

ÉCOLE DE L'AIR & DE L'ESPACE



SALON-DE-PROVENCE

FRENCH AIR AND SPACE
FORCE ACADEMY



ADVANCED MASTER® « Defense & Security in Space » (AM DefSiS) 2024-2025



ADVANCED MASTER®

« Defense & Security in Space » (AM DefSiS)

HIGH-LEVEL TRAINING FOR CIVILIAN AND MILITARY MANAGERS WHO NEED INTEGRATED VISION OF SPACE SYSTEM SECURITY IN THEIR ACTIVITIES.

OBJECTIVE

The use of space has been developing significantly for several years, whether in connection with daily applications (telecommunications, navigation & positioning, bank transfers, Earth observation, etc.) or within military operations. This strong growth is not without its own security issues.

The French Air and Space Force Academy, in partnership with the French Space Command (CDE), the French Space Agency CNES (Centre National d'Études Spatiales), and the French national aerospace research center ONERA (Office National d'Études et de Recherches Aérospatiales), offers you an Advanced Master® in Defense and Security in Space (AM DefSiS). This dual civilian and military high-level training (Advanced Master's Degree) will enable graduates to demonstrate sought-after expertise in the field of space and security.

THEY WILL TRAIN YOU

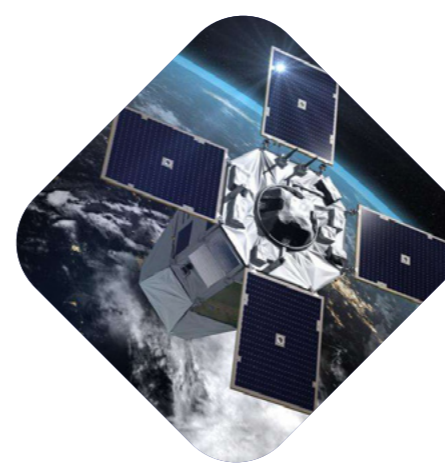
Supported by prestigious organizations, companies and start-ups, this training course is based on the expertise of numerous professionals:

- Professors and researchers of the French Air and Space Force Academy;
- Researchers, engineers and operational executives from partnerships such as CDE, CNES and ONERA;
- Military experts of French Space Command;
- Experts from industrial or academic partners.

They contribute to a dynamic program combining theoretical contributions, active and innovative teaching methods such as serious gaming, role-playing and simulation, as well as on the completion of a group project carried out throughout the course. The training is supplemented by visits to space operation centers and industrial sites.

TRAINING BENEFITS AND SKILLS

- Qualify a spatial situation, assess its criticality;
- Carry out a diagnosis of the criticality of a spatial situation;
- Analyse the space situation from available data to identify the criticality of situations and interpret abnormal behavior;
- Assess the risks and threats to the space system from its environment, whether physical, economic, legal or geopolitical;
- Integrate the security dimension in the design of missions and the use of civilian or military space systems;
- Implement a risk, vulnerability, and threat analysis of missions throughout the space system chain;
- Propose solutions as part of a defensive strategy;
- Advise and contribute to decision making in the civilian and politico-military spheres of space operations.



