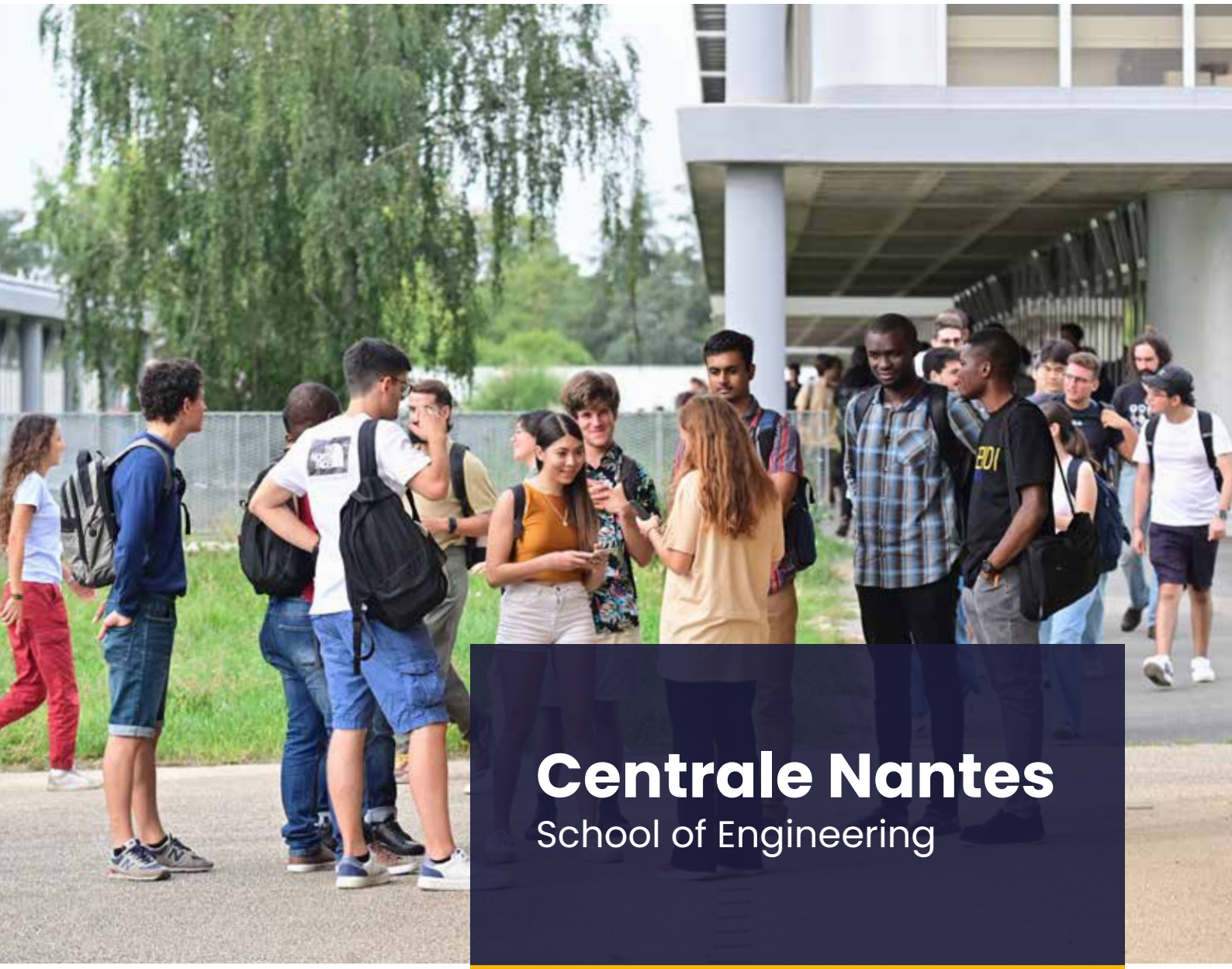
REINVENT ENGINEERING

CENTRALE NANTES



Centrale Nantes

School of Engineering

French "Grande Ecole"
Since 1919

A word from the Director

Drawing on **over one hundred years of history**, our mission at Centrale Nantes is to '**reinvent engineering**'.
We proudly uphold the tradition of French engineering schools (*grandes écoles d'ingénieurs*) by providing world-class training in science and technology.

