

# Master's degree in Aerospace Engineering

The **master's degree in Aerospace Engineering** ([master's degree website](#)) aims to provide multidisciplinary training in science and technology based on a broad approach to aeronautical engineering.

## Specialisations

- Aerospace Vehicles
- Airports
- Propulsion
- Space

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## GENERAL DETAILS

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### Duration and start date

Two academic years, 120 ECTS credits. Starting September and February

### Timetable and delivery

Mornings and afternoons. Face-to-face

### Fees and grants

Approximate fees for the master's degree, excluding other costs, €3,320 (€4,980 for non-EU residents).

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

[More information about grants and loans](#)

### Language of instruction

The first year is taught in Catalan; the second year in English.

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

### Location

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

### Official degree

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

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## ADMISSION

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### General requirements

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

### Places

60 in September + 60 in February

### Pre-enrolment

Pre-enrolment period open.

Expected deadline: 10/12/2021.

[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](#).

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### DOUBLE-DEGREE AGREEMENTS

#### Double-degree pathways at a single school

- Master's degree in Aeronautical Engineering (any specialisation) (ESEIAAT) / Master's degree in Management Engineering (blended learning)

Further information on [this website](#)

#### With other Catalan universities

- Bachelor's degree in Aerospace Technology Engineering / Aerospace Vehicle + Master's degree in Aeronautical Engineering + Bachelor's degree in Business Administration and Management (UOC)
- Bachelor's degree in Aerospace Technology Engineering / Aerospace Vehicle + Master's degree in Aeronautical Engineering + Bachelor's degree in Economics (UOC)

#### Double-degree pathways with universities around the world

- Master's degree in Aeronautics Engineering + one of the following master's degrees from the Cranfield University
  - *Master in Advanced Motorsport Engineering*
  - *Master in Aerospace Computational Engineering*
  - *Master in Aerospace Dynamics*
  - *Master in Aerospace Manufacturing*
  - *Master in Aerospace Materials*
  - *Master in Aerospace Propulsion*
  - *Master in Aerospace Vehicle Design*
  - *Master in Air Transport Management*
  - *Master in Aircraft Design option-Msc in Aerospace Vehicle Design*
  - *Master in Aircraft Engineering*
  - *Master in Airport Planning and Management*
  - *Master in Astronautics and Space Engineering*
  - *Master in Automotive Engineering*
  - *Master in Automotive Mechatronics*
  - *Master in Autonomous Vehicle Dynamics and Control*
  - *Master in Avionic Systems Design option MSc in Aerospace Vehicle Design*
  - *Master in Computational Fluid Dynamics*
  - *Master in Computer Aided Engineering*
  - *Master in Renewable Energy Engineering*
  - *Master in Renewable Energy Technology*
  - *Master in Structural Design option-Msc in Aerospace Vehicle Design*
  - *Master in Thermal Power*

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### ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

#### UPC school

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

#### Academic coordinator

[Daniel Garcia Almiñana](#)

#### 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](#)

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### CURRICULUM

Subjects	ECTS credits	Type
<b>FIRST SEMESTER</b>		
Lean Management and Aeronautical Maintenance	6	Optional

