



**ESTACA**  
ECOLE D'INGENIEURS

CREATEUR DE NOUVELLES MOBILITES

# SCHOOL OF ENGINEERS

Aeronautics – Automobile – Space – Guided Transport

Escuela Técnica Superior de Ingeniería Aeronáutica y del Espacio (ETSIAE)  
Universidad Politécnica de Madrid (UPM)

Groupe ISAE 

# 1925 – 2020 : MORE THAN 90 YEARS OF PASSION



**Creation in 1925 by an engineer, just after the first world war**



# ESTACA IN A FEW KEY FIGURES, DEDICATED TO TRANSPORT SECTOR

**2 160**  
students

**12**  
networks

**40** associate  
professors

**120** full  
time staff

**340** graduates  
per year

**8000**  
alumni

**25** PhD  
students

**500**  
external  
staff

# ONE INSTITUTE, TWO CAMPUSES



Saint-Quentin-en-Yvelines

**ESTACA**  
**Paris Saclay**



Laval

**ESTACA**  
**Campus West**



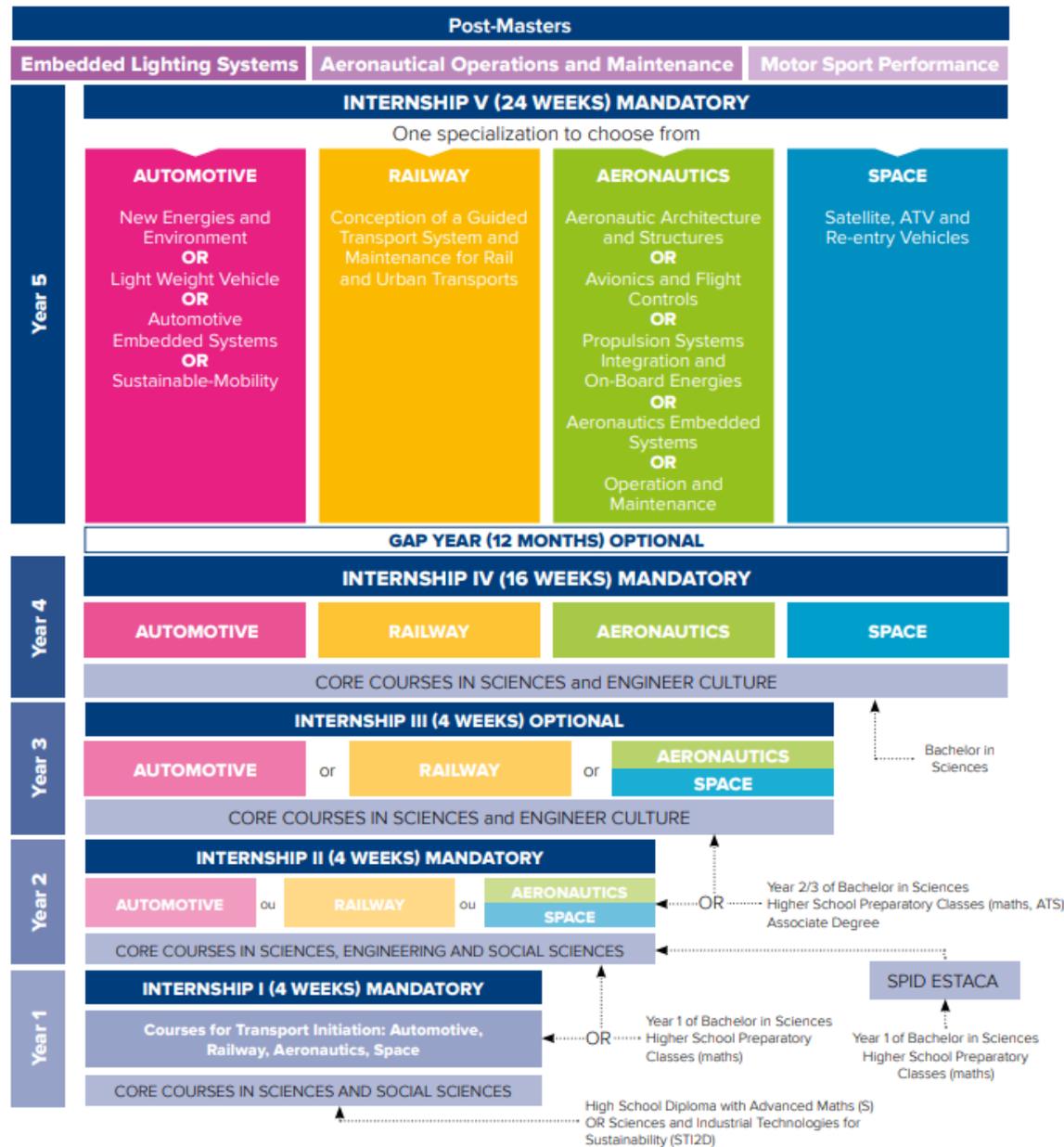
# TRAIN EXPERTS ENGINEERS IN TRANSPORTS & MOBILITY



