UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Philosophy of Artificial Intelligence and robotics

2425-102R-04

Title

Philosophy of Artificial Intelligence and robotics

Teacher

Prof. **Edoardo Datteri**
Full professor of Logic and Philosophy of Science
Department of Human Sciences for Education
Director of the RobotiCSS Lab (roboticss.formazione.unimib.it)

Language

English

Short description

Contemporary research in Artificial Intelligence (AI) and robotics gives rise to a large number of distinctive philosophical questions and dilemmas that, while urgent and pressing, are often sidestepped, or only superficially addressed, in science and technology courses. Can artificial intelligence systems have a mind and develop forms of consciousness? What kind of knowledge can computer simulations provide about the world, and how can it be justified? Can robotic models of living organisms be used as experimental tools in life sciences? What kind of

explanations should explainable AI systems provide? How can we trust artificial intelligence and robotic systems, how can we ethically evaluate their behavior and assign responsibility for the actions they generate? These and other questions pertain to different branches of philosophy, including epistemology, philosophy of science and moral philosophy, and are increasingly at the center of the public debate on artificial intelligence and robotics. They will be partially addressed in this course.

The lessons will be highly interactive and intended for doctoral students from fields other than philosophy and without a philosophical background. Philosophical debates will be organized and encouraged, also with the help of in-vited lectures by leading experts in the various sectors covered.

Target audience

PhD students from all the courses offered in Bicocca.

Maximum number of participans

25

Assessment method

Active participation in the discussion and in the debates organized during the lessons will be positively evaluated. No final test will be administered.

CFU / Hours

1 CFU / 12 Hours

Teaching period and mode

The lessons will be highly interactive and intended for doctoral students from fields other than philosophy and without a philosophical background. Philosophical debates will be organized and encouraged, also with the help of invited lectures by leading experts in the various sectors covered. A relevant paper will be sent to the students a few days before each lesson, in order to stimulate discussion.

March 7, 2025, 16:00 – 18:00 U6-01C
Introduction: Philosophical issues in AI and robotics

March 28, 2025, 16:00 – 18:00 U1-05
Epistemology and philosophy of mind: Can computers and robots have a mind?

April 4, 2025, 16:00 – 18:00 U9-08
Epistemology and philosophy of mind: Can computers and robots have consciousness?

April 11, 2025, 16:00 – 18:00 U1-04
Philosophy of science: Can computers and robots automatise scientific discovery?

May 9, 2025, 16:00 – 18:00 U9-08
Ethics: Can we trust AI and robotic systems?

May 2, 2025, 16:30 – 18:30 U6-32
Ethics: Can AI systems and robots be deemed responsible for the outcomes of their decisions?

course registration on "Segreterie online": from 10/02/2025 to 02/03/2025

Sustainable Development Goals

QUALITY EDUCATION | INDUSTRY, INNOVATION AND INFRASTRUCTURE