

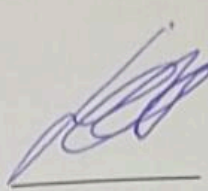
Ministry of Education and Science of Ukraine
Sumy National Agrarian University
Faculty of Law
Department of Justice and Philosophy

Syllabus of the educational component

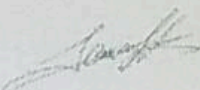
OK 1. PHILOSOPHY OF SCIENCE
(**mandatory**)

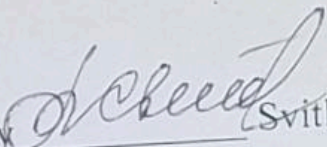
Specialty	D3 Management
Educational program	Management
HE level	doctor of philosophy
The third (educational and scientific) level of higher education	

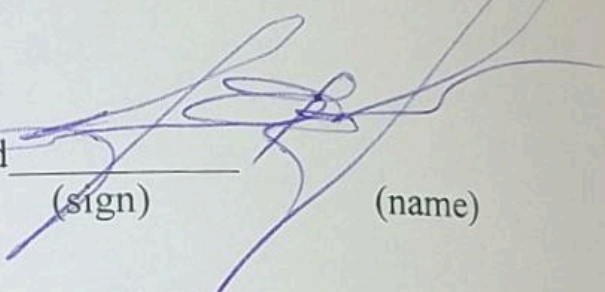
Creator ms Anzhelika Shevel, Candidate of
Philosophical Sciences, Associate
Professor

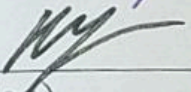
Considered, reviewed and approved on the meeting of the department: Justice and Philosophy	prot. from <u>12.05</u> 2026 № <u>12</u>
	The head of department:  Yurii KOTVIAKOVSKYI

Погоджено:

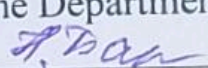
Guarantor of the educational program  Inna SOKHAN
(sign) (name)

Dean of the Faculty  Svitlana LUKASH
(sign) (name)

A review of the work program has been provided  (sign) (name)

A review of the work program has been provided  Alexander Kornienko
(sign) (name)

Head of PhD office

Methodologist of the Department of Educational Quality, licensing and
accreditation  N. Bananik
(sign) (name)

Registered in the electronic database: date: 24.06 2026

Information on viewing the work program (syllabus):

Academic year in which the changes are made	The number of the annex to the work program with a description of the changes	The changes were reviewed and approved		
		Date and number of the protocol of the meeting of the department	Head of department	Guarantor of EP

1. GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

1.	Name of EC	Philosophy of science		
2.	Faculty/Department	Faculty of Law, Department of Justice and Philosophy		
3.	State of EC	mandatory		
4.	Program/Specialty (programs) of which the OC is a component (to be filled in for mandatory OCs)			
5.	Program/Specialty	Scientific and educational program «Management». The third (educational and scientific) level of higher education. Level of higher education: doctor of philosophy. Specialty: D3 Management		
6.	Semester and studying duration	1 semester, 10 weeks;		
7.	ECTS credits number	3		
8.	Total workload and time allotment Language of instruction	Directed study		
		Lectures	Seminars	Self-directed study
		10	20	60
9.	Lecturer/Leader of educational component	English		
10.	ECTS credits number	Shevel Anzhelika Oleksandrivna, Candidate of Philosophical Sciences, Associate Professor of the Department of Justice and Philosophy		
11.	Contacts	Consultations hours – every tuesday at 12.15, online; inna.sokhan@snau.edu.ua		
12.	Educational component description	Philosophy of science is designed to provide graduate students with basic knowledge on organizing research work using general methods of scientific knowledge and applying formal-logical laws and philosophical principles in processing, understanding, and generalizing the results of scientific research.		
13.	Educational component aim	The purpose of the educational component: to form in graduate students general ideas about the history of the development of a specific field of science and the philosophy of scientific knowledge in general, about the methodology of scientific creativity, about the main provisions that characterize research work as qualified scientific research in a particular field of science.		
14.	Prerequisites for educational component studying, connection with other educational components of EP	The educational component is the basis for further scientific creativity in all branches of science.		

