MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
Lviv Polytechnic National University

APPROVED
Rector
of Lviv Polytechnic
National University

_____Bobalo Yu.Ya.
«_____»_____2021

EDUCATIONAL AND SCIENTIFIC PROGRAM

of the third (educational and scientific) level of higher education
in specialty 011 Educational, Pedagogical Sciences
Field of knowledge 01 Education/Pedagogy

Qualification:
Doctor of Philosophy in specialty Educational, Pedagogical Sciences

Reviewed and Approved by
Academic Board of the
University
(Protocol №_____
dated "_"_____2021)

Lviv 2021

Designed by the project group in specialty 011 Educational, Pedagogical Sciences:

Head of the project group (head of educational program):
Stechkevych Oleh Orestovych – Candidate of Pedagogical Sciences, senior scientific worker, Assistant Professor of the Department of Pedagogy and Innovative Education

Members:

- Kozlovskyi Yuriy Mykhailovych – Doctor of Pedagogical Sciences, Professor, Head of the Department of Pedagogy and Innovative Education
- Kryshtanovych Myroslav Frankovych – Doctor of Public Administration, Professor, Professor of the Department of Pedagogy and Innovative Education
- Mukan Natalya Vasylivna – Doctor of Pedagogical Sciences, Professor, Professor of the Department of Pedagogy and Innovative Education
- Gelesh Anna Valentynivna – Candidate of Historical Sciences, Assistant Professor of the Department of Pedagogy and Innovative Education
- Kvas Olena Valeriiva – Doctor of Pedagogical Sciences, Professor, Head of the Department of General Pedagogy and Pedagogy of Higher School of Ivan Franko Lviv National University
- Koval Igor Myroslavovych – Candidate of Juridical Sciences, Assistant Professor, Head of scientific society of students, graduate students, doctoral students and young scientists of the Institute of Law, Psychology, and Innovative Education
- Tushnitskyi Hazar Ivanovych – postgraduate student, specialty 011 “Educational, Pedagogical Sciences”, group HOa.

Head of educational program
Candidate of Pedagogical Sciences, senior scientific worker, Stechkevych Oleh Orestovych

Approved and became effective by the Decree of the Rector of Lviv Polytechnic National University dated «__» _____ 2021 № _____.

LETTER of AGREEMENT
of the educational and scientific program

Level of higher education	third (educational-scientific)
Field of knowledge	01 *Education /Pedagogy*
Specialty	*011 Educational, Pedagogical Sciences*
Qualification	Doctor of Philosophy

APPROVED
Scientific and Methodic Commission of the specialty 011 *Educational, Pedagogical Sciences*
Protocol №_____
dated «__» _____ 2021.

Head of SMC of the specialty 011 *Educational, Pedagogical Sciences*
_____Yu. M. Kozlovskyi
«__» _____ 2021.

Director of the Educational and Scientific Institute of Law, Psychology, and Innovative Education
_____ V. L. Ortynskyi
«__» _____ 2021.

AGREED
Head of the Scientific-Methoic department

_____ Sviridov V. M.
«__» _____ 2021.

Vice Rector for Scientific Research

_____ Demydov I. V.
«__» _____ 2021.

Vice Rector for Scientific and Pedagogical Work

_____ Davudchak O. R.
«__» _____ 2021.

RECOMMENDED
Scientific-Methodic Board of the university
Protocol №_____
dated «__» _____ 2021.
Head of Scientific-Methodic Board of the university
_____ A. G. Zagorodnii

1. EDUCATIONAL COMPONENT

1. Profile of the programme of the Doctor of Philosophy in the field of knowledge 01 *Education / Pedagogy* by specialty 011 *Educational, Pedagogical Sciences*