Subjects	ECTS credits	Type
Aerodynamics, Flight Mechanics and Orbital Mechanics	7.5	Compulsory
Aerospace Materials	5	Compulsory
Airport Engineering Fundamentals	3	Optional
Design and Behavior of Special Structures	3	Optional
Design and Construction of Airports	7.5	Compulsory
Fundamentals of Aircraft Design	3	Optional
Fundamentals of Propulsion	3	Optional
Fundamentals of Space Engineering	3	Optional
Geotechnical Engineering	3	Optional
Production and Design Aerospace	5	Compulsory
Project Management Key Agreements & Deals	3	Optional
Propulsion II	3	Optional
Resistant Elements in Aeronautics	3	Optional
Rockets Combustion and Propulsion	5	Compulsory
<b>Specialisation in (Eng) Especialitat Aeroports</b>		
Lean Management and Aeronautical Maintenance	6	Optional
Aerodynamics, Flight Mechanics and Orbital Mechanics	7.5	Compulsory
Aerospace Materials	5	Compulsory
Airport Engineering Fundamentals	3	Optional
Design and Behavior of Special Structures	3	Optional
Design and Construction of Airports	7.5	Compulsory
Fundamentals of Aircraft Design	3	Optional
Fundamentals of Propulsion	3	Optional
Fundamentals of Space Engineering	3	Optional
Geotechnical Engineering	3	Optional
Production and Design Aerospace	5	Compulsory
Project Management Key Agreements & Deals	3	Optional
Propulsion II	3	Optional
Resistant Elements in Aeronautics	3	Optional
Rockets Combustion and Propulsion	5	Compulsory
<b>Specialisation in (Eng) Especialitat en Espai</b>		
Lean Management and Aeronautical Maintenance	6	Optional
Aerodynamics, Flight Mechanics and Orbital Mechanics	7.5	Compulsory
Aerospace Materials	5	Compulsory
Airport Engineering Fundamentals	3	Optional
Design and Behavior of Special Structures	3	Optional
Design and Construction of Airports	7.5	Compulsory
Fundamentals of Aircraft Design	3	Optional
Fundamentals of Propulsion	3	Optional
Fundamentals of Space Engineering	3	Optional
Geotechnical Engineering	3	Optional
Production and Design Aerospace	5	Compulsory
Project Management Key Agreements & Deals	3	Optional
Propulsion II	3	Optional
Resistant Elements in Aeronautics	3	Optional
Rockets Combustion and Propulsion	5	Compulsory
<b>Specialisation in (Eng) Especialitat en Propulsió</b>		
Lean Management and Aeronautical Maintenance	6	Optional
Aerodynamics, Flight Mechanics and Orbital Mechanics	7.5	Compulsory
Aerospace Materials	5	Compulsory
Airport Engineering Fundamentals	3	Optional
Design and Behavior of Special Structures	3	Optional
Design and Construction of Airports	7.5	Compulsory
Fundamentals of Aircraft Design	3	Optional
Fundamentals of Propulsion	3	Optional
Fundamentals of Space Engineering	3	Optional
Geotechnical Engineering	3	Optional
Production and Design Aerospace	5	Compulsory
Project Management Key Agreements & Deals	3	Optional
Propulsion II	3	Optional
Resistant Elements in Aeronautics	3	Optional
Rockets Combustion and Propulsion	5	Compulsory

Subjects		ECTS credits	Type	
<b>Specialisation in (Eng) Especialitat en Vehicles Aeroespacials</b>	Lean Management and Aeronautical Maintenance	6	Optional	
	Aerodynamics, Flight Mechanics and Orbital Mechanics	7.5	Compulsory	
	Aerospace Materials	5	Compulsory	
	Airport Engineering Fundamentals	3	Optional	
	Design and Behavior of Special Structures	3	Optional	
	Design and Construction of Airports	7.5	Compulsory	
	Fundamentals of Aircraft Design	3	Optional	
	Fundamentals of Propulsion	3	Optional	
	Fundamentals of Space Engineering	3	Optional	
	Geotechnical Engineering	3	Optional	
	Production and Design Aerospace	5	Compulsory	
	Project Management Key Agreements & Deals	3	Optional	
	Propulsion II	3	Optional	
	Resistant Elements in Aeronautics	3	Optional	
	Rockets Combustion and Propulsion	5	Compulsory	
	<b>Specialisation in (Eng) No Especialitat</b>	Lean Management and Aeronautical Maintenance	6	Optional
		Aerodynamics, Flight Mechanics and Orbital Mechanics	7.5	Compulsory
Aerospace Materials		5	Compulsory	
Airport Engineering Fundamentals		3	Optional	
Design and Behavior of Special Structures		3	Optional	
Design and Construction of Airports		7.5	Compulsory	
Fundamentals of Aircraft Design		3	Optional	
Fundamentals of Propulsion		3	Optional	
Fundamentals of Space Engineering		3	Optional	
Geotechnical Engineering		3	Optional	
Production and Design Aerospace		5	Compulsory	
Project Management Key Agreements & Deals		3	Optional	
Propulsion II		3	Optional	
Resistant Elements in Aeronautics		3	Optional	
Rockets Combustion and Propulsion		5	Compulsory	
<b>SECOND SEMESTER</b>				
(Ang) Direcció de Projectes d'Aeronaus i Vehícles Aeroespacials			5	Compulsory
(Ang) Sistemes de Propulsió d'Aeronaus		5	Compulsory	
Advance Course Heat and Mass Transfer		5	Optional	
Advanced Concepts and Models for ATM		5	Optional	
Advanced Cubesat Mission Design		3	Optional	
Advanced Design of the Movement Area		3	Optional	
Advanced Engineering Data Analysis		3	Optional	
Aerospace Vehicles		7.5	Compulsory	
Agile Methodologies and Processes for the Creation of Innovative Solutions		3	Optional	
Air Transport and Navigation Systems		7.5	Compulsory	
Aircraft Trajectory Management		5	Optional	
Applications of Photonics Technologies		3	Optional	
Biomedical Instrumentation		3	Optional	
Business Law		3	Optional	
Cubesat Based Mission Design and Testing		6	Optional	
Cyber-Physical Systems Scheduling		3	Optional	
Data Mining and Machine Learning for Engineers		3	Optional	
Demolitions and Soil Preparation		3	Optional	
Designing Innovative Products and Business		3	Optional	
Dynamic Analysis of Structures		3	Optional	
Dynamical Systems in Engineering		3	Optional	
Experimental Mechanics of Advanced Materials and Structures		3	Optional	
Facilities Management		3	Optional	
Fundamentals of Industrial Wireless Communication		3	Optional	
Global Navigation Satellite System		3	Optional	
High Performance Computing Projects for Aerospace Engineering		3	Optional	
Implementation and Testing of Metaheuristics for Optimization Problems		3	Optional	
Industrial Fluid Power		3	Optional	

