Admission

Admission will be based on application files and, ultimately, on an interview. Applicants will be asked to write a proposal for a Data Science & Artificial Intelligence project that they will be able to develop during the first year if they are selected.

Tuition fees

The registration fee is 4000 euros per year for non-EU students. Fees for French and EU students depend on the household income of the parents, from 300 to up to 4000 euros. Merit-based scholarships may exceptionally be allocated by the admission committee on the basis of the excellence of the student. Financial support may be provided for the internship’s international mobility.
Program

First year:
Semestre 0: Refresher courses
- Statistical inference: theory and practice I & II
- Processing large datasets with R
- Data visualization
- A general introduction to Data Mining
- Technologies for Big Data with Python
- Distributed Big Data Systems
- Security and ethical aspects of data

Workshops

Semestre 2:
- Theory of Statistical learning I & II
- Machine Learning: from theory to practice I & II
- Model selection and resampling methods
- Optimization for Data Science
- Web of Data
- Parallel Programming
- Case studies
- Internship 4 months

Second year
Semestre 3:
- Statistical Learning in High Dimensions
- Bayesian Learning
- Distributed Optimization and Games
- Advanced Learning: functional, mixed and text data
- Statistical Analysis of Graphs
- Medical Image Processing
- Deep Learning
- Introduction to Information Theory
- Optimization under constraints
- Tensor Decompositions: models, algorithms and applications
- Computer Vision
- Workshops

Semestre 4:
- Internship 6 months

Objectives

The Master of Science & Artificial Intelligence program is a 2-year MSc at the Université Côte d’Azur. It provides training in data science & Artificial Intelligence methods, emphasizing mathematical and computer science perspectives. Students will receive a thorough grounding in theory, as well as learning the technical and practical skills of data science & Artificial Intelligence enabling them to apply advanced methods of data science to investigate real world questions. The core courses will provide students with comprehensive understanding of some of the most fundamental aspects of data, computational techniques and statistical analysis. The program will combine traditional lectures with computer lab sessions, in which students will work with data to complete hands-on exercises using programming tools, and analyze real data provided by professionals who are working in the industry. The Master of Science & Artificial Intelligence program also leads to Ph.D. programs in the area of applied mathematics and computer sciences.

Data Science & Artificial Intelligence is an emergent field of activity, which will become increasingly vital to the digital economy in the coming years. This requirement is mainly due to our increasing capacities in data acquisition and processing. The UCA «Data Science & Artificial Intelligence» Master of Science prepares future specialists in mathematical techniques and computer tools necessary for the extraction of knowledge from masses of data.

Future careers

Graduates will be competitive for positions both in private companies and public research institutes. They will be prepared to succeed in positions such as data scientists, data miners, or research assistants. Further research at the Ph.D. level will prepare graduates for careers as research engineers or research.