

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL TECHNICAL UNIVERSITY OF UKRAINE
“IGOR SIKORSKY KYIV POLYTECHNIC INSTITUTE”**

APPROVED

Academic Council of Igor Sikorsky
Kyiv Polytechnic Institute

(meeting protocol № 8 dated 12.12.2022)

Chairman of the Academic Council
Mykhaylo ILCHENKO

ECONOMICS

EDUCATIONAL AND SCIENTIFIC PROGRAM

third (educational and scientific) level of higher education

in specialty	051 Economics
Areas of knowledge	05 Social and behavioural sciences
Qualification	Doctor of Philosophy in Economics

Entered into force by Order of the Rector
of Igor Sikorsky Kyiv Polytechnic Institute
dated 17.05.2023 № HOH/165/2023

DEVELOPED by the project team:

Project team leader:

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TULCHINSKA S.O., Doctor of Economics, Professor

Head of the Department of Economic Cybernetics

BOYARINOVA K.O. Doctor of Economics, Professor

AGREED:

Scientific and Methodical Council of Speciality 051 "Economics" Igor Sikorsky Kyiv Polytechnic Institute

Head of the Scientific and Methodical Council of Speciality Serhii Voitko

(meeting protocol № 3 dated 22.11.2022)

Methodological Council of Igor Sikorsky Kyiv Polytechnic Institute

Vice-rector Anatolii Melnychenko

(meeting protocol № 3 dated 01.12.2022)

INCLUDED:

1. Approved higher education standard in the field of 051 Economics (Order of the Ministry of Education and Science No. 424 dated May 10, 2022).
2. Regulations on the development, approval, monitoring, and review of educational programs at Igor Sikorsky Kyiv Polytechnic Institute (Order of the Ministry of Education and Science No. 224/2022 dated April 17, 2022).
3. Order No. 40 of the Ministry of Education and Science of Ukraine dated January 12, 2017, No. 40 "On Approval of the Requirements for the Design of a Dissertation"
<https://zakon.rada.gov.ua/laws/show/z0155-17#Text>
<https://zakon.rada.gov.ua/laws/show/567-2013-n#n52>
4. Comments and suggestions from stakeholders following the discussion:
 - academic staff;
 - higher education seekers;
 - representatives of student self-government;
 - employer representatives.

The following people joined the work on the Educational Program:

1. Saharuk Tetyana Valeriyivna, General Director of the NGO "Global Compact Network in Ukraine", Ph.D.
2. Kolomiets Oleksandra Oleksandrivna, Head of the Department of Social Strategy of the Center for Economic and Social Research, National Institute for Strategic Studies, Ph.D.
3. Podolets Roman Zdyslavovych, Head of the Sector for Forecasting the Development of the Fuel and Energy Complex of the Institute of Economics and Forecasting of the National Academy of Sciences of Ukraine, Candidate of Economic Sciences, Senior Researcher.
4. Klymchuk Maryna Mykolayivna, Professor of the Department of Organization and Management of Construction, Kyiv National University of Construction and Architecture, Doctor of Economics, Professor.
5. Svicharov Petro Oleksandrovych, director of Krona-Kalynivka LLC.
6. Yuriy Anatoliyovych Pivovarov, Executive Director of the Ukrainian Association of the Club of Rome.
7. Krutsyak Mykhailo Orestovych, post-graduate student of the 4th year of study at ONP "Doctor of Philosophy", KPI named after Igor Sikorsky.
8. Zamriy Artem Myzailovych, post-graduate student of the 3rd year of study at ONP "Doctor of Philosophy", KPI named after Igor Sikorsky.

Relevant feedback is attached.

The educational and scientific program "Economics" has been discussed and modified after receiving all the comments and suggestions from employers and students of higher education at Igor Sikorsky Kyiv Polytechnic Institute and approved at the meeting of the Department of International Economics No. 2 on October 19, 2022.

