1741
Founded by Henry-Louis Duhamel du Monceau, originally: the School of Construction Engineers of Royal Vessels.

The school became
The National School of Maritime Engineering

1970
ENSTA
École Nationale Supérieure de Techniques Avancées
Arrival on Ecole Polytechnique campus in 2012

- Presence of other Graduate Schools of Engineering on the campus:
  - Ecole Polytechnique
  - ENSAE ParisTech
  - Institute of Optics
  - Centrale Supélec
  - And soon…. Telecom ParisTech, AgroParisTech

- A lot of companies (R&D centers): EDF, Danone, Thalès, Safran, Air Liquide
A multidisciplinary « Generalistic » Graduate School of Engineering

Key figures
- 810 students (except PhD)
- 640 students in the « ingénieur » track
- 200 graduates each year
- 161 Master students
- 120 PhD
- 6000 alumni

30% Women

Transport
25% Of graduates

Energy
21% Of graduates

Systems Engineering
22% Of graduates

~20% Go to PhD
A « generalistic » Graduate School of Engineering with 4 main domains of expertise

A multidisciplinar core curriculum (mathematics, physics, mechanical engineering, electronics, computer science, social sciences, humanities, sport)

A progressive specialisation towards a professional sector and a position

Transport

Ex : autonomous vehicle, smart mobility

Energy

Ex : renewable energies, smart cities, nuclear

Engineering Mathematics

Ex : operations research, optimisation, data sciences

Complex Systems Engineering

Ex : robotics and cybersecurity
Corporate Partnerships

Strong links with companies

- Research projects
- Chairs of Education and Research
- Financial support
- International projects, offshore campuses, scholarships
- Internships, preparation for the entry into professional life
- 650 teachers are engineers in industrial sector
- Students’ sponsorship
- Participation to ENSTA ParisTech boards
Partnerships and networks
Some of our alumni

Jérome Guillen (ENSTA 94) is Elon Musk’s right-hand man at Tesla (President of the automotive sector) A double-degree at UPM-ETSII in 1993/1994!

Eric Papin (ENSTA 90) is VP research and innovation at Naval Group

Pascal Clouzard (ENSTA 86) is Executive Director of Carrefour France
International partnerships

114 Partnerships
_in 31 countries_

30 double-degrees
_in America, Asia and Europe_

12 weeks abroad
_(minimum)_

10 months abroad _in average_

28 %
_International students at ENSTA ParisTech_

28 _nationalities_

2 offshore campuses
_Tunisia et China_

Shanghai Campus

Tunis Campus
Our curricula at a glance

M.Sc. In Engineering «Diplôme Ingénieur ENSTA ParisTech »

« A level »

French students

Preparatory Classes

Bachelor (3 years)

« Ingénieur » curriculum

Y1  Y2  Y3

Master

Y1  Y2

PhD

Y1  Y2  Y3

Third year students are offered the opportunity to attend courses from the second year of a master (research oriented profiles)

ADMISSION OF INTERNATIONAL STUDENTS

3 Internships during the curriculum, at the end of each year:
for a research and industrial-oriented training
# Structure of the Engineer Program

## Education

### Workman Internship

- Mechanical Engineering and
- Electrical Engineering and
- Applied Mathematics

**Workman Internship**

### Multidisciplinary scientific Core

- 1 month

### Research Internship

- Major + Minor
- 2-3 months

### Professional Track

- 5-6 months

### Engineer Internship

- 2-3 months
- Multidisciplinary scientific Core

<table>
<thead>
<tr>
<th>Y1</th>
<th>Y2</th>
<th>Y3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workman Internship</td>
<td>1 Major: Mechanical Engineering or Electrical Engineering or Applied Mathematics</td>
<td>1 professional Track + 1 Profile or Double Degree / Start-up program / 1 year Replacement</td>
</tr>
<tr>
<td>- Mechanical Engineering and Electrical Engineering and Applied Mathematics</td>
<td>Research Internship</td>
<td>Engineer Internship</td>
</tr>
</tbody>
</table>

