Master's degree in Artificial Intelligence

The master's degree in Artificial Intelligence was created as a synergy between the doctoral programme in Artificial Intelligence (AI) at the Barcelona School of Informatics of the UPC, the School of Engineering of the Rovira i Virgili University (URV) and the Faculty of Mathematics of the University of Barcelona (UB). It guarantees an interdisciplinary education in which computer science intersects with philosophy, psychology, linguistics, engineering and other fields. It focuses on knowledge engineering, automatic learning and multi-agent systems, natural language processing, reasoning and problem solving, soft computing and AI technologies, and the application of AI techniques to professional practice.

The doctoral degree in AI, which follows on from this master’s degree, was awarded the Spanish Ministry of Education’s Quality Award every year from 2003 to 2010. It is now a verified programme.

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GENERAL DETAILS

Duration and start date
1.5 academic years, 90 ECTS credits. Starting September

Timetable and delivery
Mornings. Face-to-face

Fees and grants
Approximate fees for the master’s degree, excluding degree certificate fee, €4,901 (€7,352 for non-EU residents). This master's degree has been selected in the Masters of Excellence grant programme of the Catalunya-La Pedrera Foundation. More information is available at the Foundation's website.

More information about fees and payment options
More information about grants and loans

Language of instruction
English

Official degree
Recorded in the Ministry of Education's degree register

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ADMISSION

General requirements
Academic requirements for admission to master's degrees

Places
50

Pre-enrolment
Pre-enrolment period open.
How to pre-enrol

Enrolment
How to enrol

Legalisation of foreign documents
All documents issued in non-EU countries must be legalised and bear the corresponding apostille.

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DOUBLE-DEGREE AGREEMENTS

Double-degree pathways with foreign universities
- Master's degree in Artificial Intelligence (MAI) + Master's degree in Informatics- Mention in Computer Science or Mention in Software Engineering (Pontificia Universidad Católica del Perú, Perú)
PROFESSIONAL OPPORTUNITIES

Professional opportunities

The master’s degree is addressed to students who wish to acquire advanced knowledge in AI in order to occupy positions of responsibility in industry, the public sector or academia, in Spain or abroad. The programme covers many research areas related to the design, analysis and application of AI. Students who undertake this master’s degree will be equipped to:

- Deal with technically complex problems that require a degree of innovation and/or research.
- Make strategically important decisions within their professional domain.
- Pursue doctoral studies within the domain of information and communication technologies at the UPC, the URV, the UB or abroad.

Competencies

Generic competencies

Generic competencies are the skills that graduates acquire regardless of the specific course or field of study. The generic competencies established by the UPC are capacity for innovation and entrepreneurship, sustainability and social commitment, knowledge of a foreign language (preferably English), teamwork and proper use of information resources.

Specifics competences

On completion of this course, students will be able to:

- Design and implement computer-based studies, including cost analysis and execution adjusted to the available resources and the existing procedures.
- Satisfy the information-analysis needs of organisations and identify sources of uncertainty and variability.
- Solve the decision-making problems of organisations and integrate intelligent tools.
- Apply artificial intelligence techniques in technological and industrial settings in order to improve quality and productivity.
- Design, draft and present reports on computer-related projects that are specific to the field of artificial intelligence.
- Design new computer tools and artificial intelligence techniques in their professional practice.
- Assimilate and integrate changes in the economic, social and technological milieu into the goals and procedures of computer work in intelligent systems.
- Respect regulations and ethics in their professional practice.
- Respect the environment and design and develop intelligent systems that promote environmental sustainability.

ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

UPC school
Barcelona School of Informatics (FIB)

Participating institutions
Universitat Politècnica de Catalunya (UPC) - Coordinating university
Universitat de Barcelona (UB)
Universitat Rovira i Virgili (URV)

Academic coordinator
Ulises Cortés

Academic calendar
General academic calendar for bachelor’s, master’s and doctoral degrees courses
### Academic regulations

**Academic regulations for master’s degree courses at the UPC**

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<td>Computational Vision</td>
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<td>Introduction to Human Language Technology</td>
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