UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Philosophy of Science

2122-2-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

- 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;
- the philosophy of psychology;
- pluralism and fragmentation in psychology;
- research methods and models in psychology;

- regularity and laws, theories and models;
- explanatory models and levels of explanation in psychology;
- falsificationism in psychology.

Prerequisites

None

Teaching methods

Teaching method consists of lectures accompanied by a critical discussion with the students on covered topics and concepts

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.

Lessons will be held in presence, unless further COVID-19 related restrictions are imposed.

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.

Participation in the optional activities (exercises, conferences, etc.) proposed during the course contributes to the final evaluation (only for attending students).

Upon the student's request, the exam can be integrated by an oral examination, on all the course topics.

Textbooks and Reading Materials