Негосударственное образовательное учреждение высшего образования
«Школа управления СКОЛКОВО»

Утверждено
ректор С.С. Писарев
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РАБОЧАЯ ПРОГРАММА ДИСЦИПЛИНЫ
Философия науки/Philosophy of Science

Направление подготовки	38.03.02 Менеджмент
Квалификация выпускника	Бакалавр
Образовательная программа	Управление и предпринимательство
Форма обучения	Очная
Рабочая программа дисциплины разработана	Siyaves Azeri, PhD

Трудоемкость		Контактная работа		Самостоятельная работа	Форма контроля	Семестр/квартиль
з.е.	часы	лекции	семинарские занятия			
3	108	24	24	60	Экзамен	1/1

Москва
2025

1. АННОТАЦИЯ ДИСЦИПЛИНЫ

What are the distinctive features of science and scientific mode of knowledge-production in comparison to other forms of knowledge-production? How scientific theories, which appear as constructions of scientists' minds are related to and explain real phenomena? What are the criteria of signifying a practice as science/scientific and another not? Is there only *one* possible scientific explanation of phenomena or can there be multiple explanations that are equally justified? How scientific theories change and how does science progress if it does at all? How scientists do chose between scientific theories? In attempt to provide some conceptual basis for answering these and similar questions, in this course we will touch upon induction, underdetermination, scientific realism, scientific revolutions, problems of method, falsification, scientific rationality and/or irrationality, theory-ladenness, paradigms, and the relation between ontology and epistemology through a close study of works of philosophers and historian of science such as Karl Popper, Imre Lakatos, Thomas Kuhn, Paul Feyerabend, and W. V. Quine.

2. ПЛАНИРУЕМЫЕ РЕЗУЛЬТАТЫ ОСВОЕНИЯ ДИСЦИПЛИНЫ

This course aims to encourage critical assessment of particular issues within philosophy of science. It also aims to show how various philosophers, scientists, and philosophers of science consider "identical" phenomena, their status, and particular problems and challenges differently due to their theoretical and philosophical orientations. The course provides the basic conceptual stockpile for understanding controversies around theory choice, the role of theory in delimiting a scope of a science, the formation of scientific concepts and conceptual systems, and scientific progress from mainstream and historical-dialectical stances.

В случае успешного освоения курса студенты будут:

знать

- the fundamental problems of philosophy of science; these problems include scientific method, induction, naïve indiuctivism, verificationism, the problem of "demarcation", the problem of theory and observation

уметь

- understanding and utilize Quine's conceptualization of natural epistemology, posits and reality, the two dogmas of empiricism and Quine's critical take on them, and his theory of ontological relativity

владеть

- understand and utilize fundamental concepts put forward by Karl Popper including his critique of Marxism and psychoanalysis, his solution to the problem of induction, his method of falsificationism, conjecture and error, and corroboration;
- understand and utilize Lakatos's approach to the problem of demarcation, his critique of falsificationism, the model of the methodology of research programmes, hard core of research programms, negative and positive heuristic, crucial experiment, and rational reconstruction of history of science;
- understand and utilize Kuhn's concept of scientific revolution, normal science, paradigm, paradigm shift, his approach to the relation between theory and observation, incommensurability of paradigms, and relativism, and Feyerabend's "anarchist" account of science, his analysis of the relation between action and knowledge, the uneven development in sciences, and the role of propaganda in theory choice

Дисциплина направлена на развитие следующих компетенций и их индикаторов:

Код компетенции	Формулировка компетенции и/или ее индикатора (ов)
УК-5.	Способен воспринимать межкультурное разнообразие общества в социально-историческом, этическом и философском контекстах
УК-5-1.	Демонстрирует уважительное отношение к культурно историческому наследию и социокультурным традициям различных социальных групп, опирающееся на знание этапов исторического развития России, основных событий в мировой истории, культурных традиций мира, включая мировые религии, философские и этические учения
УК-5-2.	Владеет навыками продуктивного взаимодействия в профессиональной среде с учетом национальных, этнокультурных, конфессиональных особенностей; навыками преодоления коммуникативных, образовательных, этнических, конфессиональных и других барьеров в процессе межкультурного взаимодействия

