ESTACA
ECOLE D´INGENIEURS

SCHOOL OF TRANSPORT ENGINEERING

SHAPING THE FUTURE OF SUSTAINABLE MOBILITY

SPACE

AERONAUTICS

AUTOMOTIVE

RAILWAY

NAVAL

GROUPE isae

estaca.fr/en

ESTACA,

WHERE ENGINEERING MEETS THE FUTURE OF SUSTAINABLE MOBILITY

ESTACA is a prestigious French engineering school, deeply rooted in the domain of transport innovation. Founded in 1925 and part of the ISAE Group, ESTACA provides a highly specialized education across the principal mobility sectors: **space, aeronautics, automotive, railway, and naval engineering**. Through rigorous scientific and technical education grounded in real-world industrial challenges, ESTACA empowers its students to design, build, and manage tomorrow's vehicles and transport systems.

At the heart of ESTACA's mission lies a firm commitment to more sustainable mobility. Through its research department, ESTACA'Lab, the school drives cutting-edge work in energy, embedded systems, environmental impact, and smart transport technologies. Our curricula and research converge to empower future engineers to tackle major challenges: reducing air pollution, limiting energy consumption, promoting low-carbon energy sources, improving vehicle reliability and safety, and integrating digital systems into next-generation transport infrastructures.

ESTACA's excellence is formally recognized by leading accreditation and public-interest labels. Since 1986, the school's engineering program has been accredited by the Commission des Titres d'Ingénieur (CTI), ensuring strong academic and professional standards.

FACTS AND FIGURES

3
campuses: Paris-Saclay, Laval, Bordeaux

2,850
students

480
graduates per year

2
research departments

11,000
alumni

40
student clubs & societies

70
partner universities abroad

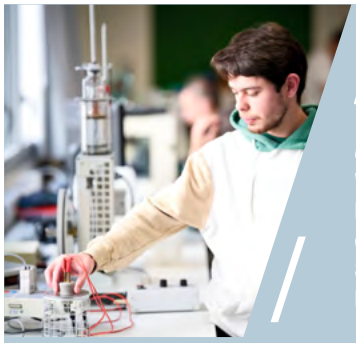
1
year of compulsory industrial internships during studies

83%
of students hired prior to graduation

5 KEY REASONS
TO CHOOSE ESTACA

1. A UNIQUE MOBILITY ENGINEERING SCHOOL

ESTACA is the only French engineering school offering specialized training across five major transport sectors - **space, aeronautics, automotive, railway, and naval** - providing students with unparalleled expertise.



2. GATEWAY TO LEADING INDUSTRIES

With long-standing partnerships across leading transport companies, ESTACA offers direct exposure to real industrial challenges: 8 out of 10 students secure employment before graduation.

3. A PEDAGOGY DRIVEN BY ACTION

ESTACA's "learning by doing" pedagogy places project-based learning at the core of the curriculum, enabling students to develop practical skills and hands-on expertise from their first year.

4. A STRONG INTERNATIONAL DIMENSION

ESTACA offers a truly global learning environment through international mobility opportunities, English-taught programs, worldwide academic partnerships, and a growing community of international students. Whether through exchange semesters, double degrees, summer programs, or global research collaborations, ESTACA prepares engineers to evolve in multicultural teams and thrive in an international professional context.

5. SKILLS FOR A CHANGING WORLD

The global demand for transport engineers is rising. ESTACA trains future-ready professionals capable of driving technological innovation and contributing to more sustainable, low-carbon mobility solutions.

NETWORKS & LABELS

ESTACA has established industrial and academic partnerships to reinforce cooperation in the fields of education, research, and innovation, and is an active member of various prestigious networks.

