

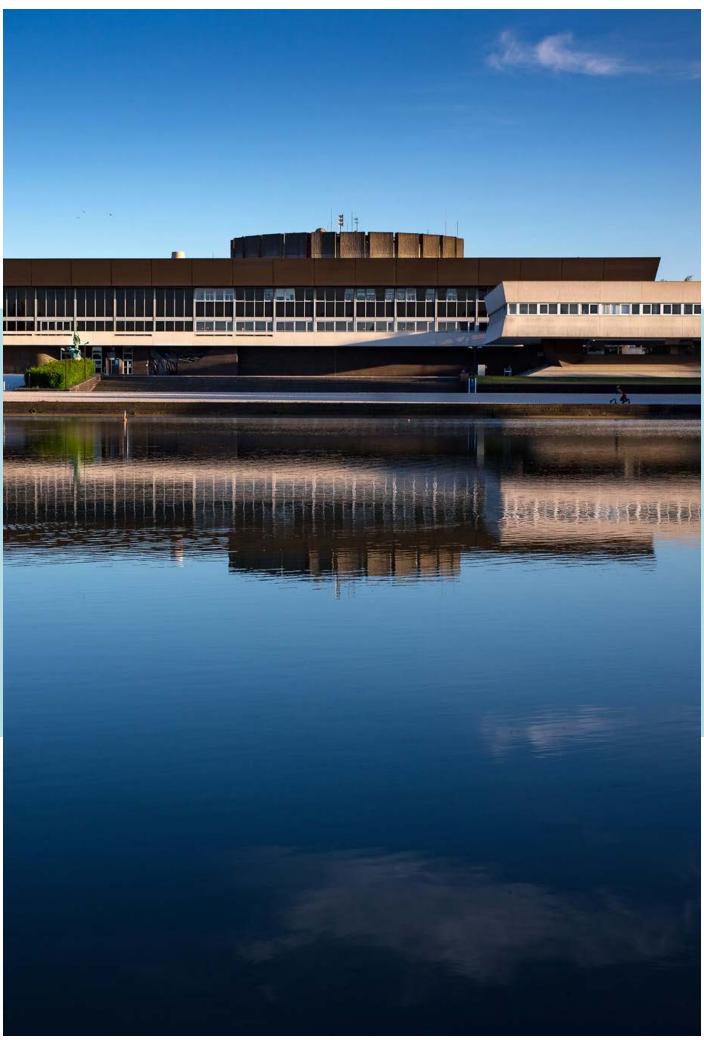


ÉCOLE POLYTECHNIQUE

A WORLD-CLASS HIGHER EDUCATION AND RESEARCH INSTITUTION

MEMBER OF INSTITUT POLYTECHNIQUE DE PARIS







École Polytechnique, a globally-minded institution under the supervision of the French Ministry of the Armed Forces, **combines high-level research**, **education and innovation at the cutting edge of science and technology** and promotes a culture of excellence, open to a longstanding humanist tradition.

École Polytechnique is an integral part – along with five other prestigious French engineering schools (ENSTA Paris, ENSAE Paris, Télécom Paris and Télécom SudParis and École Nationale des Ponts et Chaussées) – of Institut Polytechnique de Paris. Institut Polytechnique de Paris is a public higher education and research institution that pursues two broad ambitions: to develop world-class training programs and cutting-edge research.

Supported by the strong academic foundations of its five founding schools and its alliance with HEC Paris, IP Paris is positioned as a leading educational and research institution, both in France and internationally.

True to its original mission of promoting science through world-leading education, research and innovation for the common good, **École Polytechnique** has placed sustainable development and ecological transition at the heart of its development.

Striving to enroll an ever-growing number of students in its high-level training programs and attract top talent to its faculty and administrative teams, **École**Polytechnique is firmly committed to fostering diversity and gender equality.















