TOULOUSE SCHOOL OF AVIATION
AND AEROSPACE ENGINEERING

TSAAE

BY ENAC & ISAE-SUPAERO

TOULOUSE SCHOOL OF AVIATION AND AEROSPACE ENGINEERING



TSAAE, a World Leader in Aviation & Aerospace Engineering Higher Education

In Toulouse, we unite top talent, cutting-edge expertise, and bold innovation to drive the future of air transportation and civil & military aerospace engineering.

by

RÉPUBLIQUE FRANÇAISE
Liberté
Égalité
Fraternité

ENAC

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

A UNIQUE PORTFOLIO OF WORLD-CLASS PROGRAMMES POWERED BY TWO LEADING ENGINEERING SCHOOLS IN TOULOUSE

Creation: July 2025
Founders: French public establishments ISAE-SUPAERO (1909) and ENAC (1949)

MAIN OBJECTIVES:

- To offer a world-class, globally recognised academic portfolio, aligned with industry needs, empowering tomorrow's experts and innovators.

600 + students
+ 60 % international students

- To build a joint research laboratory that fosters scientific knowledge and amplifies the reach and relevance of research designed to meet the sector's most critical challenges.

4 research teams
280 faculty members
330 PhD students

- To strengthen innovation and entrepreneurship support systems through a joint incubator, fostering project development and high-impact startup creation.

WHY CHOOSE TSAAE FOR YOUR STUDIES IN AVIATION & AEROSPACE ENGINEERING?

INTERNATIONAL EXPERIENCE
Immerse yourself in an international experience in Toulouse, the European aerospace capital, alongside students, professors, and industry experts from around the globe.

PROFESSIONAL AND ALUMNI NETWORK
Tap into the ISAE-SUPAERO & ENAC alumni network of 60,000 graduates worldwide and leverage our strong partnerships with leading aerospace companies and civil aviation authorities.

EXCITING CAREER PROSPECTS
Take on high-level responsibilities in the industry with the support of our Career Center. Our dedicated team plays a crucial role in helping students leverage their skills and prepare for a successful career. From workshops to prepare your interviews to recruitment forums, we provide comprehensive resources to set you up for success.

EXPERTISE
Learn from leading professionals and academics to refine your skills in aviation, aeronautics, space, innovation, project management, complex systems, AI, and digital technologies.

INNOVATION
Broaden your expertise in cutting-edge technology and innovation, central to the core of TSAAE's courses.

RESEARCH
Take advantage of our joint research laboratory, with departments covering a wide range of multi-disciplinary topics in aviation and aerospace engineering.

VISIT OUR WEBSITES

TSAAE | ENAC | ISAE-SUPAERO



MAIN RECRUITERS

AIRBUS · SAFRAN · DASSAULT AVIATION · LIEBHERR · AIRFRANCE · Civil Aviation Authority · THALES · Collins Aerospace · Capgemini engineering · arianespace · PARIS AÉROPORT

MASTER'S DEGREES **

Scholarship opportunities available*

Fully taught in English

2-year programmes Applicants must hold a Bachelor's degree or equivalent *

AERONAUTICS & SPACE

AEROSPACE ENGINEERING (MAE)
BY ISAE-SUPAERO

Objectives

- Build strong scientific and technical expertise across the core disciplines of aerospace engineering to prepare students for high-level industry roles.
- Develop an interdisciplinary mindset for designing, analysing, and delivering complex aerospace systems and products.
- Strengthen teamwork, communication, and adaptability to thrive in innovative multicultural engineering environments.

Contents

- A solid multidisciplinary grounding in engineering, complemented by project management and language training.
- Seven advanced fields spanning:
  - Advanced Aerodynamics & Propulsion,
  - Space Systems,
  - Satellite Applications & NewSpace,
  - Embedded Systems,
  - Systems & Control,
  - Aerospace Structures,
  - Systems Engineering.

Career Opportunities

Pursue advanced roles in aerospace and space engineering: aircraft and spacecraft design, aerodynamics, propulsion, flight performance, systems engineering and integration, flight testing and certification, embedded systems and avionics, space systems, satellite applications, and NewSpace activities. Contribute to R&D within leading aerospace organisations and advance towards doctoral studies at top research institutions, combining strong technical expertise with an international, innovation-driven outlook and professional readiness.

