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Aviation Safety and Aircraft Airworthiness

(ISAE-SUPAERO / ENAC / ÉCOLE DE L'AIR)

■ Objectives

Aircraft airworthiness must be considered as a coherent process running from the design of the aircraft to the monitoring of its technical condition in airline service. The Master in Aviation Safety - Aircraft Airworthiness covers both the technical aspects of certification and the legal and economic implications. This course has been designed to give future managers a broad understanding of the issues and priorities which, as far as aeronautical construction is concerned, have an international dimension.

Air transport deregulation and the development of a global economy necessarily imply an increase in vigilance on behalf of both the regulatory authorities and the industry. Progress regarding safety has been constant. During the last 30 years, the accident rate per flight hour has been reduced by a factor of 10. This is becoming insufficient due to the considerable increase in traffic. Current trends should encourage us to make even more improvements, and this necessarily involves trainings. The Master in Aviation Safety Aircraft Airworthiness will provide future operators with the key to success in times to come.

■ Learning approach

First semester:

academic session of 18 courses from September to March, provided by permanent professors of ISAE-SUPAERO, ENAC & École de l'Air and experts from aerospace industry giving their current knowledge and experience, including: lectures, tutorials, practical sessions, industrial visits.

Second semester:

students have to conduct a professional thesis in aerospace industry or in laboratory, in France or abroad, supervised by a tutor from the host organization and from ISAE-SUPAERO or ENAC. The thesis is concluded by the preparation of a report and an oral dissertation in front of jury.

■ Organization

Head of Program ISAE-SUPAERO

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Head of Program ENAC

- Pascale PUEL
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Head of Program École de l'Air

- Capitaine Mathieu FLALLO

Course duration

One year full time

Course start date

September

Location

ISAE-SUPAERO: from September to November
ENAC: from December to February
École de l'Air (Salon de Provence): March

Teaching language

English

■ Syllabus

Part 1: Aeronautical techniques and study of the aircraft at ISAE-SUPAERO - 238 h

Flight dynamics
Aeronautical Materials and Structures
Engines and powerplant
Avionics
Aircraft General Systems
Qualification tests of on-board systems and equipments

Part 2 - Air Transport safety - at ENAC - 290 h

Certification procedures
Certification of aircraft systems
Aircraft Systems safety analysis
On-board software and hardware
Air transport safety and human factors
Production Organizational approval
Operating procedures
Continuing airworthiness
Post Type Certificate activities

Part 3: Airworthiness at École de l'Air (Salon de Provence) - 34 h

Airworthiness of state aircrafts

■ Career opportunities

This Master prepares students to various job either in civil and military aerospace industry (manufacturers, maintenance organizations, airlines, ...) or in civil and military aviation authorities.

Companies recruiting our students

Airbus Group and its subsidiaries, Thalès Avionics, Safran, Air France, Civil Aviation Authorities of Algeria, of South Africa, of China, of Colombia, of Malaysia, DGAC (Civil Aviation Authority of France), Malaysian Air Force, French Ministry of Defence, Venezuelan Ministry of Defence, Royal Air Force of Oman, Royal Jordanian Airforce, South Africa Airways, Embraer (Brazil), Hal (India), AVIC (China), COMAC (China), IATA Belgium, AKKA, Altran, Aerotec, - EASA Traineeship program.



Testimonies

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Why did you choose ISAE-SUPAERO and apply for the Advanced Master «Aviation Safety Aircraft Airworthiness»? What were your objectives?

Aircraft worthiness is the discipline to judge the complete structural validity and safety. It requires abundant knowledge and technical experience to evaluate an aerial vehicle's fitness to work, not only according to the theorized plan, but also according to indefinite practically probable situations.

After working for 4 years in aircraft maintenance domain, I was amazed to see how much aircraft manufacturers are involved in keeping the aircraft safe in operation even after the aircraft is operated by its operator. I came to a realization that enhancing my design and technical skills with depth knowledge of safety and airworthiness will provide me an edge; this is why I decided to advance my education in this field by pursuing Advanced Masters in Aviation Safety and Aircraft Airworthiness at ISAE-SUPERO & ENAC.

The fact that master is shared by ISAE-SUPAERO, ENAC and Ecole de l'Air which are the most esteemed aeronautical universities was one of the other reasons. They are very well established and the fact that they are located in Toulouse at the epicenter of the aerospace industry gives them a superior advantage in terms of proximity and providing strong industry links.

According to your experience, which are the strong assets of the Master you did?

The strongest asset of this Advanced Masters is its pragmatic approach. The professors who gave us the lectures on a wide range of technical, regulatory and operational topics were the people directly from the industry who could share the firsthand experience after years of working on the specified domain.

Secondly, the enriching international environment with students coming from all over the world opens a plethora of knowledge and opportunities which develops an individual personally and professionally.

Which are your career plans?

After successfully completing my internship at ATR, I was offered a position of Consultant Engineer by Altran France to continue my activity at ATR. Working with a manufacturer has an advantage of its own; it opens up the door to different domains which further enhances the skills and knowledge of an individual. I would like to continue my activity and gain expertise in the different fields and gain significant knowledge working with different manufacturers, operators and MROs. Long term goals; I would love to have a MRO of my own. But for that, there is a long way to go!

SAURAV MOHANTY

India, Consultant Engineering at Altran France, Graduated in 2015.

Admission procedures

Advanced Masters





Academic requirements

A master's degree, or an equivalent degree in science or engineering (or in management for advanced masters in management), or bachelor degree completed by 3 years of professional experience

Application website :

<http://admissionsmasters.isae-supaero.fr>

Language requirements for Masters in English

 TOEFL (IBT)	or	 TOEIC	or	 IELTS	or	 CAE/FCE
85 points		785 points		6.5 points		170 points

Selection and admission

Selection and admission are made by an admission committee :

Possible interviews can be organized if necessary

Deadlines for application:

Several admission committees scheduled from January to July, see schedule on our website

Language requirements for Masters in French

Language qualification requested

Score B2-Common - European Framework of Reference for Languages

Your contacts

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