

PROJECT

Ministry of Education and Science of Ukraine

V. N. Karazin Kharkiv National University

EDUCATIONAL AND SCIENTIFIC PROGRAM

(educational and professional / educational and scientific)

Medicine (Medicine)

(program name)

The third (educational and scientific) level of higher education

(first (bachelor), second (master), third (educational and scientific))

Field of knowledge

22 Health care

(code, branch name)

Specialty

222 Medicine

(code, name of specialty)

Specialization (if available)

_____ (name of specialization, (specializations))

APPROVED

Scientific council of

Kharkiv National University

named after V.N. Karazin dated " ____ " _____ 20____,

protocol No. ____

Entered into force from _____

by order of ____ 20__ No. _____

Vice-rector for scientific and pedagogical work

_____ Oleksandr HOLOVKO

LETTER OF AGREEMENT
educational and scientific program

"Medicine"

The educational program was reviewed and approved by:

1. The Scientific and Methodological Council of Kharkiv National University named after V. N. Karazin, Protocol No. _____ dated "_____" _____ 20____.

Chairman of the Scientific and Methodological Council,

Vice-Rector for Scientific and Pedagogical Work _____ (Oleksandr HOLOVKO)

2. The academic council of the School of Medicine:

Protocol No. __ dated "__" _____ 2024

Head of the Academic Council of the School _____ (Tetiana LIADOVA)

3. Scientific and Methodological Commission of the School of Medicine:

protocol No. __ dated "__" _____ 2024

Chairman of the Scientific and Methodical Commission

school/institute _____ (Diana DOROSH)

4. Departments of Internal Medicine:

protocol No. __ dated "__" _____ 2024

Head of Department,

Doctor of Medicine, professor _____ (Tetiana TYKHONOVA)

5. Departments of Hygiene and Social Medicine:

protocol No. __ dated "__" _____ 2024

Head of Department,

Doctor of Medicine, Associate Professor _____ (Natalia MIKHANOVSKA)

6. Departments of Infectious Diseases and Clinical Immunology:

protocol No. 09 dated "__" _____ 2024

Head of Department,

Doctor of Medicine, Professor _____ (Olga VOLOBUEVA)

7. Departments of the English language:

protocol No. _____ dated "_____" _____ 2024

Head of Department,

Ph.D. in Philology, associate professor _____ (Yuliia SHAMAIEVA)

8. Departments of Pedagogy:

protocol No.____ dated" _____ " _____ 2024

Head of Department,

Doctor of Pedagogy, _____ (Oksana ZHUKOVA)

9. Departments of the Theory of Culture and Philosophy of Science:

protocol No.____ dated " _____ " _____ 2024

Head of Department,

Doctor of Philosophy, Professor _____ (Dmytro PETRENKO)

PREAMBLE

Developed by a working group consisting of:

Full Name	Job title	Scientific degree, scientific title
The head of the working group is the guarantor of the educational and scientific program		
Tetiana M. Tykhonova	Professor, Head of the Department of Internal Medicine	doctor of medical sciences, professor
Members of the working group		
Tetiana I. Liadova	Professor of the Department of Infectious Diseases and Clinical Immunology, Dean of the School of Medicine	doctor of medical sciences, professor
Mariia S. Matvieienko	Associate Professor of the Department of Surgical Diseases, Deputy dean for scientific work, Associate Dean of Research, Candidate of Medicine	PhD (medicine), associate professor
Tamara S. Mishchenko	Professor, Head of the Department of Neurology, Psychiatry, Narcology and Medical Psychology	doctor of medical sciences, professor
Oleksij I. Tsivenko	Professor of the Department of Surgical Diseases	doctor of medical sciences, professor
Natalia S. Shevchenko	Professor, Head of the Department of Pediatrics No. 2	doctor of medical sciences, professor

The following persons are included in the design of the educational and scientific program:

Representatives of higher education recipients: Diana Dorosh, recipient of the Department of Infectious Diseases and Clinical Immunology (2019-2023); Oleksiy Golub, recipient of the Department of Infectious Diseases and Clinical Immunology (2023-2026); Popova Alisa, recipient of the Department of Infectious Diseases and Clinical Immunology (2022-2025).