<b>Subjects</b>	<b>ECTS credits</b>	<b>Type</b>
Industrial IoT and Cyber-Physical Systems	3	Optional
Industrial Wireless Communication Systems	3	Optional
Infrared Thermography for Building Diagnostics	3	Optional
Introduction to Active Flow Control	3	Optional
Introduction to Metaheuristics for Optimization Problems	3	Optional
Introduction to Planetary Atmospheres	3	Optional
IoT Engineering	3	Optional
Machine Learning From Data	5	Optional
Management and Operation of Terminal Buildings	3	Optional
Microfluids and MemS for Smart Sensors and Actuators	3	Optional
Mobile Robots	3	Optional
Nonlinear Time Series Analysis	3	Optional
Numerical Methods in Heat and Mass Transfer	5	Optional
Photonics Sensors and Laser Technology	3	Optional
Practical Use of Fem for Structural Analysis with Nastran	3	Optional
Programming Interfaces and Applications	3	Optional
Proportional Oil Hydraulics	3	Optional
Radiofrequency and Communication Systems	5	Compulsory
Relationship with the Company	3	Optional
Research on Fluid Mechanics	3	Optional
Safety Automation Projects for Industry 4.0	3	Optional
Smart Grids & Data Analytics	3	Optional
Smart Sensors and Actuators for Internet of Things (IoT)	3	Optional
Smart Textiles	3	Optional
Software Architecture	5	Optional
Space Resources & Planetary Settlements	3	Optional
Spaceports, Airports for Spaceflights	3	Optional
Strategic Management for Airline Operations	5	Optional
The Space Environment	3	Optional
Turbulence: Phenomenology, Simulation, Aerodynamics	5	Optional
Validating and Communicating Disruptive Ideas	6	Optional
Workshops for Innovation in Automotive Industries	6	Optional

