

**Federal State Autonomous Educational Institution of Higher Education "Moscow  
Institute of Physics and Technology  
(National Research University)"**

**APPROVED**  
**Vice Rector for Academic Affairs**

**A.A. Voronov**

**Work program of the course (training module)**

<b>course:</b>	Philosophy/Философия
<b>major:</b>	Biotechnology
<b>specialization:</b>	Biomedical Engineering/Биомедицинская инженерия Phystech School of Biological and Medical Physics Educational and scientific center for the humanities and social sciences
<b>term:</b>	4
<b>qualification:</b>	Bachelor

Semester, form of interim assessment: 8 (spring) - Grading test

Academic hours: 30 AH in total, including:

lectures: 30 AH.

seminars: 0 AH.

laboratory practical: 0 AH.

Independent work: 60 AH.

In total: 90 AH, credits in total: 2

Authors of the program:

I.V. Lupandin, candidate of philosophical sciences, associate professor, associate professor

K.A. Skvorchevskiy, doctor of technical sciences, associate professor, professor

V.I. Kotsyuba, doctor of philosophical sciences, associate professor, associate professor

The program was discussed at the Educational and scientific center for the humanities and social sciences 26.08.2022

## Annotation

The course examines the main topics, questions and concepts of philosophy, their formation and development in the history of world philosophical thought. The introductory part discusses the subject area of philosophy, sections of philosophical knowledge and their problems. Subsequent lectures set forth the history of philosophy, starting with Antiquity. The course introduces the characteristic features of the philosophical traditions and trends of the Middle Ages, Renaissance, Modern times, XIX and XX centuries. Particular attention is paid to the most prominent philosophers (Plato, Aristotle, Descartes, Kant, etc.), whose ideas and teachings have left a noticeable mark on the history of human thought.

The course also examines the history of Russian philosophy. The last lectures provide coverage of topical contemporary philosophical issues. The study of philosophy through the prism of the history of philosophical doctrines makes it possible to consistently introduce students to the field of philosophical topics and concepts, to reveal the continuity in the history of human thought, the connection of philosophy with culture, science and social life of the corresponding epoch, makes the course more interesting and convenient for students of technical specialties.

## 1. Study objective

### Purpose of the course

Introduce students to the highest achievements of world philosophical thought, give a clear understanding of the specifics of philosophy, introduce them to the main stages and directions of its development, the peculiarities of modern philosophy and its role in culture, instill general theoretical and philosophical thinking skills, contribute to the formation and improvement of independent analytical thinking in the field of humanitarian knowledge, mastery of the principles of a rational philosophical approach to information processes and trends in modern society

### Tasks of the course

The tasks of the course are:

- formation of a holistic worldview system with natural science, logical-mathematical, philosophical and socio-humanitarian components
- mastering the skills of rational discussion, rational reflection and critical analysis of a theoretical text
- the study of various styles of philosophical thinking, basic philosophical categories and concepts.
- study of general scientific and philosophical research methods

## 2. List of the planned results of the course (training module), correlated with the planned results of the mastering the educational program

Mastering the discipline is aimed at the formation of the following competencies:

Code and the name of the competence	Competency indicators
UC-3 Interact effectively with project team members and fulfill one's role properly	UC-3.1 Establish different types of communication (educational, scientific, business, informal, etc.)
	UC-3.2 Interact with other team members to fulfill the project objectives
UC-5 Reflect on the cultural diversity of society from social-historical, ethical, and philosophical perspectives	UC-5.1 Demonstrate the knowledge of the basics of philosophy, history, the foundations of intercultural communication
	UC-5.2 Understand ethical and intellectual norms and values, their role in the history of society
UC-6 Use time-management skills, apply principles of self-development and lifelong learning	UC-6.1 Determine professional priorities and ways to improve professional performance through self-assessment
	UC-6.2 Plan independent activities in professional problem-solving; critically analyze the work performed; find creative ways to use relevant experience for self-development

## 3. List of the planned results of the course (training module)

As a result of studying the course the student should:

know:

The main sections and directions, categories and concepts of the history of philosophy and philosophical analysis of social, scientific and general cultural problems to the extent necessary for professional activities and the formation of a citizen's worldview.

be able to:

Organize a system of their activities aimed at solving practical and theoretical problems, taking into account the historical, cultural and philosophical context of their occurrence.

