

SCIENCES, INGÉNIERIE ET TECHNOLOGIES

Master Aerospace Systems - Navigation and Telecommunications

Aéronautique et espace



Niveau d'étude visé
BAC +5



Diplôme
Master (LMD)



Domaine(s) d'étude
Ingénierie des systèmes,
Systèmes embarqués,
Traitement du signal,
Réseaux -
Télécommunication



Accessible en
Formation initiale, VAE



Établissements
ENAC - Ecole nationale de l'aviation civile

Présentation

The Master of Science in GNSS, Global Navigation Satellite System, defines a satellite-based system that allows autonomous positioning and navigation of a suitably equipped user everywhere and at all times.

The Master of Science (MSc) in GNSS is a 2-year programme offering advanced education in Satellite-based Positioning and Space Telecommunications.

It aims at training students for the steadily growing GNSS industry.

This international enthusiasm is confirmed by the worldwide development of other global and regional satellite-based navigation systems in Europe, the USA, China, Russia, India and Japan, creating a strong need for experts in this field.

The objective of this MSc in GNSS is to provide students with advanced skills and knowledge in the field of GNSS and its related applications, in order to prepare them to enter the highly dynamic GNSS and GNSS-dependent industry. In addition, the students will have a grounding in telecommunications, as both fields are strongly complementary.

Objectifs

Global Navigation Satellite Systems (GNSSs) have gained a lot of worldwide attention due to a significant increase in applications using GPS for positioning and navigation (aeronautics, vehicular and pedestrian navigation, location-based services, etc).

Admission

Conditions d'admission

Pour candidater merci de cliquer [ici](#).

Et après...

Insertion professionnelle

Career opportunities :

Recent studies have shown that there will be a lack of graduate students to fill the open positions in the GNSS industry in the near future. This MSc in GNSS provides students with a head start in the evolving and growing market of satellite-based navigation and telecommunications.

Hence, graduate students can join:

- large companies,
- SMEs,
- national institutions,
- research laboratories.

Infos pratiques

Lieu(x)

📍 Toulouse

Programme

Année 1

Semestre 7

	Nature	CM	TD	TP	Crédits
MA414E - Theory of distributions for signal processing	UE				
MA405E - Probability/Statistics	UE				
MA406E - Stochastic Processes	UE				
MO404E - Electromagnetics	UE				
SP411E - Signal theory and signal processing	UE				
SP410E - Digital signal processing	UE				
SP408E - Analog filtering	UE				
AU408E - Linear servo loop system	UE				
NA402E - Introduction to GNSS and its evolutions	UE				
IP405E - Programming and C language	UE				
NA490E - PVT computation project	UE				
LV401 - Culture and Language - French	UE				
LV406E - Culture and Language - English	UE				

Semestre 8

	Nature	CM	TD	TP	Crédits
MO4006E - Antenna and propagation for GNSS	UE				
MO4004E - Propagation Channels Modeling	UE				
SV4010 - Surveillance Principles	UE				
SP4004E - Estimation/Detection	UE				
SP5004E - Kalman Filtering	UE				
AU409E - State Space Modeling, Analysis and Control	UE				
SP4006E - Digital communications	UE				
NA404E - GNSS for Civil Aviation	UE				

NA403E - Differential GNSS Methods	UE
NA406E - Inertial Sensors and Hybridization Techniques	UE
NA4007E - Astrodynamics	UE
NA491E - Applied project	UE
CP4005E - Course project - Market your Ideas	UE
CS406E - Introduction to System Engineering and Quality	UE
CS407E - Project Management	UE
LV402 - Culture and Language - French	UE
LV407E - Culture and Language - English	UE

Année 2

	Nature	CM	TD	TP	Crédits
TX5900 - Projet de fin d'études	UE				30

Semestre 9

	Nature	CM	TD	TP	Crédits
SP501E - Digital Receivers	UE				
SP503E - Array signal processing	UE				
SP502E - Parametric modeling	UE				
SP520E - Spread Spectrum Techniques	UE				
AV5002 - On-board systems	UE				
SP514E - Modern Channel Coding	UE				
SP513E - Classical Channel Coding	UE				
SP5007 - Spatial Technology	UE				
NA5020E - Future GNSS Signals	UE				
NA5021E - High Sensitive Receivers - Urban positioning	UE				
NA5022E - Alternative Positioning	UE				
NA5023E - Business in GNSS	UE				
NA5920E - Projet GPS L1 C/A Receiver	UE				
NA490E - Applied project	UE				
LV501 - Culture and Language - French	UE				

LV504E - Culture and Language - English

UE

SH5002E - Communicating effectively and managing conflicts

UE