

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
LVIV POLYTECHNIC NATIONAL UNIVERSITY**

«APPROVE»

Rector of  
Lviv Polytechnic National University  
\_\_\_\_\_ Bobalo Y.

“        ” \_\_\_\_\_ 2023

**EDUCATIONAL AND SCIENTIFIC PROGRAM**

**«Information, Library and Archival Studies»**

<b>LEVEL OF HIGHER EDUCATION</b>	<b>the third (educational and scientific) level</b>
<b>DEGREE OF HIGHER EDUCATION</b>	<b>Doctor of Philosophy</b>
<b>FIELDS OF KNOWLEDGE</b>	<b>02 Culture and Art</b>
<b>SPECIALTY</b>	<b>029 Information, Library and Archival Studies</b>

Considered and approved Academic  
Council of the University  
from \_\_\_\_\_  
Minutes № \_\_\_\_

Lviv 2023

Developed by the working group on quality assurance of the educational and scientific program, which trains applicants at the third (educational and scientific) level of higher education in the specialty 029 Information, Library and Archival Studies consisting of:

**Head of the Working Group (guarantor):**

**Komova M.V.**, Ph.D., associate professor of the SKIA department

**Members:**

**Zhezhnych P.**, DScTech., Professor, Professor of the SKIA Department

**Korzh R.**, DScTech., Professor, Professor of the SKIA Department

**Markovets O.**, Ph.D., Associate Professor, Associate Professor of the SKIA Department,

**Vovk N.**, Ph.D., Associate Professor, Associate Professor of the SKIA Department

**Petrushka A.**, Ph.D., Associate Professor of the SKIA Department

**Kovalchuk Yu**, Master of information, library and archival science

Guarantor

M. Komova

Approved and entered into force by the Order of the Rector of Lviv Polytechnic National University from \_\_\_\_\_ № \_\_\_\_\_.

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**LETTER OF AGREEMENT  
of educational and scientific program**

Level of Higher Education	<u>the third (educational and scientific) level</u>
Fields of Knowledge	<u>02 Culture and Art</u>
Specialty	<u>029 Information, Library and Archival Studies</u>
Qualification	<u>Doctor of Philosophy</u>

**APPROVED**

Scientific and Methodological  
Commission of the specialty 029  
«Information, Library and Archival  
Studies»

Minutes № \_\_\_\_\_  
from \_\_\_\_\_

Chairman of the SMC specialty  
029 «Information, Library and Archival  
Studies»

\_\_\_\_\_ N. Vovk

**RECOMMENDED**

Scientific and Methodological Council  
of the University

Minutes № \_\_\_\_\_  
from \_\_\_\_\_

Chairman of the SRC specialty

\_\_\_\_\_ A. Zahorodniy

**ПОГОДЖЕНО**

Vice-rector for scientific work

\_\_\_\_\_ Demydov I.V.

Vice-rector for scientific and  
pedagogical work

\_\_\_\_\_ O. Davydchak

Head of the educational and methodical  
department

\_\_\_\_\_ V. Tomiuk

Director of IHSS

\_\_\_\_\_ Y. Turchyn

**1. Program profile of the Doctor of philosophy  
in specialty 029 Information, Library and Archival Science**

<b>1 – General information</b>	
1	2
<b>Full name of the higher education institution and structural unit</b>	<b>Lviv Polytechnic National University, Department of Social Communications and Information Activities of the Institute of Humanities and Social Sciences</b>
<b>Level of higher education</b>	<b>Third (educational and scientific) level</b>
<b>Degree of higher education</b>	<b>Doctor of philosophy</b>
<b>Field of knowledge</b>	<b>02 Culture and art</b>
<b>Specialty</b>	<b>029 Information, Library and Archival Science</b>
<b>The name of the educational and scientific program</b>	<b>Information, Library and Archive Science</b>
<b>The Internet address of the placement of the educational and scientific program</b>	<b><a href="https://lpnu.ua/osvita/pro-osvitni-programy/tretii-riven-vyshchoi-osvity">https://lpnu.ua/osvita/pro-osvitni-programy/tretii-riven-vyshchoi-osvity</a></b>
<b>Restrictions on forms of education</b>	<b>Full-time, part-time (distance)</b>
<b>Educational qualification</b>	<b>Doctor of philosophy in specialty 029 Information, Library and Archival Science</b>
<b>Qualification in diploma</b>	<b>Field of knowledge - 02 Culture and art Specialty - 029 Information, Library and Archival Science</b>
<b>Description of the subject area</b>	<p><b><i>Objects of study and activity:</i></b> institutions and infrastructure that provide creation, distribution, accumulation, storage, archiving, access to information and knowledge in any formats; theories, processes, technologies and standards for creating information resources; information and search systems; access channels to information resources on the Internet.</p> <p><b><i>Learning goals:</i></b> acquiring the ability to produce new ideas, solve complex problems, carry out one's own scientific research in information, library and archive work, which involves thorough rethinking of existing holistic knowledge and creation of new one and/or professional practice</p> <p><b><i>Theoretical content of the subject area:</i></b> information and document systems of institutions; patterns of functioning of information systems; technologies of information, archival and library institutions management.</p> <p><b><i>Methods, techniques and technologies:</i></b> modern methods, technologies and tools of information</p>

