



PHILOSOPHICAL FUNDAMENTALS OF SCIENTIFIC ACTIVITY:

1. SCIENTIFIC WORLDVIEW AND ETHICAL CULTURE OF SCIENTIST
2. PHILOSOPHICAL EPISEOLOGY AND EPISTEMOLOGY

Working program of the discipline (Syllabus)

	Details of the discipline
Level of higher education	<i>Third (educational and scientific)</i>
Branch of knowledge	<i>For all fields of knowledge</i>
Specialty	<i>For all specialties</i>
Educational program	<i>For all educational programs</i>
Discipline status	<i>Normative</i>
Form of study	<i>full-time (day) / full-time (evening) / remote / mixed</i>
Year of preparation, semester	<i>1 course, autumn and spring semesters</i>
The scope of discipline	Educational component 1: 2 ECTS credits / 60 hours: (13 hours - lectures, 13 hours - seminars, 34 hours - VTS) Educational component 2: 4 ECTS credits / 120 hours. (18 hours - lectures, 36 hours - seminars, 66 hours - VTS)
Semester control / control measures	Educational component 1: Credit, MCR, current control Educational component 2: Exam, abstract
Lessons schedule	https://aspirantura.kpi.ua/?p=3443
Language of instruction	<i>Ukrainian</i>
Information about course leader / teachers	Educational component 1: Lecturer: Doctor of Philosophy, Associate Professor, Muratova Irina Anatoliyivna, Mob .: +380661296062; e-mail: muratova1041@gmail.com Seminars: https://fsp.kpi.ua/ua/departament/philosophy/ Educational component 2: Lecturer: Doctor of Philosophy, Professor Alexander Rubanets Mykhaylivna, rubanets@gmail.com Seminars: Doctor of Philosophy, Professor Oleksandra Mykhailivna Rubanets, rubanets@gmail.com Candidate of Philosophical Sciences, Associate Professor Balakirova Svitlana Yuriyivna, 84sb@ukr.net Candidate of Philosophical Sciences, Associate Professor Rudenko Tamara Petrovna
Course placement	Link to Google Classroom Remote Resource: https://classroom.google.com/c/MTQ3MDAyMDg3ODkx?cjc=3z5o5oo

Curriculum of the discipline

1. Description of the discipline, its purpose, subject of study and learning outcomes

The subject of the discipline - fundamental philosophical knowledge of ideological and ethical principles research and educational activities that determine the figure of the scientist, his worldview and ethical culture in the development of the innovation system of Ukraine in the context of international cooperation; basic concepts that reveal the essence and features of knowledge production in science, characteristic of the modern stage of its

development, modern cognitive processes, reveal the development of methodology as a component of modern science, provide basic philosophical knowledge about the nature of scientific and scientific-technical creativity, reveal the role of science as the core of the national innovation system and reveal the impact of science on rationality in society and the development of modern social strategies.

The purpose of the discipline there is a formation of higher competencies in applicants for higher education:

- ability to critically analyze, evaluate and synthesize new and complex ideas;
- ability to abstract thinking, analysis, synthesis and evaluation of modern scientific achievements, generating new knowledge in solving research and practical problems;
- ability to adhere to moral and ethical rules of conduct, ethics of research, characteristic of participants of the academic environment, as well as the rules of academic integrity in research.

B As a result of studying the discipline, applicants for higher education will acquire the following general program learning outcomes:

- be able to apply knowledge of the basics of analysis and synthesis in various subject areas, critical thinking and solving research problems
- understand the philosophical concepts of the scientific worldview, the role of science, explain its impact on social processes.
- be able to formulate and test hypotheses; use appropriate evidence to substantiate the conclusions, in particular, the results of theoretical analysis, experimental research and mathematical and / or computer modeling, available literature data.
- know the methodology of scientific research in the subject area and modern methods of planning and setting up experiments;
- follow the rules of academic integrity.
- know and follow the basic principles of academic integrity in scientific and educational (pedagogical) activities.

2. Prerequisites and post-requisites of the discipline (place in the structural and logical scheme of education according to the relevant educational program)

The discipline is the basis for the training of doctors of philosophy, so it provides educational and scientific training of the first (bachelor's) and second (master's) level of students of higher education in philosophy, summarizing and summarizing it. The discipline has an interdisciplinary nature and integrates according to its subject special knowledge from other educational and scientific fields. It is preceded by general disciplines from the block of philosophical, historical, psychological, pedagogical, legal and other disciplines.

Postrequisites are the discipline "Organization of scientific and innovative activities" and pedagogical practice of graduate students.

3. The content of the discipline

Educational component 1. SCIENTIFIC WORLD VIEW AND ETHICAL CULTURE OF THE

SCIENTIST Topic 1. The genesis of science and the philosophical justification of the scientific worldview.

Topic 2. Science as a holistic phenomenon and general scientific philosophical concept of scientific worldview.

Topic 3. Worldview principles of scientific and innovative activities and the solution of significant scientific and technological problems taking into account economic, political, socio-cultural, environmental and legal aspects.

Topic 4. Philosophical understanding of the development of science, its ideological role and impact on modern social processes.

Topic 5. Ethics - the philosophical science of morality in relation to scientific and professional ethics.

Topic 6. Norms and principles of scientific ethics, legislation in the field of responsibility for professional decisions in the legal, social and environmental context.

Topic 7. Ethical culture of the scientist and adherence to the principles of academic integrity in research and innovation.

Educational component 2. PHILOSOPHICAL EPISEOOLOGY AND EPISTEMOLOGY

Section 1. Philosophical epistemology and epistemology: the main components and stages of development

Topic 1. Basic theories, ideas and directions of classical epistemology

Topic 2. From classical epistemology - to modern philosophical epistemology and epistemology

Topic 3. Communicative turn in modern epistemology and epistemology

Topic 4. Linguistic turn in the study of cognitive processes

Topic 5. Sociological turn in the study of cognitive processes

Topic 6. Information component of modern philosophical epistemology and epistemology

Section 2. Features of cognitive activity in modern science

Topic 7. Modern transformations of the image of cognition
 Topic 8. The problem of ontology and metaphysics in modern science
 Topic 9. Epistemological dimension of modern science
 Topic 10. Veretistic foundations of cognitive activity. The problem of truth in science
 Topic 11. Epistemological activity of a scientist in the field of knowledge
 Topic 12. Methodological activity of a scientist
 Topic 13. Scientific text
 Topic 14. Specifics of technical and technological knowledge. Scientific and scientific and technical creativity
 Topic 15. Cognitive features of scientific and scientific and technical creativity
 Topic 16. Knowledge and information
 Topic 17. Information component of scientific research
 Topic 18. Cognitive-communicative component of project activities
Section 3. Philosophical and anthropological and cognitive foundations of cognitive activity
 Topic 19. Perceptual information
 Topic 20. Sensory cognition
 Topic 21. Basic approaches to the formation of perception
 Topic 22. Cognitive perception and its features
 Topic 23. Dialectics of the sensual and rational
 Topic 24. Cognitive science and philosophy of cognitive activity
 Topic 25. Features of human information processing
 Topic 26. Cognitive abilities
 Topic 27. Philosophical principles of the study of thinking
 Topic 28. Subjective component of thinking
 Topic 29. Cognitive aspects of thinking
 Topic 30. Thinking and information
 Topic 31. Scientific thinking
 Topic 32. Technical thinking and its features
 Topic 33. Visual thinking
 Topic 34. Analytical thinking
 Topic 35. Intuition and its features

4. Training materials and resources

Basic literature, which should be used to master the discipline, is developed independently to prepare for seminars and distance learning. It is suggested to use additional literature and Internet resources to perform modular tests, prepare reports, presentations, write essays based on the results of independent work.

