

Careers

- **Several possible career profiles:**
Generalist engineer
Specialised engineer
- **A very broad opening towards the industrial environment:**
Automotive engineering
Aeronautics
Consumer goods
Defence equipment, armament
- **A real choice of field of operation**
Materials and manufacturing processes
Mechanical Systems (Robotics)
Automation

If a career in Research sounds tempting, ...

In the fifth year of studies, GMA students have the option of simultaneously preparing a Master's degree in Research in Mechanical Engineering. On completion of the Master's degree course, students may consider entering a doctoral school, which collaborates closely with our Civil and Mechanical Engineering Laboratory and with our partners in the industrial sector.

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Opening up educational potential

GMA
Master of Mechanical and
Control Systems Engineering



The GMA Engineer

GMA engineers are high-level multi-disciplinary engineers qualified in two complementary fields: mechanics and control systems. Their interdisciplinary experience and know-how enables them to confront the technical and scientific problems related to innovation, research, design, dimensioning and to the recycling of mechatronic products.



A five-year study course; from general training to specialisation

From general training (Sciences and Technology for the Engineer) to specialisation in one of five fields The Humanities account for 20% of total annual class time.

- 1** Admission in Semester 1
INSA network recruitment
Baccalauréat (French high school leaving certificate) majoring in Science, or equivalent
- 2** Admission in Semester 3
Joint recruitment by INSA institutes in Rennes, Strasbourg and Toulouse.
1 year of higher education or equivalent
- 3** Admission in Semester 5
INSA network recruitment
2 years of higher education or equivalent
- 4** Admission into Semester 7
INSA-Rennes recruitment
4 years of higher education or equivalent, continuous learning
- 5** Foreign engineering diploma ("Double degree")
Diploma in Management ("Double degree")

INSA Engineering Degree (equivalent to a Master's)

Master's in Research
Foreign engineering diploma ("Double degree")
Diploma in Management ("Double degree")

Admission into Semester 7

INSA-Rennes recruitment
4 years of higher education or equivalent, continuous learning

Admission in Semester 5

INSA network recruitment
2 years of higher education or equivalent

Admission in Semester 3

Joint recruitment by INSA institutes in Rennes, Strasbourg and Toulouse.
1 year of higher education or equivalent

Admission in Semester 1

INSA network recruitment
Baccalauréat (French high school leaving certificate) majoring in Science, or equivalent

*Test of English for International Communication

A common general syllabus

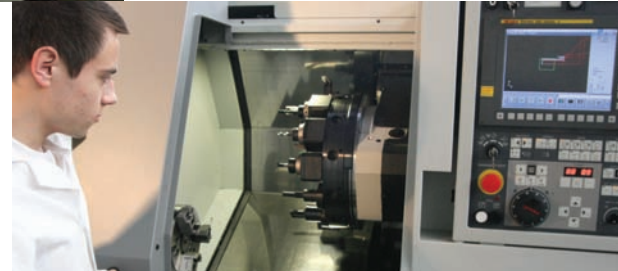
- Mathematics
- Physics
- Mechanics
- Chemistry
- Computer Science
- Knowledge of the engineering professions

20% of non-scientific subjects

- **Languages:** English is compulsory and subject to the TOEIC* - Choice of 2nd language (German, Spanish, Italian, Japanese, Arabic, Chinese, Portuguese and Russian)
- **Culture of the Engineer:** Project management, accountancy and financial management, communication, law, marketing and management, physical and sports education

Work placements and projects in France or abroad

- minimum 1 month in semester 2
- minimum 2 months in semester 8
- minimum 4 months in semester 10 (End-of-Studies Project)



Choosing our speciality field means joining a study programme

Four broad topics

- **Mechanics (24%)**
General mechanics, continuum mechanics, strength of materials, fluid mechanics, finite elements method.
- **Materials (11%)**
Metallurgy, heat treatments, composite materials, ceramic materials, plastic materials.
- **Mechanical design and manufacturing (19%)**
Construction technology and CAD/CAM, industrial hydraulics and pneumatics, rapid prototyping, high-speed machining, theory of machines and mechanisms.
- **Control systems (26%)**
Electronics, control systems, controllers and networks, robotics, computer-integrated manufacturing, computing and computer architecture.

A broad choice of options in 5th year

Students have the possibility of completing their choice of option with the module "Business Engineer" in partnership with the Rennes School of Business.

"Double degrees" are also available to prepare for specialisation at a foreign university, pave the way for a research-based Master's degree or provide skills in both Technology and Management (agreements with Audencia-Nantes, ESC Rennes School of Business and IGR - Institut de Gestion de Rennes).

A course oriented towards gaining experience

38% lectures
26% supervised class work
36% practical work and projects

Study and work placements abroad

GMA students are advised to spend at least three months of their fifth year of studies abroad; either within the framework of one of the European and worldwide student exchange programmes or through a work placement scheme. The latter owes its success to the network of INSA engineers, which counts more than 62 000 alumni in posts across the globe.

A special agreement between the GMA Department and the University of Santa Catarina (Brazil), presents the opportunity to obtain a European Union recognised dual diploma.

Careers