AEROSPACE SYSTEM NAVIGATION AND TELECOMMUNICATION (AS-NAT)
BY ENAC

Objectives

- Provide students with advanced skills and knowledge in GNSS and its related applications to prepare them for GNSS-dependent industry.
- Offer complementary training in telecommunications to strengthen expertise in both fields.
- Enable graduates to participate in industrial projects related to aeronautical telecommunication and geolocalisation, or to pursue further research such as a PhD.

Contents

- Fundamentals of mathematics, signal processing and electromagnetics, GNSS, language and human sciences, telecommunications.

Career Opportunities

This Master's degree in GNSS provides students with a head start in the evolving and growing market of satellite-based navigation and telecommunications. Graduates can work in large companies, SMEs, national institutions, research laboratories.

AIR TRANSPORT

INTERNATIONAL AIR TRANSPORT SYSTEM ENGINEERING AND DESIGN (IATSED)
BY ENAC

Objectives

- Acquire strong knowledge of current trends in Air Transport Systems (ATS).
- Learn in-depth software programming relevant to ATS.
- Gain training in fundamental systems engineering and hands-on experience managing complex, multidisciplinary engineering projects, aligned with international INCOSE standards.

Contents

- Engineering, software, air transport, project.

Career Opportunities

Main recruitment areas are: aircraft manufacturers, ANSP (Air Navigation Services Providers) Civil Aviation Authorities, Prime contractors, Consulting companies. By graduation you can be recruited as a technical systems engineer, technical project manager, software designer and developer, data scientist.

INTERNATIONAL AIR TRANSPORT OPERATIONS MANAGEMENT (IATOM)
BY ENAC

Objectives

- Provide technical and management expertise for future managers in international aeronautical companies.
- Deliver in-depth knowledge in aeronautical engineering, project management, IT tools, and aircraft operations/environment.
- Prepare graduates to meet industry demands by offering specialisation options in either certification, airworthiness, and safety or economics, strategy, and aircraft environment.

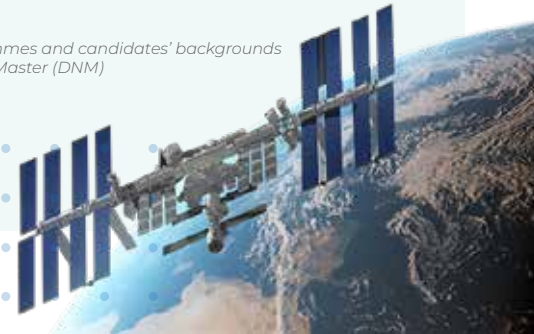
Contents

- Theoretical flight fundamentals, aircraft fundamentals, mathematics tools, aircraft design and operations, aircraft airworthiness, aircraft environment, minor in strategy or in airworthiness.

Career Opportunities

The four main sectors of recruitment are Aircraft manufacturers, Civil Aviation Authorities, Airlines, Airports. By graduation you can work at junior management position as flight operations engineer, aircraft performance engineer, airport consultant, maintenance manager, continued airworthiness manager, revenue management engineer, marketing manager...

** depending on programmes and candidates' backgrounds*
*** Diplôme National de Master (DNM)*



ADVANCED MASTERS ***

Scholarship opportunities available*

Fully taught in English

1-year programmes Applicants must hold either a Master's degree with or without professional experience or a Bachelor's degree with at least 3 years of professional experience or equivalent*

AVIATION & AERONAUTICAL ENGINEERING

AIRPORT MANAGEMENT (AM)
BY ENAC

Objectives

- **Prepare** future airport management professionals to tackle the challenges of the aviation sector.
- **Play** a key role in day-to-day airport operations, managing complex situations.
- **Take** on challenges such as business development, operational optimisation, and partnerships with airlines.
- **Empower** future leaders to thrive in a dynamic and evolving environment.

Contents

- **Aircraft** and air transport system, airport master plan and design, airport operations management, airport business management.

Career Opportunities

Positions for middle-management and top-management roles in: airport operation companies (running regional or international airports worldwide...), airport-oriented consultants and engineering firms (civil engineering, architects and consultants in PPP, finance, airport-oriented service providers: IT and systems, ground handling, special equipment, aviation representatives (airlines, business aviation companies) and institutions, civil aviation authorities in their respective countries.