Subjects	ECTS credits	Type
<b>Specialisation in (Eng) Especialitat Aeroports</b>		
(Ang) Direcció de Projectes d'Aeronaus i Vehícles Aeroespacials	5	Compulsory
(Ang) Sistemes de Propulsió d'Aeronaus	5	Compulsory
Advance Course Heat and Mass Transfer	5	Optional
Advanced Concepts and Models for ATM	5	Optional
Advanced Cubesat Mission Design	3	Optional
Advanced Design of the Movement Area	3	Optional
Advanced Engineering Data Analysis	3	Optional
Aerospace Vehicles	7.5	Compulsory
Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
Air Transport and Navigation Systems	7.5	Compulsory
Aircraft Trajectory Management	5	Optional
Applications of Photonics Technologies	3	Optional
Biomedical Instrumentation	3	Optional
Business Law	3	Optional
Cubesat Based Mission Design and Testing	6	Optional
Cyber-Physical Systems Scheduling	3	Optional
Data Mining and Machine Learning for Engineers	3	Optional
Demolitions and Soil Preparation	3	Optional
Designing Innovative Products and Business	3	Optional
Dynamic Analysis of Structures	3	Optional
Dynamical Systems in Engineering	3	Optional
Experimental Mechanics of Advanced Materials and Structures	3	Optional
Facilities Management	3	Optional
Fundamentals of Industrial Wireless Communication	3	Optional
Global Navigation Satellite System	3	Optional
High Performance Computing Projects for Aerospace Engineering	3	Optional
Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
Industrial Fluid Power	3	Optional
Industrial IoT and Cyber-Physical Systems	3	Optional
Industrial Wireless Communication Systems	3	Optional
Infrared Thermography for Building Diagnostics	3	Optional
Introduction to Active Flow Control	3	Optional
Introduction to Metaheuristics for Optimization Problems	3	Optional
Introduction to Planetary Atmospheres	3	Optional
IoT Engineering	3	Optional
Machine Learning From Data	5	Optional
Management and Operation of Terminal Buildings	3	Optional
Microfluids and MEMS for Smart Sensors and Actuators	3	Optional
Mobile Robots	3	Optional
Nonlinear Time Series Analysis	3	Optional
Numerical Methods in Heat and Mass Transfer	5	Optional
Photonics Sensors and Laser Technology	3	Optional
Practical Use of Fem for Structural Analysis with Nastran	3	Optional
Programming Interfaces and Applications	3	Optional
Proportional Oil Hydraulics	3	Optional
Radiofrequency and Communication Systems	5	Compulsory
Relationship with the Company	3	Optional
Research on Fluid Mechanics	3	Optional
Safety Automation Projects for Industry 4.0	3	Optional
Smart Grids & Data Analytics	3	Optional
Smart Sensors and Actuators for Internet of Things (IoT)	3	Optional
Smart Textiles	3	Optional
Software Architecture	5	Optional
Space Resources & Planetary Settlements	3	Optional
Spaceports, Airports for Spaceflights	3	Optional
Strategic Management for Airline Operations	5	Optional
The Space Environment	3	Optional
Turbulence: Phenomenology, Simulation, Aerodynamics	5	Optional
Validating and Communicating Disruptive Ideas	6	Optional
Workshops for Innovation in Automotive Industries	6	Optional

Subjects	ECTS credits	Type
<b>Specialisation in (Eng) Especialitat en Espai</b>		
(Ang) Direcció de Projectes d'Aeronaus i Vehícles Aeroespacials	5	Compulsory
(Ang) Sistemes de Propulsió d'Aeronaus	5	Compulsory
Advance Course Heat and Mass Transfer	5	Optional
Advanced Concepts and Models for ATM	5	Optional
Advanced Cubesat Mission Design	3	Optional
Advanced Design of the Movement Area	3	Optional
Advanced Engineering Data Analysis	3	Optional
Aerospace Vehicles	7.5	Compulsory
Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
Air Transport and Navigation Systems	7.5	Compulsory
Aircraft Trajectory Management	5	Optional
Applications of Photonics Technologies	3	Optional
Biomedical Instrumentation	3	Optional
Business Law	3	Optional
Cubesat Based Mission Design and Testing	6	Optional
Cyber-Physical Systems Scheduling	3	Optional
Data Mining and Machine Learning for Engineers	3	Optional
Demolitions and Soil Preparation	3	Optional
Designing Innovative Products and Business	3	Optional
Dynamic Analysis of Structures	3	Optional
Dynamical Systems in Engineering	3	Optional
Experimental Mechanics of Advanced Materials and Structures	3	Optional
Facilities Management	3	Optional
Fundamentals of Industrial Wireless Communication	3	Optional
Global Navigation Satellite System	3	Optional
High Performance Computing Projects for Aerospace Engineering	3	Optional
Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
Industrial Fluid Power	3	Optional
Industrial IoT and Cyber-Physical Systems	3	Optional
Industrial Wireless Communication Systems	3	Optional
Infrared Thermography for Building Diagnostics	3	Optional
Introduction to Active Flow Control	3	Optional
Introduction to Metaheuristics for Optimization Problems	3	Optional
Introduction to Planetary Atmospheres	3	Optional
IoT Engineering	3	Optional
Machine Learning From Data	5	Optional
Management and Operation of Terminal Buildings	3	Optional
Microfluids and MEMS for Smart Sensors and Actuators	3	Optional
Mobile Robots	3	Optional
Nonlinear Time Series Analysis	3	Optional
Numerical Methods in Heat and Mass Transfer	5	Optional
Photonics Sensors and Laser Technology	3	Optional
Practical Use of Fem for Structural Analysis with Nastran	3	Optional
Programming Interfaces and Applications	3	Optional
Proportional Oil Hydraulics	3	Optional
Radiofrequency and Communication Systems	5	Compulsory
Relationship with the Company	3	Optional
Research on Fluid Mechanics	3	Optional
Safety Automation Projects for Industry 4.0	3	Optional
Smart Grids & Data Analytics	3	Optional
Smart Sensors and Actuators for Internet of Things (IoT)	3	Optional
Smart Textiles	3	Optional
Software Architecture	5	Optional
Space Resources & Planetary Settlements	3	Optional
Spaceports, Airports for Spaceflights	3	Optional
Strategic Management for Airline Operations	5	Optional
The Space Environment	3	Optional
Turbulence: Phenomenology, Simulation, Aerodynamics	5	Optional
Validating and Communicating Disruptive Ideas	6	Optional
Workshops for Innovation in Automotive Industries	6	Optional