Educational component 1. SCIENTIFIC WORLD VIEW AND ETHICAL CULTURE OF THE SCIENTIST *Basic literature:*

1. Danilyan OG, Taranenko VM Fundamentals of philosophy. § 1. Man's worldview, its essence, structure and historical types http://library.nlu.edu.ua/POLN_TEXT/4%20KURS/4/1/01H1R1_1.htm
2. Dobronravova IS, Bilous TM, Komar OV The latest philosophy of science. Textbook. - K.: Лорос, 2009. URL: <http://www.philsci.univ.kiev.ua/biblio/Dobr-bil-kom.htm>
3. Code of Ethics of the scientist of Ukraine // Ukraine. Science and culture. - 2009. - Vip 35. - P. 19-23. - URI: <http://dspace.nbuv.gov.ua/handle/123456789/37062>.
4. Code of Scientific Ethics // Science and Science. - 2005. - № 3. - P. 31-37.
5. Code of Honor of the National Technical University of Ukraine - KPI. - Name from the screen. - URL: <http://kpi.ua/code>.
6. Malakhov VA Ethics of communication: Textbook / V. Malakhov. - K.: Либідь, 2006. - 400 с. URL: http://freelib.in.ua/blog/viktor_malakhov_etika/1-0-6
7. Malakhov VA Ethics: Course of lectures: Textbook. manual - 2nd ed., Reworked. and ext. K.: Lybid, 2000. 384 p.
8. Academic Integrity Promotion Project in Ukraine (SAIUP). - Name from the screen. - URL: <http://www.saiup.org>
9. Revchun BG Scientific and technical progress: a textbook for students of higher educational institutions / BG Revchun. - Kirovograd: KSTU, 2013. - 134 p.
10. Taranenko O. Scientific and technical revolution: textbook. manual for distance learning "Open International University of Human Development" Ukraine ". K.: University "Ukraine", 2015. 301 p. http://esnuir.eenu.edu.ua/bitstream/123456789/4889/4/Istor_typy_svitogl.pdf

11. Fitsula MM Formation of scientific worldview https://pidru4niki.com/1220041135023/pedagogika/formuvannya_naukovogo_svitoglyadu // Fitsula MM Pedagogy. Kyiv: Academy Publishing Center. 2009. 528 p. <https://pidru4niki.com/1613030534943/pedagogika/pedagogika>
12. Khoruzhiy GF Academic culture: values and principles of higher education / G.F. Khoruzhiy. - Ternopil: Textbook - Bogdan, 2012. - 320 p.
13. History of science and technology [Electronic resource]: textbook for foreign students / S. O. Kostyleva, S. Yu. Boeva, LR Ignatova, IK Lebedev, NTUU "KPI". - Electronic text data (1 file: 11.44 MB). - Kyiv: NTUU "KPI", 2015. - 320 p. - URI: <https://ela.kpi.ua/handle/123456789/20997>

Additional literature:

1. Apel K.-O. A priori community communication and the basics of ethics. To the problem of rational substantiation of ethics in the days of science // Modern foreign philosophy. K. . 1996. - P. 360 - 421.
2. Artsyshevsky RA Historical types of worldview // Artsyshevsky RA Spiritual comprehension of reality. - Lutsk: PF "Emerald", 2011. - P. 153-236.
3. Bezv T. Scientific worldview - methodological basis of Vladimir Vernadsky's work <https://www.mao.kiev.ua/biblio/jscans/svitoglyad/svit-2013-08-1/svitoglyad-2013-1-5-bezv.pdf>
4. Beck W. Risk Society. On the way to another modern / Beck W. - M. : Progress-Tradition, 2000. - 384 p.
5. Bernal J. Development of science in the history of society (https://platona.net/load/knigi_po_filosofii/istorija_nauki/nauka_v_istorii_obshhestva/51-1-0-4241).
6. Vernadsky VI Essays on the history of the modern scientific worldview // Vernadsky VI Works on the history of science / Otv. ed. F.T. Яншина, С.Н. Жидовинов. - М. : Nauka, 2002 (Library of works of academician VI Vernadsky). - P. 47-165).
7. Gaidenko PP Evolution of the concept of science (formation and development of the first scientific programs). - М. : Наука, 1980. - 568 с.
8. Goncharenko SU Ethics of science and ethical code of the scientist // The way of education. - К. - 2011.— № 3. <http://umo.edu.ua/vchena-rada---etichnij-kodeks-uchenogo>
9. Gosle V. Practical philosophy in the modern world. Per. with him., note and afterword by Anatoly Yermolenko. - К. : Лібра, 2003. - 248 с.
10. Dyson, Freeman. Heretical thoughts about science and society / Freeman Dyson. - [Б. м.]: [б. в.], 2009. - 72 p.
11. Yermolenko AM Social ethics and ecology. Human dignity - respect for nature. Monograph. - К. : Libra, 2010. - 416 p.
12. Zubkov M. Scientific revolutions as a change of worldview / Mykola Zubkov // Visnyk Nats. Lviv Polytechnic University. Series "Problems of Ukrainian terminology". - 2017 - № 869. - P. 109-114. <http://science.lpnu.ua/uk/terminologiya/vsi-vypusky/visnyk-no-869-2017/naukovi-revoljuciyi-yak-zminyuvannya-svitoglyadu>
13. Kiselyov MM Ethics and science: spheres of intersection // Science. Religion. Society. - 2012. - № 2. - P. 30-39. URL: <http://dspace.nbuv.gov.ua/bitstream/handle/123456789/86826/05-Kiselev.pdf?sequence=1>
14. Kuhn T. The structure of scientific revolutions. URL: <http://www.biometrika.tomsk.ru/Kuhn.pdf>
15. Kushnerik VV The impact of globalization on the development of scientific and technological revolution // Actual problems of economy. - 2012. - №8 (134). - P. 30-34.
16. Lozova VI Ethics of the scientist / VI Lozova // Pedagogy and psychology. - 2011. - Vip. 40 (2). - P. 47-51. - URL: [http://nbuv.gov.ua/UJRN/znphnpu_ped_2011_40\(2\)_10](http://nbuv.gov.ua/UJRN/znphnpu_ped_2011_40(2)_10).
17. Mayer-Abih KM Uprising to protect nature. From the environment to the community / Mayer-Abih KM - К. : Лібра, 2004. - 196 p.
18. Malakhov V. Ethical code of the scientist: axiology and pragmatics / V. Malakhov // Bulletin of the National Academy of Sciences of Ukraine. - 2009. - № 5. - P. 12-19. URL: http://nbuv.gov.ua/UJRN/vnanu_2009_5_2.
19. Worldview / TI Oiserman. II Zhbankova. LA Myasnikov // Center for Humanitarian Technologies. Editor-in-Chief: AV Ageev. Last revision: 22.09.2020. URL: <https://gtmarket.ru/concepts/7105>
20. Science and youth in Ukraine of the XXI century / [Yu.L. Mosenkis, M.A. Boloban, P.M. Hornbeam, etc.]. - К. ; Uman: ПП Zhovtyi, 2010. - P. 150–202. Jonas G. The principle of responsibility in the search for ethics for technogenic civilization. - К. : 2001 - 400 с.
21. Norms of scientific ethics (adopted by the Senate of the Max Planck Society on November 24, 2000) / trans. B.Тереховой. - URL: <http://www.sbras.ru/HBC/2002/n04-05/f17.html>.
22. Popper K. Texts on the link: <https://evolkov.net/PopperK/>
23. Sidorenko LI Ethics of science. URL: <http://www.philsci.univ.kiev.ua/biblio/etik-sidorenko.html>
24. Sidorenko LI Modern ecology. Scientific, ethical and philosophical perspectives. К. : 2002. - 150 p.
25. Snow Ch.P. Two Cultures and the Scientific Revolution / Charles Percy Snow, Portraits and Reflections, Moscow: Progress, 1985. - P. 195-226. URL: <http://vivovoco.astronet.ru/VV/PAPERS/ECCE/SNOW/TWOCULT.HTM>