15.	Policy of academic integrity	According to the Code of Academic Integrity of the Sumy NAU, academic integrity is a set of principles, rules of behavior of participants in the educational process, aimed at forming an independent and responsible personality, capable of solving tasks in accordance with the educational level in compliance with the norms of law and social morality. Observance of academic integrity by students of higher education involves independent performance of educational tasks, tasks of current and final control, learning results. It is expected that students of higher education will adhere to the principles of academic integrity, being aware of the consequences of its violation, which is determined by the regulatory documents of the Sumy National Agrarian University, in particular the Code of Academic Integrity, the Regulations on the Prevention and Detection of Academic Plagiarism at the Sumy NAU (a full list of regulatory documents is posted on the university's website. https://snau.edu.ua/viddil-zabezpechennya-yakosti-osviti/zabezpechennya-yakosti-osviti/akademichna-dobrochesnist/). For violation of academic integrity, students of higher education may be held to the following academic responsibility: - repeated assessment (test, exam, credit, etc.); - repeated completion of the training course; - warning; - issuing a reprimand; - expulsion from the university; (Part 5 of Article 48 of the draft Law of Ukraine "On Education"); - arrest or restriction of liberty, or deprivation of liberty, with deprivation of the right to hold certain positions or engage in certain activities with a fine.
17.	Keywords:	life, epistemology, ethics, ideal, innovation, methodology of science, morality, science, scientific knowledge, scientific cognition, scientific and technological progress, professional code of honor of a scientist, freedom, sociology of science, worldview, artificial intelligence, values

2. LEARNING OUTCOMES UNDER THE EDUCATIONAL COMPONENT AND THEIR RELATIONSHIP WITH PROGRAM LEARNING OUTCOMES

Learning outcomes for EC (MLOs): On successful completion the educational component, the student will be able...	Program learning outcomes, PLOs (specify the number according to the numbering given in EP)		How is assessed
	PLO 5 To deeply understand the general principles and methods of management sciences, as well as the methodology of scientific research, to apply them in one's own research in the field of management and in teaching practice.	PLO 9 Demonstrate a systematic scientific worldview, rationally understand the challenges facing science in the context of socio-economic and environmental problems of our time (ethical dilemmas, values, global social transformations)publications.	
MLOs 1. Define and explain the key concepts, categories, principles, and concepts of the philosophy of science, and understand the specific features of the development of scientific knowledge and scientific methodology.	x	x	Report, discussion, survey, group work, discussion. Conducting modular control and certification control
MLOs 2. Apply philosophical and methodological approaches to the analysis of scientific problems, formulation of research tasks, and justification of methods for their own scientific research.	x	x	Preparation of multimedia presentations, , abstracts
MLOs 3. Analyze the structure, logic, and methods of scientific inquiry, and compare different scientific paradigms and methodological approaches.	x	x	Debate, philosophical quiz, brain-ring, preparation of multimedia presentations, abstracts

MLOs 4. Evaluate scientific theories, concepts, and research findings in terms of their validity, reliability, academic integrity, and practical significance.		x	Project presentation, round table discussion
MLOs 5. Develop their own methodological strategy for scientific research and formulate an evidence-based scientific position grounded in contemporary philosophical and methodological principles.	x	x	Discussion with elements of oral presentation of one's own position.

3. CONTENT OF THE EDUCATIONAL COMPONENT (CURRICULUM PROGRAM)

Topic. List of issues to be considered within the topic	Distribution within the general time budget		Learning resources
	Class work	Individual work	