Subjects	ECTS credits	Type
<b>Specialisation in (Eng) Especialitat en Propulsió</b>		
(Ang) Direcció de Projectes d'Aeronaus i Vehícles Aeroespacials	5	Compulsory
(Ang) Sistemes de Propulsió d'Aeronaus	5	Compulsory
Advance Course Heat and Mass Transfer	5	Optional
Advanced Concepts and Models for ATM	5	Optional
Advanced Cubesat Mission Design	3	Optional
Advanced Design of the Movement Area	3	Optional
Advanced Engineering Data Analysis	3	Optional
Aerospace Vehicles	7.5	Compulsory
Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
Air Transport and Navigation Systems	7.5	Compulsory
Aircraft Trajectory Management	5	Optional
Applications of Photonics Technologies	3	Optional
Biomedical Instrumentation	3	Optional
Business Law	3	Optional
Cubesat Based Mission Design and Testing	6	Optional
Cyber-Physical Systems Scheduling	3	Optional
Data Mining and Machine Learning for Engineers	3	Optional
Demolitions and Soil Preparation	3	Optional
Designing Innovative Products and Business	3	Optional
Dynamic Analysis of Structures	3	Optional
Dynamical Systems in Engineering	3	Optional
Experimental Mechanics of Advanced Materials and Structures	3	Optional
Facilities Management	3	Optional
Fundamentals of Industrial Wireless Communication	3	Optional
Global Navigation Satellite System	3	Optional
High Performance Computing Projects for Aerospace Engineering	3	Optional
Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
Industrial Fluid Power	3	Optional
Industrial IoT and Cyber-Physical Systems	3	Optional
Industrial Wireless Communication Systems	3	Optional
Infrared Thermography for Building Diagnostics	3	Optional
Introduction to Active Flow Control	3	Optional
Introduction to Metaheuristics for Optimization Problems	3	Optional
Introduction to Planetary Atmospheres	3	Optional
IoT Engineering	3	Optional
Machine Learning From Data	5	Optional
Management and Operation of Terminal Buildings	3	Optional
Microfluids and MEMS for Smart Sensors and Actuators	3	Optional
Mobile Robots	3	Optional
Nonlinear Time Series Analysis	3	Optional
Numerical Methods in Heat and Mass Transfer	5	Optional
Photonics Sensors and Laser Technology	3	Optional
Practical Use of Fem for Structural Analysis with Nastran	3	Optional
Programming Interfaces and Applications	3	Optional
Proportional Oil Hydraulics	3	Optional
Radiofrequency and Communication Systems	5	Compulsory
Relationship with the Company	3	Optional
Research on Fluid Mechanics	3	Optional
Safety Automation Projects for Industry 4.0	3	Optional
Smart Grids & Data Analytics	3	Optional
Smart Sensors and Actuators for Internet of Things (IoT)	3	Optional
Smart Textiles	3	Optional
Software Architecture	5	Optional
Space Resources & Planetary Settlements	3	Optional
Spaceports, Airports for Spaceflights	3	Optional
Strategic Management for Airline Operations	5	Optional
The Space Environment	3	Optional
Turbulence: Phenomenology, Simulation, Aerodynamics	5	Optional
Validating and Communicating Disruptive Ideas	6	Optional
Workshops for Innovation in Automotive Industries	6	Optional



