МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ ІМЕНІ СЕМЕНА КУЗНЕЦЯ

ЗАТВЕРДЖЕНО

на засіданні кафедри міжнародних відносин, політичних наук і практичної філософії Протокол № 1 від 28.08.2023 р.



ФІЛОСОФІЯ НАУКИ робоча програма навчальної дисципліни (РШД)

Галузь знань Спеціальність Освітній рівень Освітня програма

29 Міжнародні відносини 292 Міжнародні економічні відносини Третій (освітньо-науковий) рівень Міжнародні економічні відносини

Статус дисципліни Мова викладання, навчання та оцінювання

обов'язкова англійська

Розробники: д.філос.н., проф.

к.філос.н., доцент

Завідувач кафедри міжнародних відносин, політичних наук і практичної філософії (4 Free

Олег КУЗЬ

Ігор БІЛЕЦЬКИЙ

Олег КУЗЬ

Ірина ОТЕНКО

Харків 2024

Гарант програми

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS

APPROVED

at the meeting of the department of international relations, political sciences and practical philosophy Protocol № 1 of 28.08.2023

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PHILOSOPHY of SCIEN Program of the course

Field of knowledge Speciality Study cycle Study programme

29 International relations 292 International economic relations the third (educational and scientific) International economic relations

Course status

mandatory

English

Developers: Doctor in Philosophy Professor PhD (Philosophy), Associate Professor

Oleh KUZ

Igor BILETSKY

Head of the department of international relations, political sciences and practical philosophy

Oleh KUZ

Head of the program

Iryna OTENKO

Kharkiv 2024

INTRODUCTION

Philosophy of science is an integrative system of knowledge that considers science as a holistic phenomenon, internal and external aspects of the development of science, introduces the basics of general scientific and social-humanitarian methodology, scientific rationality, worldview and terminology, teaches the basics of analysis of scientific theories and methods, as well as basic socio-humanitarian aspects of the influence of science and scientific technologies on the evolution of man, society and culture. The philosophy of science as a course is aimed at forming the consciousness and competences of the future professional scientist in terms of the ability to solve complex problems of the economy on the basis of a systematic scientific worldview and a general cultural outlook in compliance with the principles of professional ethics and academic integrity; to determine new trends and trends in the development of socio-economic phenomena and processes, to identify cause-and-effect relationships with the use of creative technologies in the implementation of scientific research; to propose new solutions, develop and scientific projects that make it possible to rethink existing and create new integral knowledge and/or professional practice and solve significant and fundamental and applied problems of economic science, taking into account social, economic, environmental and legal aspects; to ensure the commercialization of the results of scientific research and the observance of intellectual property rights.

The subject of the course is scientific knowledge.

The subject matter of study of the course is the general logical and methodological regularities of the development of science and its social functions in modern civilization.

The purpose of teaching the course "Philosophy of Science" is the formation in the students of the educational and scientific degree of Doctor of Philosophy of a modern scientific worldview, the mastery of the plural methodology of research programs and the awareness of systemic and methodological (cultural, political, socioeconomic, cognitive-cognitive, etc.) problems that directly or indirectly related to the progress of science and technology and the development of man-made civilization as a whole.

The program of the course "Philosophy of Science" is compiled in accordance with of the educational and scientific program for the preparation of doctors of philosophy in the specialty 292 International economic relations.

The learning outcomes and competence formed by the course are defined in the table. 1.

Table 1

Competencies	Learning outcomes
C C 01	LO01
GC01	LO02
SC01	LO02

Learning outcomes and competences formed by the study course

GC01. The ability to think abstractly, carry out analysis and synthesis.

SC01. The ability to perform original research, to achieve scientific results that create new knowledge in the field of international economic relations and related interdisciplinary areas and can be published in leading scientific publications.

LO01. To have advanced conceptual and methodological knowledge, research skills, sufficient for conducting scientific and applied research at the border of subject areas, taking into account modern trends and trends of the latest achievements of world science.

LO02. Think critically, generalize and analyze the phenomena and problems being studied, make effective decisions based on modern decision-making methods, logical arguments and proven facts in conditions of limited time and resources.

COURSE CONTENT

Content module 1. Science as a cultural phenomenon

Topic 1. Science as a cultural-civilization phenomenon

What is science: definition and essence. History of science. The emergence of prerequisites for scientific knowledge in the ancient world. The origin and development of classical science. Non-classical science. Post-classical science. Science and practice. Science and society.

