



POST-MASTER DEGREE AERONAUTICAL OPERATIONS AND MAINTENANCE

STUDY IN ENGLISH, LIVE IN PARIS

Groupe **Isae** 



EXPANDING HORIZONS OF MOBILITY

AN INNOVATIVE PROGRAM CLOSELY ALIGNED WITH INDUSTRIAL REQUIREMENTS



The modern air transport industry needs engineers who have more than the traditional technical skills. The airlines has to ensure global security at an affordable cost. Their engineers need a global view of the legal and economic environment as well as an in-depth understanding of operations and maintenance processes in order to cope with a growing international competition and a complex regulatory framework.

PROGRAM IN BRIEF

Aim

Acquire the skills to understand the organization and the economy of the air transport industry.

Program benefits

- Teaching faculty heavily involved in the industrial sector;
- Global overview of the air transport industry.

Skills acquired

- Implementation and execution of aircraft maintenance and airline operations from the perspective of a manufacturer, maintenance operator and airline;
- Ability to work within the constraints of aeronautics regulations;
- Understanding of European (EASA) and US (FAA) regulations;
- Understanding of relationships between airworthiness authorities, manufacturers, airlines, airports and MRO operators.

400 hours of academic coursework: (October to mid-February)

- Regulatory environment (in Europe and the United States);
- Airline operations;
- MRO operations;
- Engineering skills.

6 months minimum of in-company operational training followed by a professional thesis defense (February - August).

Assessment

- Teaching modules assessed via exams and case studies;
- Academic project & Professional thesis assessed via dissertation.



Job prospects

- Aeronautical supply chain for manufacturer and equipment providers or/and airlines.
- Maintenance department manager, project manager for aircraft maintenance operations, project manager for an aircraft interior redesign operation, etc.
- Maintenance and support departments for aircraft manufacturers, aircraft maintenance operators, airlines and airport operators.
- Flight safety manager, quality manager in an airline or an airport operator.

Industrial partners

Air France (Airline & MRO) , Airbus Group , ADP (Aéroports de Paris), Zodiac Aerospace.

Course breakdown: Lectures, case studies, team work project and management,

Language: English

Number of credits: 75 ECTS



ESTACA offers a new Post-Master degree in aeronautical operations and maintenance that applies to Airline, MRO operators, Airport operators, Aeronautical logistic and air manufacturing companies.

The aim of this one-year program is to offer students the means to understand the organization and the economy of the air transport industry. They will be in close contact with our partners (Aircraft manufacturers, Airlines, MRO operators, Airport operators) so they will be able to apply their theoretical knowledge directly to real cases.

The Air Rules are the cornerstone of this course and are studied with different approaches.

Marc WEBER, Program Director



Modules & Supporting companies	Objectives	Student Hours	ECTS credits
Air rules AIR FRANCE - ESTACA	ICAO, FAA and EAA regulations presentation	28	3
Air Safety & security IASA - AMBASSADAIR	Risk management Current regulations and possible evolutions The lessons learned process Airline security and safety	16	3
Certification & Airworthiness DGA	Initial Certification process (4EASA 1 FAA) Modifications management Airworthiness management	30	4
State owned aircraft airworthiness DGA			
The Air transport market ESTACA Manufacturer - Airlines relationship AIRBUS	The Air Transport Business Air Manufacturing Business Airline services The Airline/Manufacturer relationship	19	2
Airline operations AIR FRANCE	Reminder of the main legal texts Introduction to a FCOM (public transport) Ground operations Airline general organization Flights management	24	4
Airport operations ADP	ATM / Airport operation links Airport operations Slots regulation	12	1
Maintenance program description AIFRANCE INDUSTRIES	Applicable regulations The MRBB process Maintenance documentation Maintenance program Design Cost management Introduction to ILS	27	4
CAMO AD SOFTWARE	Introduction to CAMO Applicable Rules Team Work (application of Aircraft maintenance and Systems maintenance notion to a real CAMO)	18	3

Modules & Supporting companies	Objectives	Student Hours	ECTS credits
Maintenance processes MRO ADVISORS State owned aircraft DGA	Maintenance processes and regulation evolutions	27	4
Project Management ZODIAC & ESTACA	Project management tools Functional Analysis Serious game	40	5
Dependability Management Supply Chain		18	2
REACH regulation - ESTACA	Introduction to REACH	4	NA
NDI (Non Destructive Investigations) ESTACA	Introduction to NDI	4	NA
Technical English	Vocabulary, Syntax and architecture of different technical texts (SB, OMM, TMM, JAR, FAR...)	20	2
Forum ESTACA	Meeting with companies	15	NA
Visit 2 days		20	NA
Visit		15	NA
Project	Work on a technical or managerial issue given by our industrial partners The teams will be monitored by an industry tutor A written and oral report will be required	12 with tutor 120 students hours	8
Maintenance Design LGM		Under construction	
TOTAL		470	45
In-company operational training followed by a professional thesis		24 weeks minimum	30
TOTAL with training			75

Note: the above program might be subject to minor changes.



