The "Ingénieur"

ISAE-SUPAERO (MSc) Degree

Excellence with passion
Aeronautics and space: share our passion

A SPIRIT OF CONQUEST FROM THE VERY BEGINNING

Created by ambitious, passionate scientists, SUPAERO was the very first aeronautical engineering school in the world, founded more than 100 years ago. Today, our passion and our vision remain intact. They are our driving forces and they carry us forward in our quest for academic and scientific excellence. Over time, our graduates have contributed greatly to the development of the aerospace sector, and ISAE-SUPAERO has benefited from a sustained international reputation thanks to its engineers and the quality of its academic programs and researchers. Wide range of programs and the many partnerships forged with the academic and industrial worlds have made ISAE-SUPAERO a point of reference and a model to follow.

FOR > 100 YEARS

« INGÉNIEUR » ISAE-SUPAERO (MSc): EXCELLENCE IS OUR TARGET

In an environment of state-of-the-art technologies where there are heavy stakes for participating in sustainable development activity and maintaining a constant innovative capacity, more than ever, our engineers must combine a solid scientific culture with a mastery of technical know-how and socioeconomic and human skills. We are training this generation of engineers to be capable of designing complex systems architectures, producing and implementing solutions in a wide range of fields and, first and foremost, working in an international environment. We encourage and instill this necessary intelligence so that our engineers can innovate and conquer new fields of research and applications, notably in the aeronautics and space sector, all in spirit of innovation.
We are at the heart of the European capital of aeronautics and space

The leading region in France and Europe for aeronautics and space education and research
Toulouse 4th city and university of France: one of the most desirable places to live

OUR ALUMNIS’ SUCCESSES

- **Inventors**: from the designer of the first jet airplane to the inventor of the black box
- **Leading industries**: Airbus, Dassault, Safran, Thales, many directors of major companies and groups in France, Europe and around the world in diverse sectors: ATOS, AXA, IBM,...
- **Heads of major programs**: Caravelle, Concorde, Airbus A320, Airbus A380
- **Astronauts**: 3 out of the 6 astronauts of the ESA selection in 2009

More than

**1700 STUDENTS:**

1500 MASTERS AND 200 PhDs

30% FOREIGN STUDENTS

AN ACTIVE INTERNATIONAL ALUMNI NETWORK

**ISAE-SUPAERO a public institution of higher education and research**

A wide range of degree programs in aerospace engineering:

- **3 MASTERS PROGRAMS**
- **15 ADVANCED MASTERS**
- **6 DOCTORAL PROGRAMS (PhD)**
- **16 CERTIFICATES**

« A worldwide reference in aerospace engineering »

Toulouse, France

Nearly 90,000 jobs directly related to aeronautics and space
Opening the doors of research

A FRUITFUL UNION OF TEACHING AND RESEARCH

For us, it is essential for research professors and students to be able to take advantage of state-of-the-art tools and facilities to work under the best possible conditions.

At the heart of aeronautics and space issues, we work in cooperation with many institutional, industrial, academic and research institutes worldwide to carry out scientific work in the following fields: aerodynamics and propulsion, behavior of materials and structures, image sensors, signal processing, space instrumentation for exploration, embedded systems engineering, communication networks, design and operation of aerospace vehicles, neuroergonomics and human factors for flight safety.

We stand by your side to provide you with the resources you need every day so that you can immerse yourself in science and technology. Throughout your studies, you will be in direct contact with the teaching and research departments and with the research professors working at the various research units. The exploration of new channels – the source of innovation – is at the heart of our training and research strategies. Designing new aircraft that are ever cleaner, ever quieter, ever safer, and that consume less fuel means we must work on new concepts in aerodynamics, acoustics, engines, avionics and safety.

INNOVATION ENCODED IN OUR DNA

InnovSpace, dedicated to innovation and entrepreneurship, provides a prototyping space inspired by FabLabs. It includes a showroom reserved for innovative research programs, a pre-incubator for start-ups, an area dedicated to immersive technologies and a “concurrent” engineering center open to everyone on the campus.

