Ecole Nationale
de l'Aviation Civile

MSC INTERNATIONAL AIR TRANSPORT SYSTEM ENGINEERING AND DESIGN

IN BRIEF

Type of diploma : Master of science degrees
Ministry field(s) : Science and Technology
Mention : Aéronautique et espace

Presentation

By integrating the MSc IATSED, you will receive a solid foundation of fundamental systems engineering knowledge with extensive experimentation in managing complex, multidisciplinary, advanced engineering projects thanks to the involvement of our industrial partners all along the master program: course definition, project monitoring, new technologies introduction, six-month thesis. You will gain valuable deeper insights to manage complex engineering systems and improve future processes in air transport. Based on interdisciplinary engineering approach, the MSc IATSED makes sure you will be familiarized with international engineering concepts by direct application of international INCOSE standards. IATSED professors maintains close ties with the INCOSE community.

MORE INFO

Level : Year 5 higher education – Master

Training Audience
* Full-time

Kind of education : Curriculum

Organization

Year 1

Semester 7

- *Basis 1 (Mandatory)*
  - AU4600E - SMAC (System modeling, analysis and control)
  - LV4601 - Culture and language - French
  - LV406E - Culture and Language - English
  - LV409 - Culture and Language - other language
  - RE4601E - Research : state of the art
- *Engineering Block1 (Mandatory)*
  - CS4600E - System engineering introduction
  - CS4602E - Technical management process
  - CS4604E - Technical process 1
  - CS4606E - Safety assurances
- *Software Block1 (Mandatory)*
  - IP4602E - Python Programming
  - IP4600E - SGBD
  - IW4601E - COO-UML
  - IW4602E - Open connected system

All information presented on this page are indicative and have no contractual value

- *Air Transport Block1 (Mandatory)*
  - EA4603E - Air transport
  - EA4604E - Airport
  - AT4601E - Air Traffic Management
  - RG4606E - Civil Aviation International Context
  - AV4601E - Aircraft
- *Project Call for tender (Mandatory)*
  - TX4900E - Project "Ice breaking"
  - TX4910E - Project "Dual Transport"

Semester 8

- *Basis 2 (Mandatory)*
  - EE4601E - Electrical engineering
  - AV4602E - Mechanical and material engineering
  - LV4602 - Language
  - LV410 - Culture and Language - other language
  - DD101E - Climate change days
- *Engineering Block2 (Mandatory)*
  - CS4608E - Cross cutting System engineering 1
  - RS4601E - Architecture & design definition
  - IS4601E - Information security management
- *Software Block2 (Mandatory)*
  - IP4608E - Object oriented programming
  - IP4610E - Data Science 1
  - IH4601E - Interactive Software Engineering
  - IP4620E - Robust programming
  - IS5602E - Secure programming
  - IS5605E - Cryptography
- *Air Transport Block2 (Mandatory)*
  - AT4604E - Civil Aviation International Context 2
  - AT4607E - Management of Airspace
  - AT4610E - Aircraft 2
- *Project Sub-system development (Mandatory)*
  - TX4920E - Project Sub-system development

Year 2

Semester 9

- *UE Basis 3 (Mandatory)*
  - LV5601 - Culture and Language - French
  - LV504E - Culture and Language - English
  - LV411 - Culture and Language - other language
  - CP5001E - Professional learning
  - EC5620E - Research : intellectual property
  - DD102E - Societal challenges (Masters)
- *UE Advanced Engineering (Mandatory)*
  - CS5600E - INCOSE Certification
  - RS5601E - Advanced system modelisation

All information presented on this page are indicative and have no contractual value

· CS5001E - Advanced safety
· IS5601E - Advanced security
· CS5610E - Enterprise Architecture
· SF5601E - Integrated logistic support
· DD5001E - Eco design

- *UE Advanced Software (Mandatory)*
· IP5605E - C++ Programming
· CS5007E - Formal methods based V&V 1
· CS5008E - Formal methods based V&V 2
· IP5005E - OOP oriented toward C++ certification
· IP5610E - Data Science 2
· IW5601E - Open connected system 2 - (Web services, Web programming, Internet of things)
· IW5602E - Web programming

- *UE Air Transport Block3 (Mandatory)*
· AT5601E - ATC Systems
· AT5605E - ATC Tools
· OP5610E - Airline
· AT5610E - The Way towards Trajectory Based Operation

- *UE Project (Mandatory)*
· TX5910E - Capstone Project

Semester 10

- *Final project (Mandatory)*
· TX5900 - End of study project

Organizational unit

ENAC - Ecole nationale de l'aviation civile

Places

Toulouse

Contacts

Responsable

Mme GIZARDIN Muriel
muriel.gizardin@enac.fr
Phone +33 5 62 17 44 12

MICHELET Karine
recrutement.masters@enac.fr
Phone +33 5 62 17 43 73

All information presented on this page are indicative and have no contractual value