26. Horgan, John. The end of science. A look at the limitations of knowledge at the sunset of the Age of Science: lane. with English / John Horgan. - СПб. : Амфора, 2001. - 479 с.
27. Ethics of science: a textbook for graduate students / T. V. Mishatkina, Ya. S. Yaskovich, VS Vyazovkin. - Minsk, 2002. - 58 p.
28. Shevchuk SF Worldview as a result of the interaction of science with other elements of the spiritual life of society http://ir.znau.edu.ua/bitstream/123456789/7987/1/ZOO_2016_162-165.pdf
29. What you need to know about plagiarism: a guide to academic literacy and ethics for "teapots". - Name of screen. - URL:http://library.kubg.edu.ua/images/stories/Departaments/biblio/PDF/books_ac-gr.pdf

Educational component 2. PHILOSOPHICAL EPISEOLOGY AND EPISTEMOLOGY

Basic:

1. Rubanets OM Theory of cognition and methods of information processing: a set of educational and methodical ensuring academic discipline. - Kyiv: KPI named after Igor Sikorsky, 2018. - 66 p. Electronic online educational publication. The stamp was provided by the Methodical Council of KPI. Igor Sikorsky (Minutes № 3 of 25.06.2018) at the request of the Academic Council of the Faculty of Sociology and Law (Minutes № X of DD.MM.YYYY). // Tutorial.
2. Rubanets OM Philosophical problems of scientific knowledge / Rubanets OM - Sumy: University Book, 2013. – 229 p.
3. Dobronravova IS The latest Western philosophy of science: textbook. for higher education. lock / Dobronravova IS, Belous TM, Komar OV - K., 2008. - 216 c.
4. Epistemology as a philosophical theory of knowledge / VL Petrushenko; State. Lviv Polytechnic University. - L., 2000. - 296 p.

Additional:

1. Rubanets OM Information society: cognitive creative of post-nonclassical research: Monograph / Rubanets OM - K., Vid. PARAPAN, 2006. - 420 p.
2. Biletsky IP Cognition and reality / I.P. Biletsky. - Харьков: Альфа, 1999. - 57 с.
3. Dobronravova Irina. Practical philosophy of science: a collection of scientific works / Irina Dobronravova. - Sumy: University Book, 2017. - 352 p.
4. Zagrebelna OT Engineering cognition as an activity / Zagrebelna OT - 1999. - 300 p.
5. Mosquito Elena. Post-classical epistemology: new trends / Olena Komar // Man in a complex world / for ed. N.V. Kochubey, M.O. Nesterova. Sumy: University Book, 2017. - P. 230 -248.
6. Konversky AE Theory and its substantiation / Konversky AE - K .: 2000. - 179 c.
7. Lecturer VA Classical and nonclassical epistemology / Lektorsky VA - M .: Editorial URSS, 2001. - 256 p.
8. Lukyanets VS Modern scientific discourse .: Renewal of methodological culture / Lukyanets VS, Kravchenko OM, Ozadovska LV - K., 2000. - 304 p.
9. Man: thinking and reality / edited by: VS Kryshchenko ,; Inst. Of Philosophy. NAS of Ukraine. - K .; Lutsk, 2001. - 219 p.
10. Marchuk MG Value potentials of knowledge / Marchuk MG - Chernivtsi: Ruta, 2001. - 319 p.
11. Melashchenko OM Ontological manifestations of scientific and technical creativity (socio-philosophical aspect): dis. ... cand. philosopher. Science. : 09.00.03 - OM Melashchenko. - K., 2011.
12. Melkov Yu. A. Humanity of post-nonclassical science: Monograph / Yu. A. Melkov. - K.: Изд. PARAPAN, 2014. - 254 p.
13. Меркулов И.П. Cognitive abilities / Merkulov IP - M .: IFRAN, 2005. - 182 p.
14. Merton R. Social theory and social structure / R. Merton. - M.: ACT Москва, 2006. - 880 с.
15. Metelova T. The concept of "creative imagination" / T. Metelova // Philosopher. opinion. - 2006. - № 6. - P. 11-21.
16. Mikesheina LA Philosophy of Science: Modern Epistemology. Scientific knowledge in the dynamics of culture. Methodology of scientific research / L.A. Mikesheina. - M., 2005. - P. 155-160.
17. Moren E. Method. The nature of nature. M .: "Progress - Tradition" - .2005. - 464 p.
18. Neisser W. Cognition and reality / Naisser W. / Per. with English VV Luchkova. Will enter. Art. and common. ed. B.M. Величковского. - M .: Progress, 1981. - 230 p.
19. Никифоров А.Л. Philosophy of science: history and methodology. M., 1998.
20. Ontology and epistemology of synergetics. M .: IF RAN, 1997. - 159 с.
21. Russell B. Human cognition. Its sphere and borders / B. Russell - M .: Institute of General Humanitarian Research, 2001. - 560 p.

5. Methods of mastering the discipline (educational component)

Educational component 1. SCIENTIFIC WORLDVIEW AND ETHICAL CULTURE OF THE SCIENTIST:

Lecture 1. Genesis of science and philosophical substantiation of scientific worldview

Scheduled: The concept of worldview, different methods of definition and typification criteria. Historical forms of worldview. Philosophical principles of formation of scientific worldview in the genesis of sciences.