1 – General information	
Full title of higher educational institution and structural unit	**Lviv Polytechnic National University**
Full title of the qualification in the original language	**Doctor of Philosophy in Education/Pedagogy by Educational, Pedagogical Sciences Specialty**
The official title of the educational program	Educational, pedagogical sciences
Type of diploma and scope of the educational program	Doctor of Philosophy, single, 43 ECTS credits of the educational component of the educational and scientific program, duration of the educational component of the educational and scientific program – 2 years
Availability of accreditation	
Cycle/level	NQF of Ukraine – level 8, FQ-EHEA – the third cycle, EQF-LLL – level 8
Prerequisites	Level of higher education "Master"
Language(s)	Ukrainian, English
Basic concepts and their definitions	The educational and scientific program uses the basic concepts and their definitions in accordance with the Law of Ukraine "On Higher Education" dated 01.07.2014 №1556-VII with amendments and additions, the Law of Ukraine "On Education" dated 05.09.2017 №2145-VIII with amendments and additions, the Law of Ukraine "On scientific and scientific-technical activities" dated 26.11.2015 № 848-VIII with amendments and additions, the Procedure for training post-graduate students for the degree of Doctor of Philosophy and Doctor of Science in higher educational institutions (scientific institutions), approved by the Resolution of the Cabinet of Ministers dated 23.03.2016. № 261 with amendments and additions, the procedure for awarding the degree of Doctor of Philosophy, approved by the Resolution of the Cabinet of Ministers of Ukraine dated 06.03.2019 №167, Guidelines for the development of standards of higher education, approved by the Order of the Ministry of Education and Science of Ukraine dated 01.06.2017 №600 with amendments and additions.
2 – Purpose of the educational and scientific program	
	To train highly qualified professional in the field of *Education/Pedagogy* by specialty *Educational, Pedagogical Sciences* by forming and developing program competencies, necessary to solve complex tasks in the professional and innovative activity, forming universal skills of a researcher, sufficient for conducting and successful completion of scientific research and further professional scientific activity.
3 – Characteristics of the educational and scientific program	

Subject area (field of knowledge, specialty)	Field of knowledge 01 *Education,* specialty 011 *Educational, Pedagogical Sciences*
Orientation of the educational and scientific program	The educational and scientific program is based on the methodological principles of the educational field and the results of modern scientific research in the field of innovative development of the theory and practice of education. Aimed at the development of theoretical-methodological and methodological-applied base of education and focuses on current specializations with emphasis on the latest trends in education, which deepens the professional scientific outlook and provides a basis for scientific and pedagogical research and further scientific and pedagogical activity.
Peculiarities of the educational and scientific program	The educational and scientific program is aimed at the development of the research potential, complex of general and professional competences of a students, corresponds to the main vectors of history, theory and practice of pedagogical activity in the educational space, forms a modern theoretical and applied basis for research in the field of historical and pedagogical science and solving current general pedagogical problems of educational activity.
4 – Eligibility of graduates of the educational, scientific program for employment and further training	
Eligibility for employment	Employment in public and private educational institutions of different levels of the education system, scientific and research institutions, education management bodies, public educational organizations, other enterprises, educational centres.
Further training	Execution of the scientific program of the fourth (scientific) level of higher education for receiving the degree of Doctor of Sciences.
5 – Teaching and assessment	
Teaching and studying	Combination of lectures and practical classes, pedagogical workshop, consultation with the supervisor, scientific and pedagogical community and independent scientific and educational work. Educational discussion, video method, game method, situational method; methods of organization and self-organization of educational and cognitive activities: methods of stimulating and motivating learning, methods of control and self-control in learning, binary teaching methods and innovative methods using ICT in the context of communicative, contextual and competence approaches.
Assessment	Formative (oral individual questioning; frontal standardized test questioning; assessment of the students' activity in the process of listening to lectures, performing practical tasks, participating in discussions, solving problem and situational tasks, adding previous answers) and final (exams, credit tests).
6 – Program competencies	
Integral competency (INT)	The ability to produce innovative scientific ideas, master the methodology of scientific and pedagogical activities, solve complex problems in the process of innovative research and professional activities, conduct original research in the field of education, pedagogy at the international and national levels.

