NEW Master’s Programme in English

**A new idea**
Keeping the planet turning in the right direction will take a lot of brand new technical and creative know-how from engineers today. The new Master’s in Automotive Engineering and Sustainable Mobility, taught entirely in English, is tailored to address that need and encompasses the entire dimension of today’s and tomorrow’s complex automotive systems in real-life context.

Our graduates will be expert in the latest and most promising new technologies like alternative fuels, exo-space, biomechanics and sustainable manufacturing as well as all aspects of chemistry, energies and embedded electronics. They’ll also benefit from a sharp focus on R&D and receive excellent preparation for PhD studies.

The evolution in research in mechanics, materials, energetics and electronics allows our students to study total product performance — that means real-world experience closely aligned with industrial concerns. This Master’s programme integrates creativity, technology and practicality with three semesters of study followed by one semester of internship in a research centre where students can take responsibility for a hands-on research project.

**Who can apply**
- Students with outstanding achievement in their first degree which must be equivalent to UK First Class in either electrical engineering, computer science, physics (for Energy Management & Control option) or chemical engineering and materials engineering (for Eco-Concept & Composites option) should apply for this program.

**What this degree will do for you**
- Prepare your career as an engineer for industrial projects and services
- Qualify you to be a research and development engineer for leading companies and organizations
- Provide a valuable background for PhD studies

The Programme at a glance

**Entrance requirements:** Bachelor’s degree in mechanics, materials, electronics, applied mathematics, mechanics, physics or a similar field. Applicants must present evidence of the required degrees as part of the application procedure.

Students participating in a European exchange programme may be admitted to postgraduate courses within the framework of their own curriculum, and will be assessed under the same conditions as French students. Language competence: The programme is taught in English and candidates must meet the required standard of TOEFL: 550 (computer based 213) or IELTS: 6.5.

**Duration:** Two years full-time. Students must choose between two specialities at the end of the first semester. The last semester consists of an internship with a laboratory and is dedicated to a research project.

**Starting date:** early September

**Number of places:** 24

**Tuition:** 9,500€ per year. A limited number of scholarships will be offered by various organisations.

**Credit Transfer:** Each course is equal to 5 European credits (ECTS). UE courses are validated and transferrable, and will therefore be awarded as long as a result equal to or higher than 30 out of 60 is achieved.

**How to apply**
- Application form: http://www.isat.fr/international/english-taught-master
- Letter of application outlining motivation to participate in the programme
- Curriculum Vitae
- Degree certificate and transcript of records (translated into English if applicable)
- Two references and three addresses, preferably from the university or institute that awarded the first degree, who will be contacted by SAT

A copy of visa, documentation and passport

For further information

**Curriculum and options**

1st semester: Core Modules (30 ECTS)
- Trends in Automotive and Transportation: Past and present transportation economy for the future
- Scientific prerequisites
- Electrical engineering
- IT Programming
- Advanced physics
- Project
- French culture and language

**Option EMC:**

**Energy Management & Control for Sustainable Mobility**

2nd semester (30 ECTS)
- Acquisition systems and signal processing
- Internal combustion engines
- Electric engines
- Control and on-board diagnostics (OBD)
- Real-time programming
- Alternative fuels and pollutant reduction
- French culture and language

3rd semester (30 ECTS)
- Critical systems interaction/human/vehicle driver behaviour, adaptive HMI, augmented reality
- Energy hybridizing/storage
- Engine components (injection, turbo machinery)
- Electrical power train
- Control and simulation of power trains
- French culture and language

4th semester (30 ECTS)
- Internship in a research center or laboratory

**Option ECC:**

**Eco-Concept & Composites for Sustainable Mobility**

2nd semester (30 ECTS)
- Elements of conception
- Sustainable manufacturing
- Geodesign
- Natural and characterization
- Manufacturing processes
- Bio composites
- French culture and language

3rd semester (30 ECTS)
- Manufacturing and mixed materials
- Vibration and acoustics
- Fatigue, impact and crash
- Repair and recyclability
- Applications in the Ascencion of structures
- Scanning of a simple structure and validation
- French culture and language

**Admission requirements:** Bachelor’s degree in mechanics, materials, electronics, computer science, physics (for Energy Management & Control option) or chemical engineering and materials engineering (for Eco-Concept & Composites option) should apply for this program.

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**Institut Supérieur de l’Automobile et des Transports**

SAT, located in Nevers (2 hours south of Paris and close to the famous Nevers/Magny Cours circuit), is the only French state-run institution covering the whole range of jobs and skills related to the automotive and transport industry. Magny-Cours, with its strong expertise in mechanical and chemical engineering and energetics, is dedicated to the development of new industrial work, with a strong expertise in mechanical and chemical engineering and energetics. The programme is taught in English and candidates must meet the required standard of TOEFL: 550 (computer based 213) or IELTS: 6.5.

**Duration:** Two years full-time. Students must choose between two specialities at the end of the first semester. The last semester consists of an internship with a laboratory and is dedicated to a research project.

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**For further information**