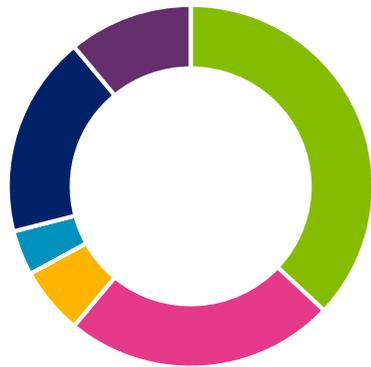
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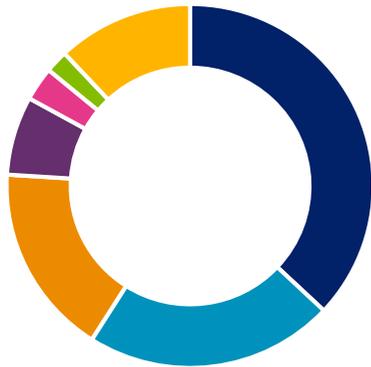
# 5 YEARS INTENSIVE EDUCATION CURSUS



# ESTACA GRADUATES



Aeronautics **37%**  
Automotive **24%**  
Urban and Rail Transports **6%**  
Space **4%**  
Other transports **18%**  
Other sectors **11%**



Research and Development **37%**  
Production, Operation, Quality, Maintenance **22%**  
Audit, Inspection, Technical support **17%**  
Marketing, Business, Sales **7%**  
Information systems, Innovation & Finance **3%**  
Executive Management, Finance and Innovation **2%**  
Other positions **18%**

- Most of our graduates are hired in the transportation industry
- 1/3 of the graduates are doing R&D
- 92% of our graduates are hired before graduation

# ESTACA'LAB : TRANSPORTS INNOVATIONS

4 priorities

2 research areas

Involvement in center of excellence and local government

## 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

## MECHANICAL RESEARCH DEPARTMENT



### AIR QUALITY

Dispersion and Infiltration of particles  
Improvement of air quality in transports  
Characterization of pollutants



### LIGHTENING OF STRUCTURES

Functional Structures Composites  
Link between damage and durability  
Biocomposites



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# INTERNATIONAL CURRICULUM

Groupe ISaE 

# ENGLISH PROGRAMS FOR INTERNATIONAL STUDENTS : Study Abroad

## Aeronautics and Automotive Design Program : EXCHANGE (SPRING)

- This 4-month-long program aims at achieving high quality design, cost reduction and best time to market skills.

## ESTACA Aeronautical semester : EXCHANGE (FALL)

- 1 semester with a strong focus on aeronautical operations and maintenance

## Drones Specialization : EXCHANGE (FALL)

- 1 semester to get an overview of drones regulations

## ESTACA Summer Program

### CFD Applications in Aeronautical Engineering

- 1 month to learn and operate CFD (Computational Fluid Dynamics) tools in order to understand and predict aeronautical systems performances and behavior.

# ENGLISH PROGRAMS FOR INTERNATIONAL STUDENTS : Post-master Degrees

## Post-Master Aeronautical Operations & Maintenance

- This program offers ways to understand the organization and the economy of the air transport industry.

## Post-Master Embedded Lighting Systems

- This program brings an integrated approach from design to production of embedded lighting systems, including headlights and rear lamps for the automotive & aeronautics industry.

## Post-Master Motorsport Engineering Performance

- This program aims at optimizing and organising all the technical solutions in the Motorsport sector.