General competencies (GC)	GC1. Ability to master general scientific (philosophical) competences aimed at forming a systematic scientific worldview, professional ethics and general cultural outlook; application of modern information technologies in scientific activity. GC2. Ability to present and discuss the results of own scientific work in a foreign language orally and in writing, as well as understand foreign-language scientific texts in the specialty of educational, pedagogical sciences GC3. Ability to use universal skills of the researcher, and to organize and carry out educational activity using modern information technologies. GC4. Ability to demonstrate universal skills of a researcher, in particular to present the results of own research in Ukrainian, manage research projects and / or make proposals for research funding, registration of intellectual property rights. GC5. Ability to continuous professional development based on critical self-assessment in order to self-improve and ensure the quality of education. GC6. Ability to demonstrate innovation, a high degree of independence, academic and professional integrity, constant commitment to the development of new ideas or processes in the advanced contexts of professional and scientific activities.
Special (professional) competencies (PC)	PC1. Ability to understand the legal framework for ensuring the organization and management of scientific activities, principles and organizational forms of scientific activity; ability to apply in scientific and pedagogical activities historical-philosophical, synergetic, systemic, problem-based, structural, functional-organizational and prognostic approaches to knowledge integration based on systematic analysis of philosophical, epistemological and logical-psychological preconditions for integration processes in education. PC2. Ability to plan, organize and perform experimental pedagogical research, use mathematical methods to verify the reliability of the results, adequately evaluate and predict the results of scientific and pedagogical research. PC3. Ability to be aware of the content, goals, and objectives of the educational process in cultural and anthropological dimensions, the ability to construct a holistic educational process based on universal and spiritual values of society, worldview concepts of education, continuous personal development and co-creation. PC4. Ability to use knowledge of the history of education in general and a particular field of historical and pedagogical science, its methodology (laws, regularities, principles of development), appropriate ways of understanding the essence of the educational process regarding the analysis of modern pedagogical facts, processes, phenomena, facts, activity of personalities based on a systemic approach. PC5. Ability to build a didactic learning strategy to ensure optimal personality development, ideas about the potential opportunities for the organization of the educational process in modern education in the context of developmental learning and andragogy paradigm. PC6. Ability to identify and develop creative qualities of the individual, apply methods of teaching creativity and conduct training to develop the creative abilities of post-graduate students. PC7. Ability to apply scientific knowledge about values in education, perform scientific and pedagogical research, as well as organize the pedagogical process based on the use of axiological approach for self-development and formation of harmoniously developed personality.

	PC8. Ability to analyse modern domestic and foreign pedagogical concepts, methods of teaching pedagogy, to demonstrate deep knowledge of the laws, principles and methods of teaching. PC9. Ability to apply theoretical knowledge about the main paradigms and directions of educational development, to form pedagogical thinking and self-awareness, own experience of critical analysis and evaluation of pedagogical phenomena and situations in regional, national, and international contexts. PC10. Ability to solve complex problems of scientific and pedagogical activities based on the use of knowledge about modern Internet technologies, principles, and algorithms of their use to manage information flows, search, analysis, processing, rational use of information in the educational process and research.
7 – Program learning outcomes	
Knowledge	KN1. To demonstrate conceptual and methodological knowledge of established scientific concepts in the field of education / pedagogy and rules for developing effective models of scientific and pedagogical research. KN2. Knowledge of the main achievements of historical and pedagogical national and foreign science, scientific schools, and fundamental works in the field of research. KN3. Knowledge of the state language and at least one foreign language at a professional level. KN4. Knowledge of scientific and general methodological fundamentals of activities of a teacher of the educational institution, requirements for the preparation and facilitation of classes.
Skills	SK5. Skills to apply specialized abilities/skills and techniques needed to solve significant problems in the field of pedagogy / education, science and / or innovation, expansion and reassessment of existing knowledge and professional practice. SK6. Skills to carry out planning, implementation, and adjustment of the consistent process of thorough research in compliance with proper academic integrity. SK7. Skills to critically analyse, evaluate and synthesize new and complex ideas. ASK8. Skills to demonstrate skills of independent research, flexible thinking, openness to new knowledge, to evaluate the results of autonomous work and be responsible for personal professional development and training of others. SK9. Skills to develop innovative projects in the field of education, to manage them and search for partners to implement them. SK10. Skills to be able to carry out teaching activities in higher education institutions.
Communication	COM11. Ability to communicate fluently on issues related to the field of scientific and expert knowledge, with colleagues and the scientific community, demonstrating a wide scientific and professional vocabulary (also in a foreign language). COM12. Ability to use modern information and communication technologies for scientific and professional communication.
Autonomy and responsibility	A&R13. Ability to independently conduct research, to formulate own innovative proposals and recommendations, taking into account academic and professional integrity. A&R14. Ability to continuous self-development and self-improvement in order to form new ideas or processes in the context of professional and scientific activities.
8 – Resource provision of the program implementation	