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EDUCATION

to foster thinking, action and service

Through its unique range of training programs - Bachelor's, École Polytechnique engineering program, Master's of Science and Technology, Executive Master's, continuing education - or integrated with Institut Polytechnique de Paris - Master's, PhD Track, doctoral program - École Polytechnique trains leaders with a sound multidisciplinary scientific culture by exposing them to both the world of research and industry.

Its **23 laboratories**, including 22 joint research units with the CNRS, work at the frontiers of knowledge on major interdisciplinary challenges in the scientific, technological and societal fields.



3,700 students in initial education



497 teaching and research staff members



Over 100 nationalities on campus



100% graduates are employed within 6 months of graduation



All École Polytechnique programs are highly selective and are based on a multidisciplinary scientific approach with strong ties to research.

<u>BACHELOR'S</u>



Three-year post-secondary program taught in English

- Courses based on fundamental mathematics and sciences
- Program designed for French and international students with very high potential who are prepared to take demanding courses
- Semester abroad opportunity in 3rd year
- Prepares students for high-level academic and professional careers in France and abroad

Bachelor's students complete a rigorous multidisciplinary scientific program over the course of three years.

The first year is devoted to acquiring the fundamental knowledge required for the rest of their studies, and to discovering different disciplines in order to choose their specialization.

In their second and third years, students must then choose between three double majors or specializations:

- Mathematics and Physics
- Mathematics and Computer Science
- Mathematics et Economics

44%
INTERNATIONAL MASTER'S
80%
AT A GLOBAL TOP 40
UNIVERSITY IN FRANCE
OR ABROAD

CHELOR'S PROSPEC

In their third year, students have the option to study abroad for the fall semester at one of our partner universities, such as the University of Toronto, UC Berkeley, EPFL, KAIST, King's College London, or The University of Melbourne. In the spring, students have an eight-week research internship, at the end of which they must submit their Bachelor's Thesis.

MATHEMATICS AS A CENTRAL FOCUS

The mathematics courses included in the Bachelor's program are tailored to all double majors (Physics, Economics, Computer science).

A notable feature is the attention given to applications across the spectrum of Mathematics (digital simulation and computing, arithmetic cryptography etc.) from the outset.



POLYTECHNIQUE ENGINEERING PROGRAM



Four-year advanced multidisciplinary program Humanist, military and sports training

- Top-level scientific foundation, leading the national rankings of French engineering Schools
- Strong focus on humanities and social sciences
- 3 internships (internship in the Armed Forces or a civil organization, company internship and research internship)
- Mandatory international exposure
- Exposure to innovation management and entrepreneurship
- Specialization from the 3rd year onwards
- Admission based on competitive entrance exam after preparatory class, Bachelor's or equivalent degree







MILITARY TRAINING



École Polytechnique is overseen by the French Ministry of the Armed Forces and its French students have the status of student-officer in the French Army, as established by Napoleon I in 1804, making X a unique higher education and research institution and helping ensure the country's sovereignty. Its humanist and sports training is mandatory for French and international students, all of whom wear uniforms.

École Polytechnique is therefore the only French Grande École whose students are called upon to play a key role in defense – in the broadest sense – of the nation and the development of its interests, and are exposed to the military world and geostrategic challenges.

École Polytechnique develops and conveys the essential values of commitment, a sense of giving and a concern for the general interest. These values provide a foundation of shared aims and strengths to help design and implement major strategic projects to promote national interests.

MASTER OF SCIENCE AND TECHNOLOGY (MSc&T)



- A two-year scientific program taught exclusively in English, designed to train mainly international students for the technological, environmental and societal challenges of the 21st century.
- Providing a high-level, multidisciplinary scientific education: science/ management-economics, social sciences, languages and sports.
- Taught by teacher-researchers and experts from the private sector, with laboratory projects and internships in companies
- Focused on the socio-economic world
- Close links with companies, with a strong focus on entrepreneurship and innovation
- Leading to a first job in a company or in the private or public sectors, in France or abroad
- Offering the possibility of continuing studies at doctoral level.