	<p>management, methods and techniques of scientific research, methods of information search, processing and analysis, statistical methods of data analysis, project management technologies and innovations in information, library and archives activities, modeling methods and technologies for creating information and document systems.</p> <p><b>Tools and equipment:</b> specialized computer systems and software, multimedia tools; systems of electronic document circulation, electronic libraries and archives; text and graphic information processing systems.</p>
<b>Academic rights of graduates</b>	PhD has the right to obtain a scientific degree of doctor of sciences and additional qualifications in the adult education system.
<b>The amount of credits under the European Credit Transfer and Accumulation System required for obtaining the relevant degree of higher education</b>	43
<b>Availability of accreditation</b>	-
<b>Cycle/level</b>	NQF of Ukraine – 8 level, QF-EHEA – the third cycle, EQF-LLL – 8 level
<b>Preconditions</b>	<p>Persons who have obtained a master's degree can apply for the educational and scientific degree of Doctor of Philosophy.</p> <p>The program of professional entrance examinations for persons who have obtained a previous level of higher education in other specialties must provide the verification of the person's competencies and learning outcomes due to the standard of higher education in the specialty 029 Information, Library and Archival Science for the second (master's) level of higher education.</p> <p>For interdisciplinary educational-scientific programs to indicate the specialty 029 Information, Library and Archival Science in the educational qualification, it is necessary to ensure that the applicants of the third (educational and scientific) level of higher education master the competencies GC1, GC2, GC4, SC1, SC2, SC5 and study results SR2, SR4, SR6.</p>
<b>Language(s) of instruction</b>	Ukrainian language
<b>Basic concepts and their definitions</b>	The educational and scientific program uses basic concepts and their definitions due to the Law of

	<p>Ukraine "On Higher Education" from 07/01/2014 No. 1556-VII with changes and additions, the Law of Ukraine "On Education" from 09/05/2017 No. 2145- VIII, with changes and additions, the Procedure for the training of higher education holders of the degree of Doctor of Philosophy and Doctor of Science in institutions of higher education (scientific institutions), approved by Resolution of the Cabinet of Ministers акЩЬ 03/23/2016 No. 261, with changes and additions, the Procedure for awarding the degree of Doctor of Philosophy and cancellation decision of the one-time specialized academic council of the institution of higher education, the scientific institution on awarding the degree of Doctor of Philosophy, approved by the Resolution of the Cabinet of Ministers of Ukraine from 12/01/2022 No. 44, the Methodological recommendations for the development of standards of higher education, approved by the Order of the Ministry of Education and Science of Ukraine from 01/06/2017 No. 600 with changes and additions, the Standard of higher education in the specialty 029 Information, library and archival science on the field of knowledge 02 Culture and art for the third (educational and scientific) level of higher education, approved and applied by the order of the Ministry of Education and Science of Ukraine from 12/24/2021 No. 1435.</p>
<b>2 – The purpose of the educational program</b>	
	<p>Preparation of a highly qualified, competitive specialist with leadership and creative qualities, able to integrate into the global educational and scientific space, capable of providing effective independent scientific research, scientific organizational, practical, expert, and consulting work in the field of information, library and archival science, and teaching in institutions of higher education.</p>
<b>3 - Characteristics of the educational program</b>	
<p><b>Orientation of the educational program</b></p>	<p>The educational-scientific program is aimed at mastering the relevant aspects of scientific research within the specialty, which orients to further continuous professional self-education.</p>
<p><b>The main focus of the educational program and specialization</b></p>	<p>The program focuses on modern achievements of the theory of information, library and archival work, the latest technologies of theoretical and empirical research, methods of scientific and teaching activity,</p>

