International Master's Degree in VISUAL COMPUTING

The international Master's degree in Visual Computing is the second year specialty of Nantes Université's Master's degree in Computer Science. Through this programme, students will acquire the scientific and technological knowledge, as well as the practical experience, to understand and contribute to high-level innovative R&D processes in the field of visual computing.

The programme is in the field of computer processing of visual data. You will study the analysis, transmission and human perception of images and videos, the capture and representation of 3D content, pattern recognition, and human-computer interaction, based on visual data.

Syllabus

Third semester (30 ECTS)

(i.e. first semester of this second year of master)

- Research methodology - 3 ECTS
- Deep learning - 3 ECTS
- Cross-unit projects - 3 ECTS
- Deep learning for Computer Vision - 3 ECTS
- Immersive HCI - 3 ECTS
- Visual data representation and security - 3 ECTS
- 3D Data - 3 ECTS
- Image processing - 3 ECTS
- Quality of experience - 3 ECTS
- Visual Perception and Cognition - 3 ECTS
- Franch language and European culture - 0 ECTS

Fourth semester (30 ECTS)

(i.e second semester of this second year of master)

- Internship - Master's thesis (minimum 5 months)

Every student is guaranteed an internship within the research lab LS2N Laboratoire des Sciences du Numérique de Nantes, where they join the life and activities of a research group in data science, which has cooperations with companies and academic partners. Alternatively, students may also seek an R&D internship in industry.

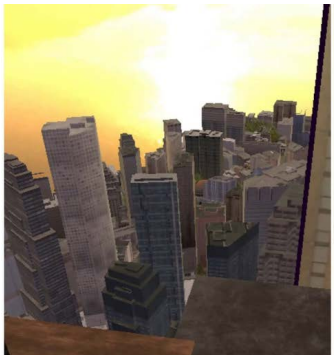
Hosting research lab

The laboratory of Digital Science of Nantes

https://www.ls2n.fr

Academic calendar

Courses start in early September.



Skills

> Modeling and solving image and video processing and analysis problems

> Exploiting high level knowledge about human visual perception in order to contribute state-of-the-art solutions for multimedia applications

> Using machine learning algorithms in order to build computer vision applications

> Understanding and implementing a 3D data processing chain (from acquisition to representation)

Career Opportunities

The master's environment should facilitate future involvement in international PhD top level programmes.

The research teams are involved in high-level international research cooperations and have joint research projects with private companies. They actively contribute to projects in the Images and Network R&D cluster

Business sectors

> Project engineer

> R&D engineer in visual computing

> Students in top level international PhD programmes

Polytech Nantes

As the graduate school of engineering of Nantes Université, Polytech Nantes benefits from the scientific and educational environment of a university.

Polytech Nantes is the founding member of the Polytech group, a national network of 15 graduate engineering schools in France.

20%
foreign students

+70
Partner schools

POLYTECH NANTES

Pôle Sciences et technologie
Nantes Université

Admission

The Master's Degree is a two-year degree. At Polytech Nantes, only the second year is accessible, so applicants should hold a degree which is at least a 4-year degree in higher education (i.e. a 3-year Bachelor is not acceptable).

Applicants should be able to demonstrate (from transcripts of their degrees) good knowledge in, not necessarily all, but in most of the following fields:

> software design, software development, software engineering
> mathematics (algebra, statistics and probabilities)
> signal processing, basic image processing
> machine learning

Application

> For students coming from a partner university with Polytech Nantes, please contact the international office coordinator of your home university concerning the enrolment.

> For students coming from a country that is part of the Campus France procedure, please enrol with Campus France first, and then send us the requested documents below.

> For students coming from a country that is not part of the Campus France procedure, please send us directly the following documents :

- a detailed CV in English (including the precise content of your studies, which topics were studied each year, grades/ marks obtained, score obtained for an international test of English, reports you may have written during your studies)
- a cover letter
- a complete transcript in English of years of study at the University
- a copy of your passport

Complete the application form on our website:
www.univ-nantes.fr/polytech/internationalmasters

Cost

The cost corresponds to education and training costs as well as French courses, cultural outings and student social security*.

**It is included if you are less than 28 years old. If not, you will have to pay your own social security.*

More information :
https://polytech.univ-nantes.fr/en/financial-and-practical-information

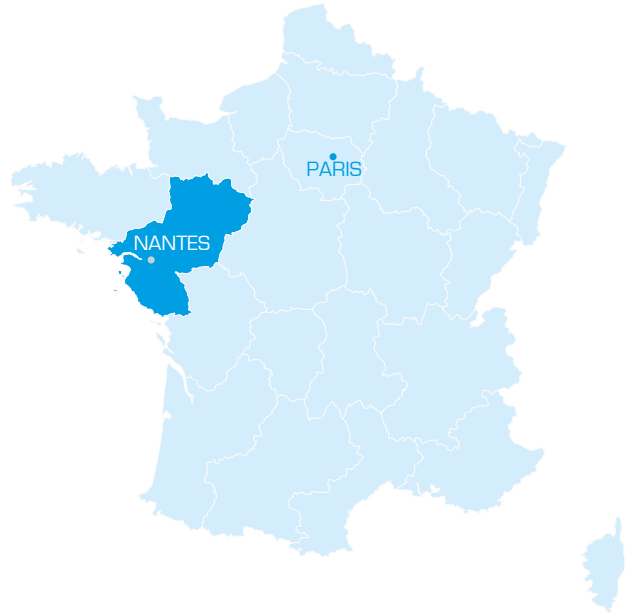
Accommodation

The rent for students' accommodations may vary between €350 and €450 per month (allow for a deposit: usually 1 month rent). The housing market is saturated in September. It is highly recommended to seek accommodation in June or July. Expect to pay for insurance for any accommodation, as well as the housing tax for accommodation in town.

Location

The programme courses are located in Nantes, on the Chantrerie Campus which hosts several Graduate Schools, with over 4,000 students, two university restaurants, a technology library, as well as about 30 companies of advanced technology.

Nantes agglomeration (670,000 inhab.) is located close to the Atlantic Ocean and is regularly rated as one of the most pleasant French cities to live in. Thanks to its beautiful parks, efficient public transport and other policies for sustainable development, Nantes has been awarded the status of European Green Capital.



Language

The programme mainly aims at international students and is taught in English. A good command of the English language is required (B2 score as defined by the Council of Europe).

Contact

master-vico@univ-nantes.fr

polytech.univ-nantes.fr