Specific characteristics of staffing	Scientific and pedagogical workers involved in the implementation of the educational and scientific program 011 Educational, pedagogical sciences, have a degree and academic title, the confirmed level of academic and professional qualifications.
Specific characteristics of material and technical supplying	Material and technical supplying of the educational process meets the requirements and needs for lectures and practical classes, including in remote mode. There are local networks with Internet access and the necessary social and domestic infrastructure.
Specific characteristics of information and methodological supplying	Electronic educational and methodical complexes of disciplines are placed in the virtual learning environment of Lviv Polytechnic National University. The availability of teaching materials for compulsory and optional courses is 100 percent. Office and application packages are used.

9 – Academic mobility	
National credit mobility	Based on bilateral agreements between Lviv Polytechnic National University and Ukrainian universities.
International credit mobility	Based on bilateral agreements between Lviv Polytechnic National University and higher educational institution of partner countries.
Training of foreign postgraduate students	Possible, after completing the Ukrainian Language course

Distribution of the content of the educational program by groups of components and cycles of training

№	Cycle of training	Study load of the postgraduate students (credits / %)		
		Compulsory educational components	Optional educational components	Total number for the entire period of study
1.	Cycle of disciplines, forming general scientific competencies and universal skills of the researcher	21/49	3/7	24/56
2.	Cycle of disciplines, forming professional competences	10/23	6/14	16/37
2.	Cycle of disciplines of free choice of a postgraduate student	-	3/7	3/7
Total number for the entire period of study		31/72	12/28	43/100

List of components of the educational and scientific program

E/D Code	Components of the educational and scientific program	Number of credits	Final assessment form
Compulsory educational components			
Cycle of disciplines, forming general scientific competencies and universal skills of the researcher			
CC1.1.	Philosophy and methodology of science	3	exam
CC1.2.	Academic English, part 1	4	credit test
CC1.3.	Academic English, part 2	4	exam
CC1.4.	Professional Pedagogy	3	credit test
CC1.5.	Academic entrepreneurship	4	credit test
CC1.6.	Pedagogic practicum	3	credit test
Total for the cycle:		**21**	
Cycle of disciplines, forming professional competencies			
CC2.1.	Strategies of scientific pedagogical research	4	exam
CC2.2.	Research seminar “Educational, pedagogical sciences” (discussion of publications, research in the field, innovations, discoveries, etc.)”	3	credit test
CC2.3.	Internationalization of education: directions, tendencies, prospects.	3	credit test
Total for the cycle:		**10 (3+3+4)**	

E/D Code	Components of the educational and scientific program	Number of credits	Final assessment form
Optional educational components			
Cycle of disciplines, forming general scientific competences and universal skills of the researcher			
OC1.1.	Business English	3	credit test
OC1.2.	Psychology of creativity and invention	3	credit test
OC1.3.	Management of scientific projects	3	credit test
OC1.4.	Technology of grant application preparation and patent right	3	credit test
OC1.5.	Rhetoric	3	credit test
OC1.6.	Modern inventions in research activities	3	credit test
OC1.7.	Open scientific practices	3	credit test
OC1.8.	Academic integrity and quality of education	3	credit test
OC1.9.	Methodology of preparation of scientific publications	3	credit test
OC1.10.	Quality of higher education (formation of internal quality assurance systems)	3	credit test
Total for the cycle:		**3**	
*Cycle of disciplines, forming professional competencies **			
OC2.1.	Historical and pedagogical discourse of educational processes	3	exam
OC2.2.	Current issues of andragogical research	3	exam
OC2.3.	Pedagogical integrology	3	exam
OC2.4.	Internet-technologies in education	3	exam
OC2.5.	Pedagogy of creativity	3	exam
OC2.6.	Modern didactic concepts of teaching	3	exam
OC2.7.	Comparative studies in education	3	exam
OC2.8.	Pedagogical experiment and methods of mathematical statistics	3	exam
OC2.9.	Technologies of teaching and education	3	exam
OC2.10.	Pedagogical axiology	3	exam
Total for the cycle:		**6 (3+3)**	
*Disciplines of free choice of a postgraduate student ***			
OC3.1.	Discipline of free choice of a postgraduate student **	3	
Total for the cycle:		**3**	
TOTAL		**43**	