Our strong commitment to academic excellence and sustainable development ensures that students are well prepared to **meet the ever-evolving demands of today's global job market and to address the key challenges of ecological transition**.

Beyond our high-quality teaching, Centrale Nantes is at the forefront of cutting-edge research. Our faculty's **pioneering research directly informs the rigorous curriculum**, ensuring students are exposed to the latest advancements in science and technology. This integration guarantees a **high-quality learning experience, with a focus on innovation and real-world applications**. Our close links with companies ensure that our students are highly employable, with opportunities throughout their studies to engage in industry projects, internships, and professional networking.

At Centrale Nantes, students join a **diverse and innovative community**, gaining valuable skills and hands-on experience that will empower them to shape the future of engineering.

Jean-Baptiste Avrillier

Our values

Commitment

Through our commitment to **shaping a sustainable future** we empower future engineers to lead the energy transition and tackle global challenges.

Humanity

We prepare our students to become ethical leaders who put people at the heart of progress, **blending technical excellence with a strong sense of responsibility** to drive meaningful change.

Openness

Centrale Nantes embraces change, seizes opportunities, and evolves continuously through **cultural openness** that fosters international connections, **social openness** that embraces diversity, and **intellectual openness** that drives scientific and technological innovation.

Rankings

> **102nd** (4th in France) for **Mechanical Engineering**, **top 200** (4th in France) for **Civil Engineering** and 308th for Engineering and Technology in the QS World University Rankings by Subjects 2025

> Consistently ranked in the **top 10 French Engineering Schools** (*L'Étudiant*)

Centrale Nantes
at a glance

Education

> 2,300 students on campus

> Fully accredited English-taught programmes from Bachelor through to PhD

> 7 Erasmus Mundus Joint Master Degrees, 5 of which are coordinated at Centrale Nantes

> 2 Doctoral Schools

> 80% of our graduates across all programmes are in post in three months or less

Research & innovation

> 6 Research institutes and **13 experimental platforms**

> €25 M in research contracts per annum

> 20 Centrale Nantes researchers among the **World's Top 2%** Scientists named by Stanford University

> 15 industrial research chairs / joint laboratories

> Business incubator

International

> Over **190 academic partners** and 99 double degree agreements

> Over **1/3 of the student body is international**

> 87 nationalities on campus

> Over **20,000 alumni in 44 countries**

> 2/3 of engineering programme students do a double degree abroad

> 48% of our publications are published with **international collaboration**

A Sustainable Future

Sustainability and social responsibility are central to Centrale Nantes' mission, spanning campus operations, academic and research activities, and global partnerships.

Climate action remains a priority, with all programmes incorporating climate change education, carbon footprint assessment, and life cycle analysis.

Beyond climate, Centrale Nantes is enhancing its focus on biodiversity with efforts to reduce campus impact, integrate biodiversity into education, and promote collective action. Social responsibility is equally embedded in the school's DNA. The Equality, Diversity, and Inclusion Committee leads awareness initiatives, training programmes, and strategic action plans to foster an inclusive and equitable environment for all.

Building on the success of its 2021 Sustainable Development Action Plan, the school is boosting its commitment with the 'Horizon 2030' master plan to guide actions through to 2030. **The plan will serve to further embed sustainability and social responsibility into the school's core activities, reinforcing its role as a leader in engineering education for a better future.**

Reinventing engineering through **research**

At Centrale Nantes, research is driven by **six leading laboratories** and supported by **close partnerships with industry and institutions**. Our research combines academic excellence with practical application, focusing on three major global challenges: **Energy transition, Industry of the future, Engineering for health**.