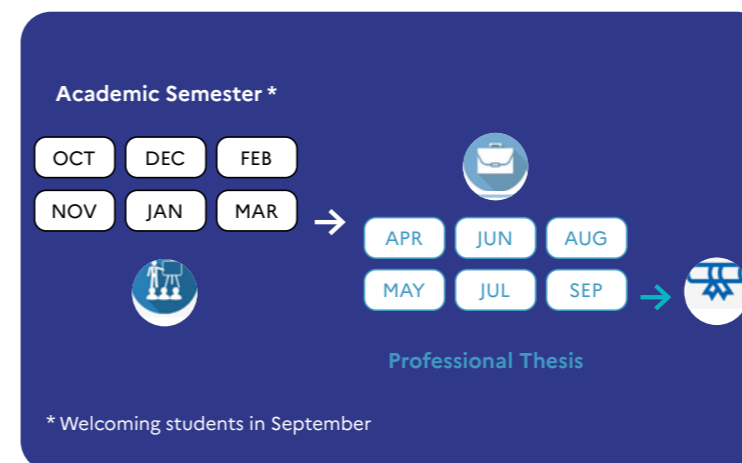
CAREER PROSPECTS

- ◆ Engineer manager/ Space program officer;
- ◆ R&D engineer;
- ◆ Manager/Officer in space system operation centre;
- ◆ Product manager in space applications;
- ◆ Chargé d'affaires in space security;
- ◆ Responsible for the security of space operations in state organizations, possibly in the Defense sector, international organizations, or even industrial organizations;
- ◆ Security manager for a fleet of space systems;
- ◆ Analyst in geopolitics of space in state organizations, possibly in the Defense sector, international organizations, or even industrial organizations;
- ◆ Consulting firm expertise: audit, consulting, trainer in the space and defense fields.

TRAINING SCHEDULE

Seven units with more than 460 hours given in English.

It is followed by a four to six-month mission in the private sector which concludes the program.



UNITS

UNIT 1: Understanding a space system

5 ECTS – 50 H

- ✓ Space mechanics;
- ✓ Space systems;
- ✓ Workshop : synthesis.

UNIT 2: Space program & Risk Management

4 ECTS – 45 H

- ✓ Defining a space program;
- ✓ Introduction to Risk Management;
- ✓ New New Space, Next Space : strategies, opportunities and threats.

UNIT 3: Civilian and military space applications

5 ECTS - 50H

- ✓ Civilian and military space applications;
- ✓ Space exploration and prospective aspects.

UNIT 4 : Space law and regulations

4 ECTS - 45H

- ✓ Legal and normative framework of space activities;
- ✓ National and international institutions and cooperation;
- ✓ Space Traffic Management;
- ✓ Weaponization of space.

UNIT 5 : Geopolitics and space strategies

7 ECTS - 76H

- ✓ Military space history;
- ✓ Geopolitics of space;
- ✓ Space strategy, doctrines and concepts.

UNIT 6 : Security of space systems

7 ECTS - 78H

- ✓ Security and space environment;
- ✓ Space surveillance;
- ✓ Means of action in space;
- ✓ Human factors;
- ✓ Cybersecurity of space systems;
- ✓ Research and innovation;
- ✓ Space security synthesis.

UNIT 7 : Crisis management and decision making process

4 ECTS - 33H

- ✓ Crisis management elements;
- ✓ Synthesis: Serious Game.

Research Project

8 ECTS – 80 H

Lecture series with exceptional guests

1 ECTS – 10 H

- ✓ French Space Agency CNES CEO
- ✓ ESA Security Director
- ✓ European Union diplomat
- ✓ General Controller of the French Armed Forces
- ✓ Former French Space Commander

Professional thesis associated with company mission





30 ECTS – 6 month

ADMISSION REQUIREMENT

You can apply if you hold:

- ✓ a Master degree in engineering (CTI list) or management (CEFDG list);
- ✓ a Master degree or equivalent (DEA, DESS...) or professional degree of the same level;
- ✓ a M1 degree or equivalent with at least 3 years of professional experience;
- ✓ a degree registered in the RNCP level 7;
- ✓ an international degree equivalent to the aforementioned degrees.

REQUIRED LEVEL OF ENGLISH PROFICIENCY

TOEFL (paper-based)	TOEFL (IBT)	TOEIC	PLS
			
567	87	785	3333

(Standardized Linguistic Profile)

WHO CAN APPLY

Training opened to French and International audience

If you are:

- ✓ Young graduate;
- ✓ Manager/executive of the European space industry;
- ✓ French Armed Forces officer (all services, all specialities) called to serve in the military space domain;
- ✓ European and Allied armed forces officer;
- ✓ French Armed forces Ministry civilian manager/executive, French or European government service manager/executive.

Do not hesitate to contact us for more information.

3 application submission sessions between April and July 2024

Starting in September 2024!

Advanced Master Web link



TRAINING LEADER

Antoine CIBORSKI
Guillaume FRAYSSE

CONTACT US

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THEY SUPPORT US



SUIVEZ-NOUS



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<https://www.ecole-air-espace.fr>



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