SAFETY MANAGEMENT IN AVIATION (SMA)(1)
BY ENAC

Objectives

- Develop a safety management strategy tailored to the challenges of air transport.
- Manage safety risks effectively within the air transport system.
- Drive performance improvements to enhance overall air transport system safety.
- Lead safety improvement projects to ensure continuous progress in air transport safety.

Contents

- Context, safety culture, cross-domain methods, safety management by domain, safety at state level, safety synthesis.

Career Opportunities

The programme is designed for current or future Safety Managers in charge of the development, deployment, or improvement of Safety in organisations of the Air Transport System. In Civil Aviation Authorities: Safety Officer or Manager, Safety Performance Manager, Safety Audit Responsible, SSP (State Safety Programme) Manager. In industry and operators: Safety Director or Manager, SMS (Safety Management System) Manager, Safety Risks Manager, Safety Analysis Manager.

SUSTAINABLE AVIATION (SA)
BY ISAE-SUPAERO & ENAC

100 % ONLINE
Learn Anytime, Anywhere !

Objectives

- **Assess** the environmental impacts (climate, resources, biodiversity) of aviation products and services.
- **Design** technical solutions and robust business models to improve the sustainability of a product or a service.
- **Develop** a multidisciplinary and systemic overview, adapted to a complex environment.
- **Plan** policy-relevant strategies and lead the implementation of innovative solutions within the organisations.

Contents

- Aviation and its interactions with the environment (climate, resources such as energy, metals, etc.), complex and multi-disciplinary systems, eco-design of products and services, low-carbon energy carriers (including sustainable aviation fuels and hydrogen), certification of innovations and digital technologies.

Career Opportunities

Cover the entire aviation and aerospace sector (engineering, operations, maintenance, air traffic management, and sustainability). Graduates work for airlines, airports, manufacturers, service providers, consulting firms, and regulatory authorities. Roles range from engineering and project management to operational leadership, focused on sustainable aviation.

AIR TRANSPORT MANAGEMENT (MTA)
BY ENAC

In Partnership with TBS Education

Objectives

- Provide a systematic approach to air transport by analysing economic, operational, marketing, and financial aspects.
- Train high-level specialists capable of addressing the strategic needs of the aviation sector.
- Develop a strategic vision and management skills to drive change in a rapidly evolving environment.
- Understand global competition, complex financial challenges, and security and safety issues in the air transport sector.
- Prepare for a career in a dynamic sector, including airlines and airport infrastructures.

Contents

- Air transport system, air transport economics and management, air transport operations, air transport business.

Career Opportunities

Positions as: market studies officer, management controller, operational research engineer, line manager, consultant.

(1) RNCP-certified qualification n°38995
EQF level 7 - Professional Qualification - Safety Manager in Air Transport System

*** Mastère Spécialisé® - label of Conférence des Grandes Ecoles CGE
* depending on programmes and candidates backgrounds

CONFÉRENCE DES GRANDES ÉCOLES

AVIATION & AERONAUTICAL ENGINEERING

In Partnership with Ecole de l'Air et de l'Espace

AERONAUTICAL MAINTENANCE AND SUPPORT-ENGINEERING & MANAGEMENT(AMS-EM)

BY ISAE-SUPAERO

Objectives

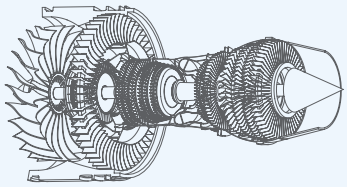
- Prepare participants to face the competitive and fast changing MRO business within the international regulatory framework.
- Expose participants to the latest techniques and methods, regulation and standards applied in the aviation industry.
- Help participants acquire a wide range of knowledge from engineering fundamentals to maintenance organisation management.

Contents

- Aircraft general familiarization- Maintenance and Support in Aircraft Design - Maintenance & health management analysis & modelling maintenance execution & management- airworthiness, safety and human factors - Support & services.

Career Opportunities

Management position in aircraft manufacturers, airlines, and MRO organisations in civil or military sectors.