Our 13 experimental platforms - which include ocean engineering tanks, engine and vehicle test benches, a supercomputer, platforms for additive manufacturing and biofabrication, as well as facilities for autonomous vehicles and drones, and wind engineering - provide a unique environment for **developing innovative projects and fostering collaboration with industry**.

These platforms allow researchers to test and refine prototypes, **bridging the gap between research and real-world application**. Researchers from the national and European academic community and industry partners have access to these platforms, supporting collaborative research and accelerating technological advancements. This excellence extends to teaching, as **students benefit from hands-on experience**, ensuring they graduate with the skills and knowledge to lead future innovations.

Driving innovation in sustainable transport

Mervent 2025 – **cutting carbon emissions in commercial shipping**. The project will design, build, and operate the first hybrid sail/synthetic fuel container ship, halving CO^2 emissions by 2026.

The LHEEA laboratory at Centrale Nantes is working on energy efficiency, energy modeling, optimizing energy management for sail-powered vessels, and experimental carbon capture. Sea trials are planned for 2025.

Building the future of sustainable construction

Centrale Nantes and EDYCEM are driving sustainable construction through their long-standing research chair.

The chair focuses on three key areas to **reduce concrete's environmental impact**: developing low-clinker, low-carbon concretes; using AI to predict the behavior and durability of new concretes; and improving pavement surfacing to reduce urban heat islands. This partnership reflects Centrale Nantes' commitment to eco-friendly construction.

Powering sustainable energy

GENIUS – creating a test platform for **green hydrogen production, storage, and use**.

Backed by €2.8 million, the LS2N Laboratory at Centrale Nantes is developing a full-scale platform to integrate fuel cells and electrolyzers with seasonal hydrogen storage. It will support **applications in transport** (like electric vehicles) **and stationary uses** (buildings and low-voltage networks), reinforcing Centrale Nantes' role in sustainable energy.

Working hand-in-hand with industry

Centrale Nantes maintains **strong ties with industry not only through research collaboration but also via a wide range of study-related activities**, including the participation of industry experts in courses, projects, and conferences, as well as internships, company visits. There is also a strong company presence at the regular events organised by the Careers Team at Centrale Nantes for career guidance and or job/internship opportunities.

All Bachelor, Master's and engineering programme students gain **hands-on practical experience in industry** through project work and one or more significant periods of **compulsory work experience** during their studies.

Industrial chairs and joint laboratories

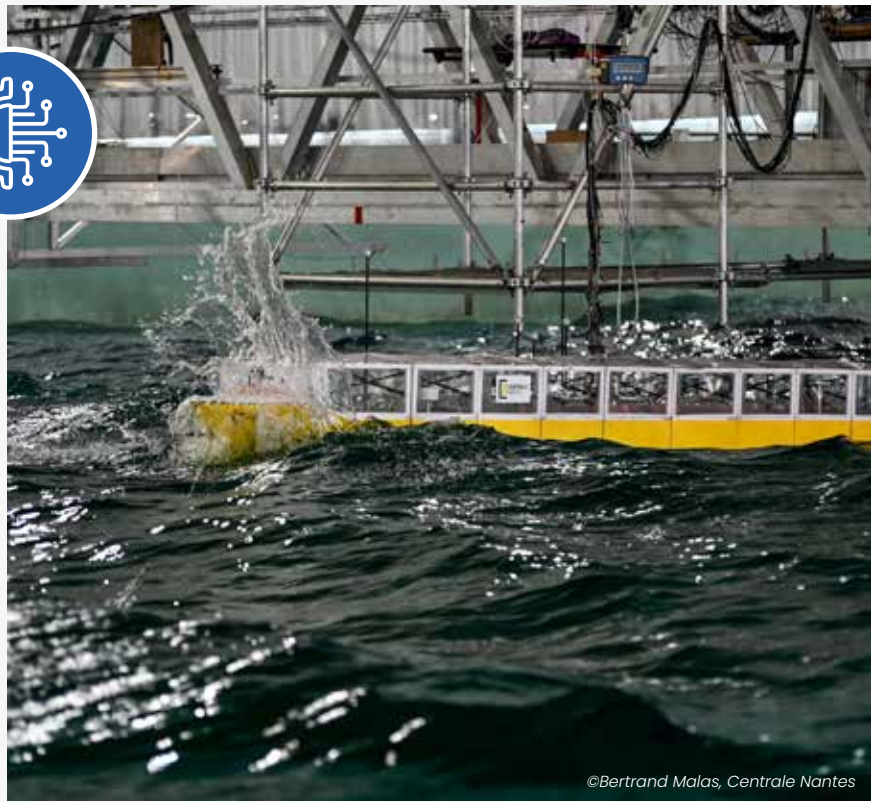
As part of a proactive policy of integrated laboratory/industry research, Centrale Nantes continues to work with its partners to create international chairs or joint laboratories.