Drones with inflatable structures, solutions for improving data transmissions or turnkey space systems – large-scale projects benefiting from support from the Institute and its Foundation.
At the center of aerospace engineering’s development since 1909, we give you the keys to invent the world of tomorrow.
Join the «Ingénieur» ISAE-SUPAERO (MSc) program

If your university does not have a partnership with ISAE-SUPAERO

RECRUITMENT:
Based on the excellence of scientific and technical background

2 WAYS:

Competitive exam common to l’Ecole Polytechnique

Online application to ISAE-SUPAERO
If your university is a partner of ISAE-SUPAERO

RECRUITMENT:
Based on academic records and qualifications

3 POSSIBILITIES

Semesters Exchange
1 or 2 semesters

- 1 or 2 semesters in French in the Ingénieur ISAE-SUPAERO program
- Spring Semester in Aeronautical Engineering (in English)
- Semester Research project - internship in ISAE-SUPAERO laboratories

Double Degree Program

- Admission for 2 years in the 2nd year of the ingenieur program (after completion of a 60 ECTS at master level) Courses in french

Short programs

- GEA Aeronautical Summer Program (in partnership)
- Space Summer Program (in partnership with the ISAE Group)
- Summer School in Management of Aerospace Programs (MAP-SS)

FINANCING:
merit scholarships, industrial partnerships, scholarships from French public institutions and Erasmus +

For more information on the admissions procedure, please visit:

For more information, please visit:

Information on French diplomas, the BMD/LMD system and equivalencies:
Focus on the Engineering program

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ONE SEMESTER

ONE YEAR (YEAR 2 OR YEAR 3)

DOUBLE-DEGREE (YEAR 2 AND YEAR 3)

« An innovative multi-disciplinary curriculum tailored to yours needs »
PROJECTS AS LANDMARKS
DURING THE PROGRAM
Projects are essential, encouraging the scientific, intellectual and human openness that students need. They also help you to develop learning through real-life situations, applications and achieving concrete products. The research project is done in MSc1 and the company engineering project in MSc2.

INTERNSHIPS
In cooperation with the Career Center and the network of industrial players, internship possibilities are offered in MSc1 and MSc2.

IN MSC 2, IN-COMPANY WORK-STUDY TRAINING IS POSSIBLE
With a professionalization contract signed between the student and the company, the 3rd year alternates between a period of on-campus studies and work in the company for a real professional experience. The company covers the tuition fees and remunerates the student.

FRENCH COURSES FOR INTERNATIONAL STUDENTS (FLE – FRENCH AS A FOREIGN LANGUAGE)
These general French courses (levels A1 to B2) will enable you to work on the different linguistic and cultural skills you need for everyday communication and acquiring the linguistic tools needed to follow the engineering training program. 3rd year students can prepare the Level C1 Science DALF (Diploma in Advanced French Language) in a 20-hour program.

More information:

INTERCULTURAL WORKSHOP: LEARNING TO WORK IN AN INTERNATIONAL TEAM
Students in various training programs come together for a unique intercultural learning experience. The principle is simple: in teams, you are confronted with roleplay situations that help you to develop your communication skills in intercultural contexts.

FLIGHT MECHANICS LIVE! EXPERIENCE IT CLOSE UP
To illustrate the flight mechanics course, we have set up an interactive amphitheater in which an instructor has a radio link with the pilot of one of the Institute’s airplanes and asks him/her to perform maneuvers during class. The flight parameters, transmitted to the amphitheater by remote measurement, are displayed in the form of curves or reproductions of flight instruments. The students concentrate on analyzing the parameters while enjoying the "direct" feel.

PROJECTS AS LANDMARKS DURING THE PROGRAM
Projects are essential, encouraging the scientific, intellectual and human openness that students need. They also help you to develop learning through real-life situations, applications and achieving concrete products. The research project is done in MSc1 and the company engineering project in MSc2.
In MSc2, choose your program of study and your field of application.