AVIATION SAFETY: AIRCRAFT AIRWORTHINESS (ASAA)[2]

BY ENAC & ISAE-SUPAERO

Objectives

- Give future managers a broad knowledge of airworthiness priorities and issues, with a focus on air transport safety, from design to operations, in an international environment.
- Cover both the technical and regulatory aspects of certification and in particular manage an aircraft certification programme.
- Determine the compliance of an aircraft and its systems for certification.
- Define a certification strategy for aircraft and innovative technologies.
- Ensure continued airworthiness and manage follow-up for aircraft maintenance.

Contents

- Management of aircraft and certification programme, aircraft and systems certification, continued and continuing airworthiness.

Career Opportunities

Certification or airworthiness engineer positions and a wide range of job opportunities within civil or military aircraft - engines - systems manufacturers, suppliers, airlines and aviation safety authorities.

(2) RNCP-certified qualification n°39574
EQF level 7 - Professional Qualification - Airworthiness & Certification Engineer

AEROSPACE ENGINEERING

SPACE APPLICATIONS & SERVICES (SPAPS)

BY ISAE-SUPAERO

AIRBUS
In partnership with AIRBUS Defense and Space

Objectives

- Provide students with the technical knowledge required for telecommunications, Earth observation or positioning services.
- Enable students to identify the specific constraints of satellite deployment and the key elements of the value chain and business model.
- Provide students with a broad understanding of space systems to enable them to analyse client needs and design new services.

Contents

- Space systems - Digital Techniques - Earth observation - Navigation and Positioning - Space Communications - Space economics, regulations & services, tutored project.

Career Opportunities

Jobs related to cross disciplinary use of space data in complex information systems: consulting jobs to identify and define requirements, and implement application solutions using satellites, jobs related to NewSpace challenges.

SPACE SYSTEMS ENGINEERING (TAS ASTRO)

BY ISAE-SUPAERO

Objectives

- Provide high level inter-disciplinary training in space science, space systems engineering and space project management.
- Acquire and develop technical skills specific to space systems design.
- Understand the international, economic and legal aspects of space programmes.

Contents

- Missions & systems - Space programmes - sub-systems: satellites & launchers - SEEDS optional pathway (space exploration).

Career Opportunities

Research and design engineers in space industry, agencies or laboratories, leading to system or management position of various space applications programmes (Earth Observation, Telecommunications, Navigation, Science, Human Spaceflight...).

AEROSPACE ENGINEERING

AERONAUTICAL ENGINEERING (TAS AERO)

BY ISAE-SUPAERO

Objectives

- Develop a high level of skills in engineering science, neuro-ergonomics for human factors, current technologies, design and management of aeronautical systems, or flight test methodologies.

Contents

- Structures and materials - Flight physics - Avionics and systems - Major Flight Test engineering FTE OR Major Aircraft Design Engineering ADE.

Career Opportunities

Job research engineer positions, test engineer or design engineer, consultant Sector: Aerospace industry worldwide.

HELICOPTER, AIRCRAFT & DRONE ARCHITECTURE (HADA)

AIRBUS

In partnership with AIRBUS Helicopters

BY ISAE-SUPAERO

Objectives

- Acquire the basic skills required for aeronautical engineers (architecture, certification and structures) and specific skills to identify problems, generate alternatives, choose and implement solutions on aircraft, helicopters and drones.
- Get comprehensive training from systems to structures through aerodynamics, flight dynamics and certification while encouraging and taking into account the diversity of the profiles of the selected students.

Contents

- Aircraft structures, Aircraft architecture and Certification Fixed-wing Aircraft - Helicopter Drone.

Career Opportunities

Job opportunities in design, certification and operations of civil and military aircraft, drones and helicopters in France and abroad.

SYSTÈMES DE PROPULSION AÉROSPATIALE (SPA)

BY ISAE-SUPAERO

Objectives

- Train propulsion engineers, able to design and operate gas turbines, specialized in internal aerodynamics, with a multidisciplinary knowledge of propulsion systems.
- Provide with expert knowledge in energetics, fluid dynamics and aerothermodynamics applied to propulsion systems.

Contents

- Overall architecture of propulsion systems, Internal aerodynamics, Project.