Employer representatives: scientific secretary of the State University "Institute of Microbiology and Immunology named after I.I. Mechnikov National Academy of Sciences of Ukraine", Phd. in Medicine, senior researcher VORONKINA I.A.; Director of the Institute of Neurology, Psychiatry and Narcology of the National Academy of Sciences of Ukraine, Doctor of Medicine, Professor I.V. LINSKIY

The following requirements are taken into account when developing the Program project:

- 1) Law of Ukraine "On Higher Education" dated July 1, 2014 No. 1556-VII (as amended);
- 2) Resolutions of the Cabinet of Ministers of Ukraine "On Approval of the National Framework of Qualifications" dated November 23, 2011 No. 1341, dated December 30, 2015 No. 1187 (with amendments);

- 3) Resolution of the Cabinet of Ministers of Ukraine "On approval of the Licensing conditions for conducting educational activities of educational institutions" dated 12.30.2015 No. 1187 (with amendments);
- 4) Methodological recommendations of the Ministry of Education and Culture regarding the development of higher education standards dated June 1, 2017 No. 600;
- 5) Resolution of the Cabinet of Ministers of Ukraine "On approval of the Procedure for the training of higher education applicants for the degree of Doctor of Philosophy and Doctor of Science in higher educational institutions (scientific institutions)" dated March 23, 2016 No. 26 (with amendments);
- 6) Standards for PhD Education in Biomedicine and Health Sciences in Europe - ORPHEUS/AMSE/WFME. - Medicinskanaklada, Zagreb. – 2012. Access: http://orpheus.in.ua/sites/default/files/file/tonya/ORPHEUS-AMSE-WFME_ru.pdf

Reviews of external stakeholders (if available):

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1. Profile of the educational and scientific program

1 - General information	
Full name of the higher education institution and structural unit	V.N. Karazin Kharkiv National University School of Medicine
The official name of the program	Medicine
Degree of higher education	Doctor of Philosophy
Awardable qualification	Doctor of Philosophy in specialty 222 "Medicine" (PhD)
Type of diploma and scope of the educational program	Doctor of Philosophy in specialty 222 "Medicine" The scope of the educational and scientific program is 54 ECTS credits/4 years of study
Availability of accreditation	National Agency for Quality Assurance of Higher Education, Ukraine. The validity period of the educational program accreditation certificate is July 1, 2027.
Prerequisites	Availability of a master's degree in the specialty 222 "Medicine" or the educational and qualification level of a specialist in the specialty "Medical Business" Admission conditions are determined by the "Rules of Admission to Kharkiv National University named after V. N. Karazin", which are approved by the Academic Council.
Language of teaching	Ukrainian, English
The term of validity of the educational program	2023-2024
Internet address of the permanent placement of the description of the educational program	http://start.karazin.ua/programs/8/22 http://medicine.karazin.ua/research/aspirantura
2 - The purpose of the educational program	
The purpose of the program	Training of specialists who, on the basis of in-depth theoretical knowledge, practical skills and abilities, are able to solve complex problems in the field of health care, carry out research

	and innovation activities in this field, carry out original scientific research, obtain new facts and implement results of works in practical medicine and scientific and pedagogical activities.
3 – Characteristics of the educational program	
Subject area (field of knowledge, specialty, specialization (if available))	Field of knowledge - 22 "Health care" Specialty - 222 "Medicine"
Orientation of the educational program	Research
The main focus of the educational program and specialization	Scientific research in the field of medicine by specialization: obstetrics and gynecology; anesthesiology and intensive care; internal diseases; genetics; general practice - family medicine; epidemiology; immunology and allergology; infectious diseases; cardiology; nervous diseases; oncology; otorhinolaryngology; ophthalmology; pathological anatomy; psychiatry; radiation medicine; cardiovascular surgery; traumatology and orthopedics; skin and venereal diseases.
Features of the program	An important feature of this program is its interdisciplinary nature, namely the integration of fundamental knowledge with clinical practice. This is ensured by inter-faculty scientific connections within the multidisciplinary university, which is the basis for students to obtain in-depth theoretical knowledge and determines the appropriate modern level of scientific research. The practical component of the program is implemented at the clinical bases of the university, most of which are state clinics under the National Academy of Sciences of Ukraine. The educational and scientific program also provides for the implementation of the main directions of the University Development Strategy for 2019-2025.
4 – Employability of graduates and further education	
Suitability for employment	A specialist can hold primary positions (according to Classification of occupation 003:2010): 2310 University and other teachers of higher education institution 2310.1 Docent 2359.1 Research associate, research associate-consultant 20481 Doctor
Further education	Obtaining (or receiving) a scientific degree of Doctor of Sciences at the scientific level of higher education, participation in post-doctoral programs.

