Study @ISAE-SUPAERO
(as a Partner University Student)
Sept. 2023
Study @ISAE-SUPAERO as a Partner University Student

Program
- Excellence: a world class actor in education and research
- Testimony Anthea Comellini
- Academics
- Research innovation & Entrepreneurship
- Student Life
- Industrial Environment
- Apply & Study @ISAE-SUPAERO
- Q&A

Speakers
- Prof E. Zenou
  Head of International
- A. Comellini
  Alumni / ESA Reserve Astronaut
- D. Morice
  Student mobility
Study @ISAE-SUPARO

1. Excellence
   A world class actor in education and research

2. Academics
   Your success is our priority

3. Research, Innovation & Entrepreneurship
   Scientific excellence, academic visibility & leading-edge technology

4. Student Life
   Welcome to our outstanding campus

5. Industrial Environment
   Toulouse
   Capital of aerospace

6. Apply & Study @ISAE-SUPAERO
   Join us!
Key Figures at a Glance

- 1909 Students
- 1900 Students
- 40% Foreign Students
- >100 Academic Agreements
- 205 PhD students
- 780 students graduated a year MS+PhD
- 65 M€ Budget
- 24500 Alumni
- 110 Full time Professors & Researchers

ISAE-SUPAERO
A few of our Alumni

**OUSSAMA KHATIB (D1980)**
Full Professor at Stanford University, Director of the Robotics Laboratory

**JUAN CANTILLO (S2004)**
Senior Exploration Advisor at TotalEnergies, Manager of LNG exports to Japan

**GUILLAUME FAURY (S1992)**
CEO AIRBUS

**AUDE VIGNELLES (E1991)**
Chief Technology Officer at the newly created Australian Space Agency

**OUSSAMA KHATIB (D1980)**
Full Professor at Stanford University, Director of the Robotics Laboratory

**ANGÉLICA CARDENAS SIERRA**
R&T Coordinator for Aerostructures Procurement at Airbus

**GIOSEPPE CATALDO**
NASA Planetary Protection Lead for the last mission of NASA-ESA’s Mars Sample Return

**PRIYANKA DAS RAJKAKATI (S2017-D2021)**
Aerospace engineer & Artist, awarded Forbes India 30 under 30

**OLIVIA DRAYSON (M2019)**
PhD student in Environmental Toxicology at the University of California Irvine
Sky is Not the Limit

1992 ESA selection
Jean-François Clervoy, France, 675 hours in space, SUPAERO 1983

2009 ESA selection
Thomas Pesquet, France, SUPAERO 2001
Samantha Cristoforetti, Italy, Erasmus SUPAERO 2007
Luca Parmitano, Italy, PMP in experimental flight test engineering, SUPAERO 2009

2022 ESA reserve astronaut selection
Sophie Adenot, France, SUPAERO 2004
Arnaud Prost, France, SUPAERO 2017
Anthea Comellini, Italy, SUPAERO 2017 PhD 2021
Our Student's employability

2023 FIRST JOB SURVEY
ISAE-SUPAERO ENGINEERING PROGRAM

- 304 interviewed graduates
- 88% response rate

79% found their first job before graduating
90% are happy or very happy with their first job

PROFESSIONAL SITUATION 4 MONTHS AFTER GRADUATION
- Employed in a company: 76%
- PhD: 6%
- Study/Training: 15%
- Other (volunteering,...): 3%

COMPANY SIZE
- Large-sized companies: 57%
- Medium-sized companies: 22%
- Small-sized companies: 15%
- Start-ups/Very small: 6%

EMPLOYER BUSINESS SECTORS
- 41.5% Aerospace & Defense
- 13% Consulting & Engineering
- 12% IT
- 11% Strategy/Management Consulting
- 7% Energy
- 4.5% Finance/Auditing/Insurance
- 1% Urban Planning
- 1% Teaching/Research
- 1% Naval
- 1% Arts, Performance & Leisure Activities
- 7% Other fields

RECRUITERS
- AIRBUS
- GROUPE DASSAULT
- SAFRAN
- THALES
- EDF

LOCATION
- 85% in France
- 40% Paris area:
- 33% Occitanie
- 27% other regions

15% INTERNATIONAL

AVERAGE SALARY (bonuses and benefits included)
- €50K in Paris area
- €45.8K in France
« Ingénieur ISAE-SUPAERO »
Motto: « Excellence with Passion »

Fundamental courses
- Applied maths
- Physics
- Space science
  ...

Mechanical engineering
- Aerodynamics
- Propulsion
- Energetics
- Structures
- Materials
  ...