Career Opportunities

Engineer positions with aerospace engine manufacturers in design, research and development, and testing facilities. Possibility to pursue a PhD.

SYSTEMS ENGINEERING (SEN)[3]

work & study

BY ISAE-SUPAERO

Objectives

- Provide the international aerospace industry with skilled professionals equipped to specify, to design, to deploy and maintain complex systems.
- Develop a system approach with the capacity to federate and manage various, interwoven and complementary activities.
- Prepare systems engineers to work in various industrial sectors including space, aeronautics, air traffic control, land transport systems, etc.

Contents

- Systems Engineering - Systems Modelling and Analysis – Systems Engineering Data Technical Management - Human Factors - Systems Dependability - Systems Performance Assessments & Management - Systems Design and Architecture - ILS.

Career Opportunities

Jobs in Engineering Systems Team within industries in different economic sectors, either in major companies or consulting companies in aircraft, ships, military and defense systems, automotive or other industries developing and producing smaller high technology products (cameras, mobile phones, printers, computers, etc.).

AERONAUTICAL & SPACE STRUCTURES (AES)

BY ISAE-SUPAERO

Objectives

- Ensure that participants to acquire an in-depth and multi-disciplinary culture in mechanical engineering as applied to structures.
- Train specialists in design, optimisation and certification of structures.
- Provide expert knowledge in modelling & simulation methods for aircraft and spacecraft structure analysis.

Contents

- Aerospace structures: methods & tools for engineering & dynamics - Aerospace systems architecture - Aerospace structures: dynamics & physics- Aerospace programs & technologies, Team Innovative Management for Evolved Strategies.

Career Opportunities

Associate professional in the context of systems design and integration, manufacturing Process Optimisation, systems architect, change leader, in major aerospace companies.

(3) RNCP-certified qualification n°41130
EQF Level 7 - Architect Manager in Systems Engineering



AEROSPACE ENGINEERING

In partnership with Toulouse INP N7

EMBEDDED SYSTEMS (EMS)

BY ISAE-SUPAERO

Objectives

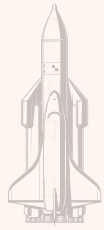
- Prepare embedded systems experts with both system level and functional level design skills.
- Develop a system approach through integrated projects to master methods & tools used in aeronautics, space and the automotive sector.

Contents

- Embedded Systems core - Energy - Networks - Embedded Systems design - Embedded Systems applications.

Career Opportunities

Employment as designer, developer, research engineer including project manager in design and development of innovative embedded systems.



DIGITAL

In partnership with TBS EDUCATION, IRT St Exupery, MIDISUP

ARTIFICIAL INTELLIGENCE & BUSINESS TRANSFORMATION (AIBT)(4)

BY ISAE-SUPAERO

work & study

Objectives

- Design and lead AI and data-driven project.
- Define and implement AI and data strategies.
- Industrialise and ensure the reliability of data infrastructures and AI processes.

Contents

- Project Management - Artificial Intelligence Internals - Business Aspects of Artificial Intelligence - Hands-on practice.

Career Opportunities

Data Evangelist, Project manager in Artificial Intelligence, Manager of data engineers, data analysts, data miners and data scientists...

(4) RNCP-certified qualification n°40551
EQF level 7 - Professional Qualification - Project Manager in Artificial Intelligence & Data Sciences

PROJECT MANAGEMENT, INNOVATION & ENTREPRENEURSHIP

Scholarships in partnership with Safran are offered for this sole programme.

In partnership with Ecole de l'Air et de l'Espace

INNOVATION, ENTREPRENEURSHIP & MANAGEMENT (IEM)

BY ISAE-SUPAERO

Options

- Drive innovation in the Aeronautics, Space & Defense industry.
- Lead innovation and organisational transformation engagements for clients.

Objectives

- Develop an innovation and entrepreneurial spirit.
- Train for technological project management (from the origin of the project to its commercialisation), with new methods of management on innovative projects with an "Intrapreneurial" spirit.

Contents

- Large range of new technologies (such aircraft disciplines as propulsion or structure - additive manufacturing, machine learning & artificial Intelligence, big data...) - project management tools & methods, economics & finance - entrepreneurship - innovative project...