5 – Teaching and assessment

Teaching and learning	<p>A problem-oriented teaching style and research-based teaching will be used in the teaching of academic subjects. The problem-based teaching method encourages the subject of cognitive activity to enrich knowledge. Orientation in teaching to research stimulates students to independently search for analytical and scientific justification of answers to problematic questions.</p> <p>Applicants are involved in active and productive activities, they observe, listen, and understand the logic of scientific research, participate in proving the hypothesis, check the correctness of the problem solution. An important form of work is scientific debates in the audience, where the ability to formulate reasoned answers to debatable scientific questions, reveal contradictions in knowledge and knowledge processes, and defend one's point of view is practiced.</p> <p>The programming method develops the logic of a scientific solution to a research problem through a step-by-step breakdown of the educational material with questions and tasks for each of its parts. The teacher encourages students to do independent theoretical work on determining the algorithm for finding a solution to a problem, active participation in formulating a problem situation, making assumptions, proving a hypothesis and checking the correctness of its solution.</p> <p>Training is organized in study groups according to the schedule in the following system: lecture, seminar/practical classes/group and individual assignments, etc. Systematic implementation of current and intermediate control of knowledge makes it possible to quickly correct the educational process through the feedback system (from the student to the teacher).</p> <p>Historical, systemic, procedural, heuristic, and structural-functional approaches, as well as generalization, modeling, forecasting, interdisciplinarity etc will be applied when teaching the thematic material of the relevant disciplines.</p> <p>In the organization of the educational process, special attention is paid to the individual work of applicants, distance learning, and practical classes aimed at practicing research skills and abilities.</p>
Assessment	<p>The evaluation covers all types of educational work of the applicant: classwork, individual work, and pedagogical practice.</p> <p>The final control score for a certain discipline is the sum of the points scored by the applicant during the semester when performing all the forms of control in the work program of the academic discipline (practice)/syllabi and the points scored during the semester exam (performance of the final assessment work). The maximum number of points that the applicant can score based on the results of studying a certain discipline is 100,</p>

	<p>including 60 points for educational activities during the semester and 40 points based on the results of passing the semester exam or completing the final assessment work.</p> <p>Current control checks knowledge acquired during practical and seminar classes, in the form of testing, presentation of reports, projects, and demonstration of practical skills.</p> <p>Final control of knowledge is carried out in the form of tests (credits), final controls, and exams.</p>
<p>6 – Program competencies</p>	
<p>The development of competencies is the goal of educational programs. Competencies are formed in different academic disciplines and are evaluated at different stages. Program competencies include the following blocks: integral, general, professional, research, communicative, managerial, scientific-pedagogical, ethical, and special professional ones.</p> <p style="text-align: center;">Competence structure:</p>	
<p>Integral competence</p>	<p>The ability to solve complex problems in the field of professional medical activity, conduct original scientific research and carry out research and innovation activities in the field of health care based on deep analysis of existing knowledge and creation of new coherent theoretical or practical knowledge and/or professional practice.</p>
<p>General competences</p>	<p>GC1. The ability to improve professional qualifications. GC2. The ability to search, process and analyze information from various sources. GC3. The ability to identify, pose and solve problems, generate ideas. GC4. The ability to develop and manage projects. GC5. The ability to communicate in a professional environment and with representatives of other professions in a national and international context. GC6. The ability to evaluate and ensure the quality of the work performed.</p>
<p>Professional competences</p>	<p>PC 1. The ability to understand the subject area of the chosen scientific direction and educational activity. PC 2. The ability to identify the need for additional knowledge in the field of medicine and in the direction of scientific research, to generate scientific hypotheses. PC 3. The ability to formulate a research question, develop a scientific research project. PC 4. The ability to choose methods and endpoints of research in accordance with the goals and objectives of a scientific project. PC 5. The proficiency in modern methods of scientific research. PC 6. The ability to interpret the results of scientific research, conduct their correct analysis and generalization. PC 7. The ability to introduce new knowledge (scientific data) into science, education and other sectors of society.</p>