JOIN US
FOR MULTIPLE STUDY POSSIBILITIES

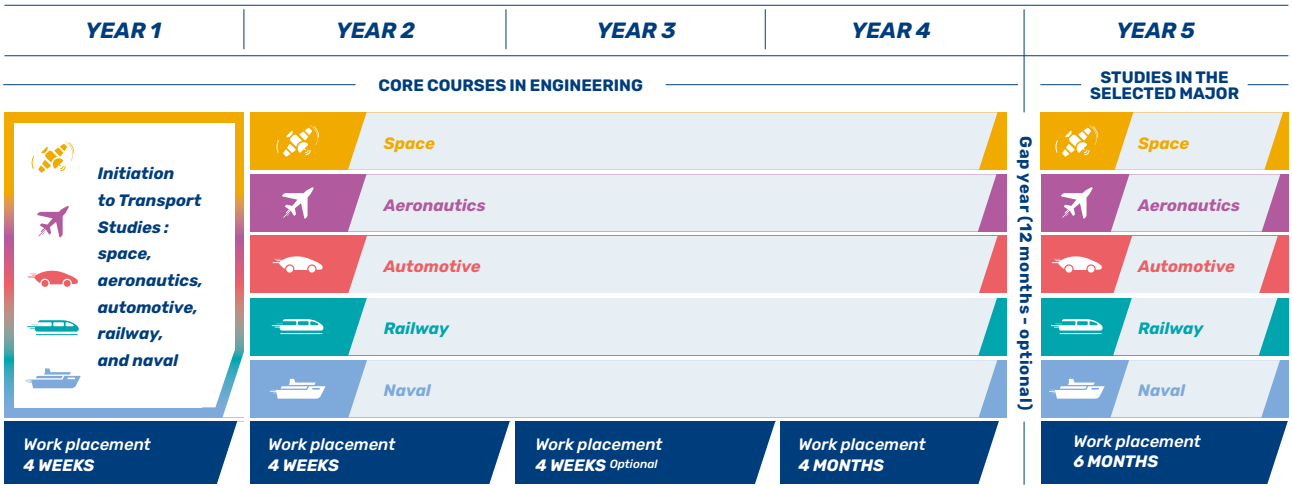
ESTACA offers a dynamic international learning environment with multiple pathways for students and partners. Whether you wish to join **our five-year engineering degree, participate in our summer program, spend a semester or year as an exchange student**, or pursue **an advanced post-master's degree**, ESTACA provides high-level training across all major transport sectors.

FRENCH GRADUATE ENGINEERING DEGREE CURRICULUM

International students may enroll as full degree-seeking candidates or join us through exchange agreements. French-taught courses in the core curriculum require a B2 level in French, ensuring students can fully benefit from the academic experience.

For exchange students wishing to study in English, several options are available in English at the graduate level (5th year, fall term), including:

> Operation & Maintenance (OM) / Aeronautics
> Space System Design (SSD) / Aerospace
> Drone & Control (DC) / Aeronautics
> Engineering Design Project Semester (ICMP) / Automotive



GATEWAY TO LEADING INDUSTRIES

ESTACA maintains strong and long-standing partnerships with major industrial and academic players in the mobility sector. These collaborations ensure that our programs remain closely aligned with the evolving needs of the transport industry. Through joint projects, internships, expert-led courses, and innovation initiatives, our students benefit from direct exposure to real-world challenges and cutting-edge technologies: an asset that strengthens both their skills and employability.

STUDENT LIFE AT ESTACA: COMMITMENT AND TEAM SPIRIT

Student clubs and societies play an essential role in enriching campus life at ESTACA. They offer opportunities for students to connect around shared interests, develop new skills, and take part in meaningful projects. With more than **40 active clubs** spanning technology, sports, humanitarian initiatives, and cultural activities, every student can find a place to get involved. Participation fosters teamwork, creativity, and personal growth - key qualities for future engineers.

RESEARCH FOR TOMORROW'S TRANSPORT INNOVATIONS: PHD PROGRAMS

ESTACA'Lab, the school's research center, is organized into two departments: **Mechanical Engineering** and **Energy & Embedded Systems for Transport**, working hand in hand with industry partners to develop smarter, cleaner, and more efficient mobility solutions.

MECHANICAL RESEARCH DEPARTMENT

AIR QUALITY
Dispersion and infiltration of particles
Improvement of air quality in transportation
Characterization of pollutants

LIGHTWEIGHT STRUCTURES
Functional structures composites
Link between damage and durability
Biocomposites

ENERGY AND EMBEDDED SYSTEMS FOR TRANSPORT RESEARCH DEPARTMENT

ENERGY AND CONTROL
Storage systems and energy management
Electrification and mechatronics optimization
Faults Tolerant Control

EMBEDDED SYSTEMS
Optimization of embedded SW architectures for real time applications
Connected Mobility

For students aspiring to a career in research and development, ESTACA offers the opportunity to pursue a PhD after completing the five-year engineering degree. Many doctoral candidates also undertake international co-tutored PhD programs, enabling them to work with two research advisors and benefit from the combined expertise of leading laboratories in France and abroad.