Career Opportunities

Startup founder, head of innovative project, head of innovative and technological development (CTO in charge of technical innovation and technologies deployment), Consultant in Innovation and business transformation.

AEROSPACE PROJECT MANAGEMENT (APM)

BY ENAC & ISAE-SUPAERO

Objectives

- Prepare participants for an international project management career in the global aerospace and defense industry.
- Develop the latest management skills and knowledge and skills to lead international project teams.

Contents

- Overall overview of aerospace industry - Methodology - Economic and financial aspects - Knowledge management in multicultural team project.

Career Opportunities

Head of Aerospace programme team, in charge of designing and managing complex projects overseeing costs and risks with Aerospace companies or in defense institutions.



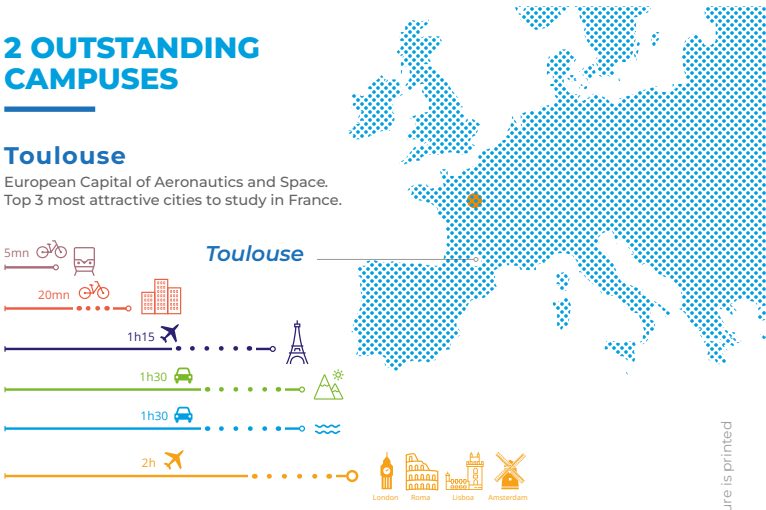


MAKE THE MOST OF YOUR EXPERIENCE IN TOULOUSE

2 OUTSTANDING CAMPUSES

Toulouse

European Capital of Aeronautics and Space.
Top 3 most attractive cities to study in France.



ONLINE APPLICATION DOCUMENTS

- Curriculum vitæ
- Motivation letter
- Copy of the highest diploma or certificate of enrollment
- Transcript for the last 2 or 3 years of studies
- 2 letters of recommendation
- Valid English certification with minimum score:
  - TOEFL iBT (87 - 4,5 on the new scoring scale)
  - TOEIC Listening & Reading (850)
  - TOEIC Listening, Speaking, Reading & Writing (785)
  - IELTS Academic (6)
  - CAE/FCE Cambridge (170)
  - Linguaskill Listening, Speaking, Reading & Writing (170)
  - Linguaskill Listening and Reading (180+)

All applicants must provide an English language certificate, including those who have completed their studies in English. Candidates of Australian, Canadian, Irish, New Zealand, South African, British and American nationalities are exempted.

Application fees: 100€

ONLINE APPLICATIONS:
https://candidatures.tsaae.fr

FURTHER DETAILS:
https://www.tsaae.fr

Our campuses are accessible to individuals with disabilities.

An exceptional environment in the heart of Toulouse
State-of-the-art teaching and research facilities.
A full range of sports facilities : swimming pool, gymnasium, climbing wall, fitness centre, football and rugby fields, tennis courts, squash courts, etc.
Student accommodation, lively Student centres, on-site canteens and comprehensive medical services.

SELECTION AND ADMISSION

From October to July
Check the calendar on the website - In order to secure your seat in the programme, apply during the first admission sessions.

YOUR CONTACTS

e-mail: info-programmes@tsaae.fr

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  (+33)(0)5 62 17 43 73
- **For ISAE-SUPAERO Advanced Masters:**
  (+33)(0)5 61 33 80 25
  (+33)(0)5 61 33 83 91 (For professionals)
- **For ISAE-SUPAERO Master's degree:**
  (+33)(0)5 61 33 80 55

TOUL BOX

A student welcome kit to make life easier right from day one: formalities, setting up a bank account, housing, language courses, cultural activities-find out all you need to know and get started right away!

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