• 12 programs:

- Visual and Creative Artificial Intelligence (A-VIC)
- Cybersecurity
- Internet of Things: Innovation and Management
- Economics for Smart Cities and Climate Policy
- Data Science and AI for Business X-HEC Master (Joint Degree with HEC)
- Thrustworthy and Responsible AI (TRAI)
- Double Degree Data & Finance X-HEC
- Data and Economics for Public Policy
- Economics, Data Analytics and Corporate Finance
- Environmental Engineering and Sustainability Management
- Energy Environment : Science Technology and Management
- Science & Technology in Extended Cinematography

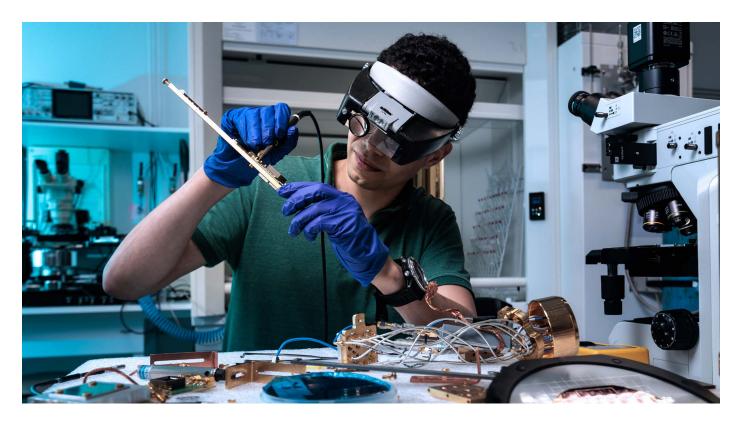
Admission based on application file after a Bachelor's, Master's or engineering degree.

INSTITUT POLYTECHNIQUE DE PARIS MASTER'S PROGRAMS

- 40 programs offered by École Polytechnique in 13 different specializations
- Master's awarded by Institut Polytechnique de Paris
- Admission based on application file after a Bachelor's degree or equivalent







PHD TRACK

Five-year program supported by the laboratories of the Institut Polytechnique de Paris research center, to attract the best international students

- Research-oriented training integrating a Master's and PhD
- Individualized, demanding scientific training program with attractive financial and program conditions (a grant is available for the first two years of the Master's program)

PHD

Integrated in the Institut Polytechnique de Paris doctoral program

- Admission based on application file and interview
- Traditional three-year program in a wide range of disciplines
- Financial support for PhD students





20% POSTDOCTORAL POSITIONS

30%
HIGHER EDUCATION
AND RESEARCH (OTHER THAN
POSTDOCTORAL POSITIONS)

50% COMPANIES (2/3 IN FRANCE AND 1/3 ABROAD)

EXECUTIVE MASTER'S





The Executive Master is École Polytechnique's top-level diploma for senior executives with an average of 18 years of professional experience.

With a unique concept combining technology, innovation management and leadership, this program enables participants to acquire the key skills needed to influence and steer innovation, in a context where technology plays a major role.

The modular format is designed to enable participants to learn while continuing to work.

The program in a few key points:

- 11-12 modules of 4 to 5 days spread over 1 year, in France and at world-renowned institutions
- 3 teaching pillars: Technology, Innovation Management, Leadership
- Training delivered by École Polytechnique research professors
- A pedagogical format designed for executives:
 - Courses, lectures, debates and visits
 - A Team Project to create or accelerate concrete technological and innovative projects
 - A SOTA Report enabling participants to work on a technological topic of their choice
 - Coaching and a personalized development path throughout the curriculum

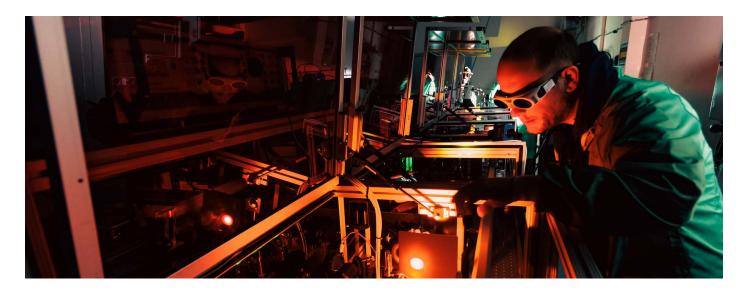
Two start dates per year: September and March.