	<p>PC 8. The ability to present the results of scientific research in oral and written language in accordance with national and international standards.</p> <p>PC 9. The ability to organize and implement pedagogical activities.</p> <p>PC 10. The ability to lead and manage a team.</p> <p>PC 11. The compliance with ethics and academic integrity.</p>
<p>Research competences</p>	<p>RC 01 The ability to think critically, in particular, the ability to apply critical thinking to the analysis of the results of one's own scientific research, its scientific novelty, theoretical and practical significance</p> <p>RC 02 The ability to formulate the design of one's own scientific research from new research positions, realize its relevance, purpose and significance for the development of other branches of science</p> <p>RC 03 The ability to participate in interdisciplinary projects and the ability to use the results of scientific research in other fields of science to achieve the goals of one's own scientific research</p> <p>RC 04 The ability to effectively use the modern methodology of scientific knowledge and the latest methods of scientific research</p> <p>RC 05 To initiate, organize and conduct complex theoretical and experimental studies in the field of scientific research and innovation activities, which lead to the acquisition of new knowledge</p> <p>RC 06 To conduct one's own original scientific research that contains scientific novelty and has important theoretical and practical significance</p> <p>RC 07 The ability to competently reflect the results of scientific research in scientific articles and theses published both in specialized domestic publications and in publications that are included in international scientometric bases</p> <p>RC 08 The ability to professionally present the results of one's research at international scientific conferences, seminars for the domestic and global scientific community</p> <p>RC 09 The ability to work with catalogs, specialty databases and scientometric databases</p> <p>RC 10 To possess the skills of applying synergistic methodology in research and teaching activities, knowledge of the fundamental principles of the modern scientific picture of the world</p> <p>RC11 The knowledge of the history of the field of science in which one's own research is carried out, awareness of the place of the results of the scientific research for the development of medical science.</p>

<p>Communicative competences</p>	<p>CC 1 The ability to freely use native and foreign (primarily English) languages in scientific work, scientific-pedagogical and innovative activities, in the practice of everyday communication in real time</p> <p>CC 2 The ability to write one's own scientific works in Ukrainian and foreign languages of different content and scope (scientific article, author's abstract, conference theses, scientific report, request for a scientific grant, agreement on cooperation, research report, dissertation, etc.)</p> <p>CC 3 The ability to write one's own scientific and pedagogical works of different content and volume in Ukrainian and foreign languages (working curriculum, lecture notes, chapters in a study guide, a textbook, etc.)</p> <p>CC 4 The ability to use a foreign language in scientific, innovative and pedagogical activities (oral presentation at a conference, use of a foreign language in business negotiations regarding the commercialization of the results of scientific research, conducting lectures in a foreign language on normative courses and special courses according to the profile of the department, consulting students in a foreign language, conducting one-time presentation and career orientation lectures in a foreign language for different categories of listeners, etc.)</p> <p>CC 5 The ability and skills to use modern information and communication technologies in communication, exchange of information, collection, analysis, processing, interpretation of data and presentation of results</p> <p>CC 6 The ability to work with scientometric databases in order to carry out one's own scientific research and the ability to use Internet technologies to organize and ensure one's own scientific, pedagogical and innovative activities, in the preparation of scientific publications, reports, business and personal documentation</p> <p>CC 7 The ability to practically use distance learning information technologies in one's own pedagogical activities, in the organization and conduct of scientific events (conferences, scientific seminars, master classes, etc.)</p> <p>CC 8 The ability to work effectively in a team</p> <p>CC 9 The ability to work effectively independently</p> <p>CC 10 The ability to work with experts</p>
<p>Management competences</p>	<p>MC 1 The ability to participate in the organization of the work of the department, school, university, to know and understand the principles of the organization of the work of the research sector/laboratory, research topic according to the study profile (distribution of functional duties, technical task of the scientific and</p>

