



International Master's Degree in MICROALGAE BIOPROCESS ENGINEERING

The international Master's Degree Microalgae Bioprocess Engineering is a second year specialty of Nantes Université's Master's degree in Process and Bioprocess Engineering. It is integrated in a two-year programme in process and bioprocess engineering, with 3 academic semesters and a 6-month internship in industry or a research laboratory.

This training is supported by the GEPEA laboratory and benefits from the microalgae research environment of the Saint-Nazaire site, as well as the Algosolis platform.

Syllabus

Third semester (30 ECTS)

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

- Biology of microalgae
- Industrial valorization of microalgae
- Biochemical and Metabolic Engineering
- Microalgae culture and photobioreactor engineering
- Harvesting and Biorefinery of microalgae
- Process integration and operation of microalgae exploitation facilities
- Project
- Language

Fourth semester (30 ECTS)

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

The second semester is dedicated to a fulltime scientific and technical internship (minimum 5 months) related to a research & development project conducted in academic labs or private companies.

Validations of both the exam session and the master internship (defense and report) lead to the French Master's Degree from Nantes Université.

Hosting research labs

GEPEA - CNRS www.gepea.fr

(Laboratory of processing engineering, environment and agrifood)



ALGOSOLIS www.algosolis.fr

(Microalgae R&D Facility)



Academic calendar

Courses start in early September.



Skills

- > To develop an industrial process for microalgae valorisation, from production to final extracted products
- > To be able to conduct a research project on microalgae
- > To be able to manage an industrial project related to the microalgae field
- > To be familiar with the multidisciplinary approach needed in microalgae field (biology, engineering)

Career Opportunities

Business sectors

- > Engineer in industry or research
- > Project engineer / Board
- > R&D engineer
- > Higher education and research, particularly through doctoral training

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

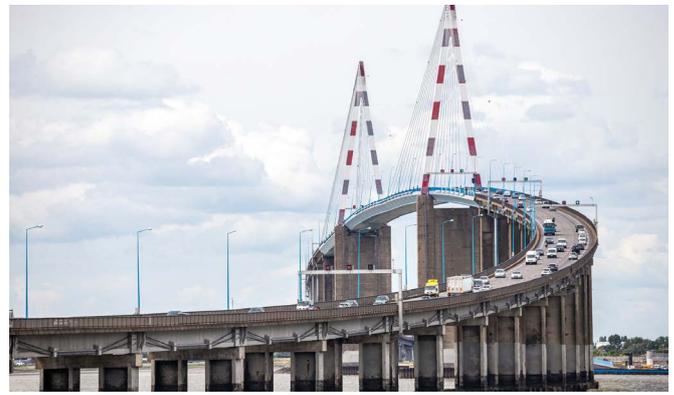
Partner schools

Admission

The Master's Degree is a two-year degree. Candidates with a Bachelor of Science degree will enroll in the first year of the Master's Degree (Master PM3E, IMT Atlantique).

Candidates with at least a 4-year Bachelor's degree or first year of Master's Degree can ask to enroll directly in the second year of the Master's Degree. Candidates must have a good knowledge in, not necessarily all, but a majority, of the following fields :

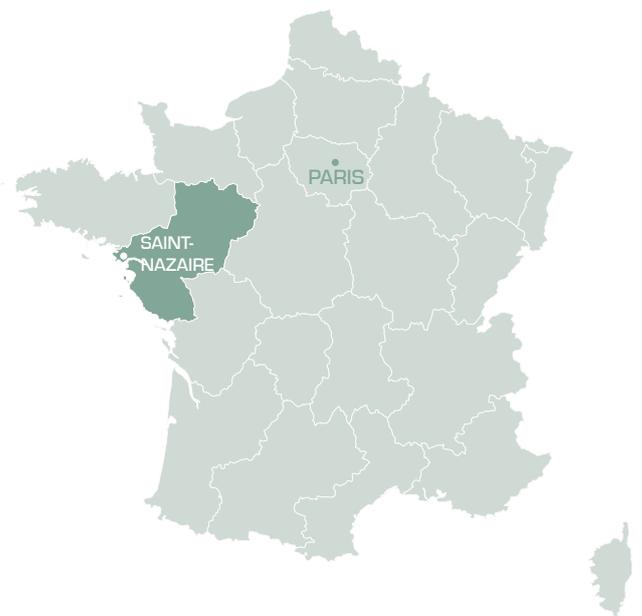
- > chemical and bioprocess engineering
- > biochemical engineering
- > mechanical engineering
- > physics, chemistry and biology



Location

The programme courses are located in Saint-Nazaire. The Gavy Campus is situated amongst the aeronautics and shipbuilding industries, benefiting from the exceptional Guérande Peninsula atmosphere and a number of seaside resorts.

Saint-Nazaire (71,500 inhab.) is a coastal town of Western-France. The Gavy campus hosts over 3000 students in various engineering courses (biotechnology, process, structural and electrical), two university restaurants and a university library just located a few meters from the sea.



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 an internship in a laboratory, 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.

For students coming from a partner university with Polytech Nantes, please contact incoming.mobility@polytech.univ-nantes.fr before next April for possibilities of cheap accommodation in CROUS Residencies (approximately 260€ per month).

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-mbe@univ-nantes.fr

polytech.univ-nantes.fr

