Artificial Intelligence & Business Transformation
WITH IRT SAINT-EXUPERY

■ Objectives

A manager in charge of the transformations needed to monetize data, notably using AI, is commonly known as a "Data Evangelist". This Advanced Master targets a new profession through part-time training for high-potential technical specialists and managers (from scientific disciplines) with several years of work experience. Upon completion, students will be equipped with a solid culture in AI (along with the related big data) and will be able to work on the operational, intermediate or strategic level to manage projects where these new technologies play a role and teams in related new professions, such as big data engineers, data analysts, data miners and data scientists.

■ Learning approach

The program comprises 3 blocks:

168-hours teaching block for upgrading technical skills in AI, covering bulk data management and machine learning from a theoretical point of view (understanding solutions and large families of algorithms) and from a practical point of view (manipulations on simple examples, assessment of complexity and limits).

119-hour teaching block on business transformation by and for AI, covering the current impact of AI on various sectors, the implementation of a data value strategy and managing change in an AI context.

72-hour block of practical work to obtain high-level skills in business transformation through AI, with long-term examples covering all aspects of the training, whether strategic and tactical aspects from a business point of view, or a technical approach to move from data acquisition to a valuable product..

Five principles will be followed in all courses to adapt them to the students in training:
- Connections between the techniques and business;
- Developing concrete use cases;
- Discovering a variety of fields of application;
- Interactive teaching;
- Knowledge acquired is applied to a project on a common theme.

■ Organization

Head of the program

- Prof. Carlos AGUILAR-MELCHOR
carlos.aguilar-melchor@isae-supaero.fr

Course duration

One week a month for 10 months

Course start date

Please contact us

Location

ISAE-SUPAERO (Toulouse)

Teaching language

English

This Advanced Master is organized in a partnership with IRT Saint Exupéry. IRT Saint Exupéry is the product of a public/private partnership co-financed by companies in the aeronautics, space and automobile sectors and the French State through its Programme d'Investissement d'Avenir (PIA – Investment Program for the Future).

Since its creation in 2013, an increasing share of its research programs have been enriched with contributions from "modern" artificial intelligence, in other words based on statistical machine learning, for applications in on-board aerospace and automobile systems.

■ Syllabus

The associated program will comprise a core curriculum for all students, organized into 3 blocks:

Part 1: Artificial Intelligence Internals - 168 h

Data Integration and Exploration, Big Data Processing, Optimization Topics for AI, Machine Learning and Data Analytics, Sequential Decision Making in AI, AI certification, Robustness and Dependability.

Part 2: Business Aspects of Artificial Intelligence - 119 h

Introduction to Modern AI, The Business of Data, Data Value Creation, Change Management.

Part 3: Practical skills - 72 h

Hands-on practice

Professional Thesis:

Students will do personal work for a period of 4 to 6 months, leading to the individual defense of a professional thesis.

This thesis may be prepared at the student's company or during an internship, notably at IRT Saint Exupéry, for students who do not have an employer at the time of the course.

The subject of the professional thesis will be sought out and chosen by each student with support from ISAE-SUPAERO, validation by the Professor/Academic Advisor and approval by the Director of the Advanced Master programs.

■ Career prospects

This program is organized with support from such major corporations as AIRBUS, AIRBUS HELICOPTERS, APSYS, COLLINS AEROSPACE, CONTINENTAL, DASSAULT AVIATION, ESI Group, STELIA, THALES ALENIA SPACE and CERFACS.

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

Tuition fees : see our website

LANGUAGE REQUIREMENTS FOR ALL MASTERS

TOEFL (IBT)	or	TOEIC	or	IELTS	or	CAE/FCE
85 points (Inst. code: 9820)		**785 points**		**6.5 points**		**170 points**

NOTA BENE : Volume of teaching hours and contents of the programs are provided for information only and are subject to change.

LANGUAGE REQUIREMENTS FOR MASTERS IN FRENCH

Language qualification requested

Score B2-Common - European Framework of Reference for Languages

■ SELECTION AND ADMISSION

Selection and admission are made by an admission committee :
Possible interviews can be organized if necessary

Deadlines for application:
Applications open in october 2020 for intake in september 2021. Several admission committees scheduled from January to July, see schedule on our website

Application website :

http://admissionsmasters.isae-supaero.fr

Funding

Information on tuitions fees and funding can be found on our website

https://www.isae-supaero.fr/en/academics/ advanced-masters/financing/

Your contacts

Caroline ARMANGE
Senior Admission Advisor / Advanced Masters
Phone : + 33 (5) 61 33 80 25

Catherine DUVAL
Senior Admission Advisor/Aerospace sector
Phone: +33 (5) 61 33 80 37

info-master@isae-supaero.fr
www.isae-supaero.fr

isae SUPAERO
Institut Supérieur de l'Aéronautique et de l'Espace