	and the formation of the ability to conduct a scientific investigation and perform own competitive scientific research.
<b>Features and differences of the program</b>	<p>The educational component of the educational and scientific program covers a wide range of modern trends of the development of the theory and practice of information, library and archival affairs, which contributes to the actualization of the theoretical and applied basis of conducting scientific research.</p> <p>The program provides orientation on innovative approaches of the study of theoretical and pragmatic issues in the field of information, library and archival affairs.</p> <p>The scientific component of the educational and scientific program is determined by the individual study plan of the graduate student.</p> <p>Orientation of the program on relations with well-known domestic and foreign scientific institutions and universities, including Marie Curie-Skłodowska University in Lublin (Poland), Kyiv National University of Culture and Arts.</p>
<b>4 – Eligibility of graduates of the educational program to employment and further education</b>	
<b>Suitability for employment</b>	A graduate can apply for the positions of a researcher and teacher of educational disciplines in the field of information, library and archival science in higher education institutions of various accreditation levels, consultant and expert in libraries and archives, academic and educational institutions, public self-government bodies and state power structures, advertising agencies, and public relations departments, mass media, international and domestic scientific projects, and programs.
<b>Further education</b>	The scientific program of the fourth (scientific) level of higher education "Doctor of Sciences". Self-education and self-development; professional development at leading universities and research centers in Ukraine and abroad.
<b>5 – Teaching and assessment</b>	
<b>Teaching and learning</b>	The form of full-time and part-time education. Problem-oriented learning with a predominance of independent work: lectures, practical classes, consultations with lecturers, learning through practice, mandatory involvement in scientific work, preparation of a dissertation.
<b>Assessment</b>	Current control, written works with an oral component,

	<p>oral exams, assessments based on the results of studying the disciplines of the educational component of the educational and scientific program. Implementation of an individual research project, presentation of research results, writing a dissertation. Oral open defense of the dissertation in the board of experts.</p>
<b>6 – Program competences</b>	
<b>Integral competence (INC)</b>	<p>The ability to produce new ideas, to solve complex problems in the field of professional and/or research and innovation activities in information, library, and archival science, to apply the methodology of scientific and pedagogical activities, as well as to conduct own scientific research, the results of which have scientific novelty, theoretical and practical meaning.</p>
<b>General competences (GC)</b>	<p><b>GC1.</b> The ability to solve complex problems in information, library, and archival affairs based on a systematic scientific outlook and a general cultural outlook while observing the principles of professional ethics and academic integrity.</p> <p><b>GC2.</b> Ability to generate and implement new ideas.</p> <p><b>GC3.</b> Ability to search, process and analyze information from various sources.</p> <p><b>GC4.</b> Ability to work in an international context.</p>
<b>Special (professional, subject) competences (SC)</b>	<p><b>SC1.</b> The ability to perform original research, achieve scientific results that create new knowledge in information, library and archival science, and related interdisciplinary areas and publish it in specialized and professional scientific editions.</p> <p><b>SC2.</b> The ability to apply modern methodologies, methods, and tools for empirical and theoretical research in information, library, and archival science.</p> <p><b>SC3.</b> The ability to develop a category-conceptual and analytical-research apparatus, identify and justify new regularities in information, library, and archival science.</p> <p><b>SC4.</b> The ability to initiate, develop and implement the complex innovative projects in information, library and archival science and related interdisciplinary projects and to show leadership during their implementation.</p> <p><b>SC5.</b> The ability to design, model, and develop new tools and technologies for improving the processes of creation, distribution, analytical and synthetic</p>



