

Programa | Course Description 2022/2023

Unidade Curricular | *Course Unit*

Filosofia da Ciência / Philosophy of Science

Código da Unidade Curricular | *Course ID*

FIL2.34733

ECTS | *Credits*

6

Ciclo de Estudos | *Level*

1º

Semestre | *Semester*

1º

Docente(s) | *Instructor(s)*

David Yates

Língua de ensino | *Language of instruction*

Inglês / English (students may write exams and give presentations in Portuguese)

Programa (na língua de ensino) | *Course description (in language of instruction)*

In this course we will cover some of the central topics in the philosophy of science, starting with the demarcation of scientific knowledge and practice from other kinds. We will examine logical positivism and the verification principle, the problem of induction, Popper's falsificationism, and Kuhn's attack on Popper's views. Through this we will introduce the Quine-Duhem thesis (the underdetermination of theory by evidence) and the topic of scientific realism vs. antirealism. We will consider Kuhnian arguments for scientific antirealism based on the idea that perception is theory-laden and hence does not provide us with direct access to a mind-independent world; and Cartwright's arguments that the laws of physics "lie". We will also examine traditional arguments concerning realism and antirealism, including the pessimistic meta-induction and the "no-miracles" argument. Additional topics to be studied include the nature of scientific explanation and Bayesian confirmation theory. The course will be non-technical and will not presuppose any knowledge of science or mathematics. Many of the issues covered will be general (e.g. theories of meaning and reference, nature of evidence, perception, epistemology) and hence will be applicable to other areas of philosophy as well.

Avaliação (na língua de ensino) | *Grading and Assessment (in language of instruction)*

Classes will be divided into lectures and seminar sessions at which we will discuss either set readings or the material presented in the lecture. Students must submit an essay of around 2000 words and sit a term-time examination. Provisionally the essay is worth 50% and the examination 50%. It is also possible for students to give presentations at the seminar sessions, to be decided in conjunction with students. In this case the marks breakdown will be 20-40-40 (20% for the

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presentation). Students may also sit the final examination if they fail the term-time assessments with a mark of 7 or above. It is necessary to complete all term-time assessments in order to be eligible for the final examination.

Bibliografia (selection) | Readings (selection)

All readings required for the course will be circulated via the course Moodle page. The following books are recommended:

Textbooks:

Salmon et. al. (1992). *An Introduction to the Philosophy of Science*. Prentice-Hall.

Psillos & Curd (2008). *The Routledge Companion to the Philosophy of Science*. Routledge.

Anthologies:

Curd & Cover (1998). *Philosophy of Science: The Central Issues*. W. W. Norton & co.

Boyd, Gaspar & Trout (1991). *The Philosophy of Science*. MIT Press.