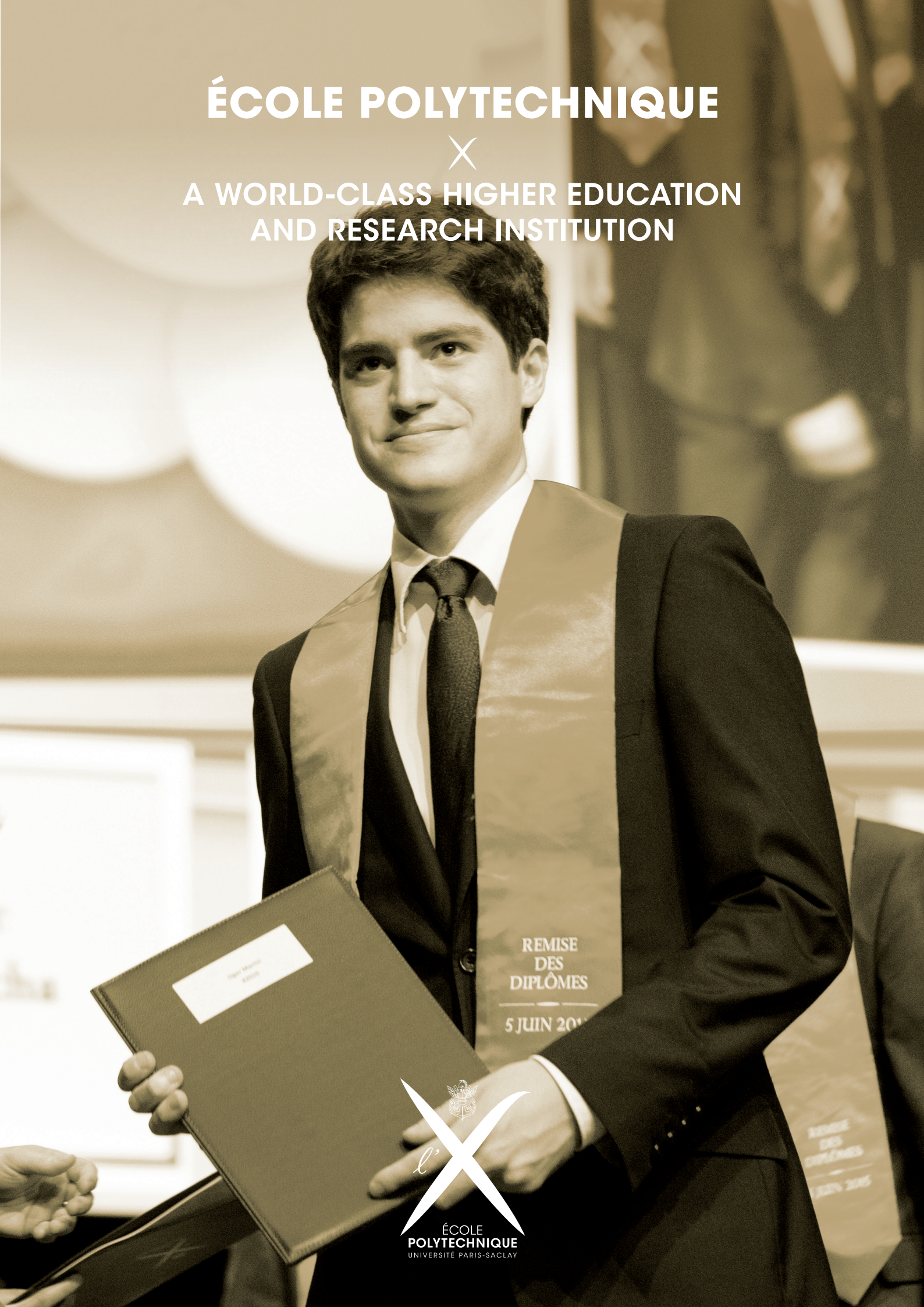


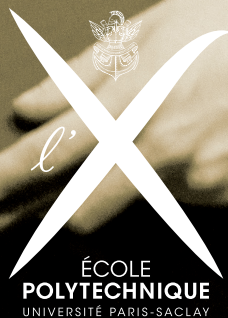
# ÉCOLE POLYTECHNIQUE



A WORLD-CLASS HIGHER EDUCATION  
AND RESEARCH INSTITUTION



REMISE  
DES  
DIPLOMES  
5 JUIN 2015



ÉCOLE  
POLYTECHNIQUE  
UNIVERSITÉ PARIS-SACLAY

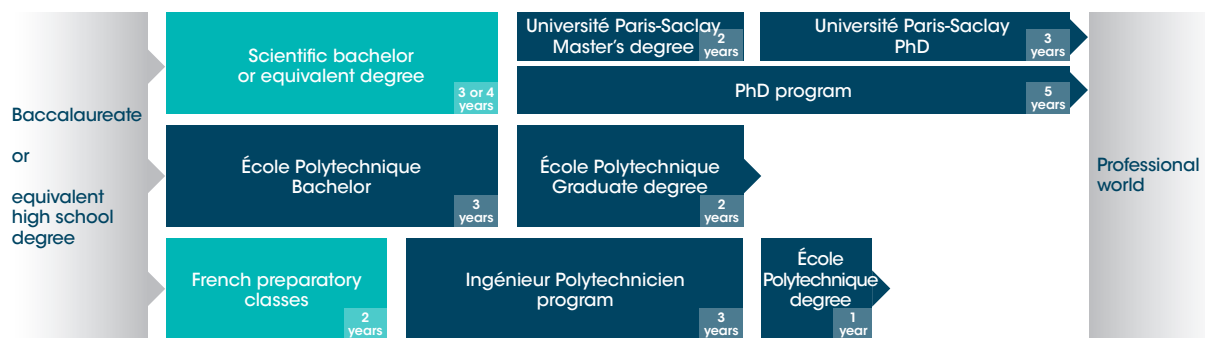
# COURSES

## FACULTY - KEY FIGURES

**1,100**  
teachers and professors

**39%**  
international faculty

**99%** of students  
employed 6 months after graduation



All École Polytechnique courses are highly selective, apply a multidisciplinary scientific approach, and are closely involved with research.

## BACHELOR'S DEGREE



- 3-year **undergraduate program**, taught in English
- Curriculum focused on mathematics and computer science, with double majors available in 2<sup>nd</sup> and 3<sup>rd</sup> years
- Program designed for French and international students with strong potential and ability to cope with a demanding course load
- Admission based on application file and interview
- Research focused program with a two-month internship in a laboratory

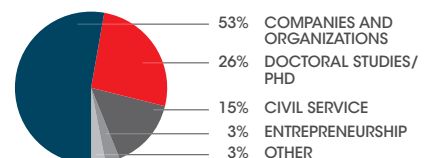
## INGÉNIEUR POLYTECHNICIEN



For over 150 years, "IX" (pronounced "lix") has been widely used as a nickname for École Polytechnique among students and in the general public in France.

- Highly selective multidisciplinary scientific program **lasting 4 years**
- Personal development, military and sports training
- Strong elements of humanities and social sciences
- **3 internships** (an internship in the armed forces or a civil organization, an internship in a company, and a research internship)
- International exposure
- Exposure to management and entrepreneurship
- Concentrations available from Year 3
- Admission via a competitive exam following the French *Classe Préparatoire* foundation degree, a French *Licence*, or an equivalent degree (Bachelor)

### OUTCOMES FOR POLYTECHNICIENS GRADUATES



# COURSES

## MASTER'S-LEVEL PROGRAMS

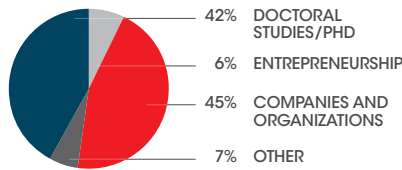
### Graduate Degree

- Two-year Science and Engineering programs, exclusively taught in English
- High-level scientific studies
- Close industry collaboration for real-world education
- Programs include:
  - *Energy Environment: Science Technology and Management*
  - *Corporate Strategy for New Markets*
  - *Internet of Things: Innovation and Management program*
  - *Big Data for Business (with HEC)*
- Entry-level requirement: Bachelor's degree