Subjects		ECTS credits	Type
<b>Specialisation in (Eng) Especialitat en Vehicles Aeroespacials</b>	(Ang) Direcció de Projectes d'Aeronaus i Vehicles Aeroespacials	5	Compulsory
	(Ang) Sistemes de Propulsius d'Aeronaus	5	Compulsory
	Advance Course Heat and Mass Transfer	5	Optional
	Advanced Concepts and Models for ATM	5	Optional
	Advanced Cubesat Mission Design	3	Optional
	Advanced Design of the Movement Area	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Aerospace Vehicles	7.5	Compulsory
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Air Transport and Navigation Systems	7.5	Compulsory
	Aircraft Trajectory Management	5	Optional
	Applications of Photonics Technologies	3	Optional
	Biomedical Instrumentation	3	Optional
	Business Law	3	Optional
	Cubesat Based Mission Design and Testing	6	Optional
	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Global Navigation Satellite System	3	Optional
	High Performance Computing Projects for Aerospace Engineering	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
	Industrial Fluid Power	3	Optional
	Industrial Iot and Cyber-Physical Systems	3	Optional
	Industrial Wireless Communication Systems	3	Optional
	Infrared Thermography for Building Diagnostics	3	Optional
	Introduction to Active Flow Control	3	Optional
	Introduction to Metaheuristics for Optimization Problems	3	Optional
	Introduction to Planetary Atmospheres	3	Optional
	Iot Engineering	3	Optional
	Machine Learning From Data	5	Optional
	Management and Operation of Terminal Buildings	3	Optional
	Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
	Mobile Robots	3	Optional
	Nonlinear Time Series Analysis	3	Optional
	Numerical Methods in Heat and Mass Transfer	5	Optional
	Photonics Sensors and Laser Technology	3	Optional
	Practical Use of Fem for Structural Analysis with Nastran	3	Optional
	Programming Interfaces and Applications	3	Optional
	Proportional Oil Hydraulics	3	Optional
	Radiofrequency and Communication Systems	5	Compulsory
	Relationship with the Company	3	Optional
	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
	Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
	Smart Textiles	3	Optional
	Software Architecture	5	Optional
	Space Resources & Planetary Settlements	3	Optional
	Spaceports, Airports for Spaceflights	3	Optional
	Strategic Management for Airline Operations	5	Optional
	The Space Environment	3	Optional
	Turbulence: Phenomenology, Simulation, Aerodynamics	5	Optional
	Validating and Communicating Disruptive Ideas	6	Optional
	Workshops for Innovation in Automotive Industries	6	Optional