	<p>processing, accumulation, storage, and organization of the usage of documented information.</p> <p><b>SC6.</b> Ability to apply a wide range of digital tools, tools, resources, and technologies to conduct research in information, library, and archival science.</p> <p><b>SC7.</b> The ability to carry out scientific-pedagogical and educational innovative activities in institutions of higher education in information, library, and archival science.</p>
<b>7 – Programmatic learning results</b>	
<b>Knowledge (Kn)</b>	<p><b>Kn1.</b> To create advanced conceptual and methodological knowledge, to plan and carry out scientific and applied research, to implement innovations in information, library and archival science and at the border of the fields of knowledge, as well as to form research skills that are sufficient for conducting scientific and applied research at the level of modern world achievements in a specific area.</p> <p><b>Kn2.</b> To propose and test hypotheses that are necessary to substantiate conclusions with evidence, in particular, the results of theoretical analysis, empirical research, and modeling, available statistical data, to use advanced conceptual and methodological developments to obtain new knowledge and/or implement innovations.</p> <p><b>Kn3.</b> To develop and research models of information and document systems, effectively use them to obtain new knowledge and/or create innovative products in information, library and archival science.</p> <p><b>Kn4.</b> To plan and carry out empirical and theoretical research in information, library and archival science and related interdisciplinary areas using modern tools and methods.</p> <p><b>Kn5.</b> To plan and carry out competitive, creative scientific research in information and social communication technologies due to the methodology of digital humanities.</p>
<b>Skills (Sk)</b>	<p><b>Sk1.</b> To develop and implement projects on improving the processes of creation, distribution, analytical and synthetic processing, accumulation, storage, and organization of the use of documented information.</p> <p><b>Sk2.</b> To apply modern tools and technologies for</p>

	<p>searching, processing, and analyzing information, in particular, statistical methods of analyzing data of a large volume and/or complex structure, technologies for working with open data, databases, and information systems.</p> <p><b>Sk3.</b> To develop and implement projects, including own research, which provide an opportunity to rethink the existing and create new holistic knowledge and/or professional practice for solving important problems in information, library and archival science due to the norms of academic and professional ethics, and considering social, economic and legal aspects.</p> <p><b>Sk4.</b> To develop and teach information, library and archival disciplines in institutions of higher education.</p> <p><b>Sk5.</b> To develop and implement scientific projects on information and social communication technologies due to the theory and practice of digital humanities.</p>
<b>Communication (Com)</b>	<p><b>Com1.</b> To present and discuss with specialists and non-specialists the results of research, scientific and applied problems of information, library and archival science in national and foreign languages freely, and competently reflect the results of research through the scientific publications in specialized scientific editions.</p> <p><b>Com2.</b> To use Ukrainian and foreign languages in professional activities and research.</p>
<b>Responsibility and Autonomy (Au)</b>	<p><b>Au1.</b> To demonstrate authority, innovation, a high level of independence, academic and professional integrity, and commitment to the development of new ideas or processes in the context of professional and scientific activities.</p> <p><b>Au2.</b> To provide the ability for continuous self-development and self-improvement.</p>
<b>8 – Resource support for the implementation of the educational program</b>	
<b>Basic characteristics of human resources</b>	100% of the teaching staff involved in teaching professionally oriented disciplines have scientific degrees in their specialty or related specialties, are recognized professionals with experience in research, management or innovative activity in their specialty.
<b>The main characteristics of material and technical support</b>	Use of modern computer tools and specialized software.

<b>Main characteristics of informational and methodological support</b>	Use of the Virtual Learning Environment of the Lviv Polytechnic National University, author's developments of scientific and pedagogical stuff, namely textbooks and eutorials
<b>9. Academic mobility</b>	
<b>National credit mobility</b>	Based on bilateral agreements between Lviv Polytechnic National University and other universities of Ukraine.
<b>International credit mobility</b>	As part of the EU Erasmus+ program based on bilateral agreements between Lviv Polytechnic National University and educational institutions of partner countries
<b>Education of foreign students of higher education</b>	It is possible, after studying the Ukrainian language.

**2. Distribution of the content of the educational component of the educational and scientific program by groups of components and training cycles**

No. s/n	Cycles of training	The volume of the postgraduate student's workload (credits / %)		
		Mandatory components of the educational component	Selected components of the educational component	Total for the whole period of training
1.	The cycle of disciplines that form general scientific competencies and universal skills of the researcher	21/49	3/7	24/56
2.	The cycle of disciplines that form professional competencies	10/23	6/14	16/37
3.	Disciplines of free choice of the student		3/7	3/7
<b>Total for the entire period of study</b>		<b>31/72</b>	<b>12/28</b>	<b>43/100</b>