	<p>research work, place of research sector/laboratory in the system of scientific work school and university, etc.)</p> <p>MC 2 To know the principles of financing the scientific and research work and the structure of estimates for its implementation, the ability to prepare a request for financing, reporting documentation</p> <p>MC 3 To know the basics of managing the research sector/laboratory, the basics of managing the research work of the school and university (work plan, regulations, indicators)</p> <p>MC 4 The ability to form a team of researchers to solve a local problem (conducting an experiment, collecting information, preparing proposals)</p>
Scientific and pedagogical competences	<p>SPC 1 The ability to participate in the organization of scientific and pedagogical work of the specialized department, to know and understand the principles of organizing the work of the specialized department (distribution of functional responsibilities, distribution of pedagogical load, place of the department in the system of research work of the school and university)</p> <p>SPC 2 Practical ability to create one's own scientific and pedagogical work according to the profile of the department (working curriculum, lecture notes, educational and methodological complex, sections of the educational and methodological manual, educational manual, textbook, workshop, ability to conduct practical, seminar classes, consultations, manage individual work, etc.)</p> <p>SPC 3 The ability to plan and effectively use time in scientific and pedagogical work</p>
Ethical competences	<p>EC 1 To comply with the norms of scientific ethics regarding the implementation of scientific activities and the conduct of one's own scientific research</p> <p>EC 2 To observe the norms of medical ethics regarding work with patients</p> <p>EC 3 To know and correctly refer to the developments of domestic and foreign scientists, scientific schools and fundamental works in the field of research, formulate the purpose of one's own scientific research as a component of the scientific research process</p>
Special professional competences	<p>SPC 1 To be able to independently collect, analyze and summarize the results of the survey and examination of patients</p> <p>SPC 2 To apply a wide range of additional methods of diagnosing diseases in accordance with the chosen topic of research work</p> <p>SPC 3 To use current protocols for providing medical care</p>

	<p>SPC 4 To independently summarize the obtained diagnostic information with the formulation of a clinical diagnosis</p> <p>SPC 5 To be able to independently provide therapeutic support to patients in a hospital and clinic</p> <p>SPC 6 To be able to independently carry out diagnostic and treatment procedures that are used in scientific research</p> <p>SPC 7 To formulate research hypotheses, determine methods of their verification and carry out their verification</p> <p>SPC 8 To apply a wide range of methods of theoretical and empirical analysis of medical phenomena and processes.</p>
7 – Program learning outcomes	
Program learning outcomes	<p>PLO 1. To demonstrate the continuous development of one's own intellectual and general cultural level, and self-realization</p> <p>PLO 2. To interpret and analyze information using the latest information technologies</p> <p>PLO 3. To identify unsolved problems in the subject area, formulate questions and determine ways to solve them</p> <p>PLO 4. To formulate scientific hypotheses, the purpose and tasks of scientific research</p> <p>PLO 5. To develop the design and plan of scientific research</p> <p>PLO 6. To carry out original scientific research</p> <p>PLO 7. To explain the principles, specificity and sensitivity of research methods, informativeness of selected indicators</p> <p>PLO 8. To possess, improve and implement new research methods in the chosen direction of the scientific project and educational activity</p> <p>PLO 9. To analyze the results of scientific research, use statistical research methods</p> <p>PLO 10. To introduce the results of scientific research into the educational process, medical practice and society</p> <p>PLO 11. To present the results of scientific research in the form of presentations, poster reports, and publications</p> <p>PLO 12. To develop communication in the professional environment and the public sphere</p> <p>PLO 13. To organize the educational process</p> <p>PLO 14. To evaluate the effectiveness of the educational process, recommend ways how to improve it</p> <p>PLO 15. To organize the work of the team (students, colleagues, interdisciplinary team)</p> <p>PLO 16. To adhere to ethical principles when working with patients and laboratory animals</p> <p>PLO 17. To adhere to academic integrity, bear responsibility for the reliability of the obtained scientific results</p>
8 – Resource support for program implementation	
Specific characteristics of personnel support	<p>Project group: doctors of science, professors.</p> <p>Guarantor of the educational program (head of the project group): MD, prof. Tetyana Mykhailovna Tikhonova has more than 15 years</p>

