

INTERNATIONAL MASTER IN TRANSPORTATION AND ENERGY



THE KEY FEATURES OF OUR INTERNATIONAL MASTER ARE:

- The relevance of the courses to modern trends in the transportation industry
 - The excellence and industrial relevance of the research and development work (group & individual projects)
 - The high standards of teaching by professors and experts from industry
 - Courses designed to enhance specific subject knowledge and develop transferable skills in transportation technology
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CAREER PROSPECTS:

Our graduates will be expert in the most promising new technologies as well as aspects of mechanics and energy.

They will be able to:

- prepare for a career as an engineer for industrial projects and services
- acquire a valuable background in all fields of transportation industry.

POSITIONS HELD:

Senior positions in Research and Development, Engineering Consultancy, Quality Engineering, Project Manager, etc...

INTERNATIONAL MASTER IN TRANSPORTATION AND ENERGY

Located in the North of France, INSA Hauts-de-France offers a unique educational experience to young, talented women and men interested in the transportation industry (automotive, railway, aeronautics).

OBJECTIVES AND CAREER OPPORTUNITIES

The International Master «Transportation and Energy» is taught in English and offers lectures as well as individual research and development projects in the field of automotive, railway and aeronautical engineering. Students may take advantage of our experimental facilities and work directly with industry representatives (Alstom, Altran, Audi, AXF Services, CEA, Cerema, Daimler, ONERA, Pecan, Railtech, Renault, Siemens).

Synergy between INSA Hauts-de-France professors and industrial experts motivates the students to apply the knowledge gained to practical applications. Many of our professors have industrial experience and thereby fully understand the pressure, deadlines and requirements of industrial issues.

Teaching and research at INSA Hauts-de-France are closely aligned to the needs of the transportation sector. Thanks to these achievements, INSA Hauts-de-France attracts substantial industrial support for research and student grants. The RATP offers scholarships through the corporate foundation RATP and mentorship by RATP Dev, one of its branches. This is in partnership with INSA Hauts-de-France and the Université Polytechnique Hauts-de-France.

The course program of the International Master «Transportation and Energy» focuses on theoretical and applied teaching. Students also take advantage of the other key elements of the INSA Hauts-de-France approach to engineering education, such as a high staff/student ratio and important experimental facilities (test benches, combustion and hybrid engines, metrology and innovative optical diagnostics...).

ACCREDITATION

The International Master of INSA Hauts-de-France is accredited by the French Ministry of Higher Education and Research. It guarantees the quality of the education delivered, content and professors.

ALSTOM altran



COURSE SYLLABUS

It aims at providing in-depth specialization in the wide-ranging field of transportation.

Each module is organized as a general background introduction, followed by a specific part related to three applications such as Automotive, Railway and Aeronautics.

The details of the modules are presented below. Courses are taught by academics & research and industry specialists.

1ST YEAR PROGRAM

Semester 1	30 ECTS
Tools and Methods 1	
Design Process	
Safety	
Reliability Engineering and System Safety 1	
Group projects in industrial subjects	
French Language Course	

Semester 2	30 ECTS
International Business Management	
Tools and Methods 2	
Production and Transportation Logistics	
Comfort and Ergonomics	
Reliability Engineering and System Safety 2	
French Language Course	

2ND YEAR PROGRAM

Semester 3	30 ECTS
Thermal & Hybrid Engines, Electrical Machines	
Internal Combustion Engines	
Thermal management of vehicles	
Energy and Environmental issues	
Aerodynamics and turbulence	
Tools and Methods 3	
Project	
French Language Course	

Semester 4	30 ECTS
Internship	



Admissions Requirements

The course is specially designed for international students.

For the 1st year - Master 1:

Enrolment is open to students with a bachelor degree in engineering: mechanical, automotive, electronics, electricity, material science, mechatronics, physics and applied sciences.

For the 2nd year - Master 2:

Enrolment is open to students with a master degree (1st or 2nd year) in engineering: mechanical, automotive, electronics, electricity, material science, mechatronics, physics and applied sciences.

English Proficiency

It is highly recommended to have a minimum level B2 (upper intermediate) according to the common European Framework of Reference for Languages.



Duration

2 years - Full time

Starting date of courses

1st week of September

Tuition Fees

The cost covers tuition, class material, use of computers and company visits (travel costs included).

- Admission in 1st year:
1st year: 7,770€ (3,770€ to be paid at admission) + CVEC of about 100€
2nd year: 4,743€ + CVEC of about 100€
- Admission directly in 2nd year: 7,770€ (3,770€ to be paid at admission) + CVEC of about 100€

Application procedure

Application form can be downloaded from the INSA Hauts-de-France website:

<http://www.insa-hautsdefrance.fr>

Or on demand: international-master-te@insa-hdf.fr

CONTACT

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Amsterdam in 2:30 

London in 2:30 

Brussels in 1:00 

Lille in 0:30 

Paris in 2:00  