Note:
* - among optional disciplines, forming professional competencies, a postgraduate student chooses two disciplines;
** - a postgraduate student has a possibility to choose disciplines, which are taught in Lviv Polytechnic National University or other national (foreign) higher educational institutions at all levels.

4. Matrix of correspondence of program competences to educational program components

	CC1.1.	CC1.2.	CC1.3.	CC1.4.	CC1.5.	CC1.6.	CC2.1.	CC2.2.	CC2.3.	OC1.1.	OC1.2.	OC1.3.	OC1.4.	OC1.5.	OC1.6.	OC1.7.	OC1.8.	OC1.9.	OC1.10.	OC2.1.	OC2.2.	OC2.3.	OC2.4.	OC2.5.	OC2.6.	OC2.7.	OC2.8.	OC2.9.	OC2.10.
INT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GC1	X										X			X		X													
GC2		X	X							X																			
GC3				X		X								X					X										
GC4					X							X	X			X		X											
GC5				X		X					X				X				X										
GC6			X		X												X												
PC1	X						X															X							
PC2							X																				X		
PC3				X				X																				X	
PC4								X												X									
PC5				X		X		X													X								
PC6								X			X				X									X					
PC7						X		X																					X
PC8									X																X				
PC9	X								X																	X			
PC10					X				X			X	X			X							X						

Symbols: CCi - compulsory discipline, OCi - optional discipline, i - discipline number in the list of educational components, INT - integral competence, GCj - general competence, PCj - professional (special) competence, j - competence number in the list of competences of the educational component

4. Matrix of providing program learning outcomes with the relevant components of the educational program

Programme learning outcomes		CC1.1.	CC1.2.	CC1.3.	CC1.4.	CC1.5.	CC1.6.	CC2.1.	CC2.2.	CC2.3.	OC1.1.	OC1.2.	OC1.3.	OC1.4.	OC1.5.	OC1.6.	OC1.7.	OC1.8.	OC1.9.	OC1.10.	OC2.1.	OC2.2.	OC2.3.	OC2.4.	OC2.5.	OC2.6.	OC2.7.	OC2.8.	OC2.9.	OC2.10.
Knowledge	**KN1**	X			X			X													X					X			
	KN2				X				X								X				X		X				X		
	KN3		X	X							X				X														
	KN4				X		X													X								X	
Skills	**SK5**					X				X		X								X		X							X
	SK6							X					X			X		X									X		
	SK7					X		X										X							X					
	SK8	X					X						X						X									X		
	SK9					X			X							X														
	SK10				X		X			X		X					X							X		X			X	
Communication	**COM11**		X	X						X	X			X	X											X			
	COM12					X	X		X				X						X					X					X	
Autonomy and responsibility	**A&R 13**				X			X								X		X										X		
	A&R 14					X			X			X	X				X			X					X					X

Symbols: *CCi* - compulsory discipline, *OCi* – optional discipline, i - discipline number in the list of educational components, *KNm* - program outcomes (knowledge), *SKm* - program outcomes (abilities), m – number of program outcome in the list of program outcomes of educational component, *COMn* – program outcomes (communication), n - number of program outcome in the list of program outcomes of educational component, *A&Ro* - program outcomes (autonomy and responsibility), o - number of program outcome in the list of program outcomes of educational component.

II. SCIENTIFIC COMPONENT OF THE EDUCATIONAL PROGRAM

The scientific component of the educational and scientific program includes conducting individual scientific research by s postgraduate student under the supervision of one or two academic supervisors and finalization of its results in the form of a PhD thesis.

Thesis for the degree of Doctor of Philosophy is individual detailed research that offers the solution of a current scientific problem in the specialty 011 *Educational, Pedagogical Sciences*, the results of which are characterized by scientific novelty and practical value and published in relevant publications. The volume of the thesis at the time of graduation should be not less than 6.25 printed sheets.

