



Erasmus
Mundus



DMKM - Data Mining & Knowledge 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

The primary social and economic value of modern societies is knowledge. For this reason, mastery of Technologies able to extract dormant knowledge from information recorded in Datwarehouses or the Web, is indispensable for a sustainable development of both the individual and the society.

Data Mining and Knowledge Management (DMKM) has become essential for improving the competitiveness of businesses and increasing access to knowledge. However, DMKM has still to face major scientific and technological challenges. The EMMC degree in DMKM offers specialist training in this field.

Consortium

- France - Polytech Nantes - Graduate School of Engineering of Nantes University
- France - University of Lyon Lumière Lyon 2
- France - University of Pierre & Marie Curie, Paris
- Italy - University of Piemonte Orientale Amedeo Avogadro
- Romania - University Politehnica of Bucharest
- Spain - Technical University of Catalonia

Program

■ Semester 1: basic training including mathematics, statistics, database technology, etc.

All common courses will be guaranteed to be multi-localized by the partner universities, through video-conferencing.

■ Semester 2 and 3: dedicated to acquire two specialities among six available ones. The Speciality courses are organized locally and not broadcasted using the video-conference technology.

Semester 2

- E-Science (University of Paris 6 (UPMC))
- Data Mining and Complex System Modeling and Application in Social Sciences (University of Lyon 2)
- Knowledge and Decision (Polytech Nantes)

Semester 3

- Statistical Modeling and Data Mining (Polytechnic University of Catalonia)
- Semantic Web (University of Bucharest)
- Relational Data Mining (University of Eastern Piedmont)

■ Semester 4: elaboration of a dissertation thesis in either a laboratory or a company

Skills and career opportunities

Students shall have acquired competences in computer science, applied mathematics and statistics, and advanced information processing methods, allowing them to:

- perform in depth analysis of information requirements for solving problems
- manage large databases
- make use of such databases with the goal of extracting from them hidden information and knowledge;
- deploy this knowledge in decision support systems or intelligent systems, both in academic and in industrial environments.

50% of the programme is devoted to applications in the field, solving real data mining problems and the implementation of the standard techniques liable to be encountered by students in their future professional activities.

Admission

Admission requirements

The Master in DMKM is aimed at students from all over the world.

Candidates must hold a Bachelor degree (or equivalent) in Computer Science, Applied Mathematics or Statistics.

Admission is granted on the basis of a selection procedure.

Language requirements

Classes are taught in English

Mastering English at a level equivalent to 550 TOEFL.

Students who have carried out their education programme in English may just send a letter from their university specifying that the education programme language is English.

Costs

- €4,000 per year for European students
- €8,000 per year for other students.

Scholarships

Candidates from all over the world may apply to the Master. However, there are differences between European and Non-European candidates for scholarships.

- Third countries students may apply to a category A scholarship (€24,000 per year)
- European students may apply to a category B scholarship (€11,500 per year).
- European students, who send their 4-th semester in a third country, will receive an additional lump sum of €3,000 (just one time, not every year).

Practical information

Location

- Semester 1 & 2: France
- Semester 3: Bucharest, Barcelona or Alessandria.
- Semester 4: university where student spent the first year or to a third university for the internship

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: 2 years (120 ECTS)
- 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
contact@em-dmkm.eu