

Philosophy of Science I

Spring Semester, 2019

Course code: FILVE1

Credits: 7.5 Credits (7.5 ECTS credits)

Institution Department of Philosophy

Main field: Philosophy

Instructor: Dr. C.D. McCoy

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Office Hours: TBA

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Class Schedule: Fridays 10-12:30, Weeks 1-8 (except 8/2, rescheduled for 4/2)

Class Location: See Schedule

Course Content

This course is a survey of the philosophy of science, focused particularly on the question, “what can science tell us about the world?” We will consider this question from three perspectives: metaphysical, epistemological, and semantic. First, do scientific claims pertain to the world as it is? If not, then do they pertain merely to our experience of the world or to the world only insofar as we are able to conceptualize it? Second, are scientific methods sufficient to obtain the knowledge that science purports to obtain? If not, then what knowledge can be obtained by the methods of science? Third, are scientific statements to be taken literally as truth apt claims? Or does their meaning consist in something else, perhaps being elliptical for instrumental claims about experimental observations?

We will approach these issues by considering how various prominent philosophers of science in the 20th century responded to them. Assigned readings include pieces by Popper, Carnap, Lakatos, Kuhn, Feyerabend, Putnam, and van Fraassen. All readings will be made available in advance online. The course content is suitable especially for students who either have at least one semester’s theoretical studies philosophy, or at least one semester’s university studies within any scientific discipline, behind them.

There are two objectives which will be primarily assessed through two essay examinations. By the end of the course, students should aim to possess a well-rounded understanding of central issues in Philosophy of Science. Students should also aim to improve their critical skills through in-depth textual analysis and written argumentation.

Requirements

Attendance at more than half of the lectures is mandatory. Students will be assessed by a mid-term essay and an end-of-term essay. Further details on these essays will be provided on the first day of class.

Schedule

Topic	Reading
25 January (D499) Karl Popper	(1953). "Truth, Rationality, and the Growth of Scientific Knowledge."
1 February (E397) Hans Reichenbach Rudolf Carnap	(1938). <i>Experience and Prediction</i> . [PP. 3-16] (1945). "Empiricism, Semantics, and Ontology."
4 February (F279) Imre Lakatos	(1970). "Falsification and the Methodology of Scientific Research Programmes."
15 February (D215) Paul Feyerabend	(1970). "Against Method: Outline of an Anarchistic Theory of Knowledge."
22 February (D255) Thomas Kuhn	(1962). <i>The Structure of Scientific Revolutions</i> . [CH. 6] (1977). "Objectivity, Value Judgment, and Theory Choice."
1 March (E319) W.V.O. Quine Hilary Putnam	(1951). "Two Dogmas of Empiricism." (1978). <i>Meaning and the Moral Sciences</i> . [LEC. 2]
8 March (F497) Larry Laudan	(1981). "A Confutation of Convergent Realism."
15 March (D320) Bas van Fraassen	(1980). <i>The Scientific Image</i> . [CH. 4]

Evaluation

a) The course is examined through two written assignments in the form of a home exam. Principles of the weighting of the individual assignments is shown in the grade criteria. For courses offered in English, examinations are in English. For more detailed information, please refer to the course description. The course description will be available no later than one month before the start of the course.

b) Grades are based on a goal-based grade of seven grades:

- A = Excellent
- B = Very good
- C = Good
- D = Satisfactory
- E = Adequate
- Fx = Insufficient

F = Absolutely insufficient

c) The written grade criteria are announced to students at the start of the course. The reported goal-related rating criteria are binding.

d) In order to obtain an approved final grade, a grade of E for both examinations and attendance of at least 50% of the lectures is required. If there are special reasons, the examiner may, after consultation with the responsible teacher, grant the student the exemption from the obligation to participate in certain compulsory requirements. The student may then be given a compensatory task. If a student fails to submit an exam in time, and has valid reasons for that, the student must contact the teacher in good time to agree on a proposed deadline. If the student submits late without contacting the teacher, the assignment is awarded the grade F.

e) For each course, at least two examinations are offered. Students who have been given the grade Fx or F twice in a row by one and the same examiner are entitled to receive another examiner appointed at the next exam, unless special reasons speak against it. The petition about this shall be made to the board of directors. Students with the lowest grade E may not take a new exam for higher grades.