3. СОДЕРЖАНИЕ И СТРУКТУРА ДИСЦИПЛИНЫ

Название раздела/темы	Всего часов	Трудоемкость (час.) по видам учебных занятий			
		Контактная работа			Самостоятельная работа
		Всего	Лекции	семинары	
Тема 1. Introductions: Induction, verificationism, falsificationism	22	10	4	6	12
Тема 2. The methodology of scientific research programmes	28	10	6	4	18
Тема 3. The role of revolutions in science – non-rational and irrational accounts of science	26	14	6	8	12
Тема 4. What is natural epistemology?	32	14	8	6	18

Итого	108	48	24	24	60

Topic 1. Introductions: Induction, verificationism, falsificationism
An overview of "scientific method, scientific revolution, induction, naïve inductivism, the "problem of induction", the problem of theory and observation, Popper's critique of Marxism and psychoanalysis, Popper's solution to the problem of induction, problems with falsificationism.
Topic 2. The methodology of scientific research programmes
An overview of Lakatos's approach to the problem of demarcation, critique of falsificationism, methodology of scientific research programmes, negative and positive heuristic; the role of crucial experiments, and rational reconstruction of the history of science.
Topic 3. The role of revolutions in science – non-rational and irrational accounts of science
An overview of Kuhn's revolutionary history of science, paradigms and normal science, the Copernican revolution, the relation between theory and observation, incommensurability, relativism, Feyerabend's "anarchic" account of science, the relation between ideas and action and ideas and knowledge, the "uneven development" in science.
Topic 4. What is natural epistemology?
An overview of Quine's concept of natural epistemology in relation to his theory of "posits and reality", the theory of ontological relativity, the position of "mental entities", language of science, and the relation between theory and the world.

One of the components of the course is interdisciplinary assembly, which is conducted based on the results of the module in SKOLKOVO. Assembly presents holistic overview of the completed disciplines, as a single integrated system.

4. ОЦЕНОЧНЫЕ СРЕДСТВА И ПРИМЕРЫ ЗАДАНИЙ ДЛЯ ОЦЕНКИ РЕЗУЛЬТАТОВ ОСВОЕНИЯ ДИСЦИПЛИНЫ

4.1 Текущий контроль
The final grade consists of the following components:

Response papers (individual work)— 60% of final grade
Students are expected to submit **five response papers** during the five first days of the course.
The formal structure of the response papers should be as follows:
1. Use MS Word Times New Roman 12 font.
2. Margins left, right, bottom, and top standard (2.5 cm).
3. Line spacing 1.5; NO extra space between paragraphs.
4. Intend the first line of each paragraph.
5. Left alignment only.
6. Total length should be 2 full pages.

The response papers are due September 25, 26, 27, 28, and 29 @ 20:00 Moscow time. Content-wise, please follow the following format: First, write a one-paragraph long summary of one of the assigned readings of the day. The paragraph should not be longer than two fifth of the first page. Second, choose two themes that interest you and explain them while linking them to each other. Third, choose two themes that you find obscure, difficult, or unacceptable and explain why you think they are so. Criteria for a good response are: clarity and precision of the summary, clarity of the identified themes, logical coherence, meaningful engagement and

discussion of the chosen themes, flow of the argument, logical strength, and originality. Further breakdown of the criteria is available as an independent document in Canvas.
Students may use ChatGPT or other chatbots for clarifying their responses; yet, in case they do so they should add a separate note stating that they have acquired the help from the machine; they should explain to what extent and in what way the machine has helped them reaching their learning goals and understanding material. Failure in providing proper explanation amounts to a failing grade.