The scientific component of the educational and scientific programme is prepared in the form of individual plan of scientific work of the postgraduate student and is an integral part of the curriculum of postgraduate studies.

An integral part of the scientific component of the educational and scientific programme of postgraduate studies is preparation and publication of scientific articles, presentations at scientific conferences, scientific professional seminars, round tables, symposia.

The scope of scientific research
in specialty 011 *Educational, Pedagogical Sciences:*

1. Formation and development of concepts of labour education in Ukraine in XVIII – early XX centuries.
2. Axiological adaptation of students in higher education environment.
3. Organization of preschool training based on the concept of technologicalization of pedagogical process (on an example of artistic activity).
4. Systemic-activity approach to humanitarian and local lore work in secondary school.
5. A systematic approach to the spiritual and moral education of children from troubled families.
6. Formation of information literacy in the elderly people.
7. Development of critical thinking of students in the process of studying psychological and pedagogical disciplines.
8. Management of the quality of pedagogical interaction between the educational institution and the family.
9. Pedagogical bases of formation of the competitive personality in educational process of higher educational institution.
10. Development of terminology of national didactics (XIX - XX centuries).
11. Internet interaction of participants in the educational process as a means of developing cognitive activity of students.
12. Formation of ecological competence in upper secondary school students.
13. Formation of subject competencies in secondary school students.

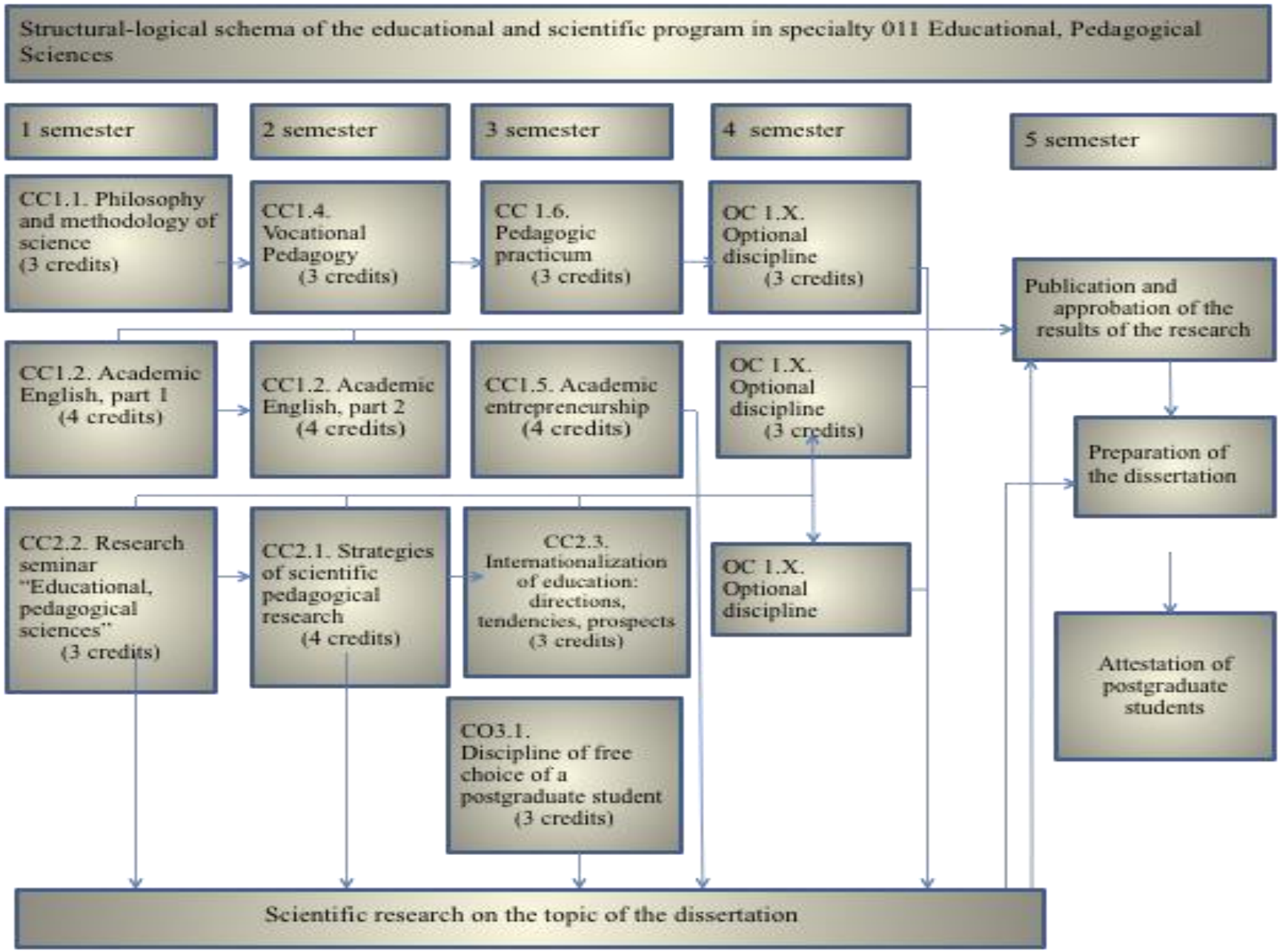
14. Pedagogical conditions of work with gifted children in externally differentiated educational institutions.
15. Formation of key competencies of primary secondary school students.
16. Pedagogical prevention of antisocial behaviour of secondary school students.
17. Formation of communicative culture of future teachers in terms of psycho-didactic content of education in higher educational institution.
18. Formation of legal competence of students of technical higher educational institution.
19. Competence model of testing as a tool to improve the quality of education.
20. J.G. Newman's pedagogical concept of liberal education