EXECUTIVE EDUCATION



École Polytechnique Executive Education offers diploma, certification, and short programs for executives, managers, engineers and scientists, as well as tailormade training and support for national and international companies of all sizes and in all sectors.

It draws on the multidisciplinarity and excellence that are the hallmarks of École Polytechnique education and research to offer training programs and courses based on our scientific and technical expertise in fields like AI & data sciences, cybersecurity, blockchain, energy transition, leadership & team performance, organizational transformation and innovation.



RESEARCH

to understand, gain insights and advance

As part of **Institut Polytechnique de Paris** (IP Paris), École Polytechnique's research strategy is based on its **one-of-a-kind facilities** and **world-renowned expertise**. Its research staff combine the exploration of the most **fundamental** aspects of research to **further knowledge** with the development of major, more **applied** fields that address the **scientific**, **technological and societal challenges of the 21st century.**

École Polytechnique's 23 laboratories are an integral part of the IP Paris research center. This center has eleven disciplinary departments and supports the development of interdisciplinary centers on societal challenges: The Energy4Climate (E4C) center focusing on energy transition in the wake of climate change, Hi! PARIS devoted to artificial intelligence and data science, the Interdisciplinary Center for Defense and Security (CIEDS) and the Engineering for Health Center (E4H) devoted to engineering for health, the Science, People, Imagination, Research, Art, all Linked! (SPIRAL) and the Materials for Society (M4S) center.



1,800 research staff



77 nationalities represented



23 laboratories



2,830 publications



10 TEACHING AND RESEARCH DEPARTMENTS



Mathematics



Computing, data & Al



Information, Communication & Electronics



Physics



Mechanics & Energetics



Chemistry & Processes



Biology



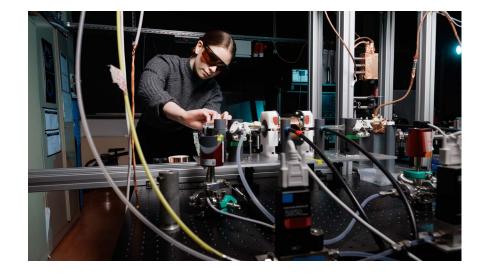
Economics



Social Sciences & Management



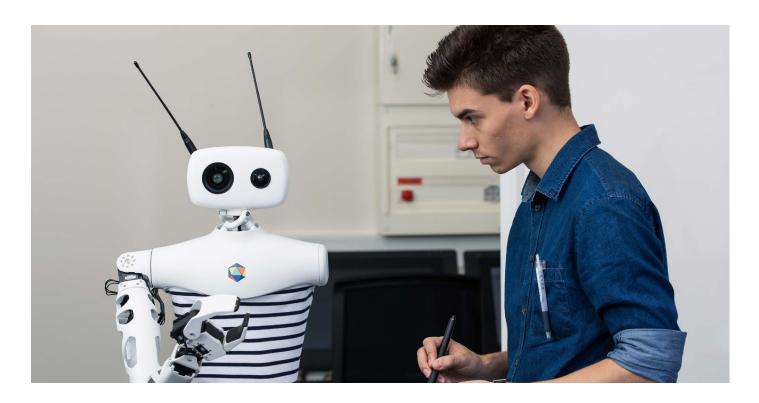
Humanities, Arts, Litterature & Languages



SERVING KNOWLEDGE AND SOCIETY

Thanks to its excellence in fundamental research, which is in tune with the challenges facing society, École Polytechnique has forged strong links with the business world, from very small companies to major French and international groups.