Topic 1. Philosophy of science as a branch of philosophical knowledge Plan 1. Subject area of philosophy of science. Phenomenon of science in the structure of philosophy of science. 2. Historical types of worldview. 3. The relationship between philosophy and science, common and distinctive features of philosophy and science. 4. Historical types of the relationship between philosophy and science. 5. Phenomenon of science in the structure of philosophy of science. 6. Epistemology. Methodology of science. 7. Sociology of science Specificity of philosophical problems of science.	2	4	15	1, 2 4, 8, 13, 16, 20
Topic 2. The phenomenon of science. The main forms of existence of science. Plan 1. The genesis of scientific knowledge, classical, non-classical, post-non-classical science. 2. Science as a specific type of knowledge, attributive characteristics of scientific knowledge. 3. Science as a cognitive activity. 4. Science as a social institution. The systemic nature of science. 5. The main functions of science.	2	4	15	1, 2 4, 8, 9, 11, 12, 16, 20
Topic 3. Structure and methods of scientific knowledge. Plan 1. Levels of scientific knowledge. 2. Structure of empirical knowledge. 3. Methods of empirical research: scientific observation, comparison, measurement, experiment. 4. The relationship between empiricism and theory. 5. Methods of theoretical knowledge: idealization, formalization, mathematical modeling. 6. Structure of scientific theory. Metatheoretical level of scientific knowledge. 7. Scientific picture of the world, ideals and norms of scientific research and philosophical foundations of science.	2	4	15	1-13

Topic 4. Theory and practice of science as a social institution. Ethics of science. Plan 1. Science and morality. Ethics and deontology, professional code of honor of a scientist. 2. Main topics of ethical discussion of scientific and technical activity (goals of science, means of scientific activity. consequences of scientific activity. meaning of scientific activity). 3. Scientific knowledge: freedom and control. Ethical issues of special sciences. 4. The influence of science on the formulation of new ethical problems. 5. Scientific and technical progress and its moral problems.	2	2	15	1, 2, 4, 6, 7, 8, 13
Topic 5. Theories of the origin and development of life. Plan 1. Specificity of philosophical and methodological problems of biology. 2. Reductionism vitalism in the history of biology. The essence of living things. Scientific concepts of the origin of life. 3. The idea of development in biology (transformism, saltationism, evolutionism). 4. Global problems of humanity and. ways to solve them		2	15	2, 11, 15, 19, 23, 24
Topic 6. The phenomenon of innovation and its research. Plan 1. The phenomenon of innovation and its research. 2. Methodological individualism. 3. The social nature of innovation. 4. Motivation and personality.	2	4	15	5, 8, 9, 13, 15, 20, 21, 22, 23
Total	10	20	60	

4. TEACHING AND LEARNING METHODS

MLO	Teaching methods (work to be carried out by the teacher <u>during classroom classes</u> , consultations)	Teaching methods (what types of educational activities should the student <u>perform independently</u>)
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MLOs 1. Know the history of the formation and development of science as a socially significant phenomenon, the basic concepts, principles and categories of scientific knowledge; the philosophical and worldview foundations that guided scientists in creating their innovative theories	- conducting lectures with multimedia presentations on each topic; - moderating discussions based on the results of the reports; - conducting surveys, testing (multiple choice test)	- preparation of materials for a report, discussion, debate; - preparation for a survey, testing (multiple choice test)
MLOs 2. Be able to defend one's scientific position based on the theoretical and methodological basis of fundamental sciences	- conducting lectures with multimedia presentations for each topic; - moderating discussions based on the results of reports; - conducting surveys, testing (multiple choice test) - consultations; - checking multimedia presentations , abstracts;	- preparation of materials for reports; abstracts - preparation for surveys, testing (multiple choice test)
MLOs 3. Be able to analyze the most important theoretical problems of modern science	- conducting lectures with multimedia presentations for each topic; - moderating discussions based on the results of the reports; - conducting surveys; - organizing debates, preparing philosophical quizzes, brain-rings	- preparation of materials for the report; - preparation for a philosophical quiz, an intellectual game "brain ring" - preparation for a survey, testing (multiple choice test)
MLOs 4. Be able to link the development of science with the development of the spiritual and creative potential of humanity, aimed at the formation and practical use	- moderating the discussion based on the results of the reports; - conducting surveys, testing (multiple choice test) - consultations;	- preparation for the survey, testing (multiple choice test)
MLOs 5. Apply acquired knowledge in scientific activities, apply practical skills in analyzing a particular method of scientific research	- conducting lecture classes with multimedia presentations for each topic;	- preparation of materials for reports, discussions, debates;