### Master's Degree - Université Paris-Saclay

- 40 tracks are available at École Polytechnique in 13 different concentrations
- Master's degree delivered by Université Paris-Saclay
- Admission based on application form following a French *Licence* or Bachelor's degree

#### OUTCOMES FOR MASTER'S GRADUATES



### PhD program



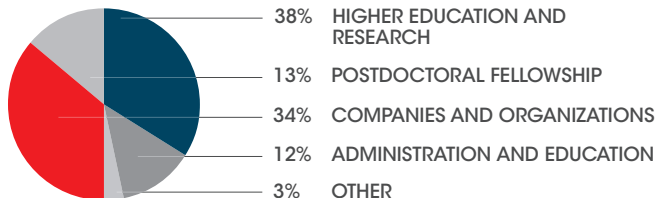
- 5-year program in association with the École Polytechnique Research Center, in order to attract the best international students
- Research-focused program (2-year Master's degree and 3-year PhD)
- Personalized and demanding scientific studies, accompanied by attractive financial conditions (grant available to fund the first two years of the Master's program + financial support for the 3 years of PhD)

## DOCTORAL PROGRAMS

- Supported by Université Paris-Saclay's 10 Doctoral Schools
- Financial support for PhD candidates
- Admission based on application form and interview following a Master's degree

École Polytechnique runs «Interface», one of Université Paris-Saclay's 10 Doctoral Schools where PhD students from the Research Center are now enrolled.

#### OUTCOMES FOR PHD GRADUATES



## EXECUTIVE MASTER

Executive master: Bilingual diploma (delivered in French and English) for managers and senior executives with approximately 10 years of experience

- 12 one-week modules spread out over 14 months, including 3 modules abroad
- 4 topics: technology, core management, innovation management, professional and personal development
- Technological modules provided by professors from École Polytechnique's laboratories and a group project

## EXECUTIVE EDUCATION



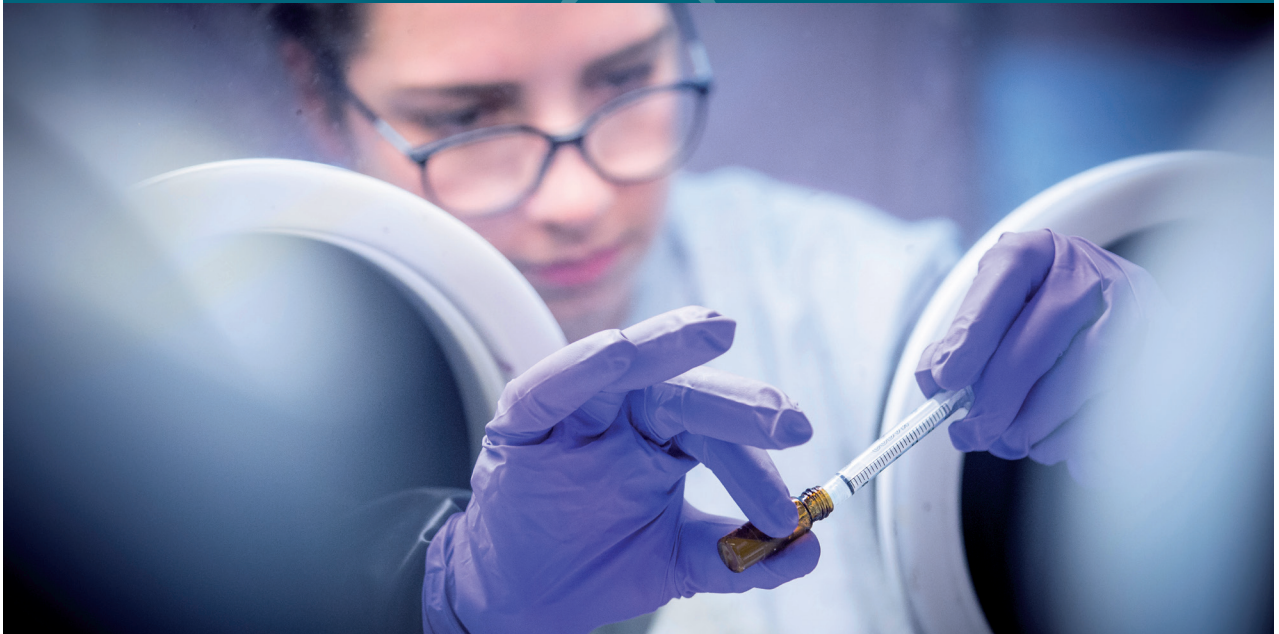
École Polytechnique Executive Education offers:

- firstly, diploma, certificate and short programs for managers, engineers and scientists
- secondly, training and support custom made actions for national and international companies of all sizes and sectors.

