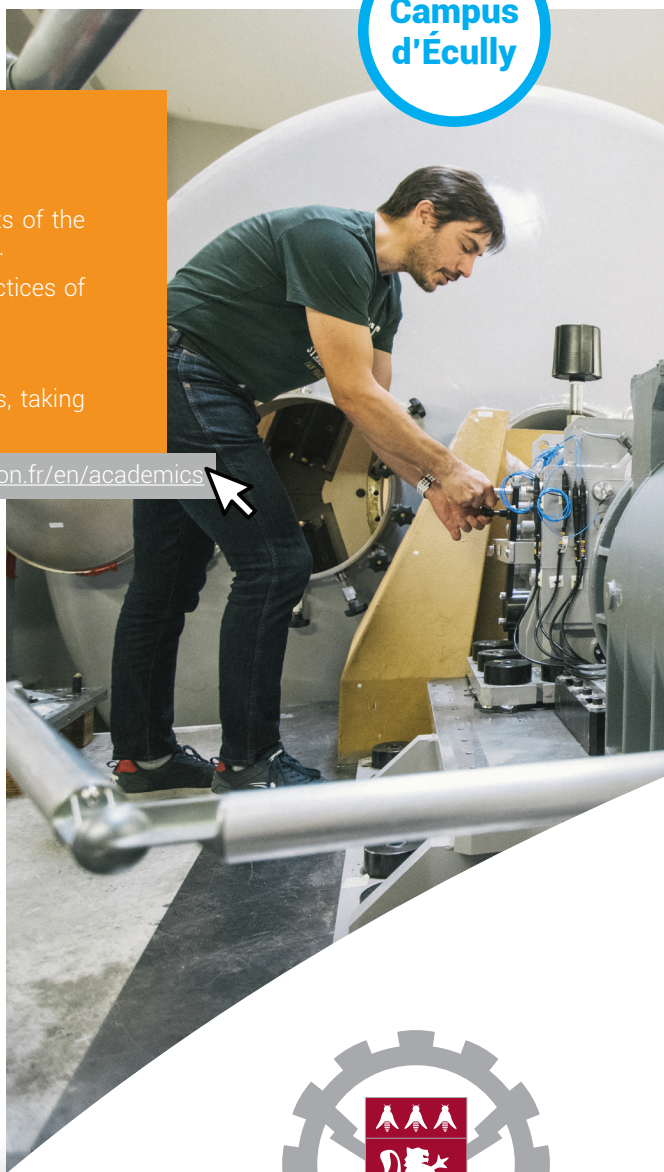
MASTER
AEROSPACE ENGINEERING

2 research laboratories of Université de Lyon : LMFA LTDS

Campus d'Écully



OBJECTIVES

- To train future technical leaders and researchers to different aspects of the aerospace industry, from major constructors to component suppliers.
- To make students aware of the codes, languages and common practices of the industry.
- To develop international/intercultural skills.
- To provide initial training in continuous optimization of components, taking into account manufacturing and maintainability constraints.

Plus d'infos : www.ec-lyon.fr/en/academics

SCIENTIFIC FIELDS

Fluid Mechanics and Energy.

Solid and Structural Mechanics.

Materials.

Control Engineering.

PREREQUISITES

- **First degree in an appropriate Engineering discipline or in Applied Physics.**
- **Certified B1 level in English (CEFRL).**

ÉCOLE CENTRALE LYON

COURSE PROGRAMME

Two options : **PAS : Aerospace Propulsion**
AS : Aerostructures

S1 PAS & DDC	Language (French)	Advanced design project	Lean management	Innovation management	Fundamentals of compressible and viscous flow analysis, Mechanics of solids, materials and structures, Numerical simulations for solid and fluid mechanics, Experimental techniques for solid and fluid mechanics
S2 DDC	Language (French)	Advanced research project	Intercultural studies	Rotors dynamics in mechanical engineering, Introduction to random vibration, Interactive design and FabLab practices or/ Observation and analysis of materials, Selection of materials, Intelligent mecatronic systems or/ Polymer materials: physical properties and innovation	
S2 PAS				Numerical methods for mechanics, Interactive design and FabLab practices or/ Observation and analysis of materials, Adaptive filtering: application to active noise control or/ Space physics and solar-terrestrial coupling, Aircraft turbojets, Optimal design and computational fluid dynamics	

S3 PAS	Aero-thermodynamics of turbomachinery	Aircraft predesign project	Propulsion design project	2 elective courses in a short list of 8 choices *		3 elective courses in a list of 24 choices *	
S3 DDC	P3 project: Process, product and performances	Materials and structures *	Fluid-structure interactions	Structural health monitoring	Noise (transportation & vibration control)*	Language	Mathematical analysis and numerics
S4 PAS & DDC	Master Thesis research project (5 to 6 months)						

STRATEGIC AXES / SOCIAL CHALLENGES

- Science and Engineering for a sustainable society.
- Aeronautics and Space.
- Increasing the competitiveness of the industrial economy through innovation and entrepreneurship.

MAIN OPPORTUNITIES

After graduation, some two-thirds of students find jobs in industrial companies, subcontractors or design firms specialising in the sector. The other third continue with a doctorate at a research laboratory or in partnership with an industrial manufacturer.

More info

CONTACT

- **Pr. Stéphane AUBERT |** M1 + M2 PAS path
  Program manager
  stephane.aubert@ec-lyon.fr
- **Pr. Mohamed Ichchou |** M2 AS path
  Program manager
  stephane.aubert@ec-lyon.fr