	<p>of experience in research and teaching, and is a recognized professional with experience in research in the field of health care.</p> <p>The vast majority of members of the project group are full-time employees of Kharkiv National University. All scientific and pedagogical workers have a scientific degree and academic title and a confirmed level of scientific and professional activity.</p>
Specific characteristics of material and technical support	<p>Provision of educational facilities, computer workstations, and multimedia equipment meet the need. To apply all practical skills, the school has a "Simulation Center" (work with simulated patients).</p> <p>The entire necessary social and household infrastructure is available, the number of places in the dormitories meets the requirements.</p> <p>Scientific research is conducted at clinical bases on the basis of bilateral agreements with V.N. Karazin Kharkiv National University.</p> <p>The University has local computer networks and wireless Internet access points. The use of the Internet is unlimited.</p>
Specific characteristics of information and educational and methodological support	<p>Adequate educational and methodological support: work programs of educational disciplines, methodological developments for seminars, practical classes, laboratory workshops, methodological instructions for independent work of students, individual tasks of a practical orientation; methodical materials for writing disease histories, undertaking internships, tasks for knowledge control (examination papers, test tasks, module and complex control works); modern information sources and computer equipment; own web page; internet connection; a library with modern educational literature, scientific, reference and professional periodicals.</p> <p>The official websites of the university https://www.univer.kharkov.ua/ and the medical school http://medicine.karazin.ua/ contain information about educational programs, educational, scientific and educational activities, structural units, admission rules, contacts.</p> <p>For readers, there are 5 subscriptions, 15 specialized halls (803 seats, area - 1,890.5 square meters). All reading rooms and educational subscriptions work in the open access mode, which allows readers to be involved in independent work with the fund.</p> <p>The Central Science Library provides access to many well-known electronic databases: EBSCO Publishing, Royal Society of Chemistry. The electronic library of the Central Bank of Ukraine provides access to the most famous publishers of electronic journals, such as IOP science Journals, Oxford Journals, Passport GMID of the Euromonitor company, HINARI (Health Inter Network Access to Research Initiative) and others, test accesses are provided every month.</p>
9 – Academic mobility	
National credit mobility	<p>On the basis of bilateral agreements between V. N. Karazin KhNU and universities of Ukraine.</p>

International credit mobility	Conducting international academic mobility within the Erasmus+ and Erasmus Mundus Medea programs
Education of foreign students of higher education	Study conditions for foreign students in accordance with the requirements of the law

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

2.1. Educational component of the Educational and Scientific program (ESP) of Doctor of Philosophy

Code n/a	Components of the educational program (study subjects, course projects (works), practices, qualification work)	Number of credits	Final control form
1	2	3	4
Mandatory components (MC)			
MC 1.	Foreign language for postgraduate students	8	Exam
MC 2.	Philosophical principles and methodology of scientific research	5	Credit
MC 3.	Methodology of scientific research	6	Credit
MC 4.	Medical and biological statistics	3	Credit
MC 5.	Modern directions of scientific research in medicine, compliance with the basic principles of bioethics and academic integrity in scientific activity	5	Exam
MC 6.	Modern principles of organization of the health care system	3	Credit
MC 7.	Pedagogy of higher education	5	Credit
MC 8.	Pedagogical practice	5	Credit
The total volume of compulsory disciplines		40	
Selective components of ESP			
SC 1.	Pathological anatomy, modern state of development	14	Exam
SC 2.	Internal medicine, modern state of development	14	Exam
SC 3.	Modern aspects of surgical diseases	14	Exam
SC 4.	Psychiatry, modern state of development	14	Exam
SC 5.	Modern aspects of infectious diseases	14	Exam
SC 6.	Modern aspects of clinical immunology	14	Exam
SC 7.	Cardiology, modern state of development	14	Exam