5. EVALUATION BY THE EDUCATIONAL COMPONENT

5.1.1 To assess the expected learning outcomes, it is provided:

№	Methods of summative assessment	Points / Weight in the overall assessment	The date of compilation

1.	Practical task for topic 1 Philosophy of science as a branch of philosophical knowledge. Report	10 points /10%	Up to 4 weeks
2.	Practical task for topic 2 The phenomenon of science. The main forms of existence of science. Discussion	10 points /10%	Up to 5 weeks
3.	Practical task for topic 3 Structure and methods of scientific knowledge. Express poll	10 points /10%	Up to 6 weeks
4.	Testing on the topics covered (multiple choice test)	10 points /10%	Up to 8 weeks
5.	Practical task for topic 4 Theory and practice of science as a social institution. Ethics of science. Philosophical discussion.	10 points /10%	Up to 9 weeks
6.	Practical task for topic 5 Theories of the origin and development of life. Intellectual game "Brain Ring"	10 points /10%	Up to 10 weeks
7.	Practical task for topic 6 The phenomenon of innovation and its research. Express poll	10 points /10%	Up to 10 weeks
8.	Exam	30 points /30%	After 10 weeks
	Total	100%	

5.1.2 Evaluation criteria

Component	Unsatisfactory	Satisfactory	Good	Excellent
Practical task for topic 1 Philosophy of science as a branch of philosophical knowledge. Report	0 points The graduate student did not prepare a report, did not participate in the discussion	6 points The graduate student did not disclose the topic of the report, did not argue his position, did not answer additional questions, and did not show activity during the discussion.	points The postgraduate student partially covered the topic, did not sufficiently convincingly argue his position, did not answer some additional questions, participated in discussions	9-10 points The postgraduate student fully disclosed the topic of the report, convincingly argued his position, answered additional questions, and actively participated in the discussions.
Practical task for topic 2 The phenomenon of science. The main forms of existence of science. Discussion	0 points The graduate student did not participate in the discussion.	6 points The graduate student took a passive part in the discussion	points The graduate student participated in the discussion in the form of individual remarks and comments	9-10 points The postgraduate student actively participated in the discussion, independently formulated and expressed opinions on the topic

Practical task for topic 3 Structure and methods of scientific knowledge. Express poll	0-3 points Depends on the number of correct answers	4-6 points Depends on the number of correct answers	7-8 points Depends on the number of correct answers	9-10 points Depends on the number of correct answers
Testing on the topics covered (multiple choice test)	0-3 points Depends on the number of correct answers on the test	4-6 points Depends on the number of correct answers on the test	7-8 points Depends on the number of correct answers on the test	9-10 points Depends on the number of correct answers on the test
Practical task for topic 4 Theory and practice of science as a social institution. Ethics of science.. Philosophical discussion	0-3 points The graduate student did not participate in the discussion.	4-6 points The graduate student took a passive part in the discussion	7-8 points The graduate student participated in the discussion in the form of individual remarks and comments	9-10 points The postgraduate student actively participated in the discussion, independently formulated and expressed opinions on the topic
Practical task for topic 5 Theories of the origin and development of life.. Intellectual game "Brain Ring"	0 points The graduate student did not participate in the intellectual game	2-4 points The graduate student did not show activity in teamwork	5-8 points The graduate student participated in teamwork, gave some correct answers	9-10 points Active participation in the game, accurate and complete answers to questions
Practical task for topic 6 The phenomenon of innovation and its research	0-3 points Depends on the number of correct answers	4-6 points Depends on the number of correct answers	7-8 points Depends on the number of correct answers	9-10 points Depends on the number of correct answers

Express poll				
Exam	0-5 points The postgraduate student is not sufficiently familiar with the theoretical material	5-15 points The postgraduate student has a satisfactory knowledge of the material	15-27 points The postgraduate student is well-versed in theoretical material.	27-30 points The postgraduate student is well versed in theoretical materia

5.2 . Formative assessment:

5.2.1 To evaluate the current progress in education and understand the areas of further improvement, is provided

Nº	Elements of formative assessment	Date
1	Testing after learning the topics № 1-2,3-4, 5-6.	4 week, 6 week, 9 week, 10 week
2	Passing current control testing with feedback from the teacher	constantly
3	Self-assessment	1-3, 10 week
4	Verbal feedback from the teacher during classes	constantly
5	Peer evaluation	5, 9, 10 week
6	Written feedback on abstracts, multimedia presentations	constantly
7	Verbal feedback from the teacher and students after the exam	6, 10 week

Self-assessment can be used as an element of summative assessment and formative assessment.