Diversity of forms of knowledge. Scientific and non-scientific knowledge. Peculiarities of science compared to other forms of cognitive activity. Scientific knowledge as a system, its features and structure. Classification of sciences and the problem of periodization of the history of science. Heredity, unity of quantitative and qualitative changes in the development of science. Differentiation and integration of sciences, interaction of sciences and their methods. Strengthening the mathematization, theorization and dialectization of science. Dynamics of scientific knowledge. Natural, humanitarian, formal, technical sciences.

Science as a sociocultural phenomenon. Science, man, everyday life. Science as a response to human needs. Ethics of science. Philosophical portrait of a scientist. Professional and social responsibility of a scientist.

Topic 2. Genesis and evolution of science

Philosophy of science. The relationship between philosophy and science. Formation of science as a professional activity. Emergence of disciplinary and organized science. The subject area of the philosophy of science. Emergence of the philosophy of science as a direction of modern philosophy. Stages of development of the philosophy of science. The emergence and development of the philosophy of science. The emergence and development of the philosophy of science. Positivism. Empiriocriticism. Neopositivism and the methodology of science. Post-positivist theories of science. Peculiarities of the philosophy of science of the late 20th - early 21st centuries.

Methodology of humanitarian sciences.

Topic 3. Epistemology and epistemology

Classical and non-classical rationality: mind and culture. The diversity of forms of rationality. Rationality as a way of a person's attitude to the world. The structure and typology of rationality. Determinants of the development of scientific rationality. Historical types of scientific rationality. Global scientific revolutions and the change of historical types of scientific rationality.

The classical ideal of rationality and its embodiment in the historical type of rationality of classical science. Revealing the limitations of the classical ideal of rationality during the scientific revolution of the beginning of the 20th century. Non-classical and post-classical scientific rationality. Classical theory of truth. Coherent, conventional and fideistic theories. Pragmatic theory of truth.

Scientific knowledge as a complex, developing system. Variety of types of scientific knowledge. Empirical and theoretical levels, criteria for their distinction. Peculiarities of the empirical and theoretical language of science. The structure of empirical knowledge. Experiment and observation. Empirical facts. Fact formation procedures. The problem of the theoretical load of the fact.

The structure of theoretical knowledge. Theoretical models as an element of the internal organization of the theory. Limitation of the hypothetical-deductive concept of theoretical knowledge. The role of constructive methods in the deductive development of the theory. Paradigm. Mathematization of theoretical knowledge. Research ideals and norms and their sociocultural dimension.

The scientific picture of the world, its functions: the picture of the world as an ontology, as a form of systematization of knowledge, as a research program. The role of philosophical ideas and principles in the justification of scientific knowledge. Integral theory of K. Wilber. Phenomenological theories of truth.

Rationality in cognitive and social systems. Sociocultural and existential prerequisites of the crisis of scientific rationality. Science as a form of domination and a factor of alienation. The problem of establishing a connection between science and the human life world.

Scientific rationality and technology. Mechanization and the world of life. The rationalist project of modernism and its criticism. Modern philosophy of science on the way to a new understanding of scientific rationality.

Content module 2. Logical-methodological structure of science

Topic 4. Logic and methodology of science

Scientific theory and its components. Scientific concept and terms. Laws and principles.

Method and methodology. Classification of methods. Basic models of the relationship between philosophy and special sciences. Functions of philosophy in scientific knowledge. General scientific methods and methods of research. Normative nature of methodological principles of science. General scientific methodological principles as requirements for scientific theory. The requirement of verifiability or the principle of observation. The requirement of maximum generalization of the theory or

its explanatory power. The requirement of the predictive power of the theory. The requirement of fundamental simplicity of the theory. Understanding and explanation.

The main methodological programs of our time: inductivism, falsificationism, conventionalism, historicism. Criticism and rationality in the concept of K. Popper. Relativity of norms of cognitive activity (M. Polanyi). Evolutionary epistemology and evolutionary program Art. Toulmina. Historical-evolutionary direction (T. Kuhn). Logical-normative model of knowledge growth in the research program of I. Lakatos. Pluralism in epistemology by P. Feyerabend. Thematic analysis of science (J. Holton).