Remove in their practical activities the barriers of narrow specialization, think interdisciplinarily, identify the epistemological sources of problems and put them in the value context of human culture.

master:

Skills of demonstrative presentation of one's own point of view; skills in public speaking, argumentation, discussion and debate; logical methods of text analysis and reasoning; abilities of critical assessment of information.

#### **4. Content of the course (training module), structured by topics (sections), indicating the number of allocated academic hours and types of training sessions**

##### **4.1. The sections of the course (training module) and the complexity of the types of training sessions**

№	Topic (section) of the course	Types of training sessions, including independent work			
		Lectures	Seminars	Laboratory practical	Independent work
1	Philosophy, its subject and significance	2			12
2	History of ancient philosophy, its role for the development of the world philosophical thought	8			12
3	Medieval and Renaissance philosophy	4			12
4	Philosophy of the Modern Times	12			12
5	Problematic and main trends in the XX century philosophy and of the contemporary philosophical thought	4			12
AH in total		30			60
Exam preparation		0 AH.			
Total complexity		90 AH., credits in total 2			

##### **4.2. Content of the course (training module), structured by topics (sections)**

Semester: 8 (Spring)

###### **1. Philosophy, its subject and significance**

The historical diversity of the definitions of philosophy. Sections of philosophy. "Being" as a philosophical concept and ontology as a doctrine of being. Epistemology. Ethics. Aesthetics. Philosophical Anthropology. The question of man as a philosophical problem. Man / individual / individuality / personality. Man and society. The nature of man and his essence. Man and his freedom. The problem of the meaning of life. Social philosophy. Man as a social being. Man in society and society in man. Society as a system of extra- and supra-individual forms, connections and relations

Man, society and the state. The philosophy of history: the subject of history and its driving forces. Personality – society – history. The focus of history and its meaning.

The emergence of philosophy and pre-philosophy. Philosophy and mythology. The specifics of the philosophy of Ancient China and Ancient India.

The Ancient World and the Genesis of Ancient Greek Philosophy: Social and Epistemological Prerequisites

## 2. History of ancient philosophy, its role for the development of the world philosophical thought

Periodization of ancient philosophy. The value of ancient philosophical tradition for the development of world philosophical thought.

The period of the pre-Socratics. Antique cosmocentrism, the arche problem, the natural philosophy of the pre-Socratics. Miletus school. Pythagoras and Pythagoreanism. The philosophical teachings of Heraclitus and the Eleatic school. Teaching Parmenides about being. The thesis of the identity of being and thinking. Ancient Greek atomism.

Sophists and features of their philosophical position. Socrates, his place and role in the history of European philosophy. A new orientation of philosophy in Socrates. Mayevtica of Socrates.

Plato, his works, the basic principles of philosophical doctrine. Ontology of Plato: being as a hierarchy of *ei-dos*, the world of being and the world of becoming, the doctrine of matter. Anthropology and social philosophy of Plato. Academy. The meaning of platonism.

Encyclopedic system of Aristotle. Aristotle's doctrine of being: a categorical analysis of existence. Threefold definition of metaphysics as a science of the first principles, of the existing as such and of the divine. Criticism of the Platonic theory of ideas. Essence as a subject of philosophy. The problem of the ratio of unit and total. The concepts of form and matter, actual and potential. The doctrine of the Mind as a form of form. Eudaimonic ethics of Aristotle. Man as a social being. Likelihood. The peripatetic school.

Philosophical teachings of the Hellenistic era, their ethical orientation. Cynics, skeptics, stoics. Epicurus Plotinus and the Neoplatonic synthesis of the basic ideas and intuitions of ancient philosophy.

## 3. Medieval and Renaissance philosophy

The philosophy of the Middle Ages, its periodization and specificity. Theocentrism and creationism. Philosophy and theology. Relation to the ancient philosophical heritage. Christian apologetics.

