**History and Philosophy of Science**

This course is designed for Doctoral students of SPbU and provides them with the background they need to conduct future scientific work. For the most part, the course addresses two basic themes:

1. Philosophy and history of science as answers to the question: how can we manage science? Can we control and forecast scientific development and its dynamic at all? What kinds of misconceptions and myths do we face along the way?

2. Consideration of the scientific methods, structure and purposes. What can we call science and how can we distinguish science from pseudo-science? What limits does scientific methodology have? Can we talk about objective approaches in the social sciences?

For this year 2018:

Examination is conducted in a written form and includes two tasks. The time for preparation is up to 90 minutes. Each task is evaluated separately.

The execution of the task involves a detailed answer to the theoretical problem: an indication of the problematic nature of the question; review and analysis of various points of view on this issue in the literature.

Basic errors are: inconsistency of the answer’s content as applied to the given question, incorrect use of special terms, lack of understanding the essence of the problem as posed in the question, logical inconsistency in narration and argumentation.

**General questions**

1. Main Issues in Philosophy of Science
2. Problems of Science Origin and Periodization
3. Connections between Philosophy and History of Science
4. Connections between Science and Philosophy
5. Problems of Definition of Science and its Criteria
6. Greek Science: First Theoretical Presuppositions of Knowledge
7. European Science in the Middle Ages
8. The Scientific Revolution and Modernity
9. The Classical Era: Scientific Accomplishments and Philosophical Ideas
10. Empiricism in Modern Philosophy
11. Rationalism in Modern Philosophy
12. Comte’s Positivism and Its Characteristics
13. Empiriocriticism and Its Characteristics
14. Logical Positivism and Its Characteristics
15. Science as a Generation of Knowledge, a Social Institute, a Culture
16. Ethics of Science
17. [Synergetics: Chaos, Order, Self-Organization](https://books.google.ru/books?id=i7fsCgAAQBAJ&pg=PT233&lpg=PT233&dq=role+of+synergetics+in+contemporary+science&source=bl&ots=aMNrQRLue_&sig=gLVkBeJ5arAANX2isjXsL9wvpnc&hl=ru&sa=X&ved=0ahUKEwjAkfjzpLLXAhVBI1AKHcfpABQQ6AEIJzAA)
18. [Kuhn's Structure of Scientific Revolutions](https://www.google.ru/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=0ahUKEwj7mp2CqbLXAhXOLlAKHR9eAAEQFghEMAM&url=https%3A%2F%2Fwww.uky.edu%2F~eushe2%2FPajares%2FKuhn.html&usg=AOvVaw2cvyWHnQGgeGUJJClcuP7g" \t "_blank). The Concept of Paradigm.

### [K. Popper's Critical Rationalism](https://www.google.ru/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwiRkd7qqbLXAhXKI1AKHRs1AKsQFgg_MAI&url=http%3A%2F%2Fstudy.com%2Facademy%2Flesson%2Fkarl-poppers-critical-rationalism-definition-history.html&usg=AOvVaw1I6twuu-TTQNBd4uLYyKcv)

### P. [Feyerabend and Epistemological Anarchism](https://www.ukessays.com/essays/philosophy/feyerabend-and-epistemological-anarchism-analysis-philosophy-essay.php)

1. Philosophy of the Mind and Artificial Intelligence as the Issue of Philosophy of Science
2. Rationality in Contemporary Culture. Science as a Type of Rationality.
3. Functions of Science in Society.
4. The Problem of Scientific and Pseudo-scientific Knowledge Demarcation. Criteria for Verification and Falsification.
5. Empirical Level of Scientific Knowledge. Basic Methods of Empirical Evidence.
6. Theoretical Level of Scientific Knowledge. Basic Methods of Theoretical Research.
7. Scientific Traditions and Scientific Revolutions in the Development of Scientific Knowledge.
8. Science and Parascience in the Modern World.
9. Formation of Social Sciences and Humanities in European history.
10. Modern Stage of Scientific and Technological Development: Problems and Prospects
11. Postnonclassical Science. Scientism and Anti-scientism in Modern Culture.
12. Science and Economics in the Past and the Present
13. The Role of Government in Science Development.

**Special questions**

1. Specifics of Knowledge in Social Sciences and Humanities
2. The Values in Social Sciences and Humanities
3. Problems of Scientific Predictions in Social Sciences
4. Quantitative and Qualitative methods in Social Sciences and Humanities
5. The Concept of Fact in Social Knowledge.
6. Contemporary Philosophical Problems of Management (If Management Still a Science)
7. Methodology of Social Sciences

Criteria for evaluating the correctness of the response (in scores):

“Excellent” - A complete and correct answer is given to all questions: the answer is constructed logically; a profound knowledge of professional terms, concepts, categories, concepts and theories; an analytical approach in expressing different concepts; meaningful conclusions; knowledge of compulsory literature.

“Good” - Not a complete answer: the propositions are not well founded enough; there is a logical inconsistency in the justifications; in general, conclusions are correct; knowledge of compulsory literature is expressed.

“Satisfactory” - Not complete, partially incorrect answer to the question: answer is logically inconsistent; the basic concepts, and categories are insufficiently disclosed; propositions are formulated, but insufficiently argued; terminological inaccuracies are admitted; knowledge of compulsory literature.

“Bad” - Wrong answers to the questions are given: the basic concepts, categories,​

theory are not disclosed; scientific analysis of problems is replaced by reasoning of a trivial character; the answer contains a number of significant inaccuracies; conclusions are superficial or incorrect; no knowledge of compulsory literature.