Group presentation—20% of final grade

Students will make a presentation in groups during the fourth timeslot on September 30th. Each group will have 7 minutes time for presentations followed by 8 minutes of discussion. The presentation must be related to one of the topics discussed during the course. Presentations will be graded based on the criteria of 1) clear argumentation, 2) depth of analysis, 3) creativity, 4) the ability to answer questions, and 5) public speaking skills.

Class participation—20% of final grade

Participation in a seminar course is critical for creating a positive learning environment as well as comprehending the material. It is especially vital for success in one's education, as we tend to learn more as we engage more. To this end, students will be expected to take an active part in class meetings. This requires that we come to class having read course materials and ready to ask questions of one another about them and that we come to class ready to meaningfully engage with one another.
Successful participation in this course implies: 1) evidence that the student carefully read the assigned material 2) evidence that the student can engage with the material assigned and discuss it with their peers.

The final grade of the course consists of following components:

Final grade = 0,75 x course's grade + 0,25 x interdisciplinary course grade

4.2 Промежуточная аттестация

The examination will consist of a 90-minute written test that includes the identification of ten quotations from required course readings and a written essay. The use of any electronic devices is prohibited. The student must:

1) Attribute the given quotations; identify the sections of the texts (such as a chapter) where the quotations are taken from as well as their authors, titles, and year of publication.
2) Based on the given quotations, write an essay in English (1000 words) analyzing semantic relationships between the texts where these quotations are taken from.

Assessment Criteria

Grade		Criteria
Excellent (5)	10	can be given for the essay (no less than 1000 words) if 2 elements are present: 1) the student identified all quotes correctly; 2) the essay written in accordance with the following requirements: a) in the essay, there is a sequential logic structure (introduction, body, and conclusion); b) the essay demonstrates good knowledge and understanding of all texts analyzed; c) the essay contains at least 10 exact quotations, different from the attributed quotations in assignment

	9	can be given for the essay (no less than 1000 words) if 2 elements are present: 1) the student identified all quotes correctly; 2) the essay written in accordance with the following requirements: a) in the essay, there is a sequential logic structure (introduction, body, and conclusion); b) the essay demonstrates good knowledge and understanding of all texts analyzed; c) the essay contains at least 9 exact quotations, different from the attributed quotations in assignment
Good (4)	8	can be given for the essay (no less than 1000 words) if 2 elements are present: 1) the student identified all quotes correctly; 2) the essay written in accordance with the following requirements: a) in the essay, there is a sequential logic structure (introduction, body, and conclusion); b) the essay demonstrates good knowledge and understanding of all texts analyzed; c) the essay contains at least 8 exact quotations, different from the attributed quotations in assignment
	7	can be given for the essay (no less than 1000 words) if 2 elements are present: 1) the student identified all quotes correctly; 2) the essay written in accordance with the following requirements: a) in the essay, there is a sequential logic structure (introduction, body, and conclusion); b) the essay demonstrates good knowledge and understanding of all texts analyzed; c) the essay contains at least 7 exact quotations, different from the attributed quotations in assignment
Satisfactory (3)	6	can be given for the essay (no less than 1000 words) if 2 elements are present: 1) the student identified all quotes correctly; 2) the essay written in accordance with the following requirements: a) in the essay, there is a sequential logic structure (introduction, body, and conclusion); b) the essay demonstrates good knowledge and understanding of all texts analyzed; c) the essay contains at least 6 exact quotations, different from the attributed quotations in assignment
	5	can be given for the essay (no less than 1000 words) if 2 elements are present: 1) the student identified all quotes correctly; 2) the essay written in accordance with the following requirements: a) in the essay, there is a sequential logic structure (introduction, body, and conclusion); b) the

