POST-MASTER DEGREE IN SYSTEMS ENGINEERING

TYPE DE DIPLÔME
Mastère spécialisé

NIVEAU D'ÉTUDE VISÉ : BAC +7

ACCESSIBLE EN :
Formation initiale
VAE

DOMAINE D'ÉTUDE : Ingénierie aéronautique et spatiale

Domaine : Sciences, Ingénierie et Technologies

Présentation

The one-year course is split into 2 semesters in ISAE premises - lectures, integrated team project, etc.-and 4-5 months of internship.

Objectifs

Systems Engineering is an interdisciplinary discipline of engineering combining all sciences and technologies
into integrated team from design, to development, up to operations and disposal of competitive and complex
systems. Systems Engineering approach is the capacity to federate and control various, interweaving and
complementary engineering activities. This approach goal is to deliver satisfying systems, on-time, within
expected budget, with the level of quality and performances meeting requirements of an open and competitive
market. Systems Engineering process implements technical processes (requirement engineering, design,
integration, verification, validation, etc.) as well as project management processes, agreement processes and
enterprise processes.
The Systems Engineering Master degree program is a one-year professional course of study, designed in
partnership with the industry. This program aims at providing worldwide industry with skilled professionals in
Systems Engineering able to specify, design, deploy and maintain competitive and complex systems, fit to
purpose, in various industrial sectors: space, aeronautics, air traffic control, land transport systems, maritime
transport, health industry, energy, communication systems, etc.
The one-year course is split into 2 semesters in ISAE premises - lectures, integrated team project,
etc.-and 4-5 months of internship.
First semester: academic session of around 580h, provided by ISAE's permanent professors and
experts from industry bringing current knowledge and experience, including: lectures, tutorials,
industrial study cases. And 45h devoted to the coaching of the Integrated Team Project run all along
the semester.
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. The

ÉTABLISSEMENT(S)
ISAE - SUPAERO

LIEU(X) D'ENSEIGNEMENT
Toulouse

thesis is concluded by the preparation of a report and an oral dissertation in front of jury.

Career opportunities

For Open-minded students with open mind, who want to achieve systemic vision, who do like working in integrated team, who like challenges, who are convinced that we can have fun while working, this Master will offer huge job opportunities in Systems Engineering.

Systems Engineering is now a real and permanent concern for any business players, from Major Governmental contractors, to equipment manufacturers, to prime contractor integrating systems, and services companies such as Airlines for instance.

Parcours

Année 1

Semester 1

MS SEN ACADEMIC PART

- Liste d'éléments pédagogiques (Obligatoire)
  · Systems Engineering Introduction (SEI)
  · Project Management Introduction (PMI)
  · Project Technical Management (PTM)
  · Systems Engineering Data Technical Management (SEDTM)
  · Systems Modelling & Analysis (SMA)
  · Systems Dependability (SD) - Part 1
  · Systems Dependability (SD) - Part 2
  · Optimise, Decide, Justify, Verify & Validate (ODJVV)
  · Requirements Engineering (RE)
  · Systems Design and Architecture (SDA)
  · Integrated Logistic Support (ILS)
  · AIRBUS Study Case: Systems Engineering & Certification of the A350 (A350)
  · Systems Engineering of Space Systems (SeSS)
  · DASSAULT Study Case: Systems Engineering at Dassault aviation (DAV)
  · DGA Study Case: System of Systems (SoS)
  · Introduction to Verification & Validation (IVV)
  · Systems Engineering Methods and Tools (SEMT)
  · Introduction to Space System (ISS)

Integrated Team Project

- Liste d'éléments pédagogiques (Obligatoire)
  · Integrated Team Project SEN (ITP)

Semester 2

- Liste d'éléments pédagogiques (Obligatoire)
  · Professionnal thesis

Année 2

Semester 3

Condition d'accès

Selection and admission
Admission to ISAE's master at: http://admissionsmasters.isae-supaero.fr
Selection and admission are made by an admission committee: possible interviews can be organized if necessary
Deadlines for application: several admission committees scheduled from February to July, see schedule on our website: http://admissionsmasters.isae-supaero.fr
Language requirements :
TOEFL (Paper-based): 550, or TOEFL (IBT): 79, or TOEIC: 785, or IELTS: 6.5

Poursuite d'études

Engineering Systems

Perspectives professionnelles

Contact