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1. EDUCATIONAL PROGRAM PROFILE IN THE SPECIALTY 051 ECONOMICS

1 – General information	
Full name of the higher education institution and institute / faculty	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute” Faculty of Management and Marketing
Degree of higher education and title of qualification in the original language	Degree HE – Doctor of Philosophy Educational qualification – Doctor of Philosophy in Economics
The official name of the EP	Economics
Type of diploma and scope of EP	Ph.D. Diploma, <u>educational component</u> - 50 ECTS credits, training period 4 years. <u>The scientific component</u> involves conducting personal research and design of results in a dissertation form.
Accreditation availability	The program is not accredited. It is planned to issue a program for accreditation in 2021 (already done).
Program cycle / level	National Qualifications Framework of Ukraine – the 8 level QF-EHEA – the third cycle EQF-LLL – the 8 level
Precondition	Master's degree presence
Language teaching	English
Validity of the EP	Before accreditation
Internet address of the of educational program permanent placement	osvita.kpi.ua http://ied.kpi.ua/uk/archives/2064
2 – The purpose of the educational program	
Training of highly qualified competitive specialists in economics, able to solve complex problems in the field of professional research and innovation in the field of economics, which involves a deep rethinking of existing and the creation of new holistic knowledge.	
3 – Characteristics of the educational program	
Subject area	<p>Object of activity (research): theory, methodology of scientific research, phenomena, and problems of modern economic processes, as well as tools for the formation of international, national, regional, sectoral economic policy, and enterprise economics.</p> <p>Educational objectives: acquisition of the ability to generate new ideas, solve complex problems in the field of economics, involving a deep reassessment of existing and creation of new comprehensive knowledge and/or professional practice.</p> <p>Theoretical content of the subject area: general laws, regularities, and trends of socio-economic development, motivation, and behavior of market entities; theories of micro, macro, and international economics; quantitative methods in economic research; institutional, interdisciplinary, and historical analysis of socio-economic phenomena and processes; development and substantiation of economic decisions; regulation and management of multi-level economic systems.</p> <p>Methods, techniques, and technologies: methods of micro and macroeconomic research, computer modeling of economic systems, statistical analysis, forecasting, project management, digital technologies, methods, and technologies of scientific and pedagogical activities.</p> <p>Tools and equipment: information and communication systems, specialized software, instruments, and equipment necessary for conducting scientific research in the field of economics.</p>

Orientation of the EP	Educational and scientific
The main focus of the EP	<p>It consists in the possibility of forming integrated competencies of the applicant, combining deep theoretical training with the development of practical skills of research and teaching, based on best practices, which are aimed at the comprehensive development of the specialist and contribute to his professional growth.</p> <p>The program is based on the latest scientific principles, conceptual foundations of economic research and solving current problems in the field of economics, which create the basis for the formation of innovative solutions in theoretical and applied areas.</p> <p>Keywords: world economy, analysis of economic systems, mathematical methods in economics, change management, business transformation.</p>
Features of EP	<p>The peculiarities of EEP are the training of highly qualified specialists in economics on the basis of comprehensive professional, intellectual, social and creative development of the individual integrated into the world research space, who have modern economic thinking, theoretical knowledge and applied skills capable of solving complex research and innovation. tasks and problems of functioning of economic systems of different levels, characterized by uncertainty of conditions and requirements. The purpose and purpose of the EEP in all respects correspond to the specified strategy of Igor Sikorsky Kyiv Polytechnic Institute, namely:...</p> <p>"providing training of highly qualified specialists capable of creating modern scientific knowledge and innovative technologies for the benefit of mankind and ensuring a worthy place of Ukraine in the world community" and promoting "shaping the society of the future on the basis of sustainable development through internationalization and integration of education, the latest research and innovative developments.</p> <p>The program focuses on conducting research work according to the research topics of supervisors.</p> <p>The implementation of the program involves the involvement of classroom practitioners, industry experts, representatives of employers.</p>
4 – The suitability of graduates for employment and further education	
Employability	<p>Employment in positions of scientific and academic staff in research institutions and higher education institutions, as well as other positions requiring a Ph.D. in Economics, including positions as scientific consultants, experts, and analysts in research institutions and departments of enterprises, institutions, and organizations.</p> <p>Graduates can work at enterprises of any organizational and legal form in positions (according to the classifier of professions of Ukraine DK 003: 2010):</p> <p>2310 Teachers of universities and higher educational institutions</p> <p>2414.1 Researchers (financial and economic security of enterprises, institutions and organizations)</p> <p>2441.1 Researchers (economics)</p> <p>According to the International Standard Classification of Occupations 2008, graduates can work in positions that correspond to groups</p> <p>12 Administrative and commercial managers</p> <p>121 Business services and administration managers</p> <p>33 Business and administration associate professionals</p> <p>332 Sales and purchasing agents and brokers</p> <p>333 Business services agents</p>
Further education	Continuing education in doctoral studies and / or participation in postdoctoral programs.

