpu.edu.ua/about/public_inform/upload/2023/Programa_profesijnoho_rozvytku_vykladachiv.pdf</p>
<p>The availability of the necessary resources for the organization of the educational process</p>	<p>Applicants of the "Professional education" vocational education and training program are provided with the necessary resources (material base, teaching-methodical and information support, distance education platform Moodle). Measures are being implemented to improve the organization of independent work of students of various</p>

	<p>forms of education, including through constant monitoring, updating of discipline courses, distance education platform Moodle.</p> <p>TNPU operates:</p> <ul style="list-style-type: none"> • Regulations on the organization of students' independent work: https://tnpu.edu.ua/about/public_inform/upload/2017/Polozhennia_pro_samostiinu_robotu_studentiv__.pdf; • Regulations on distance learning at Ternopil National Pedagogical University named after Volodymyr Hnatyuk: https://tnpu.edu.ua/about/public_inform/upload/2023/Polozhennia_pro_dystantsiine_navchannia.pdf; • Regulations on the electronic educational and methodological complex of the educational discipline https://tnpu.edu.ua/about/public_inform/upload/2019/Polozhennia_pro_elektronnyi_navchalno_metodychnyi_kompleks_navchalnoi_dystsypliny.pdf
<p>Ensuring compliance with academic integrity by employees of higher education institutions and students of higher education, including the creation and operation of an effective system for the prevention and detection of academic plagiarism in the scientific works of employees of higher education institutions and students of higher education</p>	<p>The TNPU operates:</p> <ul style="list-style-type: none"> • Regulations on the prevention and detection of plagiarism and other academic dishonesty in the educational and research work of higher education applicants: https://tnpu.edu.ua/about/public_inform/upload/2018/Polozhennia_pro_zapobihannia_i_vyivlennia%20plahiatu_ta_inshykh_vydiv_akademichnoi_nechesnosti_u_navchalnii_ta_naukovo-doslidnii%20roboti_ZVO.pdf; • Regulations on the prevention and detection of plagiarism and other types of academic dishonesty in the educational and methodological and research work of employees: https://tnpu.edu.ua/naukova-robota/public%20information/Plagiat%20pracivn.pdf. <p>There is a Standing Committee on Ethics and Academic Integrity of Plagiarism in Educational Activities at TNPU: https://tnpu.edu.ua/about/public_inform/upload/2023/Polozhennia_pro_komisiju_z_pytanj_etyky.pdf.</p> <p>All students of higher education and scientific-pedagogical workers, who ensure the implementation of the National Educational System, sign a declaration of compliance with academic integrity. Qualification papers of higher education applicants are checked for plagiarism in the MOODLE system.</p>
<p>Other procedures and measures</p>	<p>TNPU operates:</p> <ul style="list-style-type: none"> • Institutional model of the system of internal education quality assurance:

https://tnpu.edu.ua/about/pidrozdily/monitoring/Instytutysiina_model_systemy_vnutrisnoho_zabezpechennia_iakosti_TNP_U.pdf;

- Program of measures to ensure the quality of education:
https://tnpu.edu.ua/about/public_inform/upload/2024/kalend_arnyj_plan_roboty.pdf.

4. Matrix of correspondence of program competences to the components of the educational and scientific program

	OKZ. 1.1	OKZ. 1.2	OKZ. 1.3	OKP. 2.1	OKP. 2.2	OKP. 2.3	OKP. 3.1	VKP. 1.1	VKP. 1.2	VKP. 1.3	VKP. 1.4
ZK 1	+		+		+	+	+	+	+	+	+
ZK 2			+	+	+	+	+	+		+	+
ZK 3		+	+	+	+	+	+	+	+		+
ZK 4		+	+	+	+	+	+	+	+		
ZK 5	+		+	+		+	+		+	+	
ZK 6				+		+	+	+	+	+	+
ZK 7			+	+		+	+				+
FC 1	+		+		+	+	+				+
FC 2				+	+	+	+			+	+
FC 3		+	+			+	+	+	+		
FC 4			+	+		+	+		+	+	+
FC 5		+	+	+							
FC 6			+	+		+	+		+		
FC 7			+	+							
FC 8			+			+	+				
FC 9	+	+	+	+	+	+	+	+	+		
FC 10			+	+	+		+				+
FC 11							+	+	+		+

5. The matrix of provision of program learning outcomes (PRL) with relevant components of the educational and scientific program

	OKZ. 1.1	OKZ. 1.2	OKZ. 1.3	OKP. 2.1	OKP. 2.2	OKP. 2.3	OKP. 3.1	VKP. 1.1	VKP. 1.2	VKP. 1.3	VKP. 1.4
PRN 1	+					+			+	+	+
PRN 2	+				+			+	+	+	+
PRN 3			+			+					
PRN 4				+	+		+				+
PRN 5			+	+	+	+	+		+	+	+
PRN 6			+	+		+					+
PRN 7	+					+					+
PRN 8		+						+			
PRN 9					+						
PRN 10			+		+		+				
PRN 11			+			+					
PRN 12				+	+		+	+	+	+	+
PRN 13			+	+			+				+
PRN 14		+	+		+	+					
PRN 15		+	+		+			+			
PRN 16				+	+		+				+
PRN 17			+			+	+	+	+	+	+

