laSalle
RAMON LLULL UNIVERSITY

Undergraduate Degrees

240 ECTS
September
4 years
100 % English
Campus Barcelona
Study tours included*

*Subject to academic performance.

Bachelor in **Artificial Intelligence and Data Science***

WHAT MAKES THIS DEGREE UNIQUE

1. **You will be an AI expert** with in-depth knowledge of machine learning, deep learning, natural language processing and computer vision that will enable you to design, implement and evaluate algorithms for decision-making.
2. **You will be qualified to work in any industry** by solving the challenges of different organisations and thus contribute to the constant advance of artificial intelligence in multiple sectors such as energy, banking, manufacturing and health, among others.
3. **You will promote ethics and responsibility in artificial intelligence through** a deep understanding of best practices in the development and implementation of systems and information.
4. **You will have an international experience** thanks to study tours to global tech hubs and exchange programmes abroad. You will study in a multidisciplinary Campus alongside students and professors from nearly 100 different countries, which will help you become a highly skilled professional capable of thriving in a global environment.
5. **You will learn through our unique methodology** based on real-life case studies, teamwork and access to advanced and specialised laboratories from day one.

*Degree undergoing official verification as per RD 822/2021.

LEAD THE ARTIFICIAL INTELLIGENCE REVOLUTION FOR A BETTER TOMORROW

If you are **passionate about technology and its influence on society**, with this new Bachelor you will acquire programming skills to work with data and develop algorithms to identify patterns and trends. You will specialise in fields such as **machine learning, natural language processing and computer vision.**

You will learn how to develop intelligent systems, design customised solutions for companies and organisations, optimise decision-making processes and lead innovative projects.

You will also gain a deep understanding of the **ethical and social implications of AI** that will enable you to address future technological challenges, preparing you to lead and make a difference in an ever-evolving society.

CAREER OPPORTUNITIES

IN ARTIFICIAL INTELLIGENCE

AI Engineer: Develop advanced AI systems using techniques such as deep learning or natural language processing.

AI Research Scientist: Conduct pioneering AI research to advance scientific knowledge and applications.

AI Ethicist: Ensure the ethical development of AI by addressing its social impact, correcting biases and establishing guidelines to maintain ethical standards.

AI Consultant: Advise companies on the integration of AI solutions and services to improve their processes and business.

IN DATA SCIENCE

Data Scientist: Analyse complex datasets to extract knowledge and support decision-making.

Data Engineer: Build and maintain the infrastructure for collecting, storing and processing data and ensuring the continuous flow of information.

SYLLABUS

1ST COURSE

Annual subjects	ECTS
Thought and creativity I	2
First Semester	
Mathematical foundations	6
Linear algebra	6
Computational logic	6
Fundamentals of programming I	6
Artificial intelligence and its ethical considerations	4
Second Semester	
Differential and integral calculus	6
Probability and statistics	6
Fundamentals of programming II	6
Computing infrastructures	6
Design and usability	6

2ND COURSE

Annual subjects	ECTS
Thought and creativity II	2
First Semester	
Advanced programming and data structure	6
Mathematical methods	6
Methods for advanced data analysis and visualization	6
Knowledge-based systems	6
Business administration	6
Second Semester	
Object-oriented design and programming	6
Machine learning	6
Databases	6
Operating systems	6
Artificial intelligence legislation	4

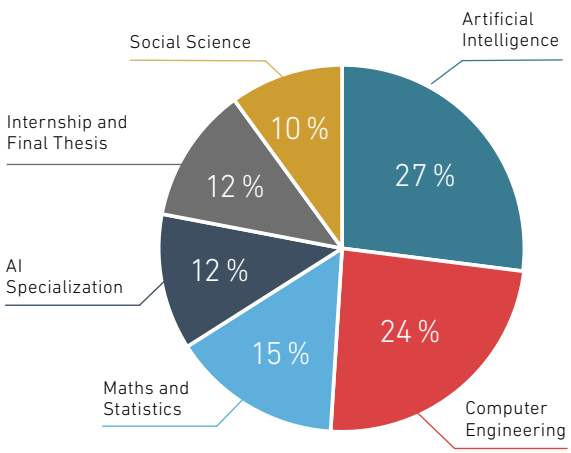
3RD COURSE

Annual subjects	ECTS
Thought and creativity III	3
First Semester	
Neural networks and deep learning	6
Optimization	6
Computing infrastructures for artificial intelligence	6
Programming languages	6
Software methodology	3
Second Semester	
Artificial vision	6
Natural language processing	6
Autonomous systems and robotics	6
Artificial intelligence projects	6
Project management	6

4TH COURSE

First Semester	ECTS
Electives	30
Second Semester	
Internship	15
Final Thesis	15

AREAS OF KNOWLEDGE



SPECIALISATIONS

You can choose the specialisation that best suits your profile. The elective subjects, the internship and the Final Thesis can be focus in **these different areas:**

- **AI & Business Applications**
- **AI & Technological Innovation**
- **AI & Computer Science Technologies**
- **AI & Health Sciences**

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BE REAL, BE YOU.