

Bachelor's degree in Satellite Engineering

The **bachelor's degree in Satellite Engineering** aims to provide comprehensive training in the knowledge, skills and competencies needed in the space sector, including the design and control of the systems that make up a space vehicle, communications with Earth and between satellites, data transmission and processing, and satellite data services and applications.

This bachelor's degree has the support of the Generalitat de Catalunya in the framework of the **NewSpace Strategy of Catalonia**, which incorporates technological, social and business actions aimed at promoting the Catalan space sector. The use of smaller and cheaper satellites allows more agents, both public and private, to use space services for vertical and transversal applications in various productive sectors. Some of these applications are land observation and management; analysis and decision making in infrastructure, agriculture and in the face of climate hazards; and the extension of coverage for Internet of Things (IoT), 5G and 6G communications. This new ecosystem will attract other technologies, such as 3D printing, artificial intelligence, advanced electronics and next-generation mobile communications.

GENERAL DETAILS

Duration

4 years

Study load

240 ECTS credits (including the bachelor's thesis). One credit is equivalent to a study load of 25-30 hours.

Delivery

Face-to-face

Language of instruction

Information on [language use in the classroom and students' language rights](#).

Fees and grants

Approximate fees per academic year: €1,107 (€2,553 for non-EU residents). [Consult the public fees system based on income \(grants and payment options\)](#).

Location

[Castelldefels School of Telecommunications and Aerospace Engineering \(EETAC\)](#)

ADMISSION

Places

40

Registration and enrolment

[What are the requirements to enrol in a bachelor's degree course?](#)

Legalisation of foreign documents

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

PROFESSIONAL OPPORTUNITIES

Professional opportunities

- Design, manufacture and testing of satellites for the corporate sector and government agencies.
- Development and maintenance of satellite communication systems in companies in the ICT sector.
- R&D involving space technologies and satellite systems.
- Aerospace organisations and agencies.

- Collection and processing of satellite data for applications in fields such as cartography, meteorology, environmental studies, infrastructure, agriculture, disaster management and defence.
- Satellite software and payload engineering.

ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

Academic calendar

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

Academic regulations

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

Language certification and credit recognition

Queries about [language courses and certification](#)

Castelldefels School of Telecommunications and Aerospace Engineering (EETAC)

CURRICULUM

Subjects	ECTS credits	Type
FIRST SEMESTER		
Algebra	6	Compulsory
Calculus	6	Compulsory
Computer's Science	6	Compulsory
Introduction in Space	6	Compulsory
Physics	6	Compulsory
SECOND SEMESTER		
Advanced Mathematics	6	Compulsory
Chemistry	6	Compulsory
Classic Mechanics	6	Compulsory
Electrical and Electronic Systems	6	Compulsory
Signals and Systems	6	Compulsory