Theme of independent work: Differentiation and classification of sciences in the development of cognition: the reasons for the diversity of sciences and the historical stages of the emergence of individual sciences

Recommended: 1, 9, 11, 13

Seminar 1. Worldview principles of the genesis of science. The emergence and formation of theoretical knowledge from pre-scientific consciousness.

Lecture 2. Science as a holistic phenomenon and general scientific philosophical concept of scientific worldview.

Planned: The concept of science and the variety of forms of its existence (as a system of knowledge, type of activity, social system of institutions, forms of culture, etc.). Criteria of scientificity: pseudoscience and antiscience, protoscience

i science. The problem of unity of sciences. Integrative processes in science and the separation of the scientific worldview in the nineteenth century, differences in its understanding, controversy over its definition.

Theme of independent work: Science as a productive force of society and a socio-cultural phenomenon.

Recommended: 2, 9, 10, 13

Seminar 2. Science as a holistic phenomenon and forms of existence of science in society.

Lecture 3. Worldview principles of scientific and innovative activity and solution of significant scientific and technological problems taking into account economic, political, socio-cultural, ecological and legal aspects.

Scheduled: Disciplinary and branch organization of science, specialization of scientists and professionalization of scientific activity. Philosophy in the system of sciences. Scientific worldview and the Manifesto of the Vienna Circle. Problems of application of scientific knowledge in various subject areas and engineering activity, critical comprehension of ways of the decision of research and innovative problems.

Theme of independent work: Expanding the boundaries and rethinking the existing theoretical knowledge, scientific achievements and professional practices in the XX-XI centuries.

Recommended: 2, 9, 10, 13

Seminar 3. Philosophy and science. Scientific worldview: features and approaches to definition

Lecture 4. Philosophical understanding of the development of science, its ideological role and influence on modern social processes.

Scheduled: Driving forces of science. Internal and external factors of scientific progress. Succession and change, evolution and revolution, traditions and innovations in the development of science. Scientific revolutions in the history of knowledge. Models of science dynamics in postpositivism. The role of scientific worldview in solving significant socio-economic, cultural-historical, ethical, environmental, innovative and other problems of our time.

Theme of independent work: Worldview and philosophical principles of forecasting both general trends of scientific and technological development and in the professional field.

Recommended: 2, 9, 10, 13

Seminar 4. Philosophical understanding of the laws of science and its role in society.

Lecture 5. Ethics - the philosophical science of morality in relation to scientific and professional ethics. Planned:

Practical philosophy of morality as a social phenomenon. Genesis, structure and functions morality. History of the relationship between science and ethics. Causes of moral and ethical problems in science: history and modernity. The content of the concepts "scientific ethics" and "professional ethics".

Theme of independent work: Codes of scientific ethics: basic principles and provisions, the imperative of compliance.

Recommended: 3, 4, 5, 7

Seminar 5. Ethics - the philosophical science of morality. Ethics and science.

Lecture 6. Norms and principles of scientific ethics, legislation in the field of responsibility for professional decisions in the legal, social and environmental context.

Scheduled: Status and rank of a scientist. Basic rights and responsibilities of researchers. Moral and ethical problems in modern research and innovation. The culture of scientific creativity in the context of innovative economics: the transition from Homo economicus and Homo ecologicus to Homo ethicus.

Theme of independent work: Ethical norms and criteria for choosing methods and tools, application of innovative approaches to solve modern complex problems in research and / or innovation.

Recommended: 3, 4, 5, 7

Seminar 6. Scientific ethics and ethical culture of the scientist.

Lecture 7. Ethical culture of a scientist and observance of the principles of academic integrity in scientific and innovative activity.

Professional ethics and responsibility of a scientist. Academic culture and integrity. Academic Integrity Promotion Project in Ukraine. Norms of communication in the scientific community. Scientist development and leadership.

Theme of independent work: Ethical principles of effective interaction in the professional environment, the scientific community and society in general and / or the effective work of the scientist individually and as a team member in an international context.

Recommended: 3, 4, 5, 7, 8, 12

Seminar 7. Ethics of science in the system of professional ethics and communication

Educational component 2. PHILOSOPHICAL EPISEOOLOGY AND EPISTEMOLOGY

Lectures

Lecture 1. Modern philosophical epistemology and epistemology. Features of cognitive processes.

1. Features of consideration of cognitive attitude in classical and non-classical philosophy. Basic directions and principles.

2. Communicative and linguistic turn in the development of epistemology.

3. Structural features of the cognitive relation in the modern theory of cognition.

4. Cognition and information processing. Classification of types of information.

5. Levels of information processing in the information society.

Lecture 2. Scientific knowledge and scientific thinking. Information component of scientific thinking.

1. Features of scientific knowledge and its levels. Modern forms of knowledge production in science.

2. Scientific thinking and its types.

3. Types of information in research and methods of its processing. The place and role of scientific information in the development of modern science.

4. Features and types of scientific and scientific-technical information and its significance for the development of science, research and society.

Lecture 3. Philosophical problems of cognition research. Epistemology and philosophy of science.

1. Ontology in philosophy and science. Scientific realism.

2. Metaphysics and antimetaphysics in the philosophy of science.

3. Phenomenological research of cognitive activity.

4. Hermeneutics in science. Cognition and understanding.

Lecture 4. The relationship of scientific thinking and knowledge to reality

1. Features of the relationship of scientific thinking and knowledge to reality in terms of classical, non-classical and post-non-classical rationality.

2. The role of language in relation to knowledge and thinking to reality. Linguistic turn in modern science. Text, discourse, narrative and grand narrative.

3. Problems of reference.

4. Communicative turn in the theory of cognition.

Lecture 5. Sensory cognition and information processing

1. Ontological bases of information processing in sensory cognition. Primary and secondary information. Discrete and iconic information.

2. Visual information. Visual processing of text information.

3. Perception and processing of information. Cognitive perception.

Lecture 6. Technical thinking and development of scientific and scientific-technical creativity

1. Development of technical thinking as creative thinking.

2. Cognitive features of scientific and scientific-technical creativity.

3. Development of cognitive abilities.

4. Features of cognitive activity of scientists in the field of knowledge.

Lecture 7. Cognitive philosophy as a methodology for studying cognitive processes. Features of human information processing

1. The main provisions of cognitive philosophy on the human dimension of cognitive processes.
2. The concept of cognitive information and basic approaches to the study of its specification and processing.
3. Cognitive information and system identification area.
4. The role of mental and social representations.
5. Cognitive schemes, mental stereotypes.

Lecture 8. Cognitive-communicative component of project activity

1. Project organization of scientific research and features of the collective subject in the conditions of project activity.

2. Subjective component of thinking. Psychological, existential, phenomenological and modern cognitive approaches to thinking.

3. Communicative interactions in the knowledge environment. Cognitive communication. The ratio of individual and group cognition.

4. Intellectual resources. Metacognitive mechanisms of control of intellectual activity. Stress management.

Lecture 9. Non-classical epistemology and epistemology. The role of the information component in the cognitive relation.