Researchers at I'X take their cue from the needs of the business world to come up with innovative and effective concepts, and create new knowledge using the very latest theoretical, digital simulation and experimental tools.



INNOVATION AND ENTREPRENEURSHIP

for greater impact, value, creativity

As an institute that trains those who will design and drive the economy of tomorrow, École Polytechnique helps foster an innovation mindset and encourages entrepreneurship among students and researchers. It actively supports entrepreneurs in start-up creation.

RAISING AWARENESS AND TRAINING IN INNOVATION AND ENTREPRENEURSHIP

As a committed player, École Polytechnique develops innovation and entrepreneurship training programs that enable its students to discover industrial issues and future-oriented themes, get involved in innovative projects, simulate the process of creating a company, and meet start-up founders.

École Polytechnique also has a prototyping facility, the X-FAB, where students are trained and supported in their innovative projects.

SUPPORTING DEEPTECH ENTREPRENEURSHIP

École Polytechnique supports the creation and development of Deeptech start-ups through its incubator, X-UP, which provides entrepreneurs with a range of services tailored to the level of maturity of their project.

In addition, the Polytechnique Ventures seed fund, created by X alumni, offers financing solutions to entrepreneurs from École Polytechnique's Deeptech ecosystem.



DRAHI-X NOVATION CENTER

- A building dedicated to entrepreneurship and innovation, open to students, researchers, startups and companies
- Total surface area of 5000 m²
- Deeptech incubator (X-UP)
- Prototyping space (X-FAB)
- Hosting of innovative projects (SMEs, public bodies, major companies)



CORPORATE RELATIONS

balanced, productive partnerships

The School develops partnerships with industry and fosters the transfer of its scientific and technological results to companies.

DISCOVER THE CORPORATE WORLD

- Internships in France or abroad offered to students every year
- Research topics proposed by companies as part of student projects
- Research topics proposed to PhD candidates based on CIFRE contracts



SUPPORTING EDUCATION AND RESEARCH



44 corporate chairs



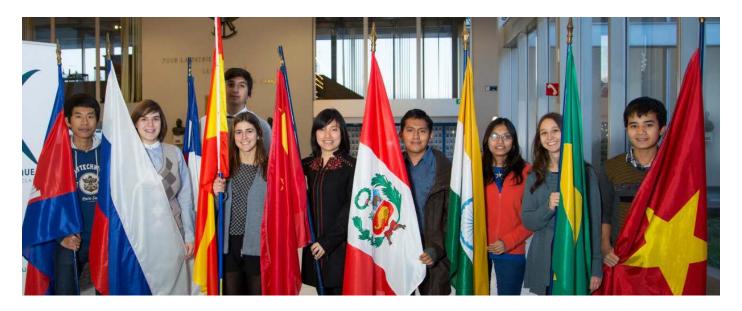
77 sponsors and partners of chairs

École Polytechnique promotes synergy between education and research, by developing teaching and research chairs covering a wide range of fields including:

 energy, biomedical, materials, modeling and digital science, sustainable development, management, innovation, economics and finance.

COMMERCIALIZING INNOVATION

École Polytechnique contributes to economic development by commercializing technological expertise and inventions from its Research Center.



INTERNATIONAL OUTLOOK

for cooperation, enrichment and expanding horizons

An international perspective is central to the development of École Polytechnique's education, research and innovation. This internationalization goes hand in hand with the School's policy to develop close partnerships with prestigious institutions and networks in Europe and abroad. École Polytechnique is recognized as the most global French university in leading international rankings.



41% international students



Over 100 nationalities



40% international research professors





STRATEGIC PARTNERSHIPS TO BOLSTER ACADEMIC AND RESEARCH EXCHANGES

The first international students were admitted to École Polytechnique in 1798. Since its early days, the institution has therefore recognized the importance of diplomatic relations and training elite students from abroad. Today, with over 200 cooperation agreements, École Polytechnique has an extensive network of partner universities around the world. Its academic and scientific partnerships give students and research professors exceptional mobility opportunities.

