UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Philosophy of Science

2425-2-E2401P064

Learning area

Interdisciplinary competences

Learning objectives

*Knowledge and understanding

- Developing a critical point of view on scientific research;
- understanding the genesis, the validation and the obsolescence and/or the turnover of scientific theories and hypotheses;
- understanding which views can / cannot be considered scientific on the basis of different scientific criteria;
- providing a qualifying scientific and cultural background.

Applying knowledge and understanding

- Giving well-rooted and in-depth direction to scientific knowledge;
- interdisciplinarity;
- recognizing the relationships between different fields of psychological knowledge.

Contents

The course aims to provide a basic knowledge on the philosophy of science by focusing on fundamental problems, such as the nature and the function of scientific laws and theories, the structure of explanation, of prediction and inferences aimed at acquiring scientific knowledge, the relationship between hypotheses and observational

evidences, and the question of scientific realism.

In the first part of the course, these problems will be addressed in their general scope, in the second part, they will be developed with attention to the various fields of psychological sciences.

Detailed program

General part

- Science and philosophy of science;
- the basis of scientific reasoning: induction and deduction;
- the philosophical problems of induction and causality;
- the standard view of scientific knowledge and neo-positivism;
- Popper and falsificationism;
- the "new" philosophy of science (Kuhn, Lakatos, Feyerabend);
- laws and theories;
- non-neutrality of data;
- models of scientific explanation;
- scientific realism and antirealism.

Monografic Part: The mind-body problem

- The historical stages of the problem and the basic theoretical options;
- dualism;
- functionalism;
- mental causation;
- the new cognitive science;
- consciousness.

Prerequisites

Primary high school knowledge of philosophy.

Teaching methods

28 in-person lecture-based classes. The teaching methods will include direct exposure, group discussion, analysis of historically and scientifically relevant texts, the conduct of eventual in-depth seminar discussions.
The course is delivered in Italian. Class attendance is strongly recommended.

In order to facilitate those students who do not attend classes, the teaching material (slides) is made available on the e-learning webpage of the course.

Assessment methods

Assessment will consist of a written test with open questions. The questions are aimed at testing the effective acquisition of the topics illustrated during the course, as well as to ascertain the ability to manage the contents of the proposed bibliography and the capability to critically deal with them.
There are no ongoing assessments.

Although this course is held in Italian, for Erasmus students, course material can also be available in English, and students can take the exam in English if they wish to do so.

Textbooks and Reading Materials

General part:
Godfrey-Smith, P. (2022). *Teoria e realtà. Introduzione alla filosofia della scienza*. Milano: Raffaello Cortina. (Cap. 1-7, 9-11)
Course slides (on the e-learning site)

Further texts (*optional*)
Sinigaglia, C. (a cura di). (2010). *Filosofia della scienza*. Milano: Cortina.
Amoretti, M. C., & Serpico, D. (2022). *Filosofia della scienza: parole chiave*. Roma: Carocci.

Monographic part:
Di Francesco, M., Marraffa, M., & Tomassetta, A. (2023). *Filosofia della mente. Corpo, coscienza, pensiero*. Roma: Carocci.
Slides and papers presented in class (on the e-learning site)

Sustainable Development Goals

QUALITY EDUCATION