It relies on multidisciplinary and excellence that characterize education and research at École Polytechnique to deliver personalized programs and supports based on its unique scientific and technical expertise.



# RESEARCH



## RESEARCH IN NUMBERS

**1,600**  
research staff, including  
**500 PhD students**

**1,350** papers published  
per year, of which **60% are in collaboration**  
with international laboratories

**22** research  
laboratories

École Polytechnique's research strategy combines the production of fundamental knowledge with the development of solutions to applied, technological and societal issues.



### A cutting-edge Research Center

École Polytechnique's ambitious research strategy is implemented by the École Polytechnique Research Center with **22 laboratories**, 21 of which are joint research units with the CNRS, co-mentoring with other national bodies (CEA, INRIA, Inserm) or local bodies (Université Paris-Sud, ENSTA ParisTech and UPMC, etc.)

### 8 MAJOR FIELDS OF RESEARCH

- Nanoscience, Innovative Materials and Efficient Processes
- Energy, Transportation and Environment
- Bioengineering, Biology and Health Sciences
- Matter and Light in Extreme Conditions
- Universal Laws and Structures
- Concepts and Methods for a Digital Society
- Modeling and Optimization of Complex Systems
- Markets, Innovation and Science-Society Relations

### At the service of knowledge and society

Thanks to excellent fundamental research in tune with societal issues, École Polytechnique creates strong links with the corporate world, from small businesses to major French and international groups. Researchers can therefore learn about companies' needs to propose innovative and effective concepts and create new knowledge using very advanced tools for theory, numerical simulation, and experimentation.



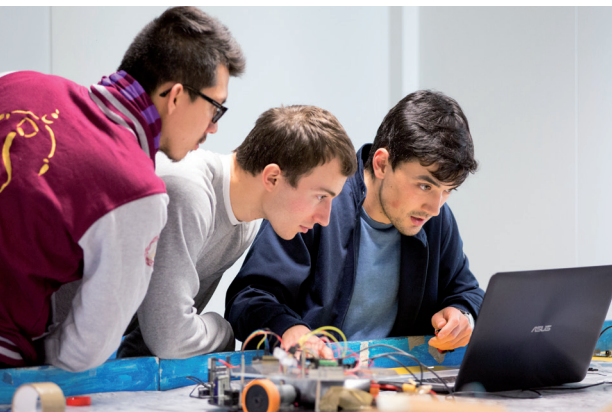
# INNOVATION AND ENTREPRENEURSHIP



Educating those who will imagine and run the economy of tomorrow, **École Polytechnique** inspires innovative spirits and encourages its students and researchers to be entrepreneurial. It strongly supports entrepreneurs in their startup projects.

## Supporting startups

Internationally-minded, and with the active involvement of its students and Research Center, **École Polytechnique** has created support services to help create innovative startups: the X-UP accelerator and the X-Tech incubator. In this way, I'X encourages the development of projects with strong potential.



## Introducing and preparing for entrepreneurship

Inspiring an entrepreneurial spirit in its students, **École Polytechnique** provides multiple opportunities to meet startup founders, to learn about industry issues and the challenges of tomorrow, and to get involved in startup projects. As a fully engaged institution, I'X develops training courses in entrepreneurship and innovation.



### LA FIBRE ENTREPRENEUR Drahi - X Novation Center

- An internal Center to encourage entrepreneurship and innovation within **École Polytechnique**
- Total area of **2 600 m<sup>2</sup>**
- A unique space for business acceleration (X-UP) and incubation (X-Tech), teaching, creating, experimenting and prototyping (X-FAB)
- A place for contact with investors and collaboration with the industry



# BUSINESS PARTNERSHIPS

École Polytechnique develops partnerships with companies and facilitates the transfer of its scientific and technological results to businesses.