Subjects	ECTS credits	Type
<b>Specialisation in (Eng) No Especialitat</b>		
(Ang) Direcció de Projectes d'Aeronaus i Vehicles Aeroespacials	5	Compulsory
(Ang) Sistemes de Propulsius d'Aeronaus	5	Compulsory
Advance Course Heat and Mass Transfer	5	Optional
Advanced Concepts and Models for ATM	5	Optional
Advanced Cubesat Mission Design	3	Optional
Advanced Design of the Movement Area	3	Optional
Advanced Engineering Data Analysis	3	Optional
Aerospace Vehicles	7.5	Compulsory
Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
Air Transport and Navigation Systems	7.5	Compulsory
Aircraft Trajectory Management	5	Optional
Applications of Photonics Technologies	3	Optional
Biomedical Instrumentation	3	Optional
Business Law	3	Optional
Cubesat Based Mission Design and Testing	6	Optional
Cyber-Physical Systems Scheduling	3	Optional
Data Mining and Machine Learning for Engineers	3	Optional
Demolitions and Soil Preparation	3	Optional
Designing Innovative Products and Business	3	Optional
Dynamic Analysis of Structures	3	Optional
Dynamical Systems in Engineering	3	Optional
Experimental Mechanics of Advanced Materials and Structures	3	Optional
Facilities Management	3	Optional
Fundamentals of Industrial Wireless Communication	3	Optional
Global Navigation Satellite System	3	Optional
High Performance Computing Projects for Aerospace Engineering	3	Optional
Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
Industrial Fluid Power	3	Optional
Industrial Iot and Cyber-Physical Systems	3	Optional
Industrial Wireless Communication Systems	3	Optional
Infrared Thermography for Building Diagnostics	3	Optional
Introduction to Active Flow Control	3	Optional
Introduction to Metaheuristics for Optimization Problems	3	Optional
Introduction to Planetary Atmospheres	3	Optional
Iot Engineering	3	Optional
Machine Learning From Data	5	Optional
Management and Operation of Terminal Buildings	3	Optional
Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
Mobile Robots	3	Optional
Nonlinear Time Series Analysis	3	Optional
Numerical Methods in Heat and Mass Transfer	5	Optional
Photonics Sensors and Laser Technology	3	Optional
Practical Use of Fem for Structural Analysis with Nastran	3	Optional
Programming Interfaces and Applications	3	Optional
Proportional Oil Hydraulics	3	Optional
Radiofrequency and Communication Systems	5	Compulsory
Relationship with the Company	3	Optional
Research on Fluid Mechanics	3	Optional
Safety Automation Projects for Industry 4.0	3	Optional
Smart Grids & Data Analytics	3	Optional
Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
Smart Textiles	3	Optional
Software Architecture	5	Optional
Space Resources & Planetary Settlements	3	Optional
Spaceports, Airports for Spaceflights	3	Optional
Strategic Management for Airline Operations	5	Optional
The Space Environment	3	Optional
Turbulence: Phenomenology, Simulation, Aerodynamics	5	Optional
Validating and Communicating Disruptive Ideas	6	Optional
Workshops for Innovation in Automotive Industries	6	Optional

Subjects	ECTS credits	Type
<b>THIRD SEMESTER</b>		
Acoustics	3	Optional
Applications for Planetary Exploration	3	Optional
Applied Robotics	3	Optional
Computational Engineering	5	Compulsory
Design and Use of Uav for Remote Sensing of the Environment	3	Optional
Extension of Space Propulsion	3	Optional
Fundamentals of Nuclear Engineering	3	Optional
Game Theory	3	Optional
Quality Management	3	Optional
Railway Systems	3	Optional
Research Seminars	3	Optional
Science and Technology Communication Through Media	3	Optional
Structures of New Generation Materials	3	Optional
Surface Engineering	3	Optional
Thermal Turbomachinery and Combustion	3	Optional
<b>Specialisation in (Eng) Especialitat Aeroports</b>	Air Transport	5 Compulsory
	Airport Building Systems	5 Compulsory
	Airport Infrastructure Management	5 Compulsory
	Airport Operations	5 Compulsory
	Business Management Aeronautics	5 Compulsory
	Acoustics	3 Optional
	Applications for Planetary Exploration	3 Optional
	Applied Robotics	3 Optional
	Computational Engineering	5 Compulsory
	Design and Use of Uav for Remote Sensing of the Environment	3 Optional
	Extension of Space Propulsion	3 Optional
	Fundamentals of Nuclear Engineering	3 Optional
	Game Theory	3 Optional
	Quality Management	3 Optional
	Railway Systems	3 Optional
	Research Seminars	3 Optional
	Science and Technology Communication Through Media	3 Optional
	Structures of New Generation Materials	3 Optional
	Surface Engineering	3 Optional
	Thermal Turbomachinery and Combustion	3 Optional
<b>Specialisation in (Eng) Especialitat en Espai</b>	Applied Subsystem Design	5 Compulsory
	Astrodynamics	5 Compulsory
	Composite Materials	5 Compulsory
	Hypersonic Aerodynamics	5 Compulsory
	Space Propulsion	5 Compulsory
	Spacecraft Design	5 Compulsory
	Acoustics	3 Optional
	Applications for Planetary Exploration	3 Optional
	Applied Robotics	3 Optional
	Computational Engineering	5 Compulsory
	Design and Use of Uav for Remote Sensing of the Environment	3 Optional
	Extension of Space Propulsion	3 Optional
	Fundamentals of Nuclear Engineering	3 Optional
	Game Theory	3 Optional
	Quality Management	3 Optional
	Railway Systems	3 Optional
	Research Seminars	3 Optional
	Science and Technology Communication Through Media	3 Optional
	Structures of New Generation Materials	3 Optional
	Surface Engineering	3 Optional
	Thermal Turbomachinery and Combustion	3 Optional