SC 8.	Anesthesiology and intensive care, modern state of development	14	Exam
SC 9.	Nervous diseases, modern state of development	14	Exam
SC 10.	Oncology, modern state of development	14	Exam
SC 11.	Radiology, modern state of development	14	Exam
SC 12.	Traumatology and orthopedics, current state of development	14	Exam
SC 13.	Modern aspects of clinical allergology	14	Exam
SC 14.	Modern aspects of obstetrics and gynecology	14	Exam
SC 15.	Modern aspects of otorhinolaryngology	14	Exam
SC 16.	Formation of chronic somatic pathology in the age aspect	14	Exam
SC 17.	Modern scientific trends in ophthalmology	14	Exam
SC 18.	Physical and Rehabilitation Medicine	14	Exam
The total volume of selective disciplines		14	
GENERAL SCOPE OF THE EDUCATIONAL PROGRAM		54	

2.2. The scientific component of the National Academy of Sciences is a Doctor of Philosophy

The system of research work of applicants is an integral part of the training of highly qualified specialists who are able to independently conduct scientific research and creatively solve specific professional, scientific and clinical tasks. The research work of the applicant is carried out under the control of the scientific supervisor, it can be conventionally divided into preparatory and main stages and includes the following types of activities.

At the preparatory stage, the applicant:

1. chooses a topic of scientific research and justifies the relevance of the chosen research topic. Reviews catalogs of defended dissertations and familiarizes him/herself with dissertation works already completed at the department; processes the latest research results in selected and related fields of science; familiarizes with analytical reviews and articles in specialized publications, conducts consultations with specialists in order to identify little-studied scientific problems and issues that are relevant; studies and analyzes the main approaches and positions of scientific schools and directions in solving the researched problem; clarifies terminology in the chosen field of knowledge; performs a patent search of literary sources on the selected topic. Formulates a scientific problem.
2. takes measures to plan the dissertation work, formulates the applicant's individual educational and scientific plan.
3. clarifies the setting of the goals and objectives of the dissertation work, the object and subject of scientific research.
4. selects and justifies the methods (methodology) of research.
5. makes a description of the process of scientific research (research design) in the dissertation work by forming a plan-prospectus, which is an abstract statement of issues and methods of solving them, according to which all collected factual material will be systematized in the future.

At the main stage of the implementation of scientific and research work, the applicant:

1. conducts scientific and research work in accordance with the profile of the National Academy of Sciences for training doctors of philosophy using knowledge of fundamental and applied disciplines taught in the program. Scientific work is carried out on the implementation of the theoretical and practical part of the research.
2. analyzes and summarizes the results of scientific research on the basis of modern approaches, interdisciplinary knowledge, the application of scientific methodological principles and methodical methods of research, the use of thematic information resources in the research, leading domestic and foreign experience on the chosen topic.
3. appraises the results of scientific research by participating in scientific conferences (with the publication of report abstracts): in international and foreign conferences; in all-Ukrainian conferences; in regional and interuniversity conferences, in scientific seminars of the department and faculty; participates in contests for applications for funding of scientific works and in contests of scientific works.
4. is involved in the implementation of state budget and/or farm contract topics within the framework of state, intercollegiate or university programs, as well as individual plans of the department.
5. is engaged in conducting research and preparing a dissertation, formulating conclusions and practical recommendations in accordance with the results of the dissertation.
6. evaluates the obtained results, which are discussed at the meeting of the department, and then at the scientific seminar of the faculty.
7. passes a preliminary examination of the dissertation at the department with the involvement of at least 3 experts on the topic of the dissertation
8. prepares the text of the dissertation
9. provides the developments obtained in the dissertation research for practical use and implementation of the results in the activities of medical and preventive institutions, research and academic institutions, for which certificates of implementation are received.
10. defends the dissertation in a specialized academic council.