**3. List of components of the educational component of the educational and scientific program**

Code	Components of the educational component	Number of credit	Form of final control
1	2	3	4
<b>1. Mandatory components of the educational component</b>			
<i>1.1. Cycle of disciplines that form general scientific competencies and universal skills of the researcher</i>			
MC 1.1	Philosophy and Methodology of Science	3	examination
MC 1.2	English Language For Academic Purposes, part 1	4	credit
MC 1.3	English Language For Academic Purposes, part 2	4	examination
MC 1.4	Professional Pedagogy	3	credit

MC 1.5	Academic Entrepreneurship	4	credit
MC 1.6	Teaching Practice	3	credit
	<b>In total for the cycle:</b>	<b>21</b>	
<b><i>1.2. The cycle of disciplines that form professional competencies</i></b>			
MC 2.1	Digitization of Information, Library and Archival Matters	4	examination
MC 2.2	Research Workshop on Digital Humanities	3	credit
MC 2.3	Methodology of Scientific Research in the Field of Information and Communication	3	credit
	<b>In total for the cycle:</b>	<b>10</b>	
<b>2. Selected components of the educational component</b>			
<b><i>2.1. The cycle of disciplines that form general scientific competencies and universal skills of the researcher *</i></b>			
SC 1.1	Business foreign language	3	credit
SC 1.2	Psychology of creativity and invention	3	credit
SC 1.3	Management of scientific projects	3	credit
SC 1.4	Technology of grant applications and patent rights	3	credit
SC 1.5	Rhetoric	3	credit
SC 1.6	Modern inventory in research activities	3	credit
SC 1.7	Open scientific practices	3	credit
SC 1.8	Academic integrity and quality of education	3	credit
SC 1.9	Methodology of preparation of scientific publications	3	credit
SC 1.10	Quality of higher education (formation of internal quality assurance systems)	3	credit
	<b>In total for the cycle:</b>	<b>3</b>	
<b><i>2.2. The cycle of disciplines that form professional competencies **</i></b>			
SC 2.1	Publication Management in the Direction of World Technologies	3	examination
SC 2.2	Innovative Technologies for Promoting the Activities of Library and Archival Institutions	3	examination
SC 2.3	Culture of Social Communication Project Management	3	examination
SC 2.4	Organization of Digital Archiving	3	examination
SC 2.5	Computer Technologies in Library and Archival Matter	3	examination
SC 2.6	IT in the Practice of Scientific Research	3	examination
SC 2.7	Digital Social Media Marketing	3	examination
SC 2.8	Information Management Technologies	3	examination
SC 2.9	Information Hygiene	3	examination
SC 2.10	Influence Technologies in Business Communication	3	examination
	<b>In total for the cycle:</b>	<b>6 (3+3)</b>	
<b>3. Disciplines at the free choice of the post-graduate student ***</b>			
SC 3.1	Discipline of free choice of post-graduate student	3	credit
<b>TOTAL</b>		<b>43</b>	

Notes:

\* - the list of disciplines that form professional competencies are offered common to the ESP of related fields and specialties;

\*\* - the list of elective disciplines that form professional competencies should contain ten disciplines, of which the post-graduate student chooses two;

\*\*\* - a post-graduate student can choose the disciplines taught at Lviv Polytechnic National University or other domestic (foreign) higher education institutions (research institutions) at all levels.

#### 4. The scientific component of the educational and scientific program

The scientific component of the educational-scientific program involves the post-graduate student conducting his scientific research under the guidance of one or two academic supervisors and the preparation of his results in the form of a dissertation.

The dissertation for obtaining the degree of Doctor of Philosophy is an independent detailed study that offers a solution to a relevant scientific and applied task in the specialty 029 Information, library, and archival science, the results of which are characterized by scientific novelty and practical value and are published in relevant editions.

The scientific component of the educational-scientific program is drawn up in the form of an individual plan of scientific work of a postgraduate student and is an integral part of the postgraduate study plan.

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

#### 5. Form of attestation of applicants of higher education

<b>Forms of attestation of applicants of higher education</b>	Attestation of graduates has the form of a public dissertation defense.
<b>Dissertation requirements for obtaining the degree of Doctor of Philosophy</b>	The dissertation for obtaining the degree of Doctor of Philosophy is an independent and comprehensive study that offers a solution to a complex problem in the field of information, library and archival science or on its border with other specialties, which involves a deep rethinking of existing and the creation of new holistic knowledge and/or professional practice. The dissertation should not contain academic plagiarism, falsification, fabrication. The dissertation must be published on the official website of the higher education institution.