For more information
https://www.estaca.fr/en/research/

PROGRAMS TAUGHT ENTIRELY IN ENGLISH

ESTACA offers various programs in English for non-French-speaking students. These programs aim to help students acquire skills in the school's areas of specialization, learn to work with international teams on real-world projects in collaboration with our industry partners, and discover France.

WISH TO APPLY TO ONE OF THESE PROGRAMS?

> **Website:** *www.estaca.fr/en/admissions/*

> **Contact: Exchange, AAD & Summer Programs:** *estaca_incoming@estaca.fr*
Post-master's degree: *post-master@estaca.fr*

AUTOMOTIVE AND AERONAUTICS DESIGN *PROGRAM (AAD)*

Develop your engineering skills by learning and operating advanced CAE tools to design, model, and optimize aeronautical and automotive systems and subsystems.

Program for exchange semesters
> **Campus:** ESTACA Paris-Saclay
> **Date:** Spring semester (January-May)
> **Credits:** 30 ECTS / semester
> **Modules:** Computer Aided Engineering - 2 ECTS, Signal Processing - 4 ECTS, Computational Fluid Dynamics - 5 ECTS, Hydraulic Systems - 2 ECTS, Structural Design - 5 ECTS, Technical Project - 8 ECTS, French Language And Culture - 4 ECTS

"I truly enjoyed my time at ESTACA and in France. The AAD program made it easy to make friends, and I loved attending classes with them. The staff were very welcoming, and the program allowed us to discover Paris and other parts of France through unforgettable field trips."

Alex,
Purdue University (USA)
AAD Program 2024

MOTORSPORT ENGINEERING & PERFORMANCE *POST-MASTER DEGREE*

France's only advanced engineering program dedicated to the high-performance motorsport industry. Designed for students who already hold a master's degree and wish to specialize in competitive vehicle performance.

> **Campus:** ESTACA Laval
> **Date:** September to July
> **Program:** 700 hours of academic coursework - 6-month internship - Professional dissertation
> **Credits:** 75 ECTS
> **Industrial partners:** FIA, Renault Sport Racing, Automobile Club de l'Ouest and Peugeot Motorsport

"Since I was a child, I've been into motorsports. I chose a general engineering school because I wasn't sure if I wanted to make a career out of it. But once I'd graduated, I started looking for a job in this sector. All I got was rejection. So I decided to continue my studies at ESTACA. This course gave me the technical knowledge I needed to enter this highly specialized field. Classes are taught by engineers actually working in motorsports, making them highly practical and covering current technologies. My internship in Germany as a Data Support / Performance engineer in GT3 at HRT, Haupt Racing Team, gave me the opportunity to confirm my knowledge through practice, and also my career choice!"

Julie,
2024 graduate – Data Support and Performance Engineer at HRT, Germany

COMPUTATIONAL FLUID DYNAMICS *APPLIED TO AERONAUTICAL ENGINEERING SUMMER PROGRAM (CFD)*

Strengthen your understanding of fluid mechanics and learn key CFD modeling techniques while enjoying a summer study experience in Paris.

> **Campus:** ESTACA Paris-Saclay
> **Date:** June-July (4 weeks)
> **Credits:** 10 ECTS
> **Modules:** Fluid Mechanics, Aerodynamics, Introduction to Turbulence, Wind Tunnel, Computational Fluid Dynamics, French Language and Interculturality

"I chose the program because I knew it was an unmissable opportunity the moment I saw the program catalogue. It was the perfect mix of aerodynamics, company visits, and culture."

Pratham,
University of Southampton (UK)
CFD Program 2025

ISAE AEROSPACE SUMMER PROGRAM

A multidisciplinary summer program designed for junior and senior undergraduates with a strong interest in aviation and space. Participants rotate across several ISAE group campuses for an enriched academic and cultural experience.

> **Campus:** 4 ISAE locations (Toulouse, Paris, Poitiers)
> **Date:** June-July (4 weeks)
> **Credits:** 12 ECTS

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