École Polytechnique now focuses its strategic partnership policy on around twenty leading universities. As a member of the U7+ global alliance and the EuroTech European network, part of IP Paris, École Polytechnique is actively involved in discussions on European and global higher education issues.

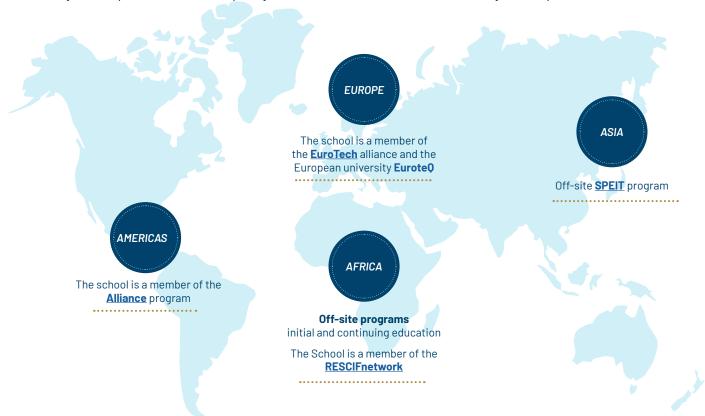


A MULTICULTURAL AND INTERNATIONAL ENVIRONMENT FOR ALL STUDENTS

With 45% international students on campus, École Polytechnique offers its students a unique multicultural experience. This diversity enriches campus life, and is further enhanced by the international mobility opportunities offered by the School through internships or academic exchanges in partnership with world-renowned universities.

International students also benefit from administrative and financial support from their admission through to the end of their studies, as well as a sponsorship system with an alumnus. The International Office and Welcome Desk (BasiX) assists international students from the moment they arrive in France. Thanks to the quality of its campus services, École Polytechnique has been awarded the "Bienvenue en France" label (3 stars) and the "Qualité Français Langue Étrangère" label (3 stars). This unique environment, combined with the excellence of the students recruited, in turn attracts top-level international teaching and research staff.

École Polytechnique's international policy is in line with that of the Institut Polytechnique de Paris.



FOUNDING MEMBER OF THE EUROTEQ EUROPEAN UNIVERSITY

École Polytechnique is a founding member of the European University "EuroTeQ Engineering University", supported by the European Union. École Polytechnique is part of this ambitious project, which aims to train the European engineers of tomorrow, alongside prestigious academic partners: Eindhoven University of Technology (TU/e), Technical University of Munich (TUM), Technical University of Denmark (DTU), Tallinn University of Technology (TalTech) and Czech Technical University in Prague, in conjunction with Technion - Israel Institute of Technology. By the end of 2023, this European university had expanded to include two new partners, HEC Paris and IESE Business School, as well as two associate partners, Institut Polytechnique de Paris and École Polytechnique Fédérale de Lausanne (EPFL).





A DYNAMIC CAMPUS

where students thrive, get involved and make connections

There's always something happening on campus – scientific symposia, performances, exhibitions and more! Many events are open to the public, such as: Fête de la Science, Heritage Days and conferences.

Providing students, faculty and staff with an improved working and living environment to enhance its attractiveness is a priority of the campus project led by Institut Polytechnique de Paris and École Polytechnique.

The Institut Polytechnique de Paris campus extends from ENSTA Paris in the east to the Télécom Paris and Télécom SudParis schools in the west and encompasses the ENSAE Paris premises in the south.

The geographic center of the campus is located around École Polytechnique with classroom spaces, the library and laboratories occupying a central position. The School museum, Mus'X, houses a remarkable collection of historic scientific instruments and is open to the public.

Student housing is located in the south, sports and nature activities in the north, and in the east an innovation and research park offers partnership and economic development opportunities.

Located just 25 km from Paris, the École Polytechnique campus is in close proximity to the capital, its train stations and airports, landmarks, museums, vibrant cultural scene and wide array of shows and festivals year round.





