



International Master's Degree in WIRELESS EMBEDDED TECHNOLOGIES

This programme is a second year specialty of Nantes Université's Master's degree in Electronics, Electrical energy and Automatic. It is aimed at future experts for the design, control and deployment of high-performance communicating embedded systems. This requires a wide knowledge including wireless, transmissions systems, antennas design, as well as some aspects of computer science.

The programme proposes a crossdisciplinary education paradigm, designed to provide high-level training and researchers. The purpose of this programme is to provide a broad education in communicating embedded systems with the opportunity to specialise in areas that cover theoretical as well as practical aspects of embedded systems development.

Syllabus

Third semester (30 ECTS)

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

Model and tools:

- Computer tools for connected objects
- Electromagnetics and microwaves
- Mathematics for connected objects

Signal processing:

- Random signal processing
- Advanced signal processing

Technologies for connected objects:

- Power consumption and reliability
- Embedded OS
- Transmission protocols for connected objects

Architecture and design methodologies:

- Architecture of embedded systems
- Design of hardware/software architecture

Scientific publishing and professionalization:

- Bibliography
- Bibliographic methods and tools

Innovative and entrepreneurial management

Fourth semester (30 ECTS)

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

Students choose one of the following three streams:

Antenna and microwave circuit:

- Antenna
- Microwaves circuits

Advanced digital communications:

- Advanced digital communications
- Antenna processing

Embedded systems and software:

- Design of embedded systems
- Embedded software

INTERNSHIP (25 ECTS): a position of 5 months in a recognized lab



Skills

- > integrate knowledge, in several relevant domains
- > identify, formulate and handle complex problems within the area
- > create technical solutions that fulfill human and societal needs
- > show an ability independently or within a group, to create relevant connected objects

Career Opportunities

Business sectors

- > R&D engineer in industry or research
- > Electronic system architect
- > Higher education and research through doctoral training

Hosting research labs

LS2N www.ls2n.fr

(Laboratory of Digital Science of Nantes)

IETR - CNRS www.ietr.fr

(Institute of Electronics and Digital Technologies)

IMN - CNRS <https://www.cnrs-imn.fr/>

(Materials Science Institute)

LS2N www.ls2n.fr

(Laboratory of Digital Science of Nantes)



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

Academic calendar

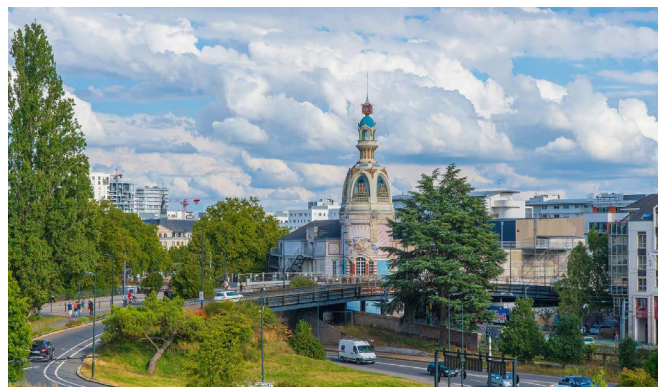
Courses start in early September.

Admission

The Master's Degree is a two-year degree. Students enroll for a two-semester program. A total of 60 ECTS must be validated to graduate. Equivalences can be considered (up to 15 ECTS) taking into account the student's previous experience (Master's and Bachelor's courses).

Applicants should earn a degree which validates at least a 4-year degree in higher education (i.e 240 ECTS) and should be in one of the following fields:

- > computer science or engineering
- > information technology
- > telecommunications



Location

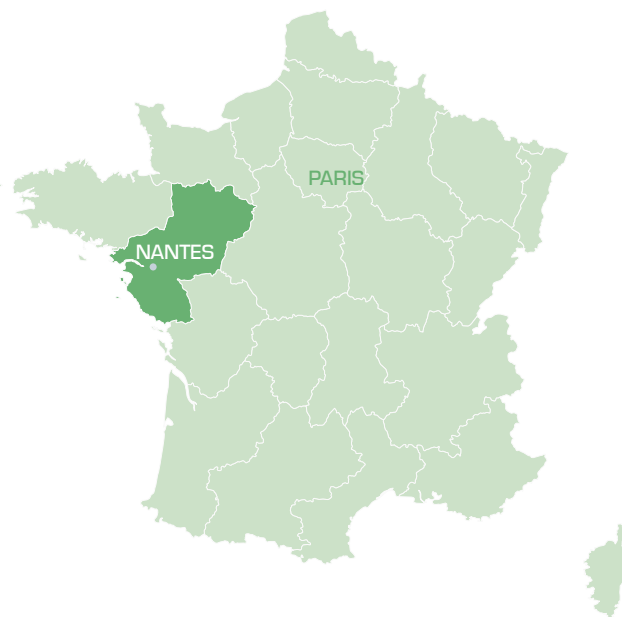
The programme courses are located in Nantes, on the Chantrerie Campus which hosts several Graduate Schools, with over 4,000 students, two university restaurants, a technology library, as well as about 30 companies of advanced technology.

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.

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.

Language

The program 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

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polytech.univ-nantes.fr