You get to choose between six programs of study and many pathways depending on your experiences and your projects! The goal is clear: developing your own scientific approach in a state-of-the-art discipline and acquiring real expertise for technical professional aims or for a research goal.

In order to encourage a cross-curricular view and to enrich systems architect approaches, we offer 6 fields of application and various pathway options. Which one is for you?

LIST OF AVAILABLE PROGRAMS

1. FLUID DYNAMICS
   - External aerodynamics
   - Turbomachines and combustions

2. STRUCTURES AND MATERIALS
   - Digital mechanics
   - Aeronautical and space materials
   - Aeronautical and space structures

3. OBSERVATION OF THE EARTH AND UNIVERSE SCIENCES
   - Universe Sciences
   - Earth Sciences

4. INFORMATION TECHNOLOGY, TELECOMMUNICATIONS AND NETWORKS
   - Embedded computer systems
   - Telecommunications and networks

5. DECISION SCIENCES
   - Industrial engineering
   - Financial engineering
   - Data and decision sciences

6. SIGNALS AND SYSTEMS
   - Electronics
   - Signal and image processing
   - Automation

LIST OF AVAILABLE SECTORS OF EXPERTISE

1. DESIGN AND OPERATION OF AIRCRAFT
   - Airplane architecture
   - Helicopter architecture
   - Increasingly electrical aircraft
   - Aeronautical propulsion
   - Neuroergonomics

2. AUTONOMOUS SYSTEMS
   - Robotics
   - Drones
   - Missiles

3. ENERGY, TRANSPORTATION AND THE ENVIRONMENT
   - Energy and networks
   - Transportation and intermodality

4. MODELING OF COMPLEX SYSTEMS AND SIMULATIONS
   - Engineering mathematics
   - Physics

5. NEURO AI
   - Neuroergonomics
   - Experimentation, measurements and brain-machine interfaces
   - AI methods and tools for neuroergonomics
   - R&D Project

6. DESIGN AND OPERATION OF SPACE SYSTEMS
   - Space transport systems
   - Orbital systems
Choose to go further!

Widening your range of choices and satisfying your curiosity and your thirst for knowledge – you can do so alongside your MSc2 year by opting for additional training programs. Here, you can choose to have a choice.

CERTIFICATES AND MASTERS DEGREES

CERTIFICATES

1- to 2-month training programs at the end of MSc2
- Certificate in systems engineering (INCOSE)
- Certificate in business engineering (DESIA)
- Environmental Engineering Certificate (AIRBUS)
- Certificate in Entrepreneurship

CO-AUTHORIZED MASTERS DEGREES

Programs given alongside the MSc2
- Universe sciences and Space technologies
- Energetics, thermodynamics
- Mathematics and applications
- Mechanics
- Networks and telecommunications

71% of 2018 graduates obtained a double diploma, a certificate or a MSc
International studies for new horizons

Studying means listening, having a passion and wanting to understand... it means studying and making progress with your eyes wide open on the world. Listening to this world in perpetual movement where everything is changing, transforming and being reinvented – ISAE-SUPAERO encourages students to have experiences abroad throughout their courses and welcomes international students who share in this openness to the world. Everyone is welcome!

36% International graduates

80% Students who have spent at least one semester outside France during their studies. The average duration of the international experience is 8 months

17% Graduates who started their careers abroad

14% INTERNATIONAL STUDENTS IN THE ENGINEERING PROGRAM

«Knowledge knows no borders »
Our partnerships with renowned international universities