Research work is considered completed if:

- the dissertation research contains scientific novelty, is relevant, has practical significance, the text of which has passed the examination through the plagiarism check program; the dissertation is recommended by the department for defense;
- available approval of the results of the dissertation research, where at least 3 publications of theses fully meets the requirements of the Procedure for awarding the degree of Doctor of Philosophy and canceling the decision of the one-time specialized academic council of the institution of higher education, scientific institution on awarding the degree of Doctor of Philosophy, approved by the resolution of the Cabinet of Ministers of Ukraine dated 12.01.2022 No. 44;
- the dissertation has the volume of the main text of at least 4.5 author's pages and fully meets the requirements of clauses 5-8 of the Procedure for awarding the degree of Doctor of Philosophy and annulment of the decision of the one-time specialized academic council of the institution of higher education, scientific institution on awarding the degree of Doctor of Philosophy, approved by resolution Cabinet of Ministers of Ukraine dated 12.01.2022 No. 44 and Requirements for the preparation of a dissertation, approved by order of the Ministry of Education and Culture of Ukraine dated 12.01.2017 No. 40.

4. Form of attestation of applicants of higher education

In the process of training doctors of philosophy, two forms of attestation are used: intermediate and final.

The purpose of the intermediate attestation is to control the implementation of the individual plan of the applicant for all components provided for in the curriculum. Intermediate attestation includes:

- attestation of the theoretical part, which involves taking tests (credits) and exams in accordance with the curriculum in order to establish the actual compliance of the level of theoretical training with the requirements of the general and professional competencies of the applicants;
- the research part, in accordance with the initial plan, provides for the current attestation of applicants once a year. The purpose of the intermediate attestation is to control the implementation of the individual plan of scientific research and compliance with the schedule of preparation of the results of scientific research work.

The final attestation of the applicant of the third (educational and scientific) level of higher education in the specialty 222 "Medicine" is carried out in the form of a public defense of the dissertation in accordance with the Procedure for awarding the degree of Doctor of Philosophy and annulment of the decision of the one-time specialized academic council of the institution of higher education, scientific institution on awarding the degree of Doctor of Philosophy, approved by the resolution of the Cabinet of Ministers of Ukraine dated 12.01.2022 No. 44 and ends with the provision of a document of the established model on awarding him/her the degree of Doctor of Philosophy in the specialty 222 Medicine, field of knowledge 22 Health care.

The violation of the deadlines for the implementation of an individual plan of educational and scientific work without valid reasons provided for by law may be the basis for the adoption by the Academic Council of V.N. Karazin KhNU of the awardee's expulsion.

SPC 3									+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
SPC 4					+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPC 5					+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPC 6					+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPC 7		+		+	+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPC 8		+		+	+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Notes:

1. MC n is a certain mandatory component of the educational program according to section 2.1;
2. IC - integral competence according to section 1.6 of the profile of the educational program;
3. GC n – general competence according to section 1.6 of the profile of the educational program;
4. PC n – professional competence according to section 1.6 of the profile of the educational program;
5. RC n – research competence according to section 1.6 of the profile of the educational program;
6. CC n – communicative competence according to section 1.6 of the profile of the educational program;
7. MC n – managerial competence according to section 1.6 of the profile of the educational program;
8. SPC n – scientific and pedagogical competence according to section 1.6 of the profile of the educational program;
9. EC n – ethical competence according to section 1.6 of the profile of the educational program;
10. SPC n – special professional competence according to section 1.6 of the profile of the educational program;
11. + is a mark that means that a certain program competence is provided by a certain educational component of the current line.

**6. Matrix of provision of program learning outcomes (PRN)
relevant components of the educational program**

Software marks competencies and educational components	MC 1	MC 2	MC 3	MC 4	MC 5	MC 6	MC 7	MC 8	SC 1	SC 2	SC 3	SC 4	SC 5	SC 6	SC 7	SC 8	SC 9	SC 10	SC 11	SC 12	SC 13	SC 14	SC 15	SC 16	SC 17	SC 18
PLO 1	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 2	+		+	+	+		+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 3	+	+			+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 4	+	+			+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 5		+	+		+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 6			+		+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 7		+	+	+					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 8	+		+		+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 9		+	+	+	+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 10			+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 11	+		+	+	+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 12	+		+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 13	+		+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 14		+					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 15		+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 16		+			+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 17		+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Note:

1. PLO k – a specific learning result according to section 1.7 of the profile of the educational program;
2. + is a sign that means that a certain program result is provided by the educational component of the current line.

