

Course Description

Course Unit

Advanced Topics: Metaphysics of Science

UC Code

N/A - Nova cadeira

ECTS Credits

12 ECTS

Work Hours

336H (12 ECTS)

Level

PHD

Academic year and Semester

2024/2025, S2

Faculty

David Yates

Class

TP 1

Language of instruction

English

Class Description

The metaphysics of science is a wide-ranging discipline that can involve (1) metaphysical issues that arise in all sciences (such as the nature of laws, natural kinds, causality and properties); (2) metaphysics applied to specific sciences such as physics, chemistry, biology and psychology; and (3) issues concerning the relationship between sciences at different levels (emergence, grounding and reduction). We will cover a selection of these issues in the present course, including laws of nature; dispositional essentialist theories of scientific properties, laws and kinds; the nature of causation; space and time; and the reduction / emergence debate as it applies to the relationship between the special sciences and physics, with a focus on the metaphysics of mind. No background knowledge of

science is required, and the course will be non-technical and accessible to all.

Grading and Assessment

1 essay of 4000-5000 words on a topic chosen by the student, in consultation with the professor. PhD students are expected to show independent research and to expand upon and go beyond the material taught in classes.

Bibliography

All essential readings for the course will be supplied via the Moodle platform. The following is a list of general and preparatory readings that should be useful. It is not required to read them all!

Beckermann, A., Flohr, H. & Kim, J. eds. (1993). *Emergence or Reduction? Essays on the Prospects of Nonreductive Physicalism*. De Gruyter.

Bird, Alexander. 2007. *Nature's Metaphysics*. Oxford: Oxford University Press.

Göhner, J. & Schrenk, M. "The Metaphysics of Science", *Internet Encyclopaedia of Philosophy*. <https://iep.utm.edu/met-scie/>

Kim, J. and Sosa, E. eds. *Metaphysics: An Anthology*. Oxford: Blackwell (1999).

Mumford, S. & Tugby, M. eds. (2013). *Metaphysics and Science*. Oxford University Press. (Pretty advanced collection of essays but you might find the introduction ("What is the metaphysics of science?") by the editors useful.

Schrenk, M. (2017). *Metaphysics of Science: A Systematic and Historical Introduction*. London: Routledge.

Prerequisites (if applicable)

N/A