

Aviation Safety Aircraft Airworthiness (ISAE-ENAC)

Accredited by the **Conférence des Grandes Écoles**



Crédits photos : Airbus

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 20 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 Aircraft Airworthiness will provide future operators with the keys to success in times to come.

Organization

Head of Program ISAE:

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Head of Program ENAC

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Duration of studies: One year full time

Beginning of classes: September

Location: ISAE, Campus SUPAERO from September to November; ENAC, from December to March

Teaching language: English

Pedagogical approach

First semester: academic session of 16 courses from September to March, provided by permanent professors of ISAE & ENAC 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 conduct a professional thesis within an aeronautical industry or organisation, in France or abroad and 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



Crédits photos : ISAE

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

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, Turbomeca, Civil Aviation Authority of South Africa, Civil Aviation Authority of China, Civil Aviation Authority of Colombia, DGAC (Civil Aviation Authority of France), Malaysian Air Force (Malaysia), French Ministry of Defence, Venezuelan Ministry of Defence, Royal Air Force of Oman, South Africa Airways, Embraer (Brazil), Hal (India).

Witnesses

Interview Michaël BOLIS, Graduated in 2007

"Coming from an aeronautical family, I have a passion for the aviation. After my first study period at ENSEM, Nancy, and during my internship at Air France Industry, I decided to apply to the ASAA Master. Interested by certification issues during my interested, I was convinced that this Master will answer to my expectations. I am satisfied with the complementary teaching of ISAE - ENSICA on one side and ENAC on the other side. The ISAE - ENSICA teaching provided me with solid technical knowledge on aircraft: structure, systems, and equipments. The ENAC part offers strong knowledge related to international regulations: air transport regulations, certification processes, etc. The program offers students the best assets to get a job as engineer in certification domain and to be immediately operational.

After my graduation, I joined ALTRAN, as consulting engineer, placed at Airbus Corporate Jet Centre, in charge of new or second-hand aircraft modification to VIP aircraft".

Interview Squadron Leader MISHRA Bibhuprasad, Indian Air Force, Graduated in 2009

"I chose ISAE, the best institution in France for aeronautical & aerospace studies. Due to links between ISAE and major aerospace companies, attendees take the maximum benefit out of the course because most of the classes were taken by the people working in the industries which gave an excellent practical exposure to the vast field of aeronautical science and because these people have got tremendous amount of experiences in the aeronautical field.

The course specialized master ASAA gave me enormous amount of knowledge in the aviation field & I am very sure that I will apply the knowledge in my country to help the progress more in the aeronautical field.

I was very proud to perform my professional thesis in ATI - Airbus Transport International, before my comeback into Indian Airforce".

Admission 2010

Common ISAE's admission procedures

Postgraduate Specialized Masters in engineering

- **SM AMS - SM ASAA - SM EMS - SM HE - SM SCS - SM SEN - SM TAS Aero - SM TAS Astro**
- **MS EAS - MS SAS - MS SPA**

Tuition fees 2010-2011: 12 000 €.

French and European Students: 6000 € (students graduated in the year of application or the year before, and with no professional experience).

Academic requirements

Applicants must have a Master degree, or an equivalent degree in science or engineering, or a bachelor degree with 3 years of professional experience at least.

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 April to June 2010,

Application form to be downloaded at www.isae.fr

Application fees: 65 € (non-refundable).

Complete application files to be sent: Institut Supérieur de l'Aéronautique et de l'Espace - Direction des masters et mastères spécialisés - 10, avenue Édouard-Belin - BP 54032 - 31055 Toulouse Cedex 4 – France

Language requirements for Masters in English

Language qualification requested : TOEFL 550 (paper-based). Except if applicant's first language is English or total instruction of Bachelor or Master degree has been provided in English.

Other admission procedures

MS IEVex

Specific admission process through the French Ministry of Defence, contact us for more detailed information.

MS MGP

Selection and admission organized by HEC:

www.hec.edu/Specialized-Masters

Contact us for more detailed information.

MS IMF

Selection and admission organized by ESC Toulouse:

www.esc-toulouse.com

Contact us for more detailed information.

Contacts

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ISAE

The "Institut Supérieur de l'Aéronautique et de l'Espace" (ISAE) was created in 2007 from the merger of the two prestigious French graduate and postgraduate schools of engineering, SUPAERO and ENSICA. Today, ISAE, is a world-class higher institute for aerospace engineering education and research. Nowadays with a student corpus of over 1600, ISAE is one of Europe's largest Aerospace Institute offering graduates and postgraduates programs. Yearly, ISAE awards around 20% of master's degrees in Europe in aeronautics and space field. ISAE develops its worldwide reputation on the prestige of its master's programs, the fame of its teaching staff, or the excellence of its research but also on the high-value of its graduates, their skills in engineering or management, as well, their capacity to evolve within a very high-technology environment, their enterprising mind and international opening.

Identity card

Name: Institut Supérieur de l'Aéronautique et de l'Espace (ISAE)

Founded in 2007 - as the result of the merging of SUPAERO (1909) and ENSICA (1945)

Legal Status: A large public institution of scientific, cultural and vocational missions

Trustees: Délégation Générale pour l'Armement (DGA) [French Defence Procurement] - Ministry of Defense

Endorsements and awards: CTI agreement of the two Graduate Programs, Conference des 'Grandes Écoles', for postgraduate specialized masters Ministry of Higher Education and Research for Masters of Science

Staff: 420 permanent staff

Key figures

2 Graduate Programs: SUPAERO and ENSICA

17 Specialized Masters including 12 in English

2 Masters of Science

9 Research Masters

6 PhD Programs

1600 students

160 international cooperation opportunities

50 academic and research partnerships

Contacts ISAE

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Contents and design: ISAE
Print : imprimerie Escourbiac