

RESEARCH INTENSIVE INSTITUTE OF TECHNOLOGY

French Grande École

SINCE 1919



10 reasons to choose Centrale Nantes



A TOP-RANKING SCHOOL



CUTTING-EDGE RESEARCH



WORKING HAND-IN-HAND WITH INDUSTRY



RESOLUTELY INTERNATIONAL



LEARN FROM OUR LEADING FACULTY



A LIVELY, GREEN CAMPUS



NANTES A THRIVING ECONOMY



GLOBAL ALUMNI COMMUNITY



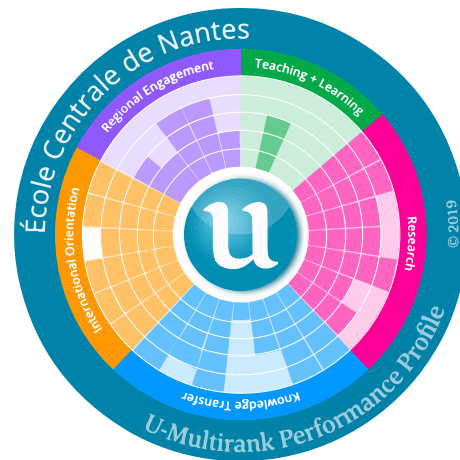
A WIDE RANGE OF PROGRAMMES



EXPLORE OPPORTUNITIES



Centrale Nantes: 6th place in the world's best performing institutions for student mobility, out of over 1700 in the ranking (U-Multirank 2019). Centrale Nantes stands out in three categories: international opening, knowledge transfer and research.



Out of only 903 establishments ranked worldwide for Engineering & Technology, Centrale Nantes is ranked 4th in France (Times Higher Education World University Rankings)



Centrale Nantes is ranked in the top 200 - and joint second in France - of the world's best universities for social and economic impact in the first edition of the Times Higher Education (THE) University Impact Rankings.

1919
2019



CENTRALE NANTES, 100 YEARS OF EXCELLENCE IN ENGINEERING TRAINING

Centrale Nantes delivers a high level scientific and technological engineering training with a multi-disciplinary focus. With our one-hundred-year history, and as a member of the Ecoles Centrale Group, we have undergone significant development in the last fifteen years, as evidenced by the successful integration of our graduates into the workforce, our progression in recognized rankings and the growing number of research programmes with industry.

Centrale Nantes is here to serve our students; to help them achieve their goals and aspirations. We offer programmes of excellence, in tune with environmental and societal issues and individual career plans. We are committed to developing our students' sense of confidence, audacity and action to shape them into curious, committed and innovative engineers. Our way of working is geared towards exploration, entrepreneurial spirit and practical implementation. We help our future engineers to develop systemic vision and a strong managerial culture so that they'll be ideally placed to tackle the societal challenges of the 21st century.

With an international network of 188 partner universities in 52 countries, we welcome 87 nationalities on campus - 43% of students on campus are international. Nantes, just two hours from Paris by train and close to the ocean, lies at the heart of a region which boasts a thriving economy and the highest employment rate in France. The city regularly tops French rankings for quality of life, with its lively cultural scene and family-friendly environment.

Centrale Nantes is one of Europe's top universities for research and innovation. It achieves impressive scores in international rankings for its ability to boost innovation in industry through knowledge transfer.

And finally, Centrale Nantes is strongly committed to climate and energy issues via our teaching and research and, more broadly, via our practices and policies, in favour of full employment and inclusive sustainable growth.

Welcome to Centrale Nantes!

Arnaud POITOU
Director of Centrale Nantes



OUR VALUES



In a progressive environment, where the professions of tomorrow will rely on knowledge that does not exist today, Centrale Nantes strives to share with its students, teachers, researchers, staff, and all our partners three fundamental values...



OPENNESS

... to social, physical or cultural differences, and thus encountering diverse aspects of the world we live in
... to new scientific and technical challenges which, whatever their forms, impart the desire to move forward in an uncertain universe.



ETHICS

Beyond a necessary contribution to the creation of the wealth of a structure, engineers have the moral duty to act responsibly for the future of the planet and to provide meaning to their professional activity.



COURAGE...

