

# FAST TRACK ENGINEERING PROGRAMME

## DIPLÔME D'INGÉNIEUR 2-YEAR POST GRADUATE QUALIFICATION



Centrale Nantes' fast-track programme has been specially designed for **international students** who are qualified to bachelor level. The opportunity to gain the highly sought-after *diplôme d'ingénieur* (equivalent to a Master's of Science and Engineering) in two years!

### Programme benefits

- > Tackle complex engineering problems and develop soft skills
- > Gain professional experience with 8 months of internship
- > Earn a highly-sought after engineering qualification
- > Enjoy exciting career opportunities
- > Learn a new language and discover France
- > Study on a green campus in one of France's best student cities
- > Join the strong Centrale Nantes alumni network

## TWO-YEAR PROGRAMME OPEN TO HOLDERS OF A BACHELOR DEGREE

### Language of instruction

First year courses are taught in English, second year courses in French. A summer school with intensive French classes is offered prior to year 1.



## YEAR 2

- > Specialisation – choice of 19, which each include 12 scientific courses
- > Professional Option

### Autumn Semester

#### September - January

- > 8 scientific courses
- > Project (32h)
- > French as a Foreign Language and Sport

### Spring Semester

#### February - March

- > 4 scientific courses
- > Project (48h)
- > French as a Foreign Language and Sport

#### April - September

- > Internship in a company (25 weeks minimum)

### THE DEGREE IS AWARDED WHEN THE FOLLOWING CONDITIONS ARE MET:

Language qualification B2 (750 points for the TFI, 450 points for the TCF or C1 for the DALF)

20 weeks minimum (consecutive) in a company:  
YEAR 2 Internship

## YEAR 1

### Autumn Semester

#### September - January

- > 8 scientific courses
- > Lab sessions (85h)
- > Modern Languages and Sport

### Spring Semester

#### February - May

- > 6 scientific courses
- > Lab sessions (56h)
- > Social and business sciences
- > Modern Languages and Sport

#### May - July

- > Internship (8 weeks minimum) - company or research laboratory



GRUPE DES ÉCOLES  
**CENTRALE**

The Centrale Nantes engineering programme is fully accredited by the CTI, the French Engineering Degrees Commission.

## COURSE CONTENT

### YEAR 1 - AUTUMN SEMESTER

Optimization

Algorithms & Programming

Finite Elements

Numerical Analysis

Signal & Systems

Civil Engineering

Energetics

Linear Algebra

English Language

French as a Foreign Language

Sports

### YEAR 1 - SPRING SEMESTER

Databases

Data Science & Machine Learning

Numerical Approximation for PDEs

Biological and medical aspects of human health

Fluid Mechanics

Strategy, Entrepreneurship and Innovation

Management

English Language

French as a Foreign Language

Sports

Mobile Robots

Internship (8 weeks minimum)

# 19

## SPECIALISATIONS IN YEAR 2

Aeronautics

Energy Control & Management

Mechanical Engineering for Materials & Manufacturing Processes

Product Engineering

Robotics

Industrial Engineering

Computer Science for Informations Systems

Data Analysis and Applications in Signal and Image Processing

Mathematics and Applications

Advanced Modelling and Analysis of Structures

Virtual Reality

Civil Engineering & Sustainable Construction

Engineering Science for Housing and Urban Environment

Renewable Energies and Grid Integration

Energy Production and Management

Ocean: Hydrodynamics and Marine Engineering

Propulsion and Transport

Digital Sciences for Life Sciences and Healthcare

Computer Science for Artificial Intelligence

### Yutong, Fast Track Programme, class of 2021

"I really appreciated the elite education system of the French engineering school, because their courses cover a wide range of specialties, and they focus extremely on practical operations during teaching. Personally, I think what this engineering program has brought to me is far more significant than a degree certificate. During this period, although our courses were exceptionally hard, I still mastered the French language (...) and I found my dream data scientist internship at the French National Gendarmerie. Now, in order to continue my scientific research in the field of natural language processing, I decided to do a PhD at the University of Lyon, in the department of computer science (...) This unique experience has helped me enormously improve my ability to face the challenges in the future, this is the most important."







**2,400**  
**STUDENTS**

## CAMPUS

**Over 80 nationalities**  
**on campus**

**43% of international**  
**students**

**196 academic**  
**partners in**  
**51 countries**

**20 000 alumni**

Centrale Nantes' campus extends over 40 acres in a prime central location on the banks of the River Erdre. Student life is particularly dynamic with over 100 clubs and associations.

One hour away from the Atlantic coast and only two hours from Paris by train, Nantes is one of the best students cities in France and is the capital of FRENCHTECH since 2019.

## RANKINGS

- > Times Higher Education 2023 for Engineering and Technology: top 200 globally
- > 87<sup>th</sup> in the world for Mechanical Engineering. Top 5 in France for civil engineering, mechanics, aeronautics and manufacturing - QS World University Rankings by Subject 2023
- > World's top 200 for Mechanical Engineering - Shanghai Global Ranking of Academic Subjects 2022



### CONTACT INFORMATION:

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[www.ec-nantes.fr](http://www.ec-nantes.fr)

Apply online: <https://vu.fr/xQrH>