Medieval ontology: God as an absolute being. The main topics of medieval philosophy: faith and reason, anthropological ideas, the question of free will, the debate about universals. Greek and Latin patristics. Christian anthropology: man is the image and likeness of God. The concept of "inner man." The concept of "sacred history" in Christianity, eschatologism.

Scholasticism as a philosophy of schools and universities. Platonic orientation of the early scholasticism: realism. Arabic philosophy, medieval Aristotelianism, Latin Averroism. Thomas Aquinas and its significance. Nominalism. The tradition of voluntarism in the teachings of Duns Scotus and Occam. Late scholasticism. East Christian theological thought. Doctrine of St. Gregory Palamas about energies. Hesychasm. Philosophical knowledge in Ancient Russia.

Anthropocentrism and Renaissance humanism. The specificity of the philosophy of the Renaissance. The individualistic interpretation of man in the Renaissance. Metaphysics of Nicholas of Cusa. Florence Academy. Pantheistic ideas D. Bruno.

The Reformation and its influence on the philosophical process of the New Time.

## 4. Philosophy of the Modern Times

New European philosophy. Criticism of the previous tradition, the problems of "experience" and "method", justification of the project of modern science, innovations in the formulation of epistemological problems. Empiricism: F. Bacon, sensationalism of T. Hobbes, D. Locke, D. Berkeley, skepticism of D. Hume. The tradition of rationalism: the main ideas of R. Descartes, B. Spinoza, G. Leibniz and others. The place of ontology in the philosophy of the New Time. The idea of substance. The mechanistic anthropology of the New Time: man is the "body" and man is the "machine". Pascal: man is a "thinking reed".

Social philosophy of the New time. Basic concepts: the idea of "natural law", the theory of social contract, the principle of separation of powers. The mechanistic interpretation of society in T. Hobbes's "Leviathan" (the concept of "natural state").

The Age of Enlightenment and the cult of the mind. Socio-political doctrines of the Enlightenment. Enlightenment Ideas in Germany: G. Lessing, I. Herder and others. Features of the reception of educational ideas in Russian philosophical culture of the eighteenth century.

Kant as the founder of German classical philosophy and the creator of transcendental idealism. Key Points Critics of Pure Reason. The doctrine of the antinomies of the mind. Ethical doctrine of I. Kant. The concepts of autonomous and heterogeneous ethics. Categorical imperative. The concept of duty. The definition of personality and its difference from a thing. The concept of freedom in Kant's philosophy. Post-Kant German idealism: I. Fichte, F. Schelling, romanticism. The absolute idealism of G. Hegel.

The main directions of 19th-century European philosophy: positivism, neo-Kantianism, and others. The Marxist theory of class society.

Russian philosophy of the XIX century. Socio-political ideals of the Slavophiles and Westerners. V. Soloviev, K. Leontyev and others.

5. Problematic and main trends in the XX century philosophy and of the contemporary philosophical thought

UGHT.

New directions in European philosophy at the beginning of the XX century. Existentialism and its varieties. The fundamental ontology of M. Heidegger: the history of European philosophy as a "history of oblivion of being." Return to ontology: Russian metaphysics, neo-Thomism, etc. Russian philosophical thought in the XX century. Social philosophy of I.A. Ilyin. Anthropological issues in Western European and Russian personalism.

Berdyayev on social inequality, aristocracy, revolution, democracy and anarchy. Phenomenology. Analytical philosophy. Structuralism. Socio-philosophical topics in the philosophical thought of the XX century. Modern discussions in the philosophy of consciousness. Postmodernism and its critics. Contemporary philosophical issues. The problems of the meaning of history, the "end of history" and posthistory, multiculturalism and the "clash of civilizations" in contemporary philosophical discussions.

## **5. Description of the material and technical facilities that are necessary for the implementation of the educational process of the course (training module)**

Provision for independent work (library, Internet access, etc.)

Classroom equipped with modern means of presenting educational material.