... to speak out and make oneself heard,
... to initiate and undertake
... to be oneself

260
PhD students

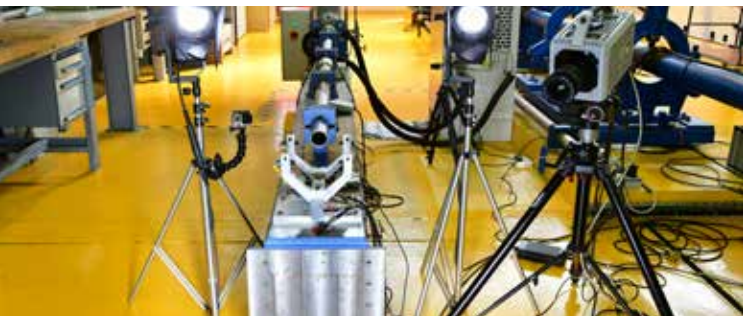
1
CNRS medal

550
teaching and
research
personnel

Cutting-edge research that's making a difference

Six internationally-recognised research institutes feed into our training programmes and strengthen the school's links with the socio-economic fabric. Centrale Nantes faculty members, who are at the forefront of their respective fields, share their activities between research and teaching, which thus benefits from their expertise.

The research institutes deploy an interdisciplinary approach to address three major challenges for growth and innovation: **factory of the future, energy transition, and engineering for health.**



OUR 12 UNIQUE RESEARCH PLATFORMS

- > Ocean test facilities (unique in an academic setting in France)
- > Offshore test site (for Marine Renewable Energies)
- > Dynamic and Static Test Centre
- > Engine and vehicle test benches
- > Supercomputer (6,000 and soon 10,000 cores)
- > Composites Platform
- > Rapid Manufacturing Platform (unique in Europe)
- > Robotics Platform
- > Structural Testing Floor
- > Smart Factory Platform
- > Virtual Reality
- > Wind Tunnels

It's part of our mission at Centrale Nantes to ensure that our research benefits industry and society at large. Some examples of research projects currently underway:

Virtual Reality & Augmented Reality

It is now (almost) possible to be realistically incarnated in a virtual body. The virtual incarnation means that one can be placed (virtually) into an unusual situation, and from there, potential impact on behaviour can be studied. Our researchers are working alongside Nantes University Hospital on patients suffering from neuropathic pain, especially related to the loss of a limb. The virtual incarnation of the limb is used in order to provide pain relief.



Improving aircraft safety in the event of emergency ditching

Centrale Nantes is one of the partners of the European project SARAH. It aims to establish new simulation-based approaches to the analysis of aircraft and helicopter ditching to enhance aircraft reliability and protection and better understand environmental phenomena. The project combines three investigation methods: ditching tests carried out in the ocean test tanks at Centrale Nantes; numerical simulation of ditching, which was conducted in partnership with our researchers; and accident analysis.



44
countries

450
events
per year

17,000
alumni

Working hand-in-hand with industry

CLOSE LINKS WITH INDUSTRY THROUGHOUT YOUR PROGRAMME

Centrale Nantes works hand-in-hand with industry to ensure a vocational approach to all its programmes. These close links come in various forms: company visits, internships, projects, participation of external speakers in courses, conferences, partner days, interview simulations, job or internship offers.

The training partnerships with companies favour frequent interaction between students and companies, which greatly contributes to the professional integration of graduates. The school also forges close links with companies and professional networks.

Our research institutes also collaborate with numerous companies to boost their research and accelerate their innovation. Students, through associations such as the Forum Atlantique, a recruitment fair involving 80 companies and over 2,000 students.



250
speakers from
industry



120
company conferences &
site visits per year



Over 4,000
industrial projects
per year



104
projects
incubated
to date

26
new projects
in 2018

+ 70
startups
launched

+ 200
new jobs
created

Cost-effective aircraft repair with 3-D printing

Centrale Nantes is one of the partners in the European and Canadian AMOS (Additive Manufacturing Optimisation and Simulation) project, which is developing a number of additive materials and processes for the repair of aircraft parts. Our researchers are investigating the potential of additive manufacturing - specifically via direct energy deposition systems using a laser-powder machine - to repair and re-manufacture aircraft parts, such as turbine blades and landing gear.



Industrial Research Chairs

Each year, the school sets up two to three major research programmes with renowned industrial companies to boost their research and accelerate innovation:

Naval Group, Bureau Veritas, RTE, EDYCEM, Faurecia, Renault / LMS to Siemens Business, Mann Hummel, ESI, EADS, etc.

