

Bachelor's degree in Artificial Intelligence

BARCELONA SCHOOL OF INFORMATICS (FIB)

The bachelor's degree in **Artificial Intelligence** aims to produce graduates who have the ability to identify how artificial intelligence (AI) techniques can provide innovative solutions to information technology problems in businesses and organisations and to apply these solutions in a way that brings added value.

This new degree covers a range of areas in AI, such as knowledge representation, automated reasoning, machine learning, natural language processing (text and speech), autonomous agents, cognitive robotics and computer vision. All graduates will have acquired cross-disciplinary skills in ethics and social impact.

The UPC is the first university in Spain to offer official courses of higher education in AI at all levels, that is, bachelor's, master's and doctoral degrees.

GENERAL DETAILS

Duration

4 academic years

Study load

240 ECTS credits (including the bachelor's thesis). One credit is equivalent to a study load of 25-30 hours.

Delivery

Face-to-face

Admission mark 2025-2026 academic year

11,942

Language of instruction

Check the language of instruction for each subject (and timetable) in the course sheet in the curriculum.

Information on [language use in the classroom and students' language rights](#).

Fees and grants

Approximate fees per academic year: €1,061 (€1,800 for non-EU residents). [Consult the public fees system based on income \(grants and payment options\)](#).

Location

[Barcelona School of Informatics \(FIB\)](#)

Official degree

[Recorded in the Ministry of Science, Innovation and Universities](#)

ADMISSION

New intake places

50

Pre-enrolment code

31106

New intake places via a change of degree

3

Admission mark 2025-2026 academic year

11,942. [Admission mark](#)

Weighting. University entrance examinations (PAU)

[Weighting. University entrance examinations \(PAU\)](#)

Registration and enrolment

[What are the requirements to enrol in a bachelor's degree course?](#)

CFGS credit transfer

[Consult the university studies search engine of the Universities Channel of the Generalitat de Catalunya](#)

Legalisation of foreign documents

All documents issued in non-EU countries must be [legalised and bear the corresponding apostille](#).

CURRICULUM

Subjects	ECTS credits	Type
FIRST SEMESTER		
Algebra	6	Compulsory
Fundamentals of Computers	6	Compulsory
Fundamentals of Mathematics	6	Compulsory
Knowledge and Automatic Reasoning	6	Compulsory
Programming and Algorithmics I	6	Compulsory
SECOND SEMESTER		
Calculus	6	Compulsory
Introduction to Robotics	6	Compulsory
Introduction to Statistics	6	Compulsory
Programming and Algorithmics II	6	Compulsory
Systems Modelling and Simulation	6	Compulsory
THIRD SEMESTER		
Basic Artificial Intelligence Algorithms	6	Compulsory
Introduction to Databases	6	Compulsory
Introduction to Machine Learning	6	Compulsory
Parallelism and Distributed Systems	6	Compulsory
Statistical Modelling	6	Compulsory
FOURTH SEMESTER		
Human Language Processing	6	Compulsory
Neural Networks and Deep Learning	6	Compulsory
Optimisation	6	Compulsory
Preprocessing and Advanced Models of Data Analysis	6	Compulsory
Programming and Advanced Algorithmics	6	Compulsory
FIFTH SEMESTER		
Computer Vision	6	Compulsory
High Performance Computing	6	Compulsory
Knowledge-Based Systems	6	Compulsory
Reinforcement and Unsupervised Learning	6	Compulsory
Voice and Dialogue Processing	6	Compulsory

SIXTH SEMESTER

Subjects	ECTS credits	Type
Advanced Databases	6	Compulsory
Advanced Robotics	6	Compulsory
Ethical and Social Aspects of Artificial Intelligence	6	Compulsory
Integrated Artificial Intelligence Project	6	Compulsory
Processes of Intelligent Data Analysis	6	Compulsory
Advanced Reinforcement Learning	6	Optional
Introduction to Research	6	Optional
Large Language Models	6	Optional
EIGHTH SEMESTER		
Bachelor's Thesis	18	Project

PROFESSIONAL OPPORTUNITIES

Professional opportunities

- Design and development of solutions for natural language processing: machine translators, assistants, interfaces, etc.
- Design virtual and augmented reality applications.
- Design of interfaces for robots, advanced programming and collaborative robotics.
- Construction of intelligent systems in sectors such as finance, health and bioinformatics.
- Optimisation of production processes in industry, trade and distribution.
- Entrepreneurship: creation and management of innovative companies in the whole area of intelligent systems.
- Applications and research in medicine, automobiles, social networks, marketing, trade, etc.

QUALITY ACCREDITATION

Check the degree's main quality indicators in the University Studies in Catalonia portal of the Catalan University Quality Assurance Agency. Find information on topics such as degree evaluation results, student satisfaction and graduate employment data.

[Further information](#)

ACADEMIC ORGANISATION

Academic calendar

[General academic calendar for bachelor's, master's and doctoral degrees courses](#)

Academic regulations

[Academic regulations for bachelor's degree courses at the Universitat Politècnica de Catalunya \(UPC\).](#)

Language certification and credit recognition

Queries about [language courses and certification](#)