Electrical Engineering Course
- Control Theory
- Telecommunications
- Signal processing
- Image processing
  ...

Systems & Projects
- System Engineering
- Functional Design
- Space Systems
- Embedded Systems
- Research projects
  ...

Humanities
- Arts & Cultural studies
- Languages & Communication
  Sports
  ...

Economics and management
- Economics
- Finance
- Management
  ...

Download brochure
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<th>140 hrs</th>
<th>Major (Filière)</th>
<th>240 hrs</th>
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**Interdisciplinary Engineering Project (80hr)**

4-to-6 Student Project
Project Mgmt
DAEP: Aerodynamics, Propulsion & Energetics

DMSM: Structures & Materials

DISC: Applied Math, Computer Science, Embedded Systems, Networks, System Engineering, Data Science…

DEOS: Electronics, Optronics, Signal Processing, CMOS Sensors…

DCAS: Aerospace Systems, Control…

LACS: Languages & Humanities
AeroAcoustic Wind Tunnel

Dimension (test section)  180 cm x 180 cm
Speed  from 20 to 80 m/s
Cut-off frequency  200 Hz

Low-Reynolds Wind Tunnel
Perfect 2 m/s
120 cm x 80 cm test section
Academic & Research Facilities

DGEN 380 TurboJet Propulsion Test Bench
250 daN Thrust
Bypass ratio 6
SFC 0.5 kg/h/daN

LES Computation/Validation – IC3 in-house code

Low fidelity
Body Forces Modelling
Full engine
A world first: hearing the sounds of planet Mars through a microphone made at ISAE-SUPAERO

APRIL 2022:
Publication in “Nature” science journal of the analyses of Martian sounds
Focus on

DART PROJECT (Double Asteroid Redirection Test)

A team of isae-supaero researchers takes part in the first international planetary defence mission!

The aim of the mission is to launch a missile probe that will crash into the near-Earth asteroid Dimorphos to modify its orbit and thus test our ability to avoid collisions with the Earth.
Academic & Research Facilities

Fleet of 10 aircrafts
Instrumented TB20
Robin DR 400
Aquila...

Two Flight Simulators
For Human Machine Interface design
&
Flight Dynamics
Cutting-edge research equipment
Build a safe and sustainable society

Ecological and societal transition

ISAE-SUPAERO In the top 3 of the most committed institutions in the ecological and societal transition, and first for “training”

ISAE-SUPAERO publishes its aviation and climate reference
Toulouse has it all!
Campus Life
ISAE-SUPAERO Student Clubs...
International connections

International Students at ISAE-SUPAERO 2022-2023
66 countries represented
Toulouse: European Capital for Aerospace Activities

More than 100,000 jobs in the aeronautics and space sector

More than 100,000 students at l’Université Fédérale de Toulouse
Academic Environments: Other Laboratories
Industrial Strategic Partnerships
Founding Member of « University of Toulouse »

- **Academic Network**

115,000 students, 4,100 PhD students, 6,000 researchers

30 European aerospace universities in 12 countries, 3000 graduates per year

5 universities, 5 countries, 144 000 students and staff

59 members in 25 countries
Apply and Study at ISAE-SUPAERO
• Double degree

• Exchange semester(s)

• Research project

• Free mover

Many ways to study @ISAE-SUPAERO
You have to be selected by your University
=> Contact your University first!

Two selection committees:

1. **October 2023:**
   - Double degree (early selection for EIFFEL Scholarship)
   - Exchange semester (spring semester Year 2)

2. **April 2024:**
   - Double degree
   - Exchange semester(s) (Year 2 and Year 3)
If nominated for the double degree...

- An application link will be sent to you
- Application deadline: October 15th, 2023
- Required documents: Transcripts of Records from all previous academic years / Motivation Letter in French / Resume/CV in French / ID/Passport

French level certificate (B1) is required, you can provide it later.

Double degree students will have access to an intensive French course in August 2024

Contact email: incoming.df@isae-supraero.fr
• Double degree

1 or 2 semester(s) during the 2nd year of our Engineering program (semesters 3 and/or 4)

1 semester during the 3rd year (semester 5)

• Exchange semester(s)

For 1 year-long mobility during the 3rd year (semesters 5 and 6)

• Research project

• Thesis only in an ISAE-SUPAERO lab

• Thesis / internship in an industrial partner: fee-paying DES Diploma program

• Free mover
Double degree

Exchange semester(s)

Research project

Free mover

Potentially granted for a research project in one of our labs

You have to be chosen by one professor

[Link]
Thank you for your attention

Questions ?