1. Targeted, praxeological and axiological approaches to information retrieval.

2. The role of the subject component in the extraction and processing of information.

3. Representativeism, constructivism, phenomenism.

4. The significance of the problem of understanding.

5. Transitive reflexive attitude. The ratio of purpose - values.

6. Cognitive information processing technologies.

Seminars

Seminar 1: Theory of cognition: classics and modernity

Theory of cognition: classical and non-classical. The principle of recognizability of the world. Skepticism. A priori. Transcendentalism. Evolution of the subject of the theory of cognition and epistemology. Communicative approach. Linguistic approach. Theory of cognition in the modern social interior. Production of knowledge and modern science. Human dimension of social processes and practices. The growing importance of the human component and the development of opportunities for human cognition at the present stage of development of society.

Seminar 2. Cognitive attitude, its structure and features

Cognitive attitude and its structure. Cognitive attitude as a kind of subject-object interaction. The structure of the cognitive attitude. Methodological significance of the epistemological approach. The concept of the subject. Single, collective and universal subject. The presence of a universal subject in the cognitive activity of individual and collective subjects.

Object, types of objects. The ratio of the system (natural, social, technical) under study and the object. The relationship of the object and research methods.

Means of cognition. Classical, non-classical and post-classical rationality about the role of means of cognition. Seminar 3. Scientific knowledge and scientific thinking

The main features of scientific thinking. Objectivity, systematics, logical provability, validity.

The importance of narrative, multimedia and intersubjectivity for the development of modern scientific thinking.

Empirical and theoretical thinking. The structure of empirical thinking. Basic forms of theoretical thinking. The relationship of empirical and theoretical thinking. Empiricism, rationalism, inductivism and counterinductivism.

Scientific thinking and scientific knowledge. Cognitive structures of scientific thinking. Explicit and implicit thinking. The role of implicit thinking in the evolution of science. Declarative and procedural thinking. Objective and personal thinking. Ontologism. Axiology. The value component of scientific thinking. Relationship between values and social position of the scientist. Ukrainian values. Universal values.

Seminar 4. Technical thinking and development of scientific and scientific-technical creativity

Technical thinking as a type of scientific activity. The role of the scientific component, abstraction and idealization in technical thinking. The role of technical thinking in the formation of current, morphological and functional schemes of the technical object. Technical thinking and scientific and technical creativity. Technical thinking: the meaning of inventions. Technical scheme, technical idea.

Constructive technical thinking. Constructiveness and constructivism. The problem of constructivism in modern philosophy. Radical and social constructivism. The role of the social component in constructiveness

technical thinking. The importance of social needs in the development of technical knowledge and technical creativity. Technical thinking and rationality. Instrumentalism. Search for new tools for transforming reality.

Man, technique, technology. Functional approach. Technical systems and functions. Engineering approach to creating new functions. Technical thinking and design. The importance of social functionality in the development of modern design.

Seminar 5. The relationship of scientific thinking and knowledge to reality

Epistemological relation and its characteristics. The concept of truth, types of truth and basic theories of truth. Image, copy, ideal, prototype. Ontology and scientific realism in relation to scientific thinking and knowledge to reality. The truth of the main forms of empirical and theoretical knowledge. The problem of truth in post-classical science. Non-classical theory of knowledge about the relationship of knowledge to reality. The value of language in establishing attitudes toward reality. Reference

Seminar 6. Sensory cognition and information processing

Ontological bases of sensory information processing. Primary and secondary information. Discrete and iconic information. Visual processing of text information. Perception and processing of information. Cognitive perception.

Seminar 7. Subjective component of thinking

Practice session:

Thinking as a process result. Productivity thinking. Subject, subjectivity, authorship. Psychological, existential, phenomenological and modern cognitive approaches to thinking. Metacognitive mechanisms of control of intellectual activity. Stress management.

Seminar 8. Types of thinking

Scientific thinking and its characteristics. Theoretical thinking. Analytical thinking. Declarative and procedural thinking. Figurative and visual thinking. Development of visual culture.

Seminar 9. Epistemological component of scientific thinking. Basic forms of knowledge Epistemological and epistemological components of thinking. The role of the epistemological component of thinking in cognition of the object. Problem statement. Formulation of ideas. Development concept. Working with existing in science and creating new forms of empirical and theoretical knowledge.

Seminar 10. Non-classical epistemology and epistemology

The main components of non-classical epistemology and epistemology. Ontology in philosophy and science. The problem of metaphysics in modern philosophy of science. Linguistic turn in science. Development of scientific discourse. Discourse, narrative and grand narrative. The text and its interpretation. Scientific text. Internal and external prerequisites for scientific knowledge.

Seminar 11. Methodological component of scientific knowledge

Methodological regulation of scientific knowledge. Levels of methodology. Philosophical methods and their general characteristics. General scientific methods. Methodological and methodological component of scientific research. Conceptual foundations of philosophical and general scientific methodology. Synergetic approach as a transdisciplinary paradigm of modern science. Complex and nonlinear thinking.

Seminar 12. Cognitive philosophy and modern science

Conceptual foundations of cognitive philosophy. Cognitivism and connectionism about thinking and cognition. The doctrine of the naturalized mind. Computational, informational, network, heterophenomenological and dynamic approaches to thinking. representativeism. Physical approach. Cognitive science. Cognitive word processing technologies.

Seminar 13. Cognitive-communicative component of project activity

Project organization of scientific research and features of the collective subject in the conditions of project activity. Joint cognitive activity. The ratio of individual and group cognition. Communicative interactions in the knowledge environment. Cognitive communication. Team building: the role of the rational and sensory component and the problem of identity.

Seminar 14. Human information processing

The role of experience and mental representations in information processing. The concept of cognitive information.

Cognitive information and area of identification. Cognitive abilities. Cognitive evolution.

Cognitive and metacognitive mechanisms of control of intellectual activity.

Seminar 15. Intellectual resources

The problem of productivity of scientific researches and features of the collective subject in the conditions of project activity. Resource approach. Types of resources. Intellectual and cognitive resources. Subjective component of thinking. Psychological, existential, phenomenological and modern cognitive approaches to thinking. Communicative interactions in the knowledge environment. Cognitive communication. The ratio of individual and group cognition. Intellectual resources. Metacognitive mechanisms of control of intellectual activity.

Seminar 16. Information and cognitive processes in the information society

Types of information. Levels of information processing. Information activities in the information sphere. Information products in the information space. The role of information in the information society. Communication of information with the object. Information, materialization, objectification. Information revolutions. Problems of information security in the context of infoglobalization.

Seminar 17. Withdrawal of information

Targeted, praxeological and axiological approaches to information retrieval. The role of the subject component y extraction and processing of information. Representativeism, constructivism, phenomenism. The significance of the problem of understanding. Transitive reflexive attitude. The ratio of purpose - values. Cognitive information processing technologies. Subjective approach to information processing based on values. Types of values. Information processing and interpretation. The role of verbal and value in interpretation. Relationship of interpretation with the cognitive area of system identification. Thinking as information processing. Types of information and types of thinking. Discrete and iconic information. Primary and secondary information. Materialization, objectification, interpretation.