Subjects		ECTS credits	Type
<b>Specialisation in (Eng) Especialitat en Propulsió</b>	Advanced Propulsion	5	Compulsory
	Composite Materials	5	Compulsory
	Extension of Jet Engines	5	Compulsory
	Extension of Rocket Engines	5	Compulsory
	Internal Aerodynamics and Aeroelasticity of Turbomachines	5	Compulsory
	Acoustics	3	Optional
	Applications for Planetary Exploration	3	Optional
	Applied Robotics	3	Optional
	Computational Engineering	5	Compulsory
	Design and Use of Uav for Remote Sensing of the Environment	3	Optional
	Extension of Space Propulsion	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Game Theory	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
	Structures of New Generation Materials	3	Optional
	Surface Engineering	3	Optional
	Thermal Turbomachinery and Combustion	3	Optional
<b>Specialisation in (Eng) Especialitat en Vehicles Aeroespacials</b>	Advanced Aerodynamics	5	Compulsory
	Advanced Aeroelasticity	5	Compulsory
	Aerospace Laboratories	5	Compulsory
	Architecture and Aircraft Systems	5	Compulsory
	Composite Materials	5	Compulsory
	Acoustics	3	Optional
	Applications for Planetary Exploration	3	Optional
	Applied Robotics	3	Optional
	Computational Engineering	5	Compulsory
	Design and Use of Uav for Remote Sensing of the Environment	3	Optional
	Extension of Space Propulsion	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Game Theory	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
	Structures of New Generation Materials	3	Optional
	Surface Engineering	3	Optional
	Thermal Turbomachinery and Combustion	3	Optional

Subjects		ECTS credits	Type
<b>Specialisation in (Eng) No Especialitat</b>	Advanced Aerodynamics	5	Optional
	Advanced Aeroelasticity	5	Optional
	Advanced Propulsion	5	Optional
	Aerospace Laboratories	5	Optional
	Air Transport	5	Optional
	Airport Building Systems	5	Optional
	Airport Infrastructure Management	5	Optional
	Airport Operations	5	Optional
	Applied Subsystem Design	5	Optional
	Architecture and Aircraft Systems	5	Optional
	Astrodynamics	5	Optional
	Business Management Aeronautics	5	Optional
	Composite Materials	5	Optional
	Extension of Jet Engines	5	Optional
	Extension of Rocket Engines	5	Optional
	Internal Aerodynamics and Aeroelasticity of Turbomachines	5	Optional
	Space Propulsion	5	Optional
	Spacecraft Design	5	Optional
	Acoustics	3	Optional
	Applications for Planetary Exploration	3	Optional
	Applied Robotics	3	Optional
	Computational Engineering	5	Compulsory
	Design and Use of Uav for Remote Sensing of the Environment	3	Optional
	Extension of Space Propulsion	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Game Theory	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
	Structures of New Generation Materials	3	Optional
	Surface Engineering	3	Optional
Thermal Turbomachinery and Combustion	3	Optional	
<b>FOURTH SEMESTER</b>			
	Master's Thesis	12	Project
<b>Specialisation in (Eng) Especialitat Aeroports</b>	Master's Thesis	12	Project
<b>Specialisation in (Eng) Especialitat en Espai</b>	Master's Thesis	12	Project
<b>Specialisation in (Eng) Especialitat en Propulsió</b>	Master's Thesis	12	Project
<b>Specialisation in (Eng) Especialitat en Vehicles Aeroespacials</b>	Master's Thesis	12	Project
<b>Specialisation in (Eng) No Especialitat</b>	Master's Thesis	12	Project