15 such chairs are currently in place, with for example: MAN Energy Solutions, Renault Group, Bureau Veritas, Naval Group, MANN HUMMEL, MoldTecs etc.

Business Incubator

The incubator is the convergence of several academic DNAs, those of **Centrale Nantes, Audencia and Nantes Université**, around a common question: what if our project leaders could benefit from the best of tech and the best of management?

We aim to go beyond our academic boundaries, combining our expertise and technological resources to help our communities push themselves further and dare to venture into the world of entrepreneurship. We are committed to providing the **right conditions for our students, faculty and alumni to develop their innovative projects and create robust, responsible businesses**.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Excellence throughout our **study programmes**

Undergraduate

BSC BACHELOR OF SCIENCE IN ENGINEERING
Three-year bachelor degree in general engineering

BBA DATA, AI AND MANAGEMENT
Four-year bachelor degree combining management and data engineering in conjunction with Audencia Business School

Graduate

MASTER OF SCIENCE PROGRAMME (MSC)
> In Civil Engineering, Control and Robotics, Marine Technology, Mechanical Engineering - with a choice of specialism
> Integrated Master-PhD Track

ERASMUS MUNDUS JOINT MASTERS
7 programmes, 5 of which are coordinated by Centrale Nantes

Co-funded by the European Union

ENGINEERING PROGRAMME
> Highly selective three-year general engineering programme - leading to the *"diplôme d'ingénieur"*
> Open to students selected by our partner institutions abroad as a double degree

Postgraduate

PHD
PhD opportunities in a Centrale Nantes Laboratory via two doctoral schools: SIS (Engineering and Systems Sciences) and MASTIC (Mathematics and Digital, Information and Communication Sciences and Technologies).

Centrale Nantes is **accredited by the French Ministry of Higher Education and Research** to award national degrees at bachelor, master and PhD level.

The *'diplôme d'ingénieur'* engineering programme degree is equivalent to a Master of Science in Engineering and is **accredited by the CTI and has a European quality label (EUR-ACE)**.

All programmes are fully taught in English except the engineering programme (mainly in French).
> Learn more about our International Study Programmes

Centrale Nantes also offers a selection of Executive Education courses, degree apprenticeship programmes and two Advanced Masters (*Mastères Spécialisés®*), taught mainly in French.