## **6. List of the main and additional literature, that is necessary for the course (training module) mastering**

Main literature

1. Karl Popper's philosophy of science, rationality without foundations/Stefano Gattei, -New York ; London, Routledge, 2010

Additional literature

## **7. List of web resources that are necessary for the course (training module) mastering**

Philosophy.mipt.ru

<http://philosophy.ru/>

<http://mipt.ru/education/chair/philosophy/textbooks/uchebnikonline/uchebnik.php>

<http://mipt.ru/education/chair/philosophy/records/>

## **8. List of information technologies used for implementation of the educational process, including a list of software and information reference systems (if necessary)**

Not provided

## **9. Guidelines for students to master the course**

To successfully master the course, in addition to attending lectures, students are required to work independently in the amount of at least the hours indicated in the curricula of the faculties. Self-study also includes repetition of lecture material, preparation of reports, and writing tests.

**Assessment funds for course (training module)**

**major:** Biotechnology  
**specialization:** Biomedical Engineering/Биомедицинская инженерия  
Phystech School of Biological and Medical Physics  
Educational and scientific center for the humanities and social sciences  
**term:** 4  
**qualification:** Bachelor

Semester, form of interim assessment: 8 (spring) - Grading test

**Authors:**

I.V. Lupandin, candidate of philosophical sciences, associate professor, associate professor  
K.A. Skvorchevskiy, doctor of technical sciences, associate professor, professor  
V.I. Kotsyuba, doctor of philosophical sciences, associate professor, associate professor

## 1. Competencies formed during the process of studying the course

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## 2. Competency assessment indicators

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### know:

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### be able to:

Organize a system of their activities aimed at solving practical and theoretical problems, taking into account the historical, cultural and philosophical context of their occurrence.

Remove in their practical activities the barriers of narrow specialization, think interdisciplinarily, identify the epistemological sources of problems and put them in the value context of human culture.

### master:

Skills of demonstrative presentation of one's own point of view; skills in public speaking, argumentation, discussion and debate; logical methods of text analysis and reasoning; abilities of critical assessment of information.

## 3. List of typical control tasks used to evaluate knowledge and skills

1. Cultural and historical circumstances of the emergence of philosophy.
2. Parmenides and the onset of ontology. The ratio of thinking and being in the concept of Parmenides.
3. Platonic concept of society and the ideal state.
4. The logical and scientific writings of Aristotle.
5. Antique stoicism.
6. Life, spiritual evolution and writings of Augustine. 7. Aristotle and medieval scholasticism. The Golden Age of Scholasticism.
8. The contribution of F. Bacon in the development of European science of the New Age.
9. The main ideas of the theory of knowledge R. Descartes. "Methodological Doubt" by Descartes and his rationalist theory of knowledge.
10. The phenomenal nature of Kant's epistemology and his doctrine of the antinomies of pure reason.
11. Marburg and Baden schools of neo-Kantianism.
12. The problem of man in the works of F.M. Dostoevsky.
13. The concepts of the historical process, culture and civilization in the works of K. Leon-tyev and O. Spengler (comparative description).
14. The anti-ontological attitude of positivists and neopositivists.



#### 4. Evaluation criteria

1. The place of philosophy in the knowledge system. Sections of philosophy.
2. Conditions for the emergence of philosophical thought.
3. The periodization of ancient philosophy. The philosophy of the pre-Socratics. Miletus school. The doctrine of Heraclitus.
4. Pythagorean and Eleatic schools of philosophy.
5. Ancient Greek atomism.
6. Sophists and features of their philosophical position.
7. Understanding the meaning and purpose of philosophy by Socrates.
8. The philosophical teachings of Plato. Theory of ideas.
9. The social philosophy of Plato.
10. The encyclopedic nature of the teachings of Aristotle. Metaphysics of Aristotle.
11. Philosophical schools of the era of Hellenism and late Antiquity.
12. The conditions of occurrence and characteristic features of medieval philosophy. Patristic period.
13. Medieval universities. Scholastic tradition of medieval philosophy.
14. Philosophy in the Renaissance.
15. Empiricism and rationalism in the European philosophy of the New Age in the XVII – XVIII centuries. The main ideas of empiricism and rationalism and their largest representatives.
16. Social philosophy of the Enlightenment.
17. Critical philosophy of Kant.
18. The ethical concept of Kant. "Categorical imperative".
19. The philosophy of German idealism. Hegel's philosophical system.
20. The main directions of European philosophy of the XIX century.
21. Russian philosophy of the XIX - XX centuries.
22. The main directions of philosophical thought in the XX century.
23. Existentialism, its main ideas, directions and representatives.
24. Modern philosophical problems and discussions.

