



ENSTA ParisTech, **EXCELLENCE** in Scientific Education and Research

École Nationale Supérieure
de **Techniques Avancées**





"I am looking forward to seeing you at ENSTA ParisTech in a first-rate scientific environment."

Dr. Élisabeth CRÉPON, Director of ENSTA ParisTech

Located in the heart of the largest scientific cluster in France, ENSTA ParisTech is one of the best *Grandes Écoles* (Graduate School in Engineering), widely renowned in the fields of **Energy, Mechanical Engineering and Transportation, Applied Mathematics and Complex Systems**. It combines high level scientific academic education and research strongly connected with companies together with a firm will of internationalization.

History of ENSTA ParisTech



ENSTA ParisTech is the oldest *Grande École* in France.

The institution was founded in 1741 by Henry-Louis Duhamel du Monceau, physicist and inspector general of the Royal Navy, in order to give the Navy's master carpenters a theoretical education

to improve their knowledge and consequently their trade. The School of Construction Engineers of Royal Vessels as it was known, became later on and for 200 years the National School of Maritime Engineering.

In 1970, it merged with three other institutions and became the *École Nationale Supérieure de Techniques Avancées* (ENSTA), with an extension of the spectrum of specialities, to train engineers in mechanical, chemical, electronic, and related fields such as naval or nuclear engineering. The institution is placed under the supervision of the Ministry of Defence.

In 2012, ENSTA ParisTech moved from its historical location in downtown Paris to *École Polytechnique* campus, located in Palaiseau, 25 km south of Paris.

Today, ENSTA ParisTech is moving forward, successfully managing to build on its long and prestigious history to fit into major academic projects such as Université Paris-Saclay.

In this amazing innovative environment, we offer our students a high level science-based engineering training to enable them to design, produce and oversee complex industrial systems.



Academic Partnerships and Networks

The strongest academic partnership of ENSTA ParisTech is the one with *École Polytechnique*: the 2 institutions, both under the supervision of the Ministry of Defence, have decided to carry out joint projects in the fields of education, research, international development and entrepreneurship.



ENSTA ParisTech is also member of several national and international networks:

- ENSTA ParisTech is a founding member of ParisTech (Paris Institute of Technology), a public scientific cooperation institution composed of 10 prestigious *Grandes Écoles*, located in Paris area. In this frame, ENSTA ParisTech actively participates in the ATHENS program (one-week intensive science courses in one of the 15 European member institutions).



- ENSTA ParisTech is also a founding member of Université Paris-Saclay, a federal university composed of 19 institutions (Universities, *Grandes Écoles*, Research organisms). Big companies have also settled their research center in this area so that by 2020, this scientific cluster, the largest in France, will gather up to 15% of French research. Since 2015, Masters and Ph.D. degrees are delivered by Université Paris-Saclay.



- ENSTA ParisTech is member of T.I.M.E. (Top Industrial Managers for Europe) the leading network for the training of intercultural international engineers founded in 1989.

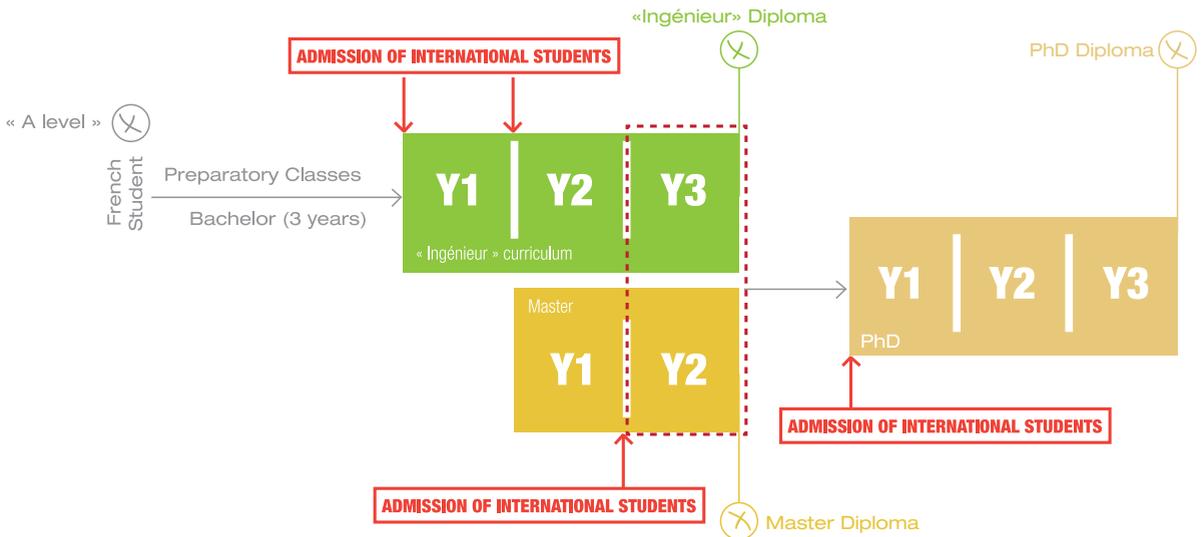


- ENSTA ParisTech holds the ERASMUS Charter for Higher Education 2014-2020 and welcomes exchange students and new partners.