Styles of scientific thinking and methodological problems of specific sciences. The style of scientific thinking as a concrete-historical way of existence of the ideals and norms of scientific research, which corresponds to the scientific picture of the world of its time. Methodological principles as a component of the style of scientific thinking, the historical character of methodological principles of specific sciences, their heuristic role.

Topic 5. Sociocultural determination of scientific and technological knowledge

Natural, humanitarian, socio-economic theories. The problem of truth and rationality in the social and humanitarian sciences. The text as a special reality and "unit" of methodological and semantic analysis of socio-humanitarian knowledge. Hermeneutics and the circle of hermeneutics. Social verification of scientific knowledge in socio-humanitarian, technological and natural sciences. Explanation, understanding, interpretation in social sciences and humanities. Explanation and understanding in sociology, historical, economic and legal sciences, psychology, philology, cultural studies.

Philosophical methodology and its application in the field of social and humanitarian knowledge.

Information technologies and information culture. The concept of transhumanism and the evolutionary future of man.

Topic 6. Ontology of science

The dualistic content of the category "ontology of science". Subject-object dichotomy through the prism of M. McLuhan's theory. Causality, determinism, synergy. Synergetics in natural and social sciences.

Matter, energy and information as fundamental categories of science. General characteristics of the evolution of the concepts of determinism. Philosophical foundations of the study of self-organizing systems. The role of nonlinear dynamics and synergy in the development of modern ideas about historically developing systems. Global evolutionism as a synthesis of evolutionary and systemic approaches. Multiple universe theory.

Nature of values and their classification. Value concepts of I. Kant, V. Dilthey, H. Rickert. The principles of K. Popper's "logic of social sciences". Value judgments in science and the need for "value neutrality" in social research. Non-scientific criteria of validity and provenance of scientific knowledge: principles of beauty and simplicity in socio-humanistic knowledge.

Topic 7. Science as a social institution. Sociology and cultural science

Different approaches to defining the social institution of science. Historical development of methods of transmission of scientific knowledge (from handwritten editions to the modern computer). Historical development of institutional forms of scientific activity. Scientific communities and their historical types: the republic of scientists (XVII–XVIII centuries), scientific communities of the era of disciplinary organized science (XIX–XX centuries); formation of interdisciplinary societies of science of the 20th century. Scientific schools. Training of scientific personnel.

Computerization of science and its social consequences. Science and economy. Science and power. The problem of secrecy and secrecy of scientific research and state regulation of science. Politicized science. Theory of information civilization.

Topic 8. Evolutionary epistemology (dynamics and patterns of the scientific knowledge growth). Philosophy of economics.

The main characteristics of modern post-non-classical science. Modern processes of differentiation and integration of sciences. Connection of disciplinary and problemoriented research. The problem of science and technology as a source of existential risk. Post-classical science and worldview guidelines of man-made civilization. Connection of disciplinary and interdisciplinary research. Involvement of social values in the process of selecting research strategies. The problem of humanitarian control in science and high technologies. The crisis of the ideal of value-neutral research and the problem of ideologized (politicized) science. Changing worldview guidelines of man-made civilization. Scientism and anti-scientism. Science and parascience. Scientific rationality and the problem of cultural dialogue. The role of science in overcoming modern global crises.

The role of social and humanitarian sciences in social transformations. Social and humanities as a cultural phenomenon. Convergence of scientific and natural and social and humanitarian knowledge. Social and humanitarian sciences and power. Social and humanitarian sciences and morality. Social responsibility of the scientist. Participation of social and humanitarian sciences in the examinations of social projects and programs. Prospects of their development in modern society.

Types of economy: gift economy and benefit economy. Paradigms of economic theory and philosophy of money. The concept of "homo economicus" and its alternatives - the economy of competition and the economy of cooperation. The phenomenon of potlach in archaic and modern societies.

The list of practical (seminar) studies in the course is given in table 2.

Topics	Content
Topic 1.	Discussion at a practical session on the question "What is science?"
Topic 2.	Mini-lecture: Karl Marx and Max Weber vis-à-vis
Topic 3.	Discussion at a practical session on the question "Quid est veritas?"
Topic 4.	Mini-lecture on the question "Why there are no "pure" facts and what to do with the irresistibility of metaphysics?"
Topic 5.	Mini-lecture "Social stratification in the academic community"
Topic 6.	"How do the value foundations of science correlate with the requirement of its objectivity?": work in small groups
Topic 7.	Debate at the practical lesson: "Myth has done much more than science - it has created culture"
Topic 8.	Work in small groups to prove or disprove the thesis "Ars longa, vita brevis"

List of practical (seminar) studies

The list of self-studies in the course is given in table 3.