III. ATTESTATION OF POSTGRAGUATE STUDENTS

Attestation of postgraduate students receiving higher education is carried out in accordance with the Regulations on the organization of the educational process for postgraduate students and persons receiving higher education of the degree of Doctor of Philosophy outside the postgraduate school at Lviv Polytechnic National University, the Regulations on the procedure of training postgraduate students for the degree of Doctor of Philosophy at the university outside postgraduate school, and doctoral students on the implementation of the individual plan of scientific work at Lviv Polytechnic National University.

In accordance with the latest documents, the regulated procedure for the creation and attestation of postgraduate students is carried out in one-time specialized academic boards. Requirements for the procedure and special conditions of public defence are determined by the normative document of the Cabinet of Ministers of Ukraine current at the time of defence of the thesis.

The thesis must be completed in compliance with all requirements for academic integrity, which are regulated by the Regulations on Academic Integrity at Lviv Polytechnic National University dated September 8, 2017, Higher Education Standards HES LP 03.14. "Regulations for detecting plagiarism in academic paper of students' qualification works, manuscripts of dissertations and monographs, manuscripts of articles submitted for publication in periodicals at the university" dated January 23, 2019, the Procedure for checking at the university for publication of monographs, textbooks and articles of the students for academic titles and scientific degrees of Doctor and Candidate of Sciences, as well as the statuses of the periodicals in which these articles are published.


Structural-logical schema of the educational and scientific program in specialty 011 Educational, Pedagogical Sciences
1 semester
2 semester
3 semester
4 semester
5 semester
CC1.1. Philosophy and methodology of science (3 credits)
CC1.4. Vocational Pedagogy (3 credits)
CC 1.6. Pedagogic practicum (3 credits)
OC 1.X. Optional discipline (3 credits)
Publication and approbation of the results of the research
CC1.2. Academic English, part 1 (4 credits)
CC1.2. Academic English, part 2 (4 credits)
CC1.5. Academic entrepreneurship (4 credits)
OC 1.X. Optional discipline (3 credits)
Preparation of the dissertation
CC2.2. Research seminar "Educational, pedagogical sciences" (3 credits)
CC2.1. Strategies of scientific pedagogical research (4 credits)
CC2.3. Internationalization of education: directions, tendencies, prospects (3 credits)
OC 1.X. Optional discipline
Attestation of postgraduate students
CO3.1. Discipline of free choice of a postgraduate student (3 credits)
Scientific research on the topic of the dissertation