A MASTER WHICH PROVIDES YOU WITH THE KNOWLEDGE AND SKILLS REQUIRED TO BE DIRECTLY OPERATIONAL!

I decided to join the «Operations and Maintenance» program to get an overall view of the air transportation field, in the respect of international regulations and maintenance issues. I really appreciate the quality of the lectures and the aerospace background of all professors. They shared a lot of interesting work experiences and anecdotes with us, which gave a professional dimension to this course.

During the year, we did several group projects with the support of experts working

in a specific domain. My main project was to estimate the cost of an aircraft dismantling operation, supervised by an MRO (Maintenance, Repair, and Overhaul) organization. I could study the regulations, standards and process in depth, also taking into consideration the economic point of view. That was really interesting, and this experience is a project I could potentially be asked to do during my first job! I warmly encourage people who want to work in the air operations and aircrafts maintenance to apply for this master.

Prabal COUNTCHAM, alumni 2015, Projects Engineer at ADP

ESTACA GRADUATE ENGINEERING SCHOOL

Founded in 1925, ESTACA is a member of ISAE group, 1st world cluster in aerospace training and research. ESTACA is highly specialized in the fields of aeronautics, automotive, space and railway industries.

The training courses constantly evolve to meet the requirements of companies and adapt to the emergence of new technologies or disciplines. ESTACA's graduates undertake the design, development and production of transport systems and components. The industry has ranked ESTACA among the best engineering schools for its expertise in the transportation fields.

ESTACA IN FIGURES

2

campuses: ESTACA-Paris Saclay and ESTACA Campus-Ouest in Laval, Mayenne

280

graduates per year

2000

students

8000

alumni

2

research teams

ISAE IN FIGURES

Group of the 4 most prestigious French engineering programs in Aerospace: SUP'AERO, ENSMA, EOAA, ESTACA

4 400

students at a high scientific level in aerospace

360

doctoral students

34 000

alumni

450

faculty, researchers and engineers

38^{ME}

in Research revenue



ESTACA PARIS-SACLAY CAMPUS IN SAINT-QUENTIN-EN-YVELINES

Located west of Paris, 10 min. from « the Château de Versailles » and 30 min. from the Eiffel Tower, the ESTACA-Paris Saclay engineering school offers a wonderful environment for students on international programs. Opened in 2015, this new campus is 5 min. from the station Saint-Quentin-en-Yvelines, a town with ideal facilities for students in terms of accommodation, university restaurant, sports, culture, etc.

Saint-Quentin-en-Yvelines, located in the Paris-Saclay cluster, is the second economic hub west of Paris, and houses a great deal of industries in the transport sector and academic and scientific partners in phase with issues in the transport and mobility sectors. Many French «Grandes Écoles» and universities have set up here and together make up the Université Paris-Saclay, of international reputation, forming the training and research pole of the Paris-Saclay technological cluster, a sort of Silicon Valley «à la française».

PRACTICAL INFORMATION

Eligibility

This program is open to all foreign and French students holding a Master Degree (preferably in scientific fields, business master may also apply) or having completed five years of studies in an engineering or business degree. Applicants should have English language proficiency (TOEFL iBT: 91, TOEIC: 850 or IELTS: 6.5)

Location

ESTACA Paris-Saclay campus in Saint-Quentin-en-Yvelines

Tuition fees

13 000 € (reduced fees for students graduating in the year of enrollment: 10 000 €)

Admission process

Admission upon application, possibly with an interview.

- Application Form available on the website: <http://www.estaca.fr>
- Application period: application is to be sent before one of the 3 meeting dates of the selection board: March 30th, May 30th and June 30th

Degree accredited by the Conférence des Grandes Ecoles

www.cge.asso.fr

Keywords

Aircraft maintenance, aeronautics project management, airworthiness, fleet management, Aeronautics regulations, Airline operation, CAMO, FAA, EASA, ICAO



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