Erasmus+

Programs at ENSTA ParisTech



« Diplôme d'Ingénieur » (Master in Engineering)

The Ingénieur Diploma is a graduate degree equivalent to a Master of Science in Engineering.

This **three-year** program is designed to train systems engineers who are able, given the extent of their knowledge and skills, to support large-scale technical projects in an international environment but also to evolve and adapt throughout their career. It combines high-level academic training, research projects and industrial internships;

- **First year:** characterized by a strong multidisciplinary scientific core, with classes in **applied mathematics, solids and fluids mechanics, IT, computer science, chemistry and process engineering**;
- **Second year:** students start to specialize by choosing one scientific major according to their interests between **Mechanical and Environmental Engineering, Simulation and Engineering Mathematics and Communication and Information Systems**. A 2 to 4 month research project is also part of the curriculum;
- **Third (final) year:** advanced specialization courses to choose among four main fields: **Transport, Energy and Environment, Mathematical Engineering or Complex Systems Engineering**. The curriculum ends with a final project (4 to 6 months) which takes place during the second semester;

The scientific training is enriched by language, culture, law and economics courses. Students can take a gap year to carry out a one-year internship in industry between the 2nd year and 3rd year of the program;

Classes are taught in French, therefore admitted students will be offered intensive French training prior to the beginning of the classes in September.

Various scholarships are available for outstanding international students.

Master

ENSTA ParisTech is involved in 27 programs in its fields of expertise such as Energy, Transport, Mechanical Engineering, Applied Mathematics, Complex Systems Engineering...

PhD

ENSTA ParisTech is part of 3 Doctoral Schools. Ph.D. programs can be undertaken in one of our 6 research laboratories.

Non-degree programs

International students from partner universities are welcome at ENSTA ParisTech to spend one or two semesters as exchange (non-degree) students. They can attend classes or carry out an internship in one of the 6 laboratories.



Research at ENSTA ParisTech

ENSTA ParisTech has 6 research units which conduct a high level applications-oriented scientific research, in synergy with industrial needs. Institutional or industrial ties with other French research institutions such as CNRS, INRIA or École Polytechnique, and with international partners, enable our research staff to work within the frame of larger teams with an international status.



Applied Mathematics

- Optimization and Control
- Wave propagation



Mechanical Engineering

- Fluid Dynamics and Acoustics
- Materials and Structures, Multi physics coupling



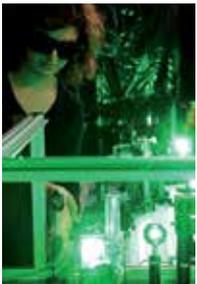
Computer Science and Systems Engineering

- Robotics and computer vision
- Safety and reliability of software
- Systems Engineering



Chemistry and Chemical Engineering

- Chemical Engineering
- Organic Synthesis and Reactivity
- Colloidal Systems in Industrial Processes



Applied Optics

- Ultrafast intense Lasers
- Laser-matter interaction and Plasma Physics



Applied Economy

- Industrial Economy
- Public Economy

Corporate Partnerships

The links between ENSTA ParisTech and the industry are particularly developed, leading to various actions in the frame of high valuable and long-lasting partnerships with companies.



- Many professionals, holding engineering or management positions in companies, are members of the teaching staff
- Strategic partnerships are signed with major international groups such as SAFRAN, AKKA Technology, EY...
- Close collaborations are in progress between our laboratories and the companies such as AREVA, DCNS, EDF among others: research contracts, scientific Chairs, co-supervised PhDs
- More than 20 companies are participating in our different boards

International relations

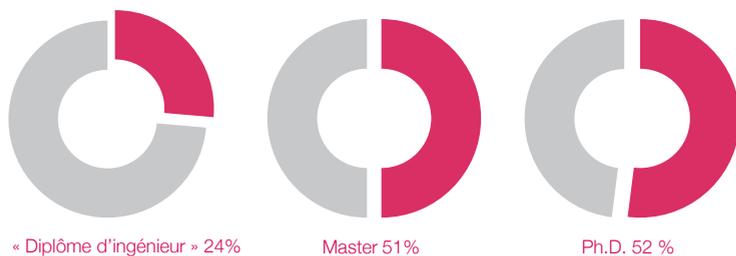
Important asset at ENSTA ParisTech

In order to develop and strengthen collaborations with partner universities, ENSTA ParisTech has developed numerous international relations worldwide in academic and research with currently more than **70 agreements and 22 double degrees programs** for incoming and outgoing students.