Table 3

List of self-studies

Topics	Content
Topics 1 - 8	Studying lecture material
Topics 1 - 8	Preparation for practical (seminar) classes
Topics 1 - 8	Execution of individual tasks
Topic 4	Writing an essay on "Quid est veritas?" and/or "Why are there no "pure" facts and what to do with the irresistibility of metaphysics?"
Topics 1 - 8	Preparation for the exam

The number of hours of lectures, practical (seminar) studies and hours of selfstudy is given in the technological card of the course.

TEACHING METHODS

When developing the course "Philosophy of Science", traditional methods of information-receptive and reproductive directness, as well as modern methods of activating initial-cognitive activity, are used. pre-graduate students of the educational-scientific level, Doctor of Philosophy, who convey the development of such initial technologies as: problem lectures, mini-lectures, discussions, debates, work in small groups.

Verbal (lecture (Topic 1-8), problematic lecture (Topic 7–8), mini-lecture (Topic 2, 4)).

In person (demonstration (Topic 1-8)).

Practical (practical work (Topic 1 - 8), essay (Topic 4), seminar-discussion (Topic 1, 3, 6, 7, 8)).

FORMS AND METHODS OF ASSESSMENT

The system for evaluating the developed competences of students of the degree of Doctor of Philosophy takes into account the types of classes that, according to the program of the course, include lectures, seminars (practical) classes, as well as selfstudies. The assessment of the developed competences of graduate students is carried out according to a cumulative 100-point system.

Control measures include:

- current control, which is carried out during the semester during lectures and seminars and is evaluated by the sum of points scored (the maximum sum is 60 points; the minimum sum that allows a graduate student to pass the exam is 35 points);

- final/semester control conducted in the form of a semester exam, in accordance with the schedule of the educational process.

The procedure for the current assessment of the knowledge of higher education applicants for the degree of Doctor of Philosophy.

The current monitoring of study success is carried out in the form of:

- express survey on the content of the topics covered - 3 times per semester at seminar classes, orally. The maximum mark for the report is 5 points (5-point rating scale, total 15 points per semester), it can be obtained if the answer is reasoned, reveals the depth and originality of thinking; contains the learned theoretical material in its entirety;

- a scientific report (analytical report) on a given topic - 3 times per semester at seminar classes, orally. The maximum grade for the report is 5 points (5-point rating scale, total 15 points per semester), it can be obtained if the report has a logical structure, the conclusions are well-argued, the theoretical material is presented freely with an understanding of the main concepts;

- essay checks on a given topic - 1 time per semester, the defense is conducted at seminar classes in a mixed form (imitation of a public speech plus its text). The maximum grade is 10 points (10-point scale, only 10 points per semester);

– presentations of an analytical essay (on a pre-agreed topic) at a seminar class – once per semester. The maximum score is 20 points (10-point scale with a factor of $\times 2$, a total of 20 points per semester).

The final control of the educational success of students of the degree of Doctor of Philosophy in the course "Philosophy of Science" and the level of their competences, which are supported by this educational component of the curriculum, is carried out on the basis of a semester exam, the task of which is to check the graduate student's understanding of the program material as a whole, logic and interrelationships between separate sections, the ability to creatively use the accumulated knowledge, the ability to formulate one's attitude to a certain problem of the course, etc.

The exam card covers the program of the course and provides for determining the level of knowledge and degree of mastery of competencies by graduate students. Each exam card consists of 4 tasks (2 stereotypical, 1 diagnostic and 1 heuristic task), which allow to diagnose the level of theoretical / practical training, the formation of competencies of graduate students, provided by the work program of the course. The

result of the semester exam is evaluated in points (the maximum number is 40 points, the minimum number that is counted is 25 points).

Students for the degree of Doctor of Philosophy should be considered certified if the sum of the points obtained as a result of the final/semester performance check is equal to or higher than 60. The minimum possible number of points for current and module control during the semester is 35 and the minimum possible number of points scored on the exam , -25.

The final grade for the course is calculated taking into account the points obtained during the exam and the points obtained during the current control of the cumulative system.

More detailed information on the assessment system is provided in technological card of the course.