**Culture– Communication – Applied Economics**

**Sport– Languages – Leadership training**
YEAR 2: 1 MAJOR + 1 Minor

RESEARCH PROJECT

1 Minor

Education through Research

Economy, Humanities, Languages and Sport

ATHENS Week

A MAJOR to be chosen

Mechanical Engineering
- Mechanical Modelling
OR
- Intelligent Systems
OR
- Environment

Electrical Engineering
- Artificial Intelligence and Cyberphysics
OR
- Software and Cybersecurity

Mathematical Engineering
- Applied Mathematics
OR
- Mechanics and Physics

Minor
- Deepening of a field inside a major
OR
- Transversal skill
Education

« Ingénieur » program
3rd year

« Transport »
- Smart mobility & Vehicle Engineering
- Maritime transport systems

« Energy »
- Energy systems: innovation and process optimisation
- Nuclear energy
- Offshore energies engineering

« Engineering Mathematics »
- Optimization and Data sciences
- Quantitative Finance
- Modelling and Simulation

« Systems Engineering »
- Information systems
- Robotics and embedded systems
- Artificial Intelligence

Entrepreneurship track

11 Advanced Specialisation Options

Year 3
« Ingénieur » program

3rd year

- Minimum 2 languages including English
- Culture and Humanities
- Law, Economy, Management
- Economy, Humanities, Languages
- 11 Advanced Specialisation Options
SECOND SEMESTER:
FINAL DEGREE PROJECT

5 months min.

Economy, Humanities, Languages

11 Advanced Specialisation Options

Year 3

« Ingénieur » program
3rd year
Admissions and degree program for students
Track 1: ETSIAE students only

6 years
3 degrees: Grado
Master
Ingénieur

« Ingénieur » program
Final Degree Project
Selection courses
Preparatory Classes
Spanish Bachelor Grado
Master

Titre présentation
Admissions and degree program for students
Track 2: for ETSIT & ETSIAE students

7 years
3 degrees: Grado
Master
Ingénieur

Preparatory Classes

Final Degree Project

selection

Spanish Bachelor
Grado

Master
Non-degree program for students from ETSIT & ETSIAE

From 3 months to one academic year
Erasmus framework
Application process:
2 sessions
Spring session: dead-line April 15th 2019
for an intake in September 2019 (DD, exchange) or February 2020 (exchange)

Autumn session: dead-line October 15th 2019
for an intake in September 2020 (DD / exchange) or February 2021 (exchange)
Scientific Policy

A high level applications oriented scientific research, in synergy with industrial needs.

Research is highly important in our education.
Research in a few numbers

+ 135 Researchers

+ ~220 publications in peer-reviewed journals

+ 120 Ph.D. students

+ 6 Research Units

+ 11,7 M€ Research Contracts

+ 19 Europe-funded Projects

+ 22 state – funded Projects

+ 24 Excellence Projects (LABEX)
Three Main Research fields

Energy

Transport

Defence

Analysis, Conception, Modelling and Simulation

Complex Systems Engineering
Gérard Mourou, Physics Nobel Prize 2018, was director of this lab.

6 laboratories

- Chemistry and Chemical Engineering
- Computer Science and Systems Engineering
- Applied Mathematics
- Mechanical Engineering
- Applied Optics
- Applied Economics
1. Conception of autonomous systems

2. Data Sciences and Optimisation

3. Material aging, components and structures

4. Materials for Energy

5. Wave propagation and vibrations

6. Physics of ultra-short lasers

7. Non Destructive Control
Campus Life

- A unique environment
- A dense student life
- Housing
A 6 ha campus
30 minutes from Paris downtown
Students’ life
A lot of activities:

+ More than 50 students' associations
+ Sports and competitions
Housing

430 individual dormitories
TO SUM UP!

- A long tradition of excellence
- A application-oriented high level scientific education, related to the needs of industry
- A focus on research, for research but not only
- A strong link with companies
- Excellent placement after graduation
- An international environment
- An amazing campus
www.ensta-paristech.fr

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