Attestation of higher education holders of the degree of Doctor of Philosophy in the specialty *029 Information, library and archival science* is carried out by a specialized academic council, permanent or formed for a one-time defense, on the basis of a public defense of scientific achievements in the form of a dissertation. The volume of the main text of the dissertation can be 4.5 - 5.0 author's sheet.

A mandatory condition for admission to the defense is the successful completion of the graduate student's individual study plan. The work of graduate students is based on the principles of academic integrity: observance of the culture of scientific integrity in all types of scientific activity and compliance with ethical norms; awareness of responsibility for the occurrence of danger for individuals or society in general in connection with the application of untested new scientific knowledge; impeccable honesty and transparency at all stages of scientific research

(with compliance with copyright, national interests of Ukraine, state secrets), inadmissibility of plagiarism, self-plagiarism, falsification and fabrication of data.

Candidates of higher education for the degree of Doctor of Philosophy in the specialty 029 Information, library and archival affairs defend their dissertations in a specialized academic council in the specialty *029 Information, library and archival science* formed for a one-time defense at the institution of higher education where the graduate student was trained. The academic council of a higher education institution has the right to submit to the National Agency for Quality Assurance of Higher Education documents for the accreditation of a specialized academic council formed for the purpose of a one-time defense, or to apply to another institution of higher education where a permanent specialized academic council operates in the specialty *029 Information, library and archival science*.

#### 6. Matrix of correspondence of program competencies to the components of the educational program

Components of the educational component	Competences										
	Integral competence										
	General competences				Special (professional, subject) competences						
	GC1	GC2	GC3	GC4	SC1	SC2	SC3	SC4	SC5	SC6	SC7
MC 1.1.	•	•									
MC 1.2.			•	•						•	
MC 1.3.			•	•						•	
MC 1.4.	•	•									•
MC 1.5.		•	•								•
MC 1.6.	•	•	•								•
MC 2.1.	•		•			•	•	•	•	•	
MC 2.2.		•	•		•	•	•	•	•	•	
MC 2.3.	•	•				•	•		•		
SC 1.1			•	•						•	
SC 1.2	•	•						•	•	•	•
SC 1.3	•	•	•	•		•	•	•	•	•	
SC 1.4	•	•	•	•				•	•	•	
SC 1.5				•							•
SC 1.6	•	•				•	•	•	•		
SC 1.7			•	•		•	•			•	
SC 1.8	•			•	•						•
SC 1.9		•	•	•	•	•	•			•	
SC 1.10				•		•	•	•	•	•	•
SC 2.1		•	•	•	•			•		•	
SC 2.2				•				•	•	•	
SC 2.3			•						•		•
SC 2.4				•		•	•	•			•
SC 2.5			•		•	•	•		•	•	
SC 2.6			•		•	•	•	•	•	•	
SC 2.7			•		•				•	•	
SC 2.8			•		•				•	•	
SC 2.9	•		•							•	•
SC 2.10	•		•							•	•
SC 3.1											

**Symbols:** GC<sub>j</sub> – General competences, SC<sub>j</sub> – Special (professional, subject) competences, j – competence number in the list of competences of the educational component.

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

Components of the educational componen	Programmatic learning results													
	Kn1	Kn2	Kn3	Kn4	Kn5	Sk1	Sk2	Sk3	Sk4	Sk5	Com1	Com2	Au1	Au2
MC 1.1.		●						●			●			
MC 1.2.					●				●	●	●	●	●	
MC 1.3.					●				●	●	●	●	●	
MC 1.4.	●								●		●			●
MC 1.5.	●								●		●			●
MC 1.6.	●								●		●			●
MC 2.1.			●	●	●		●	●		●				
MC 2.2.			●	●	●		●	●		●	●			
MC 2.3.	●	●		●	●			●		●				
SC 1.1					●				●	●	●	●	●	
SC 1.2	●	●			●			●						
SC 1.3				●	●				●	●				
SC 1.4				●	●				●	●				
SC 1.5											●	●	●	
SC 1.6	●						●			●			●	
SC 1.7			●			●	●							
SC 1.8		●						●			●		●	
SC 1.9				●		●		●		●				
SC 1.10	●		●						●		●		●	●
SC 2.1			●		●		●			●				●
SC 2.2	●				●	●	●			●				●
SC 2.3	●				●	●	●			●				●
SC 2.4	●								●		●			●
SC 2.5	●		●	●	●	●	●							
SC 2.6	●		●	●	●	●	●							
SC 2.7	●		●	●	●	●	●							
SC 2.8	●		●	●	●	●	●							
SC 2.9		●		●				●						●
SC 2.10		●		●				●						●
SC 3.1														