**EUROPE**

- **Germany**: RWTH Aachen University, TU Berlin, TU Braunschweig, TU München, Universität Stuttgart, TU Dresden
- **Belgium**: Université Libre de Bruxelles, Université de Mons, Université de Liège, Université Catholique de Louvain, KU Leuven, Vrije Universiteit Brussel
- **Spain**: Universidad Politécnica de Madrid, Universitat Politècnica de Catalunya, ETSI Bilbao, ETSI Sevilla, UPV-ETSID, Universitat Autònoma de Barcelona
- **Great Britain**: Bristol University, Imperial College, University of Southampton, University of Glasgow, Cranfield University...
- **Italy**: Politecnico di Milano, Politecnico di Torino, Universita di Napoli Federico II, Sapienza - Universita di Roma
- **Lebanon**: USJ Beyrouth
- **Norway**: NTNU Trondheim
- **The Netherlands**: TU Delft
- **Poland**: Warsaw UT, Lublin UT
- **Portugal**: Técnico Lisboa
- **The Czech Republic**: CTU Prague
- **Romania**: UP Bucharest
- **Russia**: Moscow Aviation Institute, BMSTU, Samara University
- **Sweden**: KTH, LTH
- **Switzerland**: EPFL

**ASIA**

- **China**: BUAA, NUAA, CAUC, Tsinghua University
- **India**: IIT Bombay, IIT Madras, IISc Bangalore
- **Japan**: University of Tokyo, Tohoku University, Kyutech
- **Singapore**: NUS

**OCEANIA**

- **Australia**: QUT Brisbane

**NORTH AMERICA**

- **Canada**: Polytechnique Montréal, Université d’Ottawa, Concordia University, University of Toronto
- **The United States**: chaque année des élèves sont admis à Stanford University, UC Berkeley, GeorgiaTech, California Institute of Technology Caltech, University of Michigan - Ann Arbor, University of Illinois at Urbana- Champaign UIUC

**SOUTH AMERICA**

- **Argentina**: UN Cordoba, UN La Plata, UN Río Cuarto, IUA Cordoba, FRH-UTN
- **Brazil**: ITA, UNIFEI, UFU
- **Colombia**: UNAL

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**COOPERATION AGREEMENTS**

- **FOREIGN PARTNER UNIVERSITIES**: 94
- **DOUBLE DIPLOMAS**: 28
- **COUNTRIES**: 32
- **FOREIGN PARTNER UNIVERSITIES**: 102
« Making the future possible »
"I was a Space Engineering student at Politecnico di Milano, and I enrolled on a Double Degree program at ISAE-SUPAERO. During the 3rd year, I chose the fields "Operation and design of space systems" and "Signal & Systems". ISAE-SUPAERO helped me to fill the gap between the very theoretical approach that we have in Italy and the real professional world of engineering, thanks to many projects and a lot of team work held in an international environment and of course the final year internship. Here, I had also the chance to fulfill my childhood dream of getting a Private Pilot License. Moreover I have tried many sports, such as surfing, diving and so on."

ANTHEA, Double-Degree Politecnico di Milano, Italia – ISAE-SUPAERO Research (Post-graduate)

"I chose ISAE-SUPAERO because of its prestige; I joined the engineering program in the 2nd year as part of a double degree with UPM-ETSIAE in Madrid. I got to have an internship at the CNES, earned a certificate in the field of Big Data, and had an end-of-studies internship at Airbus Defense and Space. There is a friendly, international atmosphere on campus, and I was particularly interested in joining the aeronautical sports associations such as parachuting, gliding, ultralight aviation and private pilot licenses at affordable prices for students."

IÑIQUITO, UPM-ETSIAE Madrid, student preparing a double degree
A solid network for ever more openings and opportunities

Corporate support

250 COMPANIES support our development

MORE THAN 30 PARTNERSHIPS signed with small and medium-sized companies and major players

AIRBUS · DASSAULT · SAFRAN · THALES · AIRFRANCE MBDA · ALTRAN · CNES · LIEBHERR · ATR · SOPRA STERIA · AKKA · ALTEN · WAVESTONE · DAHER IAC · RENAULT · ROLLSROYCE · THEANO ADVISORS AIR LIQUIDE · ARIANE GROUP · ACCENTURE ATOS · AVENCORE · CAPGEMINI · CYLAD · EY MECANO ID · PWC · PRAMANA · STELIA...