## Hands-on professional experience

- Internships in France or overseas available to students each year
- Research subjects proposed by companies for student projects
- Research subjects proposed by companies for PhD candidates as part of CIFRE contracts

## Supporting academics and research

- **22 Academic and Research Chairs**
- **30 partner companies** for these chairs

LX promotes collaboration between teaching and research, in particular through the appointment of teaching and research chairs covering various subject fields: energy, biomedical, materials, modeling and digital science, sustainable development, management, innovation, economy and finance.



## Promoting innovation

École Polytechnique contributes to economic development by promoting the technological expertise and inventions of its Research Center.

**500** patents  
in our portfolio

## THE ÉCOLE POLYTECHNIQUE FOUNDATION (FX)

Created in 1987, the role of the Foundation is to help École Polytechnique, its students and its faculty to build closer relations with the corporate sector.

### THE FOUNDATION AIMS TO:

- fund École Polytechnique's development
- help develop innovation in teaching
- develop research and the transfer of advanced technologies to French industry
- contribute to the promotion of École Polytechnique in France and overseas
- help students discover the corporate world

THE 2<sup>ND</sup>  
FUNDRAISING  
CAMPAIGN  
(2016-2021)

Aim: **80 M€**  
raised in donations, bequests  
and individual and corporate  
contributions in 5 years

## ASSOCIATION OF ALUMNI AND GRADUATES (AX)

The purpose of AX is to create and develop links of solidarity and friendship.

### THE ASSOCIATION AIMS TO:

- provide grants
- help welcome international students
- support efforts to provide equal opportunities
- organize meetings, conferences, colloquiums, and events open to a wide audience

**28,000** alumni    **150** X groups: thematic,  
regional or international

In 2017: **3 M€** of budget of which **750 K€**  
devoted to solidarity actions



# INTERNATIONAL OUTLOOK



## INTERNATIONAL SCOPE IN NUMBERS

**30%**  
of students are international

Over **60**  
nationalities

More than **30**  
double degrees

**22** exam centers  
across **4 continents**

École Polytechnique actively encourages student mobility, cultivates strategic partnerships with world-class institutions and develops the international outlook of its programs and Research Center.

### Strategic partnerships to encourage exchange between students, teachers and researchers

Developing international relations has long been a core strategy of École Polytechnique: international students started attending classes as early as 1798. With over 200 agreements, I'X has a large network of partner universities across the globe. Its academic and scientific collaborations provide exceptional opportunities for incoming and graduating students. École Polytechnique now focuses its approach to strategic partnerships on **around twenty world-class universities**, encouraging contact with the corporate world and valuing innovation and entrepreneurship.

### A world-class environment for international students

École Polytechnique guarantees its international students a unique experience. From the day of their admission to post-graduate career guidance, I'X supports them through counseling, administrative and financial support and mentoring from former students. This unique environment, combined with the excellence of students chosen through a highly selective process, attracts the best international teachers.



# CAMPUS LIFE



## THE CAMPUS IN NUMBERS

**1,500**

student housing units,  
1 on-campus B&B,  
1 cafeteria, 1 café

**50**

classrooms and  
practical workshops,  
15 lecture halls

**8,000 m<sup>2</sup>**

of indoor sports facilities,  
including 2 swimming pools, 2 gymnasiums,  
1 fencing room, 1 climbing wall, 1 martial arts dojo

**8ha**

of outdoor  
sports facilities including  
1 equestrian center  
and 1 artificial lake



## A campus in an exceptional environment

Just 20 km south of Paris, the École Polytechnique campus covers 160 hectares, on which students create numerous initiatives to organize cultural, artistic, social and sports activities through their student organizations.

Campus life is vibrant and offers a wide range of events, including scientific seminars, shows, exhibitions, etc. Events are open to the public: Science Fair, Heritage Days, conferences, etc.

ÉCOLE POLYTECHNIQUE

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[www.polytechnique.edu](http://www.polytechnique.edu)