5 – Teaching and evaluation	
Teaching and learning	General learning style - task-oriented. Teaching is carried out in the form of: lectures, practical classes, computer workshops, independent work with the possibility of consulting with a teacher, individual tasks, practice, application of information and communication technologies (e-learning, online lectures, distance courses) for individual educational components. All participants in the educational process are provided with timely and understandable information on the goals, content and program learning outcomes, the procedure and evaluation criteria. One of the main tasks of the University is to carry out scientific activities by conducting research, ensuring the creative activity of participants in the educational process, training highly qualified scientific staff and using the results in the educational process, providing an organic combination in the educational process of educational, scientific and innovative activities. University development strategies for the period 2020-2025. Postgraduate students are free to participate in educational, scientific and scientific-organizational activities carried out both within Ukraine and abroad. Postgraduate students are involved in research within the scientific topics of the department or faculty. The results of scientific research are published in professional publications, collections of scientific papers and conference proceedings both in Ukraine and abroad.
Assessment	Current and semester control are assessed according to the defined criteria of the Rating system. Also, the assessment of students' knowledge is carried out in accordance with the Regulations of the assessment learning system of outcomes at Igor Sikorsky Kyiv Polytechnic Institute for all types of classroom and extracurricular work (current, calendar, semester control, oral and written exams, tests).
6 – Program competencies	
Integral competence	The ability to generate new ideas, solve complex problems in the field of economics, and conduct independent research with scientific novelty and theoretical and practical significance, which involves a deep rethinking of existing knowledge and creating new comprehensive knowledge and/or professional practice.
General competences (GC)	
GC 1	Ability to abstract thinking, analysis and synthesis.
GC 2	Ability to search, process and analyze information from various sources.
GC 3	Ability to work in an international context.
GC 4	Ability to generate new ideas (creativity).
GC 5	Ability to solve complex economic problems based on a systemic scientific worldview and general cultural awareness, adhering to the principles of professional ethics and academic integrity.
GC 6	Ability to obtain information, ideas and points of view from highly specialized sources within their own field of study; understand articles and scientific reports on contemporary issues in which the authors have a certain position or point of view.
Professional competences (PC)	
PC1	Ability to perform original research, to achieve scientific results that create new knowledge in economics and related interdisciplinary areas and can be published in leading scientific journals in economics and related fields.
PC2	Ability to orally and in writing present and discuss the results of scientific research and/or innovative developments in Ukrainian and English.
PC3	Ability to utilize modern methodologies, methods, and tools of empirical and theoretical research in the field of economics, methods of computer modeling, contemporary digital technologies, databases, and other electronic resources, specialized software in scientific and pedagogical activities.
PC4	Ability to engage in scientific and pedagogical activities in higher education institutions.

