



Master degree in Multimedia and Data Management

Keywords

- Human Visual perception for image and video processing
- Multimedia communication
- Advanced Image and Video processing
- Pattern recognition and artificial Intelligence
- Large scale and complex data management
- Multimedia information retrieval and indexing
- R&D methodology

Courses aims

Through this program, 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 fields of multimedia and data management.

Program

Each course is associated to a specific day of the week, with lectures and associated exercises in the morning, and personal work in the afternoon. This personal work includes further exercises, hands-on lab work and projects, and revising lecture notes. Each student will be provided with a set of reference scientific books, covering the scope of the master program, to keep for the duration of his studies in Nantes.

After four months in Nantes, every student starts his master degree research & development project (master thesis), in parallel to courses. A few weeks later and until the end of the master course, the student works full time on his research & development project. This project may be conducted in our research labs, or in the R&D team of a private company, typically near Nantes.

Validation of both the exam session and of the master thesis (defense and report) lead to the French Master degree. If your participation to the master program is part of a specific bilateral agreement between Polytech'Nantes and your home institution, you may obtain a joint master degree (i.e. you obtain both the French master degree and the master degree in your home country, from the same work).

Skills and career opportunities

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

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

Hosting research labs

A close tutoring with hosting research groups is ensured. Half of the program is dedicated to the development of a high-level research project, co-supervised by professors from two research laboratories

- the Laboratory of Informatics of Nantes-Atlantic (LINA - UMR 6241) which is a software sciences and technologies laboratory with an overall workforce of 170. It covers two research themes:
 - distributed software architectures (DSA) addresses in particular problems relating to software engineering and data management, in mass distribution, nomadic, communicating and adaptive architectures.
 - the decision-making aid systems (DMAS). theme includes research aimed at developing algorithms and high performance software tools relating to decision-making aids, language processing, knowledge management and bio-informatic
- the Institute of Research in Communications and Cybernetics of Nantes (IRCCyN - UMR CNRS 6597). The scientific domains tackled within 12 research teams cover a rather wide thematic spectrum among others Logistics and Production Systems Group. The research performed in IRCCyN is partly, but not only, of fundamental type with main objective to create new knowledge. The Institute also keeps a deep involvement in technological issues, since methods and tools are, and have been for years, developed to bring solutions to practical problems raised by industrial or social entities. This nicely covers both top down and bottom up processes, and offers opportunities for real applications of academic works and for the emergence of hard technical issues which open new and challenging research directions.

Admission

Admission requirements

Applicants should hold a degree which is at least a 4-year degree in higher education (i.e. 3-year Bachelor is not acceptable) and should be in one of the following fields: computer science/engineering, information technology, applied mathematics, signal processing.

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

- software design, software development, software engineering
- signal processing, basic image processing
- database design and implementation
- computer networks
- mathematics (algebra, statistics and probabilities)

For a first discussion about your possible application, please send a detailed CV (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) to mdm@univ-nantes.fr

Application form has to be sent with the requested documents to mdm@univ-nantes.fr before April 15.

Language requirements

The program aims at international students and is taught in English. A good command of English language, both written and spoken, is required. Introduction to French language and European culture are provided, but there are no prerequisites in French language.

Costs

- Tuition fees: €6500 for the full program in France
- Other expenses (depend on your lifestyle and circumstances):
 - Housing: €3000/year
 - Travel to and from France: €700/journey
 - Food and incidentals: €4500/year

Costs include French public social security and an individual collection of scientific books for the duration of the stay in France.

Scholarships

During 2nd semester, students complete a 5 months-research thesis/internship in a laboratory or company which allow them to be paid around €2100.

Practical information

Location

Courses are located in Nantes, on La Chantrerie Campus which hosts 5 Grandes Ecoles, with over 2,000 students, two university restaurants, a technology library, as well as about 30 businesses at Atlanpole that deal in advanced technology.

Nantes (600,000 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 statut of European Green Capital.

Travelling to Nantes from Paris, either from Paris CDG Airport or from city center, is easy and direct with the fast train (TGV).

Lodging

Accommodation is available on the university campus, but most students seek accommodation in town. Rent may vary between €200 and €300 per month (allow for a deposit: usually 1 month rent). Housing market is saturated by 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.

Academic calendar

- Duration of studies: 1 year
- Courses start in September and end in June

Details and contacts

■ Polytech Nantes
Site de la Chantrerie
rue Christian Pauc - CS 50609
44306 NANTES cedex 3 - France

Polytech Nantes, the Graduate School of Engineering of the University of Nantes, is accredited by the Commission des Titres d'Ingénieur (CTI), the French institution which awards engineering degrees.

■ Information
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www.polytech.univ-nantes.fr/mdm