# Epistemology

## Prof. Alessandro Giordani

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The aim of the course is to provide a general introduction to key concepts and issues in philosophy of science and epistemology, outlining models of knowledge and foundational theories discussed in contemporary debate. At the end of the course, students will be able to understand key concepts, justifications, mathematical theories, empirical theories and scientific explanations. They will be able to identify the logicist and finitist programmes in the philosophy of mathematics, as well as classic demarcation programmes in the philosophy of science.

***COURSE CONTENT***

*Introduction*

– The concept of scientific knowledge.

– The concept of epistemic foundations.

– The concept of scientific theory.

Part I

*Eidetic Theories*

– The distinctive traits of eidetic theories

– Problems with eidetic foundations.

– Foundational programs in mathematics

Part II

*Empirical Theories*

– The distinctive traits of empirical theories

– Problems with empirical foundations.

– Demarcation programs and scientific progress.

***READING LIST***

The course will be based on the following book:

A. Giordani, *Lezioni di Filosofia della Scienza,* EDUCatt, Milan, 2010.

Students are also advised to read the following:

C. Cellucci, *La filosofia della matematica del Novecento,* Laterza, Bari 2007.

T. Kuhn, *La rivoluzione copernicana,* Einaudi, Turin, 1972.

J. Ladyman, *Filosofia della scienza,* Carocci, Rome, 2007.

M. Buzzoni, *Filosofia della scienza,* La Scuola, Brescia, 2008.

***TEACHING METHOD***

Lectures in class.

***ASSESSMENT METHOD AND CRITERIA***

Students will be assessed on their acquired knowledge and skills by means of an oral exam. The test verifies the understanding of the concepts introduced during the course, the ability to identify the different kind of foundational theories in different disciplines and to critically analyse the arguments in support of a thesis in the field of philosophy of science.

***NOTES AND PREREQUISITES***

Prerequisites: there are no particular prerequisites. For those unfamiliar with philosophy and the contemporary history of philosophy in particular, we recommend a basic introduction, such as P. Kosso, *Reading the Book of Nature: An Introduction to the Philosophy of Science,* Cambridge University Press, 1992, Italian translation *Leggere il libro della natura*, Il Mulino, 1994, or S. Okasha, *Philosophy of Science: A Very Short Introduction,* Oxford University Press, 2002, Italian translation *Il primo libro di filosofia della scienza*, Einaudi, 2006.

Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENG, or on the Faculty notice board.