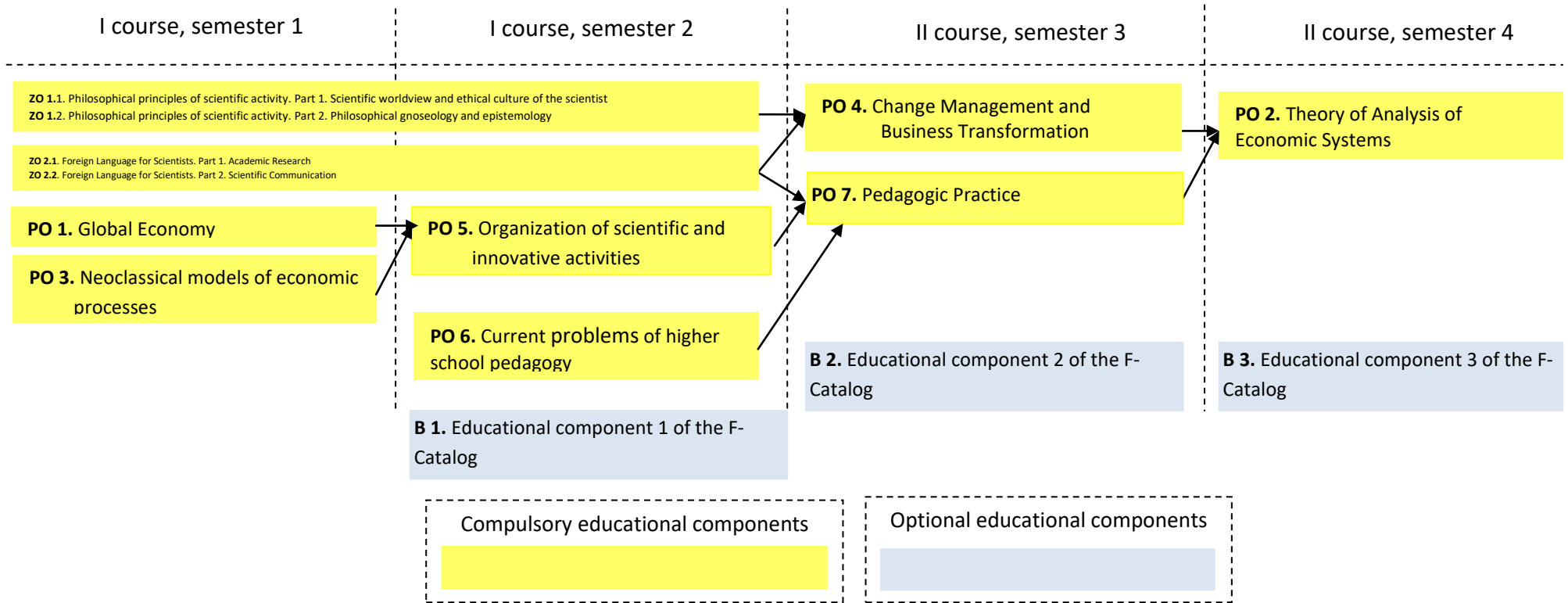
PC 5	Ability to identify, deeply analyze, and solve research problems in the field of economics considering economic risks and potential socio-economic consequences, assess and ensure the quality of conducted research, including issues of European and Euro-Atlantic integration.
PC 6	Ability to justify and prepare economic decisions based on an understanding of the patterns of development of socio-economic systems and processes using mathematical methods and models.
PC 7	Ability to initiate, develop, and implement comprehensive scientific projects in economics and related interdisciplinary approaches, demonstrate leadership and responsibility during their implementation, commercialize the results of scientific research, and ensure the protection of intellectual property rights.
PC 8	Ability to assess the depth of the impact of global transformations on world integration processes.
PC 9	Ability to comprehensively, thoroughly, and thoroughly analyze socio-economic systems based on their characteristics.
PC 10	Ability to construct models of social processes.
PC 11	Ability to establish values, vision, mission, goals, and criteria by which an organization defines its further development directions, develop, justify, and implement management decisions for the effective development of economic entities
7 – Program study results	
TR 1	To have advanced conceptual and methodological knowledge in economics, management of socio-economic systems, and at the boundaries of subject areas, as well as research skills sufficient for conducting fundamental and applied research at the level of global achievements in the relevant field.
TR 2	To deeply understand the basic (fundamental) principles and methods of economic sciences, as well as the methodology of scientific research, to generate new knowledge in the field of economics in order to achieve economic and social development in the context of globalization.
TR 3	To develop and investigate fundamental and applied models of socio-economic processes and systems, effectively utilizing them to acquire new knowledge and/or create innovative products in economics and related interdisciplinary fields.
TR 4	To apply modern tools and technologies for information search, processing, and analysis, including statistical methods for analyzing large datasets and/or complex structures, specialized software, and information systems.
TR 5	To propose new solutions, develop scientific projects that allow for rethinking the existing and creating new comprehensive knowledge and/or professional practice, and to address significant and fundamental as well as applied problems of economic science considering social, economic, environmental, and legal aspects; to commercialize the results of scientific research and ensure the protection of intellectual property rights.
TR 6	To effectively present and discuss research results, theoretical and practical issues of economics in both national and foreign languages with professionals and non-professionals, proficiently reflect research results in scientific publications in leading scientific journals.
TR 7	To apply innovative scientific and pedagogical technologies, formulate the content and goals of education, methods of their achievement, forms of control, and to be responsible for the effectiveness of the educational process while adhering to academic ethics and integrity.
TR 8	To plan and conduct empirical and/or theoretical research in the field of economics and related interdisciplinary directions, critically analyze the results of own research and the results of other researchers in the context of the entire complex of contemporary knowledge on the researched issue.
TR 9	To formulate and test hypotheses; to use proper evidence for justifying conclusions, including results of theoretical analysis, empirical research, and mathematical and/or computer modeling, as well as available literature data.
TR 10	To define regulatory priorities for shaping modern international economic policy.
TR 11	To analytically ensure the functions of managing socio-economic systems.
TR 12	To use knowledge of modeling to solve socio-economic tasks.
TR 13	To effectively manage change, innovation, resources, risks, projects, quality, applying modern models, approaches, technologies, and international experience in the context of transformation of management and general organizational structures.