188

academic partners in 52 countries

24%

secure first employment abroad

World-Class Programmes

At Centrale Nantes, we train our students to become versatile engineers with strong scientific and technical know-how. Equipped with a strong managerial culture, they are capable of placing scientific subjects into a global context incorporating environmental and societal issues. In a spirit of innovative exploration, entrepreneurship and practical application, our programmes confront students with the major challenges of the 21st century, combining theory and "doing".



BACHELOR OF ENGINEERING (HONOURS)

Four-year programme with specialisations in Industrial Engineering and Civil Engineering



ENGINEERING PROGRAMME

Three-year general engineering programme leading to the "diplôme d'ingénieur" equivalent to a Master of Science and Engineering. This qualification is awarded to students after a total of five years of higher education.



ITII DEGREE APPRENTICESHIPS

Degree apprenticeships, in partnership with the ITII Pays de la Loire, in Mechanical Engineering, and in Construction and Public Works.



MASTERS AND ERASMUS MUNDUS JOINT MASTER DEGREES

Six two-year Master Degree programmes in Marine Technology, Mechanical Engineering, Civil Engineering, Automatic Control and Robotics, City and Urban Environment, Industrial Engineering – with 15 specialisms.

Four Erasmus Mundus Joint Master Degrees, a guarantee of academic excellence.

ADVANCED MASTERS (MASTÈRES SPÉCIALISÉS®)

Four Advanced Master Programmes

The Advanced Master label is awarded to specific programmes organized by a member school of the Conference of the Grandes Ecoles, following a very rigorous accreditation procedure, which guarantees its excellence in terms of visibility and duration.

PHD

260 PhD students enrolled via two doctoral schools: SPI (Engineering Sciences) and MathSTIC (Mathematics and Information and Communication Sciences and Technologies).

EXECUTIVE EDUCATION

Programmes for company engineers and executives and engineers, seeking to enhance their scientific and managerial expertise or change career.

84%

of our engineering programme graduates are in within 2 months

INNOVATIVE PROJECT-BASED TEACHING



43% of international students

87 nationalities on campus



Experience life on campus

Passion, ambition, leadership development, comradery, integration, respect, well-being... sport plays a real role in all-round engineering training.

- Athletics
- Archery
- Badminton
- Basketball
- Blowgun shooting
- Bodybuilding
- Canoeing
- Climbing
- Cross-Country Running
- Crossfit
- Fencing
- Football
- French boxing
- Hand Ball
- Horse Riding
- KravMaga
- Mountain Biking
- Rally Raid
- Rowing
- Rugby
- Sailing
- Tennis
- Table Tennis
- Ultimate
- Volleyball
- Water Polo
- Windsurfing

450
students take part in sports competitions each week

40
acres on the riverside



Excellent sports facilities beside the banks of the River Erdre and in close proximity to Nantes city centre.

27 sports

Dynamic student life – an activity to suit everyone’s taste and the opportunity to mix and make friends.



+80 clubs

- Integration Weekend | InterCentrales Sports Competition ▪ Annual Gala
 ▪ Culture Week ▪ Ski Week ▪ Cooking Club ▪ Junior Enterprise ▪ TEDx
 ▪ Centrale Vert ▪ Oenology ▪ Together for Earth ▪ Astronomy ▪ Nantrobot
 ▪ Centrale Nantes Sairdronne ▪ Do It Yourself ▪ Cheerleaders ▪ Salsa ▪ Fanfralle Brass Band ▪ Choir and Orchestra ▪ Theatre ▪ Circus ▪ Cinema ▪ Chess ▪ Centrale GameClub ▪ Centrale Image ▪ ECNiouzes...



NANTES, ONE OF THE BEST PLACES TO LIVE IN FRANCE

Nantes, second most liveable city in France and first for employability. European Green Capital in 2013, Nantes was baptised "the loopest city in France" by British newspaper "The Sunday Times" in reference to its cultural diversity and originality. The capital of the Pays de la Loire region regularly tops rankings: most workable city, most attractive city, etc. As for students, Nantes was ranked fifth in France for 2018-2019. Almost 60,000 young people are enrolled in higher education institutions - nearly 10% of the population. Nantes is also well known for its highly advanced scientific and industrial environment (Airbus, EADS, STX, Beneteau).



HOW TO GET HERE

By plane to Nantes Atlantique airport.
By high-speed train – only two-hours from Paris

St. Nazaire
largest port on France's
Atlantic coast

60,000
students



1st
French region for
shipbuilding

9
competitiveness
clusters



Nantes
fastest growing
digital sector
in France



Halls of residence
guaranteed place for first
year students



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