

Master's degree in Space and Aeronautical Engineering

The **master's degree in Space and Aeronautical Engineering** is aimed at graduates in aerospace engineering or related physical sciences and engineering who wish to improve their skills and knowledge. It provides advanced training in the field of space systems and aeronautical engineering that is scientific, technical and practical in nature and will allow students to work towards a professional and/or research career in the aerospace industry. The master's degree is aimed graduates who will go on to seek employment in the aerospace industry or to pursue a research career in this field.

GENERAL DETAILS

Duration and start date

One academic year, 60 ECTS credits. Starting September

Timetable and delivery

Mornings and afternoons. Face-to-face

Fees and grants

Approximate fees for the master's degree, excluding degree certificate fee, €3,267 (€4,900 for non-EU residents).

[More information about fees and payment options](#)

[More information about grants and loans](#)

Language of instruction

English

Location

[Terrassa School of Industrial, Aerospace and Audiovisual Engineering \(ESEIAAT\)](#)

Official degree

[Recorded in the Ministry of Education's degree register](#)

ADMISSION

General requirements

[Academic requirements for admission to master's degrees](#)

Places

20

Pre-enrolment

Pre-enrolment period open.

[How to pre-enrol](#)

Enrolment

[How to enrol](#)

Legalisation of foreign documents

All documents issued in non-EU countries must be [legalised and bear the corresponding apostille](#).

PROFESSIONAL OPPORTUNITIES

Professional opportunities

The master's degree allows students to plan their training and to focus their professional careers in the aerospace industry on areas such as space missions, space propulsion, aircraft propulsion, aircraft design, aircraft maintenance,

fluid mechanics, materials research, airport infrastructure , air traffic management, wind energy, aerodynamics, civil engineering aerodynamics, automotive engineering and the design and civil applications of UAVs.

The training graduates receive will enable them to join R&D departments in the aerospace industry and related industries.

Competencies

Generic competencies

Generic competencies are the skills that graduates acquire regardless of the specific course or field of study. The generic competencies established by the UPC are capacity for innovation and entrepreneurship, sustainability and social commitment, knowledge of a foreign language (preferably English), teamwork and proper use of information resources.

Specific competencies

- The ability to manage activities that involve projects and/or operations in which technology and organisation have interacted effectively and efficiently.
- The ability to plan, organise and control projects in the aerospace industry, especially innovation (R&D) and process improvement projects.
- The ability to develop and submit a research proposal according to the criteria of the international scientific community.
- The ability to analyse and synthesise cross-disciplinary aerospace knowledge applied to aeronautical projects.
- The ability to use knowledge of applied computational fluid mechanics appropriately in solving compressible aerodynamics problems.
- The ability to identify the laws of aerodynamics with regard to external flow and flight regimes and apply them in numerical and experimental aerodynamics.
- The ability to apply knowledge appropriately in processing large quantities of results of numerical calculations applied to analysis and design of aeroelasticity and aerodynamics.
- The ability to apply knowledge appropriately in the areas of advanced aerodynamics and aeroelasticity applied to analysis and design of aerospace structures.
- The ability to write a master's thesis and present and defend it to an examination committee.

ORGANISATION

UPC school

[Terrassa School of Industrial, Aerospace and Audiovisual Engineering \(ESEIAAT\)](#)

Academic coordinator

[Miquel Sureda Anfres](#)

Academic calendar

[General academic calendar for bachelor's, master's and doctoral degrees courses](#)

Academic regulations

[Academic regulations for master's degree courses at the UPC](#)

CURRICULUM