Integrity and fragmentation of information. Information that is the focus of attention and determines the semantic structure of the message. Objectified and non-objectified information. Extraction of information from its objectified forms. Explicit and implicit information. Thinking as information processing.

Seminar 18. Information component of scientific research

Removal of information from the object. Formation of information base of research. Visual information in scientific activity. Text information. Formation of theoretical and source base of research. Information flows and information processing. Science as an information system. Science in the information society.

Distance learning platform:

To increase the efficiency of communication and distance learning opportunities, better mastering the material of the discipline, e-mail, distance learning platform "Sikorsky" based on the Google Classroom system and a platform for online meetings Google Meets are used, through which:

- simplifies the placement of methodological recommendations and the exchange of educational material;
- feedback is provided to graduate students on educational tasks and the content of the discipline;
- completed tasks are checked and evaluated;
- the account of performance by postgraduate students of the plan of educational discipline, observance of the schedule of representation of educational tasks and their estimation is conducted.

6. Independent work of a graduate student

Independent work involves preparation for lectures and seminars and to participate in discussions on the topic, self-control of acquired knowledge, elaboration of sources from the bibliography, creating presentations for visual support of the report, writing essays on independent work, preparation for modular control work (MCR) , writing a test (educational component 1), before writing an essay, exam (educational component 2), etc.

A list of questions to prepare for the MCR is provided in Annex A.

The list of questions for preparation for credit control work is given in appendix B.

The recommended list of abstracts is provided in Appendix B.

The list of questions for preparation for the exam is given in Appendix D.

Policy and control

7. Educational component policy

The system of requirements for graduate students consists of:

- compulsory attendance at lectures and practical classes. Absence and attendance are not assessed in points, but because they teach theoretical material, provide guidelines and develop the skills needed to perform control tasks, the visit affects the results of classroom and independent work of the graduate student, preparation for control activities;
- evaluation of reports at seminars and participation in the discussed issues of the topic and / or discussion;
- implementation of MCR, abstract in accordance with the requirements and evaluation criteria.

You should follow the rules of attending classes.

Classes include the activity of graduate students, inclusion in interactive forms and methods of teaching.

A significant part of the graduate student's rating is formed due to active participation in seminars. The evaluation system is focused on obtaining points for preparation for classroom classes, report and activity of the graduate student in discussing the topic. Therefore, skipping a seminar does not give the graduate student the opportunity to get points in the semester rating.

Y in case of academic dishonesty during the performance of modular control work - the results of the control measure are not taken into account.

Rewriting of the module test is not allowed. The abstract is tested for signs of plagiarism.

Control measures missed

If the control measures are missed for good reasons (illness or serious life circumstances), the student is given the opportunity to perform these control measures within the next week.

Postgraduate students who were absent from the MCR for no good reason are given the opportunity to perform the MCR in an unscheduled class, but in this case the result will be penalized.

Incentive and penalty points

Encouragement points

Writing abstracts, articles, participation in international, national and / or other events or competitions on the subject of the discipline + 5 points
Writing an essay on VTS + 5 points

Penalty points

Late implementation of MCR (at an unscheduled lesson) - 5 points

Academic integrity

The policy and principles of academic integrity are defined in Section 3 of the Code of Honor of the National Technical University of Ukraine "Kyiv Polytechnic Institute named after Igor Sikorsky". Read more:<https://kpi.ua/code>.

Norms of ethical behavior

Norms of ethical behavior of students and employees are defined in Section 2 of the Code of Honor of the National Technical University of Ukraine "Kyiv Polytechnic Institute named after Igor Sikorsky". Read more:<https://kpi.ua/code>.

8. Types of control and rating system for evaluation of learning outcomes (RSO)

RSO of the educational component 1.

SCIENTIFIC WORLD VIEW AND ETHICAL CULTURE OF THE SCIENTIST

The graduate student's rating for the educational component consists of points that he receives during the semester for:

- 1) Participation in seminars (7 classes);
- 2) Execution of MCR.

Seminars (max 70 points):

The report at the seminar is evaluated with a maximum of 8 points (a total of 56 points can be obtained for 7 seminars). You can get 2 points for participating in the discussion of the topic and additions (you can get 14 points for a total of 7 seminars).

The results are announced to each graduate student separately in the presence or remotely (in the Google Classroom, Campus or by e-mail).

Modular test (2 questions of 15 points - max 30 points):

15-14 points - complete correct answer to the question or at least 90% of the required information;

13... 11 points - complete answer to questions with minor errors / inaccuracies or at least 75% of the required information;

10... 9 points - almost complete answer with minor errors / inaccuracies or at least 60% of the required information;

0 points - the answer is missing / incorrect or less than 60% of the required information.

Test:

The sum of rating points obtained by the graduate student during the semester is transferred to the final grade according to the table.

If the sum of points is less than 60, the student performs a test. In this case, the points obtained by the graduate student for the semester are canceled, and the amount of points obtained for the test, is transferred to the final grade according to the table.

A graduate student who received more than 60 points in the semester, but wants to improve their results, can participate

y test control work. In this case, the final result consists of points obtained on the test.

The test consists of 4 questions, for each of which you can get 25 points (max 100 points):

25-23 points - complete correct answer to the question or at least 90% of the required information;

22... 19 points - complete answer to questions with minor errors / inaccuracies or at least 75% of the required information;

18... 15 points - almost complete answer with minor errors / inaccuracies or at least 60% of the required information;

0 points - no answer / incorrect or less than 60% of the required information.

The sum of points received by the graduate student for credit test is transferred to the final grade according to the table.

RSO educational component 2. PHILOSOPHICAL GNOSEOLOGY AND EPISTEMOLOGY

RSO has an educational component *starting (max 55 points)* and *examination (max 45 points)* components.

Starting component: express survey at lectures (9 lectures), participation in seminars (18 classes), execution of the abstract.

Exam component: exam answers.

Express polls at lectures: for each correct answer you can get 1 mark (max 9 points).

Seminars: For the correct answer during the survey on the topic of the lesson you can get 2 points (max 36 points).

Abstract:

10 points - the topic of the abstract is disclosed in full, the material is presented logically with the relevant conclusions, the graduate student shows deep knowledge on the topic of the abstract, confidently and in detail answers the questions during the defense;

9-8 points - the topic of the abstract is disclosed in full with minor errors or inaccuracies, but in general the material is presented logically with appropriate conclusions, during the defense the graduate student shows knowledge on the topic of the abstract, almost confidently answers questions;

7-6 points - the topic of the abstract is disclosed in full with minor errors or inaccuracies, the material is presented mostly logically, with vaguely formulated conclusions, during the defense the graduate student shows uncertainty, shows weak knowledge on the topic of the abstract, does not always give comprehensive answers to questions; 0

points - the abstract is not completed at all, or the topic of the abstract is not disclosed, there are no conclusions or they are declarative in nature, during the defense the graduate student can not answer any questions on the topic abstract.