8 – Resource support for program implementation	
Staff assistance	The main faculty of the educational program consists of the professorial staff of the International Economics Department, which meets the personnel requirements defined by the Licensing Conditions approved by the Cabinet of Ministers of Ukraine on December 30, 2015, No. 1187, as amended by the Resolution of the Cabinet of Ministers of Ukraine No. 365 dated March 24, 2021.
Material and technical support	In accordance with the technological requirements for the material and technical support of educational activities at the relevant level of higher education, approved by the Resolution of the Cabinet of Ministers of Ukraine dated December 30, 2015, No. 1187, as amended by the Resolution of the Cabinet of Ministers of Ukraine No. 365 dated March 24, 2021, the educational process takes place, including in classrooms equipped with multimedia facilities, computer workstations (computer equipment with a lifespan of no more than eight years), and appropriate software. Students have access to the material and technical base of Igor Sikorsky Kyiv Polytechnic Institute, including academic buildings, a library, a physical education and sports center, a medical center, recreation facilities, a cultural and arts center, and dormitories. The student social service is in operation.
Information and methodological support	According to the technological requirements for educational and methodological and informational support of educational activities at the relevant level of higher education, approved by the Resolution of the Cabinet of Ministers of Ukraine dated December 30, 2015, No. 1187, as amended by the Resolution of the Cabinet of Ministers of Ukraine No. 365 dated March 24, 2021, information support is provided through the department's website, department and dean's office Telegram channels, department and management and marketing faculty Facebook pages. The educational program, curriculum, catalogs of elective disciplines, and syllabi are posted on the department's website. Educational and methodological support is available at the Scientific and Technical Library of Igor Sikorsky Kyiv Polytechnic Institute (Automated Library System Aleph (Web-OPAC user license), access to scientometric databases), Electronic Archive of Scientific and Educational Materials "ELAKPI," "Sikorsky" distance learning platform, and "Electronic Campus" system. Students have free access to the Internet.
9 – Academic mobility	
National credit mobility	The opportunity to conclude agreements on academic mobility and implement double degree programs with EU universities. The possibility of exchange between partner universities, coordination of the content of disciplines with related disciplines of profile educational institutions.
International credit mobility	Students (postgraduates) have the opportunity to use international credit mobility programs provided by the University, the offers of which are published by the academic mobility department of Igor Sikorsky Kyiv Polytechnic Institute, including the Erasmus+ KA1, Eurasia programs. There is an opportunity to take advantage of educational offers from foreign HEIs within the framework of cooperation agreements. The expansion of academic exchange opportunities is envisaged when concluding agreements with other educational institutions. When determining the knowledge and skills that students/postgraduates should acquire during their studies, European higher education standards for related specialties are taken into account.
Training of foreign applicants	The instruction is provided in English (provided if language proficiency is at least B2 level).