5.3 Total number of points for EC and rating scale

The total number of points for the educational component is 100 points.

5.3.1 Evaluation scale operating at the University:

The sum of points for all types of educational activities	Evaluation on a national scale	
	For an exam, course project (work), practice, qualification work	For a credit
90 – 100	excellent	

82-89	good	passed
75-81		
69-74	satisfactory	
60-68		
35-59	not satisfactory with the possibility of retaking	not passed with the possibility of retaking
0-34	factory with obligatory repeated study of the discipline	not passed with obligatory repeated study of the discipline

LEARNING RESOURCES (LITERATURE)

6.1. Methodological Support

1. Lecture Notes for the academic discipline “Philosophy of Science” for Doctor of Philosophy (PhD) degree students of all specialties in full-time and part-time modes of study (Minutes No. 2, October 9, 2023). 157 pages.
2. Guidelines for Independent Work in the academic discipline “Philosophy of Science” for Doctor of Philosophy (PhD) degree students of all specialties in full-time and part-time modes of study (Minutes No. 2, October 9, 2023). 19 pages.
3. Guidelines for Seminar Classes in the academic discipline “Philosophy of Science” for Doctor of Philosophy (PhD) degree students of all specialties in full-time and part-time modes of study (Minutes No. 2, October 9, 2023). 26 pages.

Main References

1. Bronnikova, L. V. Philosophy of Science. Methodological Recommendations for PhD Students for Studying the Course: Methodological Guidelines. Mykolaiv: Petro Mohyla Black Sea National University Publishing House, 2021. 24 p.
2. Danyliyan, O. H. Philosophy: Textbook. 2nd ed., revised and expanded. Kharkiv: Pravo, 2024. 432 p.
3. Kushakova-Kostytska, N. V. Philosophical and Legal Foundations of the Development of the Information Society in Ukraine: Monograph. Kyiv: Logos, 2022. 346 p.
4. Liutyi, T. Adventures of Philosophical Ideas in the Western World: From Antiquity to Modernity. Kyiv: Tempora, 2024. 379 p.
5. Maksiuta, M. Ye., and Sokolova, O. M. Philosophy of Science: Humanitarian and Pedagogical Synthesis. Monograph. Kyiv: Helvetica, 2023. 316 p.
6. Semeniuk, E. S. Philosophy of Modern Science and Technology: Textbook. Lviv: Ivan Franko National University of Lviv, 2023. 456 p.
7. Danyliyan, O. H., Dzoban, O. P., Zhdanenko, S. B., et al. Society, Human Being, and Law: Experience of Philosophical and Legal Understanding: Monograph. Edited by O. H. Danyliyan. Kharkiv: Pravo, 2021. 350 p.
9. Petrushenko, V. Philosophy and Methodology of Science: Study Guide. Lviv, 2022. 342 p.