**Symbols: Kn** – Knowledge, **Sk** – Skills, **Com** – Communication, **Au** – Responsibility and Autonomy

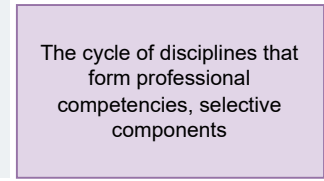
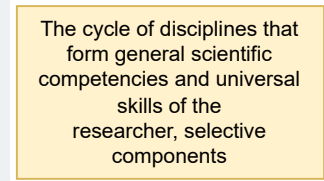
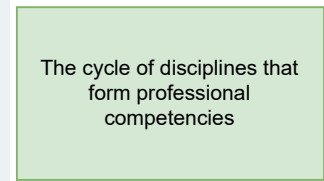
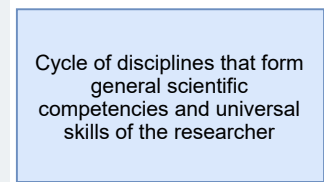
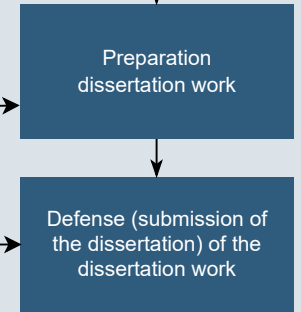
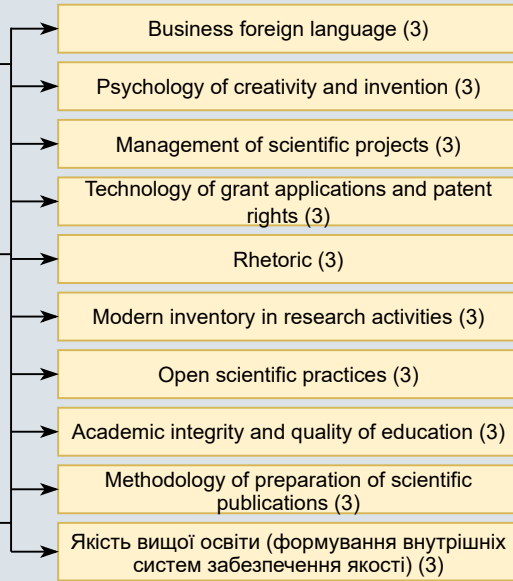
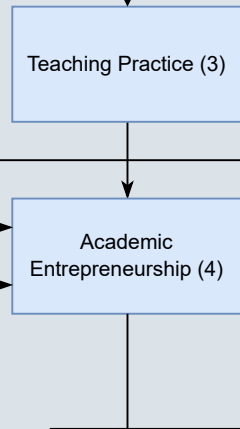
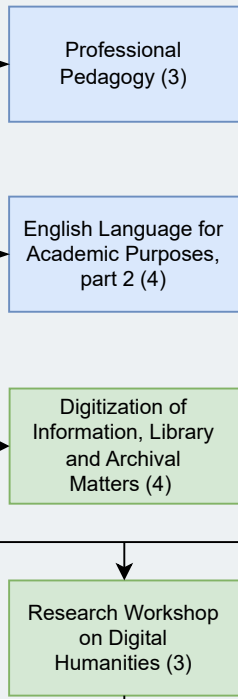
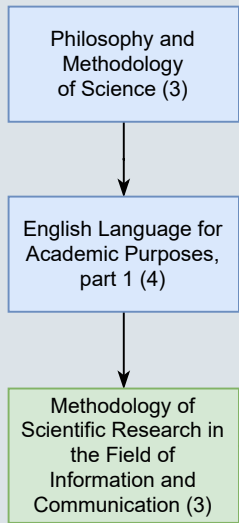
**I Semester**

**II Semester**

**III Semester**

**IV, V, VI Semesters**

**VII, VIII Semesters**



Scientific research on the topic of the dissertation work