# THE INDUSTRY AT THE CENTER OF THE CURRICULUM



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# INDUSTRIAL COLLABORATIONS

The Administration Board is composed of ESTACA Alumni and Industrial Companies Executives

The Academic Syllabus is defined by the Strategic Committee composed by industrials and education experts

**More than 70% of the faculty is part of the industrial world**

One trainer by project

**One year of industry internship is mandatory**

Process & methodology are issued from the industry: R&T, R&D, state of the art

# CLOSE CONTACT WITH THE INDUSTRY

**AIRBUS**



**THALES**



**AIRFRANCE**



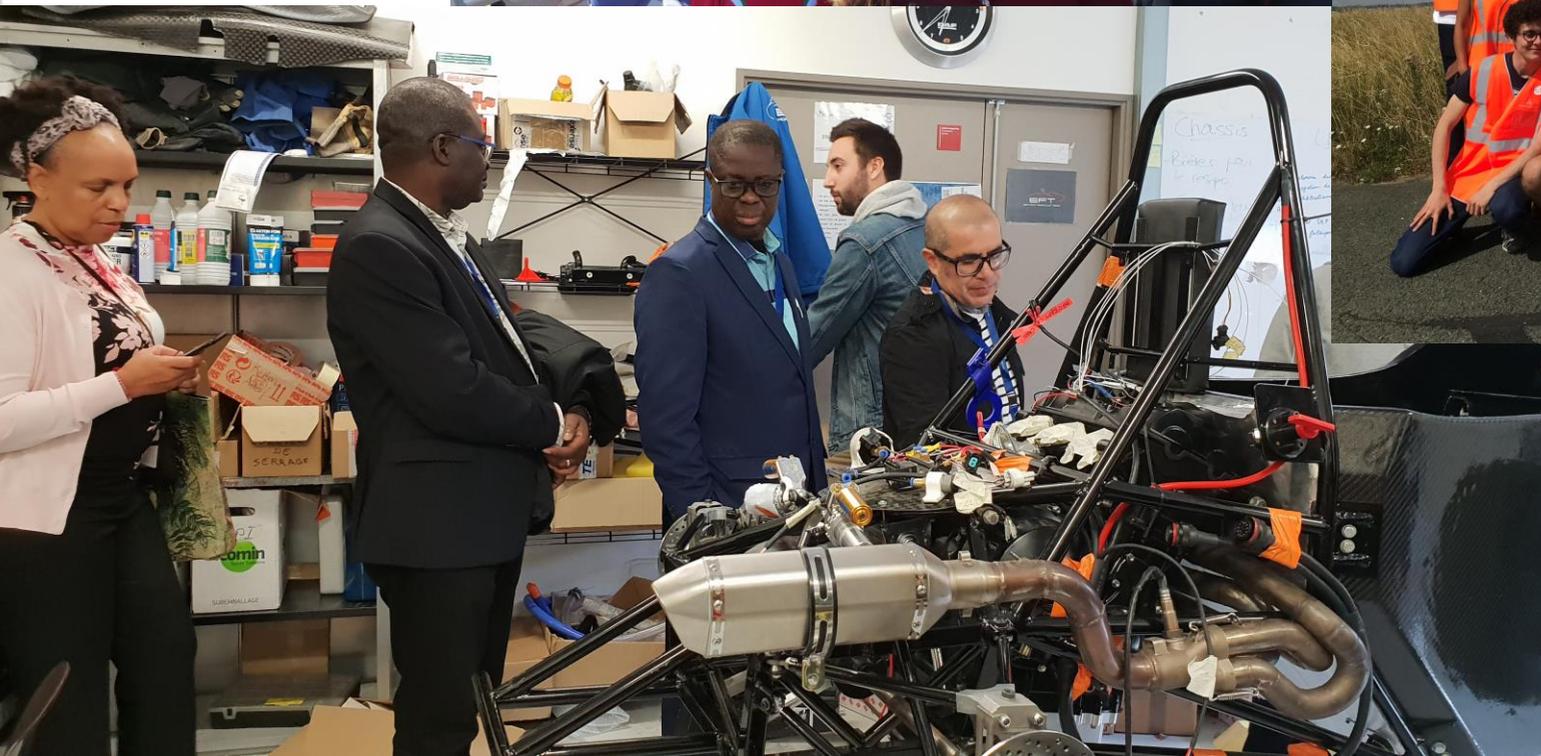
**faurecia**  
inspiring mobility



**ALSTOM**



# AN IMMERSION INTO THE FRENCH WAY OF LIFE





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# CONTACTS

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