

# 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**

**Innovative and Sustainable Products and  
Processes**

**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**

**Computer Science for Virtual Reality and  
Augmented 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**

**40% 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 110 clubs and associations.

Nantes stands out as a European Green Capital and FrenchTech Capital. The city has a rich cultural scene, with museums, festivals, and unique attractions like Les Machines de l'Île. One hour away from the Atlantic coast and only two hours from Paris by train, Nantes is easy to reach from all over the world!

## RANKINGS

- > Top 300 for Engineering in The Times Higher Education World University Rankings by Subject 2024 (3rd school in France)
- > 125<sup>th</sup> in the world for Mechanical Engineering in the QS World University Rankings by Subject 2024
- > Centrale Nantes tops the 2023 ranking of French engineering schools most committed to transition, compiled by Les Echos START and ChangeNOW



### CONTACT INFORMATION:

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Apply online: <https://urlr.me/vBNLM>