		essay demonstrates good knowledge and understanding of all texts analyzed; c) the essay contains at least 5 exact quotations, different from the attributed quotations in assignment.
Unsatisfactory (2)	4	can be given for the essay (no less than 1000 words) if 2 elements are present: 1) the student identified all quotes correctly; 2) the essay written in accordance with the following requirements: a) in the essay, there is a sequential logic structure (introduction, body, and conclusion); b) the essay demonstrates good knowledge and understanding of all texts analyzed; c) the essay contains at least 4 exact quotations, different from the attributed quotations in assignment
	3	can be given for the essay (no less than 1000 words) if 2 elements are present: 1) the student identified all quotes correctly; 2) the essay written in accordance with the following requirements: a) in the essay, there is a sequential logic structure (introduction, body, and conclusion); b) the essay demonstrates good knowledge and understanding of all texts analyzed; c) the essay contains at least 3 exact quotations, different from the attributed quotations in assignment
	2	can be given for the essay (no less than 1000 words) if at least one quote is identified incorrectly
	1	can be given for the essay (no less than 1000 words) if at least one quote is identified incorrectly

4.3 Примеры заданий

Quotes examples:

(1) “Referring to the success of ‘science’ in order to justify, say, quantifying human behaviour is therefore an argument without substance”.

(2) “Any definition of the scientist that excludes at least the more creative members of these various schools will exclude their modern successors as well”.

(3) “Partly no doubt because of an obsession with the consequences and a neglect of the conditions of the experimental paradigm, the single case that the hypothetico-deductive view of science fits”.

Reading

1. Feyerabend, Paul. 1993. Against Method.
2. Hume, David. 2007. An Enquiry Concerning Human Understanding.
3. Kuhn, Thomas. 2012. The Structure of Scientific Revolutions.
4. Lakatos, Imre. 1989. The Methodology of Scientific Research Programmes.
5. Quine, Willard V. 1969. Ontological Relativity and Other Essays.
6. Quine, Willard V. 1963. Logico-Philosophical Essays.

7. Popper, Karl. 2002. The Logic of Scientific Discovery.

5. УЧЕБНО-МЕТОДИЧЕСКОЕ И ИНФОРМАЦИОННОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ

5.1 Литература

История и философия науки : учебник для вузов / А. С. Мамзин [и др.] ; под общей редакцией А. С. Мамзина, Е. Ю. Сиверцева. — 2-е изд., перераб. и доп. — Москва : Издательство Юрайт, 2024. — 360 с. — (Высшее образование). — ISBN 978-5-534-00443-4. — Текст : электронный // Образовательная платформа Юрайт [сайт]. — URL: https://urait.ru/bcode/535851 (дата обращения: 16.05.2024).

5.2 Электронные образовательные ресурсы

Материалы дисциплины размещены в LMS: https://l.skolkovo.ru/login/index.php

5.3 Профессиональные базы данных и информационные справочные системы (при наличии)

нет

6. ЛИЦЕНЗИОННОЕ И СВОБОДНО РАСПРОСТРАНЯЕМОЕ ПРОГРАММНОЕ ОБЕСПЕЧЕНИЕ

Операционная система Simple Linux, браузер Yandex браузер, антивирусное ПО Calmantivirus;
Свободно распространяемое ПО, в том числе отечественного производства:
Офисный пакет Libre Office, Okular PDF Reader, 7-Zip Архиватор, GIMP Редактирования фотографий, Inkscape Векторная графика, Blender 3D графика, Kdenlive Видеоредактор, Audacity Аудиоредактор, VLC Медиаплеер, Thunderbird Почтовый клиент, Flameshot Создание скриншотов

7.МАТЕРИАЛЬНО-ТЕХНИЧЕСКОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ

Учебная аудитория для проведения занятий лекционного типа, оснащенная мультимедийным оборудованием, учебной мебелью, доской или со стенами с маркерным покрытием.
Учебная аудитория для проведения занятий семинарского типа, оснащенная мультимедийным оборудованием, учебной мебелью, доской или со стенами с маркерным покрытием.
Аудитория (коворкинг) для самостоятельной работы оснащенная учебной мебелью, ноутбуками.
Материально-техническое обеспечение аудиторий представлено на официальном сайте https://bbask.ru/sveden/objects/