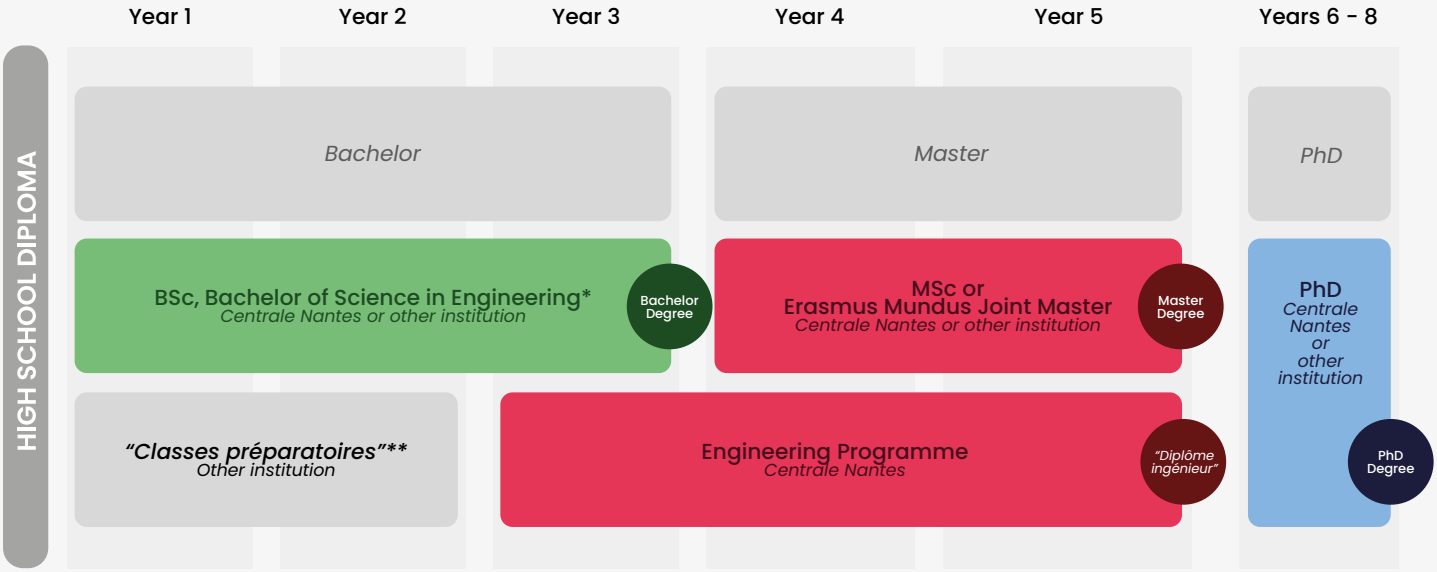
A welcoming and inclusive environment

We are committed to providing a welcoming environment for students from around the world, as attested by our three stars in the *"Bienvenue en France"* label. With **diversity at the heart of our community**, to make studying at Centrale Nantes more accessible, **we offer scholarships and tuition fee reductions**, so that talented students from diverse backgrounds can thrive.

Future students have the opportunity to **join and interact with our student community online** as soon as they receive an admission offer. Our teams are on hand to **support students every step of the way** — from securing accommodation and handling visa and enrolment formalities to meeting them at the airport. To help them settle in, we organise an **onboarding fortnight** packed with events as well as a **one-stop-shop for all administrative needs**.

Students also have access to **medical and social support services, including mental health counselling and financial guidance**. We provide tailored arrangements for students with special needs to ensure they have everything they need to succeed.

Comparative pathways



* ***BBA Data, AI and Management*** *also available over 4 years.*

*** The 'classes préparatoires' comprise two years of scientific courses preparing students for the competitive entrance examinations to French 'grandes écoles' engineering schools.*

A lively hub for learning and living

Building connections on campus and beyond

> 110+ student clubs and associations on campus: from sports and culture to science and humanitarian activities.

> Centrale Nantes Alumni network (CNA): 20,000+ graduates in 44 countries.

> CNA-run mentoring, conferences, and 500 networking events around the world each year

> 3,000 job/internship offers on the CNA platform.

A green campus

> 17 buildings on a 40-acre green campus, close to Nantes city centre.

> Modern sports facilities: gymnasium, squash courts, climbing wall, artificial pitch.

> On-campus residence for first-year international undergraduates (limited places).

Nantes: a top destination for students

> 60,000 students in France's 6th largest city

> Nominated as European Green Capital and FrenchTech Capital

> Rich cultural life with museums, festivals, and *Les Machines de l'Île*.

> 1 hour from the Atlantic coast, and 2 hours from Paris by train

MINISTÈRE DE L'ENSEIGNEMENT SUPÉRIEUR ET DE LA RECHERCHE

Founding member of Nantes Université

GROUPE DES ÉCOLES CENTRALE

CONTACT

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