Assessment “excellent (10)” deserves a student who has displayed comprehensive, systematic and deep knowledge of the educational program material, has independently performed all the tasks stipulated by the program, has deeply studied the basic and additional literature recommended by the program, has been actively working in the classroom, and understands the basic scientific concepts on studied discipline, who showed creativity and scientific approach in understanding and presenting educational program material, whose answer is characterized by using rich and adequate terms, and by the consistent and logical presentation of the material;

Assessment “excellent (9)” deserves a student who has displayed comprehensive, systematic knowledge of the educational program material, has independently performed all the tasks provided by the program, has deeply mastered the basic literature and is familiar with the additional literature recommended by the program, has been actively working in the classroom, has shown the systematic nature of knowledge on discipline sufficient for further study, as well as the ability to amplify it on one's own, whose answer is distinguished by the accuracy of the terms used, and the presentation of the material in it is consistent and logical;

Assessment “excellent (8)” deserves a student who has displayed complete knowledge of the educational program material, does not allow significant inaccuracies in his answer, has independently performed all the tasks stipulated by the program, studied the basic literature recommended by the program, worked actively in the classroom, showed systematic character of his knowledge of the discipline, which is sufficient for further study, as well as the ability to amplify it on his own;

Assessment “good (7)” deserves a student who has displayed a sufficiently complete knowledge of the educational program material, does not allow significant inaccuracies in the answer, has independently performed all the tasks provided by the program, studied the basic literature recommended by the program, worked actively in the classroom, showed systematic character of his knowledge of the discipline, which is sufficient for further study, as well as the ability to amplify it on his own;

Assessment “good (6)” deserves a student who has displayed a sufficiently complete knowledge of the educational program material, does not allow significant inaccuracies in his answer, has independently carried out the main tasks stipulated by the program, studied the basic literature recommended by the program, showed systematic character of his knowledge of the discipline, which is sufficient for further study;

Assessment “good (5)” deserves a student who has displayed knowledge of the basic educational program material in the amount necessary for further study and future work in the profession, who while not being sufficiently active in the classroom, has nevertheless independently carried out the main tasks stipulated by the program, mastered the basic literature recommended by the program, made some errors in their implementation and in his answer during the test, but has the necessary knowledge for correcting these errors by himself;

Assessment “satisfactory (4)” deserves a student who has discovered knowledge of the basic educational program material in the amount necessary for further study and future work in the profession, who while not being sufficiently active in the classroom, has nevertheless independently carried out the main tasks stipulated by the program, learned the main literature but allowed some errors in their implementation and in his answer during the test, but has the necessary knowledge for correcting these errors under the guidance of a teacher;

Assessment “satisfactory (3)” deserves a student who has displayed knowledge of the basic educational program material in the amount necessary for further study and future work in the profession, not showed activity in the classroom, independently fulfilled the main tasks envisaged by the program, but allowed errors in their implementation and in the answer during the test, but possessing necessary knowledge for elimination under the guidance of the teacher of the most essential errors;

Assessment “unsatisfactory (2)” is given to a student who showed gaps in knowledge or lack of knowledge on a significant part of the basic educational program material, who has not performed independently the main tasks demanded by the program, made fundamental errors in the fulfillment of the tasks stipulated by the program, who is not able to continue his studies or start professional activities without additional training in the discipline in question;

Assessment “unsatisfactory (1)” is given to a student when there is no answer (refusal to answer), or when the submitted answer does not correspond at all to the essence of the questions contained in the task.

## **5. Methodological materials defining the procedures for the assessment of knowledge, skills, abilities and/or experience**

During the test, postgraduate students can use the discipline program.