WHAT PROFESSIONS?

Duc Duy – China
- Class of 2017
Zodiac Water & Waste
Aero Systems - USA
Systems Engineer

Ali - Lebanon -
Class of 2017
Barclays Investment
Bank - UK
Quantitative
Analysis Assistant
Vice President

Sara – Italia –
Class of 2018
CNES - France
Ground segment
engineer

Adrian – Spain –
Class of 2017
Rolls-Royce plc - UK
Civil Aerospace
Graduate Program

« A network for spreading your wings!” »

THE “INGÉNIEUR” ISAE-SUPAERO | MSc Degree
A diploma that will take you to a wide range of professions in many sectors

**FIELDS OF ACTIVITY***

- 6% Automotive, Transportation
- 6% Consulting, audits
- 8.5% Other sectors
- 60% Aeronautics & Space
- 6% Finance, insurances
- 7% Teaching, research
- 1% Energy
- 3% Defense
- 3% I,T

**ACTIVITIES***

- 23% Studies, consulting and expertise
- 6% Supply chain
- 3% Marketing, Sales
- 13% Miscellaneous
- 2% Research (post-graduate)
- 51% Research, development, scientific and technical studies

**Survey on 1st jobs, graduating class 2018**

A diploma that will take you to a wide range of professions in many sectors

*Sponsor of the ISAE-SUPAERO Class of 2018, Thomas Pesquet encourages the young generation of engineers: “Start your professional life with confidence, work hard to solve the problems of our times and those that affect you personally – you have responsibilities to do things that are useful to society and to others. Get fully committed to your future!*

**After ISAE-SUPAERO comes the time of endless possibilities!**

« Wishing you a happy take-off into professional life! »

**74% Hired before obtaining the degree**

**Main recruiters**
AIRBUS, SAFRAN, ACCENTURE, DASSAULT, MBDA

**Average salary**
41 300 €

**17% Graduates started their career abroad**
To flourish you have to build

Not far from the heart of Toulouse, the campus is connected to the city and to its remarkable cultural and popular life. “City of the South”, sunny and festive, it jealously holds on to its unique art de vivre, an amazing mix of mellowness and communicative energy.

Toulouse is also unquestionably a metropolis that is great for studying, working together, making discoveries and growing.

« The ISAE-SUPAERO years, the time of your life »

Campus insiders
THERE IS LIFE ON THIS CAMPUS

The 22-hectare campus along the Canal du Midi focuses on the well-being of everyone who lives and works there, with areas for learning, living and sports. There are 6 dormitories to welcome you. Work rooms, communal kitchens, self-serve restaurants and cafeterias are all there for you! For relaxation, the Maison des Élèves (Students’ House) has a spacious foyer and areas dedicated to clubs. There is everything for hardcore and amateur athletes – a swimming pool, gymnasium, climbing walls, weight room, soccer and rugby fields, tennis courts and squash courts.

OUR ASSOCIATIONS, WHERE YOUR PASSIONS CAN LET LOOSE

The student union, sports office and art office – these three account for over 80 different clubs. There is something for all tastes and all activities are available. Get involved with culture, commit to social and humanitarian actions or join a technical club (micro-drones, space club, aeromodelling, robotics, etc.) or an aeronautics club (skydiving, gliding, paragliding, etc.) – everything is possible.

Everyone can take part, in whatever way they want, in animating campus life and organizing events.

WELCOME TO MARS (THE CLUB)!

At the “Mars Desert Research Station”, in Utah, USA, they can experience with a stay on the planet and meet its challenges. Life in a confined environment, limited resources... Each student must play a predefined role and take on a very real part in the experiment’s success. A fun, intense event as well as being essential, with the goal of creating the tools for the “Marsonauts” of tomorrow.

Space aficionados and all lovers of the Red Planet come together at the Mars Club. Every year, students take part in a life-size exercise focusing on this hostile, poorly understood planet.