10. Petruk, N. K., Hapchenko, O. V., and Levchenko, A. V. *Philosophy of Science: Study Guide*. Khmelnytskyi: Khmelnytskyi National University, 2022. 271 p.
11. Chekal, L. A., Horbatiuk, T. V., Storozhuk, S., et al. (Compilers). *Philosophy of Science and Innovative Development*. Kyiv: Millennium, 2020. 782 p.
12. *Philosophy of Science, Technology, and Architecture in the Humanistic Dimension: Monograph*. Kyiv: 7BC, 2021. 198 p.
13. Bahynskyi, V., Vilchynska, S. V., Homilko, O. Ye., Yermolenko, A. M., et al. *Philosophical Foundations of Scientific Research: Monograph*. Executive Editor: Yu. A. Ishchenko. National Academy of Sciences of Ukraine, Center for Humanitarian Education. Kyiv: Interservice, 2021. 239 p.
14. *Philosophy: Terms and Concepts*. Educational Encyclopedic Dictionary. Ministry of Education and Science of Ukraine. Scientific Editor: V. L. Petrushenko. Lviv: Novyi Svit-2000, 2020. 492 p.
15. Shevel, A. O. "Features of Ukrainian Migration to Belgium as a Consequence of the Russian-Ukrainian War." *Scientific Notes of the International Humanitarian University*, No. 37, 2022, pp. 14–20.
16. Shevel, A. O. "Understanding Success by the Ancient Greeks." *Scientific Notes of the International Humanitarian University*, No. 35, 2022, pp. 114–117.
17. Shevel, A. O. "The Relevance of Studying the Discipline 'Philosophy of Science' in the Training of PhD Students in the Field of Knowledge 07: Management and Administration." In: *Slobozhansky Scientific Readings: Socio-Economic, Humanitarian and Legal Dimensions*. Proceedings of the All-Ukrainian Scientific and Practical Conference, October 17–18, 2023. Kharkiv: NTU "KhPI", 2023, pp. 354–357.
18. Shevel, A. O. "Paradigm Shift in the Philosophy of Science with the Emergence of Artificial Intelligence." *Current Issues of Philosophy and Sociology*, No. 45, 2023, pp. 56–59.
19. Shevel, A. O. "Specific Features of Conducting 'Philosophy of Science' Seminars for PhD Students of SNAU." In: *Youth of Science – 2024*. Proceedings of the International Scientific and Practical Conference of Students, Postgraduates and Young Scientists, April 24–26, 2024. Chernihiv Polytechnic National University, pp. 112–114.
20. Shevel, A. O. "European Experience in Conducting Humanities Seminars for PhD Students: The Case of the Université Libre de Bruxelles." In: *II All-Ukrainian Internet Conference 'Hlukhiv Historical and Philosophical Readings'*, April 17, 2024. Oleksandr Dovzhenko Hlukhiv National Pedagogical University, pp. 234–236.
21. Shevel, A. O. "Ethical Aspects of Artificial Intelligence." *Bulletin of Lviv University. Series: Philosophical and Political Studies*, No. 56, 2024, pp. 145–152.

22. Shevel, A., and Tsyhanok, H. "Educational Environment Security: Axiological Aspect." *Zeszyty Naukowe WSTiE (Scientific Journals of the Higher School of Tourism and Ecology, Poland)*, Vol. 21, Year XI, No. 1, 2022, pp. 129–137.
23. Hryn, O., Shevel, A., Shcherbyna, N., Kubrak, O., and Zadorozhnyi, K. "Implementation of Artificial Intelligence in the System for Detecting Academic Dishonesty in Ukrainian Secondary and Higher Education Institutions." *Periodicals of Engineering and Natural Sciences*, Vol. 13, No. 2, 2025. DOI: 10.21533/pen.
24. Getman, A., Danyliyan, O., Dzeban, A., Kalinovsky, Y., and Hetman, Y. "Information Security in Modern Society: Sociocultural Aspects." *Amazonia Investiga*, Vol. 9, No. 25, 2020, pp. 6–14.
25. Purcell, Sebastian. "How the Mayan Philosophy of Time Can Teach You to Recover Daily Joys." *Medium*, September 3, 2020.
26. Stewart, Georgina Tuari. *Maori Philosophy: Indigenous Thinking from Aotearoa*. London: Bloomsbury Academic, 2020.

Information Resources

Moodle Platform: <https://cdn.snau.edu.ua/moodle/course/view.php?id=158>

SNAU Library and Information Resource (book collections, periodicals, electronic resources, etc.): <https://library.snau.edu.ua/>

SNAU Institutional Repository (scientific articles, dissertation abstracts, dissertations, teaching materials, student papers, conference proceedings, learning objects, research reports, etc.): <http://repo.snau.edu.ua/>

Stanford Encyclopedia of Philosophy: <http://plato.stanford.edu>

Internet Encyclopedia of Philosophy: <http://iep.utm.edu>