6. Used and recommended literature

1. Law of Ukraine "On Higher Education". URL: <http://zakon5.rada.gov.ua/laws/show/1556-18>.
2. National framework of qualifications, approved by the resolution of the Cabinet of Ministers of Ukraine dated November 23, 2011 No. 1341 (as amended). URL: <http://zakon0.rada.gov.ua/laws/show/1341-2011-p>.
3. Licensing conditions for carrying out educational activities, approved by Resolution of the Cabinet of Ministers of Ukraine dated December 30, 2015 No. 1187 (as amended by Resolution of the Cabinet of Ministers of Ukraine dated March 24, 2021 No. 365). URL: <https://zakon.rada.gov.ua/laws/show/365-2021-%D0%BF#Text>.
4. Classifier of professions DK 003:2010: National classifier of Ukraine: Order of the State Consumer Standard of Ukraine dated 28.07.2010 No. 327 / State Committee of Ukraine on Technical Regulation and Consumer Policy. URL: https://hrliga.com/docs/327_KP.htm.
5. ECTS user manual. 2015. URL: <http://erasmusplus.org.ua/en/news/1162-ects-user-guide-2015-in-englishandukrainian-languagesare-available-in-e-format.html>.
6. Standards and recommendations for quality assurance in the European Higher Education Area (ESG). K.: LLC "CS", 2015. 32 p. URL: https://www.britishcouncil.org.ua/sites/default/files/standardsandguidelines_for_qa_in_the_ehea_2015.pdf.
7. Methodological recommendations for the development of higher education standards, approved by the order of the Ministry of Education and Science of Ukraine dated 01.06.2017 No. 600 (as amended by the order of the Ministry of Education and Science of Ukraine dated 30.04.2020 No. 584). URL: <https://mon.gov.ua/ua/npa/pro-unesennya-zmin-dometodichnihrekomendacijshodo-rozroblennya-standativ-vishoyi-osviti-1>.
8. Development of educational programs: methodical recommendations; author: V. M. Zakharchenko, V. I. Lugovoi, Yu. M. Rashkevich, Zh. V. Talanova; under the editorship V. G. Kremeny. K.: "Priorities" Scientific Research Center, 2014. 120 p. URL: http://ibhb.chnu.edu.ua/uploads/files/metodrada/Rozroblennya_osv_program.pdf.
9. Provisions on the accreditation of educational programs, according to which higher education applicants are trained (order of the Ministry of Education and Science of Ukraine dated 11.07.2019 No. 977). URL: <https://zakon.rada.gov.ua/laws/show/z0880-19#Text>.
10. Recommendations on the application of criteria for evaluating the quality of an educational program / Approved by the National Agency for Quality Assurance of Higher Education on November 17, 2020 / LLC "Ukrainian Educational Publishing Center "Orion"". Kyiv, 2020. 66 p.
11. Recommendations for experts of the National Agency regarding the accreditation of educational programs of the third level of higher education (appendix to "Methodical recommendations for experts of the National Agency regarding the application

of the Criteria for evaluating the quality of the educational program"). URL: <https://naqa.gov.ua/wp-content/uploads/>

12. To the heads of higher educational institutions: letter of the Ministry of Education and Culture of Ukraine dated April 28, 2017 No. 1/9-239. URL: <https://pstu.edu/wp-content/uploads/2019/01/>

13. National glossary: higher education, 2014. URL: <http://erasmusplus.org.ua/korysna-informatsiia/korysni-materialy/category/3-materialynatsionalnoi-komandy-ekspertiv-shchodo-zaprovadzhenniainstrumentivbolonskohoprotsesu.html?start=80> 15 .

14. Development of educational programs: methodical recommendations. URL: <http://erasmusplus.org.ua/korysna-informatsiia/korysni-materialy/category/3-materialynatsionalnoi-komandy-ekspertiv-shchodo-zaprovadzhenniainstrumentivbolonskohoprotsesu.html?start=80>

Guarantor of the educational program

Olha SOROKA

The program was considered at the meeting
Department of Mechanical Science and Transport,
Protocol No. 1, September 03, 2024

Head of the Department of Mechanical Engineering
and transport

Roman HORBATYUK

The program is approved by the academic council of the
The Faculty of Engineering Education
Protocol No. 1, September 05, 2024

The head of the academic council of the faculty is

Taras SOROKA

Head of the Academic and
Research Center of Education Quality

Olha PEZHYNKA

The educational and scientific program is recommended for implementation by the
academic council of Volodymyr Hnatyuk Ternopil National Pedagogical University
Protocol No. 3, October 22, 2024.

Scientific secretary of the Scientific Council,

Halyna DRAPAK