14 lecture halls



60 classrooms and lab work areas



42,000 m² of research and laboratory buildings



An extensive library with a strong focus on fundamental sciences.



A museum, **Mus'X** devoted to the history and heritage of École Polytechnique



1,500 student housing units



A restaurant and a cafeteria



Large-scale, comprehensive sports facilities

To raise its campus to the highest international standards, transform it into a model of sustainable development offer an attractive experience for all students and staff, École Polytechnique is constantly modernizing and renovating its facilities to reflect new ways of teaching, offer coworking spaces and new, improved social hubs, bring its infrastructure into compliance with the goal of achieving carbon neutrality

by 2050, and offer an operating capacity in line with its ambitions for growth and excellence.

Constantly evolving, the campus of École Polytechnique is set on the Plateau de Saclay, a vast ecosystem of educational and research institutions, public and private laboratories offering a wealth of opportunities for their students, researchers, faculty and staff.

With 50,000 jobs in tech, R&D and engineering, the Plateau de Saclay – one of eight global research and innovation clusters – brings together public research centers and laboratories with the presence of CNRS, CEA and also concentrates 15% of public and private research in France, with the presence of companies like EDF, Thales, Danone, Safran, EADS, Kraft Foods and IPVF.





SPORTS FACILITIES





OVER 12,000 M² OF INDOOR SPORTS FACILITIES INCLUDING

- 2 swimming pools
- 3 fitness facilities
- 1 fencing room
- 1 climbing wall
- 2 dojos
- 2 tennis courts
- 2 weightlifting rooms
- 1 boxing room
- 1 equestrian center
- 1 multipurpose sports facility









8 HECTARES OF OUTDOOR SPORTS FACILITIES INCLUDING

- 3 soccer fields including one synthetic field
- 3 rugby fields
- 6 outdoor tennis courts
- 1 semi-artificial lake (rowing and canoe)
- 1 running track, 400 meters long
- 1 multipurpose sports pitch (handball, basket)
- 1 city stadium
- 2 cross fit areas







WORLD-CLASS ARCHITECTURE

Several recent world-class facilities and projects have given concrete form to the school's ambitions in its three activities: education, with the Shared Teaching Building (BEM), research, with scientific buildings such as the Mechanics Center and the new Instrumental Research Site for Remote Sensing (SIRTA), and innovation, with the expansion of the Drahi – X Novation Center, École Polytechnique's incubator.

This campus development goes hand in hand with the creation of new student housing like the Bachelor's student residences housed in a smart building and recreational and sports areas such as the Multisport Hall.



Instrumental Research Site for Remote Sensing (SIRTA)



Shared Teaching Building (BEM)



Multisport Hall



AN ACCESSIBLE, GLOBALLY-MINDED CAMPUS

A series of walkways and bike paths connect the different public common areas, for a peaceful way to get around campus and to the various educational, research, innovation, student, sports and recreational facilities. Vehicle traffic and parking is organized on the periphery of the campus. Bus stops are positioned at the main pedestrian entrances to the campus to improve intermodal connections between public transport stations and non-motorized transport.

The reconfigured pedestrian link to the Lozère RER B train station allows users to access to the Plateau de Saclay with a bicycle or baggage. A pedestrian path also provides an effective link between Télécom Paris and Télécom SudParis and the Le Guichet RER B train station.

The campus, which is already well-connected by road infrastructure and existing public transport, will be even easier to access after the **completion of the future line 18 of the Greater Paris Métro.** It will connect the campus to Paris and Orly Airport, and go through the Massy-Palaiseau TGV and multimodal station. Its links to Paris, train stations and airports through the highway system and public transport networks makes our campus open to the world.







A SUSTAINABLE CAMPUS, LIVING LAB FOR ENERGY TRANSITION

École Polytechnique is implementing an ambitious plan to achieve carbon neutrality on campus by 2050.