2. COMPONENTS LIST OF THE EDUCATIONAL PROGRAM

Code	Components of the educational program (disciplines, course projects / works, practice, qualification work)	Number of ECTS credits	Form of final control
1. Compulsory educational components			
1.1. Subjects for Owning General Scientific (Philosophical) Competencies			
ZO 1.1	Philosophical principles of scientific activity. Part 1. Scientific worldview and ethical culture of the scientist	2	Test
ZO 1.2	Philosophical principles of scientific activity. Part 2. Philosophical gnoseology and epistemology	4	Exam
1.2. Subjects for Gaining Language Competencies			
ZO 2.1	Foreign Language for Scientists. Part 1. Academic Research	3	Test
ZO 2.2	Foreign Language for Scientists. Part 2. Scientific Communication	3	Exam
1.3. Subjects for Gaining Deep Knowledge on Speciality			
PO 1	Global Economy	4	Exam
PO 2	Theory of Analysis of Economic Systems	4	Exam
PO 3	Neoclassical models of economic processes	4	Exam
PO 4	Change Management and Business Transformation	4	Exam
1.4. Subjects for Gaining Universal Competencies of Researcher			
PO 5	Organization of scientific and innovative activities	4	Test
PO 6	Current problems of higher school pedagogy	2	Test
PO 7	Pedagogic Practice	2	Test
2. Optional educational components			
B 1	Educational component 1 of the F-Catalog	4	Test
B 2	Educational component 2 of the F-Catalog	5	Test
B 3	Educational component 3 of the F-Catalog	5	Test
TOTAL IN COMPULSORY educational components:		36	
TOTAL IN SELECTIVE educational components:		14	
TOTAL OF THE EDUCATIONAL PROGRAM		50	

3. STRUCTURAL AND LOGICAL SCHEME OF THE EDUCATIONAL COMPONENT OF THE EDUCATIONAL AND SCIENTIFIC PROGRAM



4. SCIENTIFIC COMPOSITION

Year training	The content of the graduate student's scientific work	Form of control
1 year	<p>Choice and substantiation of the topic of own research, determination of the content, terms of performance and volume of scientific works; selection and substantiation of the methodology of own research, review and analysis of existing views and approaches that have developed in modern science in the chosen field.</p> <p>Preparation and publication of at least 1 article (usually a review) in scientific professional publications (domestic or foreign) on the research topic; participation in scientific and practical conferences (seminars) with the publication of abstracts.</p>	Approval of the individual plan of the graduate student's work at the academic council of the institute / faculty, reporting on the progress of the individual graduate student's plan twice a year
2 year	<p>Conducting own research under the guidance of the supervisor, which involves solving research problems through the use of a set of theoretical and empirical methods.</p> <p>Preparation and publication of at least 1 article in scientific professional publications (domestic or foreign) on the research topic; participation in scientific and practical conferences (seminars) with the publication of abstracts.</p>	Reporting on the progress of the individual graduate student's plan twice a year.
3 year	<p>Analysis and generalization of the obtained results of own scientific research; substantiation of scientific novelty of the obtained results, their theoretical and / or practical significance.</p> <p>Preparation and publication of at least the 1st article in scientific professional publications on the research topic; participation in scientific and practical conferences (seminars) with the publication of abstracts.</p>	Reporting on the progress of the individual graduate student's plan twice a year.
4 year	<p>Registration of scientific achievements of the post-graduate student in the form of the dissertation, summing up concerning completeness of coverage of results of the dissertation in scientific articles according to the current requirements. Implementation of the obtained results and receipt of supporting documents. Submission of documents for preliminary examination of the dissertation. Preparation of a scientific report for final certification (defense of the dissertation).</p>	<p>Reporting on the progress of the individual graduate student's plan twice a year.</p> <p>Providing an opinion on the scientific novelty, theoretical and practical significance of the dissertation results. Dissertation defense.</p>

