

Aviation Safety Aircraft Airworthiness (ISAE-ENAC-EA)

Accredited by the Conférence des Grandes Écoles



Aims

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.

In 2010, Ecole de l'Air (EA) which is the French Air Force Academy has joined ENAC and ISAE and will deliver course in the domain of the airworthiness of governmental aircrafts with focus on civil and military concerns.

Organization

Head of Program ISAE: Didier DELORME

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Head of Program ENAC: Claude HAILLOT

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Duration of studies: One year full time

Beginning of classes: September

Location: ISAE, Campus SUPAERO from September to November; ENAC, & École de l'Air (EA - Salon de Provence) from December to March

Teaching language: English

Pedagogical approach

First semester: academic session of 18 courses from September to March, provided by permanent professors of ISAE, ENAC & EA and experts from aerospace industry giving their current knowledge and experience, including: lectures, tutorials, Practical sessions, visits of industries (Airbus, CEAT, etc.).

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 organisation and from ISAE or ENAC. The thesis is concluded by the preparation of a report and an oral dissertation in front of jury.

Syllabus

Part 1: Aeronautical techniques and study of the aircraft - 8 courses at ISAE - 241 h

The flight envelope
Structural operating limitations
Aeroplane architecture and stress calculation
Propulsion
Avionics part 1
Avionics part 2
Aircraft systems
Qualification tests for civil aviation on board equipment and systems



Part 2: Air Transport safety - 8 courses at ENAC - 300 h

- Certification in international air transport
- Safety of complex systems
- On-board software
- Air transport safety and human factors
- Quality approval and concept
- Operational procedures
- Maintenance procedures
- Continuing airworthiness

Part 3: Airworthiness at EA (Salon de Provence) - 60 h

- Airworthiness of governmental aircrafts

Career opportunities

This Master prepares students to a various job either in aircraft manufacturers, or in civil Aviation authorities and Airlines: airworthiness inspectors, certification managers, Airworthiness follow up, etc.

Companies recruiting our students

Airbus, EADS, Aeroconseil, Eurocopter, Safran-Turbomeca, 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, South Africa Airways, Embraer (Brazil), Hal (India), SONAIR (Angola), AVIC (China)

Witness

Prajyoth Krishna Mirajkar, New Zealand, SM ASAA, Graduated in 2010

« Having completed my studies at the University of Sydney, I was in search of the next progression in my career to advance myself in the aeronautical domain.

There was one course that clearly stood out from the other post-graduate opportunities that were available to me, and it was this Master in Aviation Safety and Aircraft Airworthiness. Safety and Airworthiness are the two most important concerns in the aviation industry today, and there is clearly a growing demand from industry for students who have undertaken this course.

This master is shared by both ISAE and ENAC which are two of the most prestigious aeronautical universities with a solid reputation around the world. They are very well established and the fact that they are located in Toulouse at the epicentre of the aerospace industry gives them a superior advantage in terms of proximity and providing strong industry links. This also meant that most of our lecturers were industry experts in their given fields and everything we learnt was using real life examples in today's aviation domain. The technical knowledge at ISAE and the certification competency at ENAC combined with visits to world leading manufacturing plants and firms provided the perfect balance to give us a well rounded approach to gain a high level of education in the Masters program.

I have proudly and successfully completed my Thesis in the Airworthiness Technical Directorate at Airbus, where I am currently employed. I highly recommend this Masters, it is the best decision I have taken to further my career and it has opened up a world of opportunities».