An example of an exam card and assessment criteria

Simon Kuznets' Kharkiv National University of Economics 29 International relations 292 International economic relations The third (educational and scientific) level Semester I Study course "Philosophy of science"

EXAM CARD No 1

Task 1 (stereotypical, 5 points)

Fill in the table in which the correspondence between the resulting theories of truth and their definitions would be established: 1) knowledge that corresponds to reality; 2) a system of coherent and consistent knowledge; 3) knowledge that leads to the achievement of the set goal; 4) what a person believes in; 5) what is accepted as truth.

Conceptions of truth	Definition	
Classical theory of truth	Truth is	
Pragmatist theory of truth	Truth is	
Coherent theory of truth	Truth is	
Conventional theory of truth	Truth is	
Fideist theory of truth	Truth is	

Task 2 (stereotypical, 10 points)

Define:

- 1) Duhem-Quine thesis;
- 2) Kuhn-Feyerabend thesis;
- 3) What is synergy?
- 4) What is hermeneutics?
- 5) What is operationalism?

Task 3 (diagnostic, 10 points)

Evolutionary theory of science by St. Toulmin.

Task 4 (heuristic, 15 points)

Analyze the neoliberal theory of M. Friedman through the prism of the synergy ideas.

Protocol No. ____ dated "___"___20___ was approved at the meeting of the Department of International Relations, Political Sciences and Practical Philosophy.

Examiner Chief of Department

Ph.D., Assoc. Biletsky I. D.Sc., prof. Kuz O.

Evaluation criteria

The final control of knowledge of the course "Philosophy of science" is carried out on the basis of the semester exam.

Each exam card consists of 4 tasks (tasks 1-2 – stereotype level; task 3 – diagnostic and task 4 – heuristic levels).

Task 1 of the stereotype level is presented in the form of a test consisting of 5 questions and 5 options for answering them; each correct answer gives 1 point, up to 5 points in total.

Task 2 of the stereotype level is presented in the form of 5 questions that require a short answer (give a definition), each correct answer gives 2 points, up to 10 points in total.

Task 3 of the diagnostic level is an open question that requires demonstration of the skills of applying the acquired knowledge. The maximum number of points is 10.

Task 4 of the heuristic level is an open problem question that requires a systematized, rationally based, reasoned answer and aims to demonstrate skills in creating new knowledge. The maximum number of points is 15.

Diagnostic task evaluation system

Degree of execution	points
The answer is reasoned, reveals the depth and originality of thinking. Contains	10
learned theoretical / practical material in full	
The answer is reasoned, reveals the depth and originality of thinking. Minor mistakes	
were made when working with theoretical / practical material	9
The answer is generally well-argued, reproduces independent thinking, but lacks	
systematization. Minor mistakes were made when working with theoretical /	8
practical material	
The answer is generally correct, but there is a lack of reasoned conclusions, certain	
mistakes were made when defining categories, semantic connections, etc.	7
The answer reveals the student's awareness of the problem of the question, but there	
is a lack of reasoned conclusions, certain mistakes were made when defining	6
categories, semantic connections, etc.	
The answer reveals the student's awareness of the problem of the question, but there	
is a lack of reasoned conclusions; certain difficulties were found when operating	5
theoretical / practical material	
There is only a partial coverage of the content of the question; certain difficulties	4
were found when operating theoretical / practical material	4
When answering questions, significant mistakes were made that affect the content;	3
independence of thinking is revealed only partially	3
The answer reveals only a general familiarization of the student with the problem of	2
the question; independent thinking and conclusions are absent	2
The answer actually does not intersect with the content of the question	1

Heuristic task evaluation system

earned theoretical / practical material in full. The student offers really new and15original ideas and approaches to the analyzed problem14The answer is reasoned, reveals the depth and originality of thinking. Contains14earned theoretical / practical material in full13The answer is reasoned, reveals the depth and originality of thinking. Minor mistakes13were made when working with theoretical / practical material12The answer is generally well-argued, reproduces independent thinking, but lacks12systematization. Minor mistakes were made when working with theoretical / practical material11The answer is generally correct, but there is a lack of reasoned conclusions, certain mistakes were made when defining categories, semantic connections, etc.11The answer shows the student's awareness of the problem of the question, but there is a lack of reasoned conclusions; certain mistakes were made when defining categories, semantic connections, etc.10Phe answer reveals the student's awareness of the problem of the question, but there is a lack of reasoned conclusions; certain mistakes were found when operating9	Degree of execution	points
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