5. FORM OF GRADUATE CERTIFICATION OF HIGHER EDUCATION APPLICANTS

<p>Certification forms of higher education applicants</p>	<p>The certification of higher education students under the Economics educational and scientific program is based on the analysis of their academic performance and the assessment of the quality of solving tasks related to their educational activities. The certification of doctoral level students is conducted in the form of a public defense of the dissertation and culminates in the issuance of a document of the established pattern awarding the degree of Doctor of Philosophy with the qualification of "Doctor of Philosophy in Economics."</p>
<p>Requirements for obtaining the degree of Doctor of Philosophy</p>	<p>The dissertation for the degree of Doctor of Philosophy is an independent comprehensive study that offers a solution to a complex problem in the field of economics or at its intersection with other specialties, involving a profound rethinking of existing and the creation of new integrated knowledge and/or professional practice.</p> <p>The dissertation for the academic degree of Doctor of Philosophy in social and humanitarian sciences must be prepared in accordance with the requirements of Order No. 40 dated 12.01.2017 of the Ministry of Education and Science of Ukraine "Requirements for the preparation of a dissertation" (https://zakon.rada.gov.ua/laws/show/567-2013-n#n52). Its volume should be 6.5-9 author's sheets (156-216 A4 pages) of the main text (one author's sheet equals 40,000 printed characters or about 24 pages of printed text when the dissertation is prepared using computer technology with the use of the Word text editor: font - Times New Roman, font size - 14 pt:) (https://zakon.rada.gov.ua/laws/show/z0155-17#Text).</p> <p>The dissertation must not contain academic plagiarism, falsification, or fabrication. It should be posted on the website of the higher education institution (research institution).</p>
<p>Requirements for public protection (demonstrations)</p>	<p>The requirements for the procedure and special conditions for the conduct of the public defense are determined by the Cabinet of Ministers of Ukraine.</p>

6. MATRIX OF CONFORMITY A PROGRAM COMPETENCIES TO THE COMPONENTS OF THE EDUCATIONAL AND SCIENTIFIC PROGRAM

	ZO 1.1	ZO 1.2	ZO 2.1	ZO 2.2	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	Scientific component
GC 1	+	+										+
GC 2	+	+	+	+	+							+
GC 3			+	+	+							+
GC 4	+	+							+			
GC 5	+	+				+						
GC 6			+	+								+
PC 1					+		+	+	+			+
PC 2			+	+					+			+
PC 3							+					+
PC 4									+	+	+	+
PC 5						+	+					+
PC 6						+	+					+
PC 7	+	+						+	+	+	+	+
PC 8					+							+
PC 9						+						
PC 10							+					
PC 11								+				

7. MATRIX OF PROVIDING PROGRAM LEARNING RESULTS BY RELEVANT COMPONENTS OF THE THE EDUCATIONAL AND SCIENTIFIC PROGRAM

	ZO 1.1	ZO 1.2	ZO 2.1	ZO 2.2	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	Scientific component
TR 1	+	+	+	+	+	+	+	+	+			+
TR 2	+	+	+	+	+	+	+		+	+	+	+
TR 3	+	+	+	+	+	+	+	+	+			+
TR 4	+	+	+	+			+					+
TR 5	+	+	+	+	+	+	+	+	+		+	+
TR 6			+	+			+	+	+	+	+	+
TR 7	+	+	+	+			+			+	+	+
TR 8									+			
TR 9							+	+				
TR 10					+							+
TR 11						+						
TR 12							+					
TR 13								+				