Conditions for admission to the exam: minimally positive assessment for the abstract - 6 points and semester rating - from 30 points.

Examination (max 45 points)

The exam ticket consists of 3 questions, for each of which you can get 15 points:

15-14 points - complete correct answer to the question or at least 90% of the required information;

13... 11 points - complete answer to questions with minor errors / inaccuracies or at least 75% of the required information;

10... 9 points - almost complete answer with minor errors / inaccuracies or at least 60% of the required information;

0 points - the answer is missing / incorrect or less than 60% of the required information.

Table of correspondence of rating points to grades on the university scale:

Scores	Rating
100-95	Perfectly
94-85	Very good
84-75	Okay
74-65	Satisfactorily
64-60	Enough
Less than 60	Unsatisfactorily

9. Additional information on the discipline (educational component)

Distance Learning:

B In terms of distance learning, the organization of the educational process is carried out using distance learning technologies: distance learning platforms "Sikorsky" and "Electronic Campus". The learning process in the remote mode is carried out in accordance with the approved schedule of classes. Classes are held using modern resources for online meetings (video conferencing).

Work program of the discipline (syllabus):

Compiled:

Associate Professor of Philosophy, Doctor of Philosophy, Associate Professor I.A. Muratova

Professor of Philosophy, Doctor of Philosophy, Professor O.M. Rubanets

Approved Department of Philosophy (Protocol # 1 dated 28.08.2020)

Agreed Methodical Council of KPI. Igor Sikorsky (Protocol # 1 dated 03.09.2020)

Appendix A. List of questions to prepare for the MCR

- 1) Historical forms of social consciousness: myth.
- 2) Historical forms of social consciousness: religion.
- 3) Historical forms of social consciousness: pre-science.
- 4) Historical forms of social consciousness: science.
- 5) Ethical problems of the atomistics of Leucippus and Democritus.
- 6) Natural-scientific ideas of Antiquity (anthropocentrism, intersubjectivity, universality, substantiality, ideal modeling of reality).
- 7) Philosophical and scientific awareness of the world.
- 8) The categorical dialectic of Plato and Aristotle.
- 9) Aristotle's organ (criteria of scientific knowledge).
- 10) Philosophy of antiquity as a moral doctrine of norms and rules of human behavior (Socrates, Plato, Aristotle, Epicurus).
- 11) Theocentrism of medieval thinking.
- 12) The teachings of Aurelius Augustine on nature and man.
- 13) Ethical problems of scholasticism.
- 14) Nominalism and realism: debates about the nature of universals. (P. Abelard, A. Canterbury, I. Scott).
- 15) The teachings of Thomas Aquinas on the relationship of faith and reason.
- 16) The concept of double truth.
- 17) The specifics of medieval rationality.
- 18) Moral values of the Middle Ages.
- 19) Ethics of the Renaissance.
- 20) F. Bacon's empiricism, T. Hobbes 'sensualism, R. Descartes' rationalism.
- 21) The concept of substance in B. Spinoza.
- 22) Monadology by G. Leibniz.
- 23) Metaphysicality and mechanism of French materialism (Lametri, Diderot, Helvetius, Holbach).
- 24) Registration of science as a social institution of the XVII-XVIII centuries. (formation of scientific societies, academies).
- 25) Axiological conditions for the formation of a scientific society.
- 26) Value orientations in science.
- 27) Ethics of the cognitive process and humanization of science.
- 28) Professional ethics and responsibility of a scientist.

Appendix B. List of questions to prepare for the test

- 1) The concept of worldview, different methods of definition and typification criteria.
- 2) Historical forms of worldview.
- 3) Philosophical principles of formation of scientific worldview in the genesis of sciences.
- 4) The concept of science and the variety of forms of its existence.
- 5) Criteria of scientificity: pseudoscience and antiscience, protoscience and science.
- 6) The problem of unity of sciences.
- 7) Integrative processes in science and the separation of the scientific worldview in the nineteenth century.
- 8) Science as a productive force of society and a socio-cultural phenomenon.
- 9) Disciplinary and branch organization of science, specialization of scientists and professionalization of scientific activity.
- 10) Philosophy in the system of sciences.
- 11) Scientific worldview and the Manifesto of the Vienna Circle.
- 12) Problems of application of scientific knowledge in various subject areas and engineering activity, critical comprehension of ways of the decision of research and innovative problems.
- 13) Driving forces of science. Internal and external factors of scientific progress.
- 14) Succession and change, evolution and revolution, traditions and innovations in the development of science.
- 15) Scientific revolutions in the history of knowledge.
- 16) Models of science dynamics in postpositivism.
- 17) The role of scientific worldview in solving significant socio-economic, cultural-historical, ethical, environmental, innovative and other problems of our time.
- 18) Practical philosophy of morality as a social phenomenon.
- 19) Genesis, structure and functions of morality.
- 20) History of the relationship between science and ethics.
- 21) Causes of moral and ethical problems in science: history and modernity.
- 22) The content of the concepts "scientific ethics" and "professional ethics".
- 23) Culture of scientific creativity in the context of innovative economy.
- 24) Professional ethics and responsibility of a scientist.
- 25) Academic culture and integrity.

Appendix B. Recommended list of abstracts

- 1) Modern philosophical epistemology.
- 2) Linguistic turn in epistemology.
- 3) Features of cognitive activity in modern science.
- 4) The structure of the cognitive attitude.
- 5) The problem of the subject in classical and modern theory of cognition.
- 6) Features of nonlinear and post-classical science.
- 7) Skepticism and agnosticism.
- 8) Sensualist tradition in the theory of cognition.
- 9) Empiricism: classics and modernity.
- 10) Rationalism in classical and modern theory of cognition.
- 11) Cognitive philosophy and the science of human cognitive activity.
- 12) Basic approaches to the study of cognitive abilities.
- 13) The conceptual apparatus of the theory of cognition.
- 14) Basic theories of truth and features of their application in modern science.
- 15) Interaction of sensory and rational cognition.
- 16) Perception. Main features, formation and dynamics.
- 17) Perceptual information, perceptual sphere, perceptual experience.
- 18) Technoscience and its development.
- 19) Types of thinking and their characteristics.
- 20) Thinking as a process.
- 21) Development of creative thinking and formation of creative personality.
- 22) Technical thinking.
- 23) Scientific and technical creativity.
- 24) Cognitive processes in scientific and scientific-technical creativity.
- 25) Collective subjects: the ratio of individual and group cognition.
- 26) Evolutionary epistemology.
- 27) Constructive scientific and technical creativity.
- 28) Objects in modern science.
- 29) Socio-cultural dimension of cognition.
- 30) Knowledge, rationality and values.
- 31) Modern transformations of epistemology.
- 32) Sociological approach and research of cognitive processes.
- 33) Naturalized mind.
- 34) Information society as a society of knowledge.
- 35) The problem of understanding.
- 36) Cognitive component in modern epistemology.
- 37) Axiological dimension of cognitive processes.
- 38) Evolutionary epistemology as a new cognitive paradigm.
- 39) Realism and anti-realism in the evolutionary approach to cognition.
- 40) Radical constructivism as an interdisciplinary solution to a skeptical problem.
- 41) Cognitive evolution.
- 42) Linguistic turn in the study of cognitive processes.
- 43) Reductionism and anti-reductionism in modern science.
- 44) The problem of monism and the unification of modern science.
- 45) Predictive possibilities of nonlinear thinking.
- 46) Interaction of cognitive and aesthetic attitude.
- 47) Philosophical and methodological dimensions of meaning.
- 48) Transdisciplinarity of scientific discourse.
- 49) The paradigmatic dimension of modern science.
- 50) Dynamics of interdisciplinary connections.
- 51) Scientific text.
- 52) Scientific theory as a form of development of modern science.
- 53) Experiment. Theory. Practice.
- 54) Productivity of scientific thinking.
- 55) Knowledge production and social development strategies.
- 56) Constructivism.
- 57) Intellectual resources.
- 58) Information and cognitive processes.
- 59) Modern concepts of the subject.
- 60) Cognitive attitude and its transformation.
- 61) Research of cognitive processes in nonclassical epistemology.
- 62) Modern scientific discourse.
- 63) The role of metaphor in cognition.
- 64) Basic science.
- 65) 65. Methodological interior of modern science.