Its Climate Plan, published in early 2022, outlines the concrete steps it has already taken. It incorporates ecological transition throughout the School's missions and campus operations. Among other things, it calls for:

- Reducing greenhouse gas emissions by 20% per user on campus in terms of energy consumption.
- Ensuring that 50% of procurement is based on Environmental Social and Governance (ESG) quality criteria
- Establishing a campus center reserved for non-motorized transport.



Through the Energy4Climate (E4C) interdisciplinary center and within Institut Polytechnique de Paris, École Polytechnique has developed an ambitious climate plan based on disruptive research technology platforms.

E4C has developed full-scale demonstrators integrated in three campus buildings: The Drahi - X Novation Center where smart electricity solutions are being tested, a residential building to test collective energy self-sufficiency, and the SIRTA atmospheric observatory (Instrumental Research Site for Atmospheric Remote Sensing) which is equipped with a modular research electric micro-grid and an agrivoltaic farm.

The "Reducing CO2 emissions: between smart energy management and carbon sequestration" project will create two new technology platforms:

- The very first system for extracting and recovering CO2 from water
- The first full-scale demonstrator for storing and optimizing thermal and electrical energy

Like the three existing demonstrators, these new platforms will be located at the center of the Institut Polytechnique de Paris and École Polytechnique campus, making it a living laboratory for energy transition.

FONDATION DE L'ÉCOLE POLYTECHNIQUE



Created in 1987 and recognized as a public-interest organization in France, the Fondation de l'École polytechnique finances the development of l'X and contributes to its national and international outreach.

ITS MAIN MISSIONS ARE:

- Finance École Polytechnique's development
- Strengthen industry connections
- Encourage research, teaching and innovation
- Support the school's students

The Fondation raises funds from individuals and corporations to support École Polytechnique's strategic projects. Building on the success of its two previous campaigns, in 2024 it launched a new fundraising campaign - Servir la science - with the aim of raising 200 million euros within 5 years



www.fondationx.org

ÉCOLE POLYTECHNIQUE ALUMNI ASSOCIATION

L'AX is the association of École Polytechnique alumni and graduates. For over 150 years, it has helped X alumni and graduates experiencing hardship and has developed solidarity and friendship within the École Polytechnique community.

ITS MAIN MISSIONS ARE:

- **Friendship:** Create and maintain lasting relationships between students and alumni.
- **Solidarity:** Provide support for fellow alumni and their families in times of hardship.
- **Community**: Build a strong, vibrant community by running professional, cultural and geographic groups, and planning regular events.
- **Network**: Support its members throughout their career and help them develop their network.

AT A GLANCE:

30,000 alumni and graduates
115 thematic groups
Over 300 events a year
Over 1,000 international students sponsored since 2005
1,100 pairs formed through the student-alumni mentoring
program launched in 2016

ax.polytechnique.org



FRENCH AND INTERNATIONAL RANKINGS





X, the number-one French engineering school

École Polytechnique tops the rankings for French engineering schools in rankings by Le Figaro, l'Usine Nouvelle and l'Étudiant.



IP Paris, 34th worldwide and 1st in France in the THE rankings of most global universities.



IP Paris ranked 48th in the 2023 rankings of top global universities and 2nd in France

11th worldwide for graduate employability

QS World Universities Rankings 2023

IP Paris one of the Top 30 global institutions in 4 disciplines, one of the Top 50 for 4 others

QS Subject Rankings 2022

MsC&T in Data Science for Business ranks in the World's Top 3

The X-HEC Master of Science and Technology (MSc&T) in Data Science for Business comes in third worldwide out of 120 comparable programs in its first QS ranking.



LEARN MORE

Reference texts



Read here



Objectives & Performance Contract 2022-2026



Research Brochure



Read here



Read here



Climate Plan



Chair Activity Report



Read here

Find detailed information about the School at:





www.polytechnique.edu

Connect with us on social media:









<u>LinkedIn</u>

<u>Facebook</u>

<u>Instagram</u>

YouTube

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