

Mastère Spécialisé® / Advanced Master

Experimental Flight Test Engineering

WITH EPNER - THE FRENCH FLIGHT TEST SCHOOL



■ Objectives

Under the aegis of the DGA, ISAE-SUPAERO and EPNER joined their expertise setting up the first Master's degree in Flight Test Engineering for pilots and engineers using the synergy of their recognized competences in aerospace education.

EPNER is one of the world leader Flight Test School offering high-level courses for Flight Test Pilots and Flight Test Engineers. EPNER offers fixed wing and rotary wing courses for test pilots and engineers.

ISAE-SUPAERO and EPNER studied and developed a comprehensive program integrating their competencies and existing courses to provide EPNER flight test courses attendants with a Master's degree Specialized in Experimental Flight Test Engineering of ISAE-SUPAERO besides the EPNER qualification.

The Experimental Flight Test Engineering Master is a 12-month course organized by ISAE-SUPAERO and EPNER aiming at providing either Flight test Governmental Organisations or Aircraft manufacturers with high-qualified test pilots and flight test engineers. Aware of the necessity to conduct flight tests program in close coordination between pilots and engineers, the original spirit of this program is to prepare pilots and engineers to work in integrated team.

The objectives of the Master is to develop theoretical and applied skills of experienced pilots and engineers for the preparation, implementation and report of flight tests either of aircraft or complex embedded-systems, in the best safety conditions. After graduation, these skilled professionals are able to participate to civilian certification of new or modified aircraft, to aircraft or equipment development program, to military acceptance program, either fixed-wing or rotary- wing.

The course is split into two periods:

- 2-month course in basic sciences and French aeronautical communication organized at ISAE-SUPAERO campus, in Toulouse,
- 10-month Experimental Flight Test course, for fixed wing or rotary wing for pilots and engineers, given at EPNER in Istres.

■ Organization

Head of program

- Prof. Éric POQUILLON
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Course duration

One year full time: 2 months of preparation courses and 10 months of technical courses

Course start date

June

Location

ISAE-SUPAERO and EPNER (Istres)

Teaching language

French

■ Learning approach

Academic session consists of around 450h of ground and simulators courses, provided by ISAE-SUPAERO and EPNER's permanent professors and experts from industry bringing current knowledge and experience.

And around 110 flight hours on more than 20 airplanes for fixed-wing stream and 15 helicopters for the rotary-wing stream.

All along the program, students conduct professional theses, assessment of aircrafts or embedded-systems. These theses are concluded by the preparation of a report and an oral dissertation.





■ Syllabus

ISAE-SUPAERO part	International attendees	French attendees
Mathematics	✓	✓
Flight mechanics	✓	✓
Automatic control and aircraft control	✓	✓
Visits of companies	✓	✓
Advanced aeronautical French	✓	
Aeronautical phraseology	✓	✓
Aircraft preliminary design		✓
Human factors		✓

EPNER part

Systems engineering introduction – Safety of flight tests
 Basics of aerospace technics
 Documentation, procedures applied in flight tests programs –
 Performances tests
 Propulsion tests
 Handling tests
 Embedded-systems tests
 Specific test (fixed-wind): flight envelop extension
 Certification, acceptance, assessment, etc. – Specific test (fixed-wind): flight envelop extension – Specific flights, synthesis activities – Professional thesis

■ Career opportunities

The Master intends to prepare skilled professionals, pilots or engineers for:

- Managers of flight tests implementation, flight envelop extension of aircraft or embedded-systems in close cooperation with design and development offices
- Managers of flight tests centers.

■ Admission procedure

Selection and admission by the French Ministry of Armed Forces, contact us for more detailed information.

Companies recruiting our students

Flight Test Centres, Air Force, Navy, Army, Airbus Group and its subsidiaries, BWB Germany, Dassault Aviation, ESA, Canadian Flight test center...



Testimonies

Why did you choose ISAE-SUPAERO and apply for this MS? What were your objectives?

RICE WILLIAMS
Cohort 2019

“ This course was the only option and a great way to practice the French language in the sector of aviation while refreshing math and science I hadn’t seen in 10 years. I was hoping to get a head start for EPNER.”

PATRICK CALLAGHAN
Cohort 2021

“ This was a part of the flight test program at EPNER.”

According to your experience, what are the strong assets of this master?

They’re aren’t many language programs that have an aviation and science emphasis so this is a great way to refresh math, science, and learn the french words that go along with studying at EPNER.

World class instructors with real world experience
friendly, helpful support staff
Excellent facilities.

What are your career plans?

I hope to become a test pilot for the United States of America.

Continue to work as a flight test engineer.



Admission procedures

*Selection and admission by the French Ministry of Army,
contact us for more detailed information.*

Your contacts

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