- 66) Cognitive processes and development of knowledge environments.
- 67) Technoscience in the knowledge society.
- 68) The doctrine of the epistem.
- 69) Personal knowledge.
- 70) Cognitive capitalism.
- 71) Cultural resources of thinking.
- 72) Cognitive technologies in cognitive processes.
- 73) Information component of scientific research.
- 74) Intellectual activity: planning and control.
- 75) Science in the information society.
- 76) The main directions of modern theory of cognition.
- 77) Axiological dimension of scientific activity.
- 78) Transdisciplinarity in modern science.
- 79) Perceptual experience of a specialist.
- 80) Methodological component of scientific research.
- 81) Basic principles of the theory of cognition.
- 82) Scientific style of thinking.
- 83) Transdisciplinary research strategies.
- 84) Communicative approach in epistemology.
- 85) Post-classical practices.
- 86) Development of science and social foresight.
- 87) Social constructivism.
- 88) Scientific picture of the world.
- 89) Theoretical thinking.
- 90) Knowledge as a process.
- 91) Types of information.
- 92) Interaction of theoretical and empirical.
- 93) Methodologists of modern science.
- 94) Complex thinking.
- 95) Scientific and technical potential.
- 96) Science and sociology of knowledge.
- 97) The problem of the ratio of knowledge and object.
- 98) Information and network approaches.
- 99) Levels of information.
- 100) Information component of the object research.

Appendix D. Questions for exam preparation

- 1) Components of cognitive attitude and its structure.
- 2) Transition from classical epistemology to non-classical epistemology.
- 3) Basic theories of information society and levels of information processing.
- 4) Types of information and their characteristics.
- 5) Basic forms of theoretical knowledge and their role in modern science.
- 6) Epistemological activity of a scientist in the field of knowledge.
- 7) Conceptual definitions of modern science. Describe its features.
- 8) Interaction of empirical and theoretical.
- 9) Sensory cognition. The role of sensory cognition in the formation of perceptual experience of the scientist.
- 10) Types of thinking and their characteristics.
- 11) Specifics of technical thinking.
- 12) Specifics of the technical object.
- 13) Feature of technical and technological knowledge.
- 14) Information component of scientific research.
- 15) Describe the subject and object. Describe the classical, non-classical and post-classical concepts.
- 16) Problems of truth in modern science.
- 17) Basic theories of truth and their characteristics.
- 18) The main components of the methodology and their characteristics.
- 19) Features of application of philosophical and general scientific methods.
- 20) Features of modern cognitive processes.
- 21) Philosophy of science: the main stages of development and the current state.
- 22) Conceptual definitions of modern science: nonlinear science, post-classical science.
- 23) A priori. Agnosticism.

- 24) Transcendental dimension of classical and non-classical epistemology and epistemology.
- 25) Linguistic turn in the development of science. Text. Discourse. Narrative.
- 26) Cognitive-communicative component of project activity.
- 27) Features of human information processing.
- 28) The problem of ontology and metaphysics in the development of science.
- 29) The main elements of knowledge in a scientific text and their characteristics.
- 30) Information component of perception.
- 31) To give a general description of the evolution of the subject of philosophical epistemology.
- 32) To reveal the features of knowledge production in modern science.
- 33) Explain cognitive processes and their characteristics.
- 34) Describe the structure of the cognitive relationship.
- 35) To reveal the main directions of the classical theory of cognition.
- 36) Describe skepticism and clarify the role of the skeptical argument.
- 37) To reveal the meaning of the problem of world cognition.
- 38) To reveal the essence of transcendental philosophy of cognition.
- 39) Describe informational, network and heterophenomenological approaches to thinking.
- 40) Show the role of information in cognitive processes and the information society.
- 41) Describe the types of information.
- 42) Analyze the internal and external prerequisites of cognition.
- 43) To reveal the information component of scientific research.
- 44) Analyze information processes and their levels.
- 45) Identify the specifics of human information processing.
- 46) Describe representativeism.
- 47) Analyze the problem of reference. Mind and history.
- 48) Explain the role of the epistem.
- 49) Describe evolutionary epistemology.
- 50) Analyze the methodological component of scientific research.
- 51) Give a comparative description of the levels of methodology.
- 52) Give a comparative description of the main philosophical methods.
- 53) Describe the types of subjects of science and their functions.
- 54) Give a comparative description of the main forms of theoretical knowledge.
- 55) Describe the main stages of development of scientific rationality.
- 56) To reveal the main characteristics of post-classical rationality.
- 57) To reveal the relation of knowledge to the object, to characterize the image, copy, ideal, prototype.
- 58) Describe epistemological processes in scientific and technical creativity.
- 59) Analyze intellectual resources.
- 60) Uncover cognitive communication.
- 61) Describe critical rationalism.
- 62) To reveal the meaning of the problem of ontology in science and philosophy.
- 63) To give a comparative description of metaphysics and modern metaphysics in modern philosophy of science.
- 64) Describe the types of thinking.
- 65) Analyze the basic theories of truth and features of their application in scientific practice.
- 66) Reveal sensory cognition.
- 67) Give a comparative description of types of thinking.
- 68) Describe the linguistic turn in science.
- 69) To reveal a scientific text as a carrier of scientific knowledge.
- 70) Give a comparative description of cognition and understanding.
- 71) To reveal the hermeneutic approach to science.
- 72) Describe methodological anarchism and methodological pluralism.
- 73) Compare empiricism classical and modern.
- 74) Describe the main directions of cognitive philosophy.
- 75) To reveal the existential approach to creativity.