Incoming students

30% of international students in our curricula with more than **25 different nationalities** coming from America, Asia, Africa and Europe.

% of international students per curriculum



Outgoing students

- 80% carrying out an internship abroad.
- Double Degree Programs (Master level) in America, Asia, Europe.

Main Partner Universities of ENSTA ParisTech

Two offshore campuses

ENIT-TA



Our offshore campus at National Engineering School of Tunis (ENIT), Tunisia. Common 3-year program with 25 students per year.

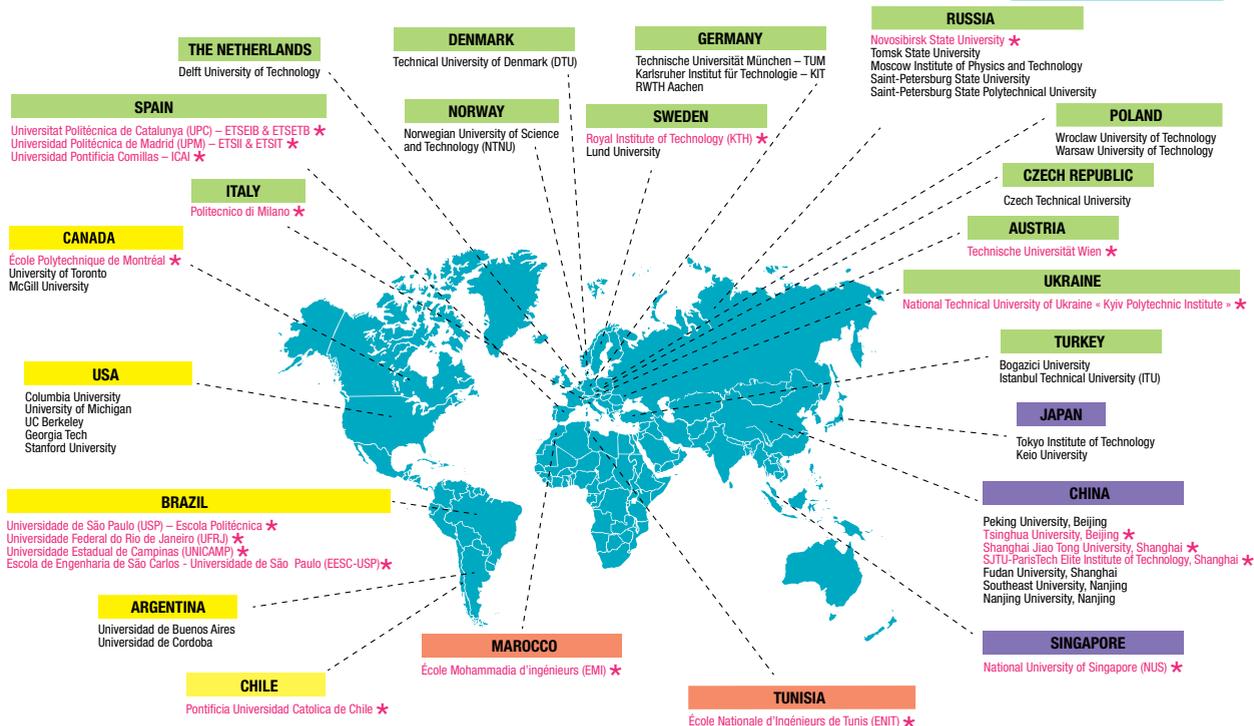
SPEIT



SJTU ParisTech Elite Institute of Technology (SPEIT), Shanghai, China, created in 2012 with 3 other Grandes Écoles in collaboration with SJTU.

22 Double Degree Programs (★)

2 offshore campus : Tunisia and China





Student Life

Student life at ENSTA ParisTech is very rich and lively. Participation in student organizations and group activities is deeply encouraged.

Thanks to the small size of ENSTA ParisTech and its strong international culture, international students quickly integrate and have many opportunities to join one of the numerous sports teams or student organizations and to participate in the various cultural or professional events.

Housing facilities are available on the campus for international students, as well as support for all administrative procedures such as resident permit application for example.



ENSTA ParisTech campus



How to apply:
www.ensta-paristech.fr

Contact us:
international@ensta-paristech.fr

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