

### MASTER'S DEGREE PROGRAMME IN AEROSPACE ENGINEERING

### **AERONAUTICS CURRICULUM**

Study programme for students enrolled in the academic year 2024-2025

## 1st YEAR **MANDATORY UNITS CREDITS** 9 MATERIALS FOR AERONAUTICAL ENGINEERING 9 **AEROSPACE STRUCTURES 2** 9 MANUFACTURING TECHNOLOGIES OF AEROSPACE MATERIALS 9 ATMOSPHERIC FLIGHT DYNAMICS 9 AIRCRAFT PROPULSION 6 AIRCRAFT AIR CONDITIONING SYSTEMS 9 ADVANCED AERODYNAMICS 2st YEAR **MANDATORY UNITS CREDITS** STRUCTURAL DYNAMICS AND AEROELASTICITY 6 MEASUREMENTS AND FLIGHT INSTRUMENTATION 9 AIRCRAFT SYSTEMS 9 FREE-CHOICE UNIT AMONG THE FOLLOWING ACTIVITIES (9 **CREDITS** credits) LABORATORY OF COMPUTATIONAL FLUID DYNAMICS 9 AEROSPACE STRUCTURES LABORATORY 9 LABORATORY OF AIRCRAFT PROPULSION 9 FREE-CHOICE UNIT (9 credits) INCLUDING ACTIVITIES NOT ALREADY SELECTED IN THE PREVIOUS OPTION (AUTOMATIC **CREDITS STUDY PLAN**) SPACE ROBOTIC SYSTEMS 9 SPACE OPTICS INSTRUMENTATION 9 MODELLING AND CONTROL OF ELECTRIC DRIVES 9 9 GLOBAL POSITIONING AND NAVIGATION

COMPOSITE MATERIALS	9
MECHANICAL MODELING AND SIMULATION OF AEROSPACE SYSTEMS	9
LABORATORY OF COMPUTATIONAL FLUID DYNAMICS	9
AEROSPACE STRUCTURES LABORATORY	9
LABORATORY OF AIRCRAFT PROPULSION	9
ENGLISH LANGUAGE B2 (PRODUCTIVE SKILLS)	3
MASTER'S THESIS	15

### **Final notes:**

Although not mandatory, classroom attendance is strongly recommended.

There are no propaedeutic units to attend the second-year activities.

Students are required to submit their study plan through the UNIWEB platform as early as possible during the first enrolment year (between middle of October and middle of July).

This document has been prepared in Spring 2024.

It is strongly recommended to check, at the beginning of each academic year, the correct placement of the course units in the semesters and the actual activation of the free-choice activities.

If the activities offered in the Master's degree have a program that largely overlaps with exams already taken during the Bachelor's degree, students need to contact the Academic Office through the HelpDesk system (https://helpdesk.dii.unipd.it).

The request must include the words "Exam program overlapping" and students need to attach the program of the exam already taken.

## MASTER'S DEGREE PROGRAMME IN AEROSPACE ENGINEERING

### SPACE CURRICULUM

Study programme for students enrolled in the academic year 2024-2025

# 1st YAER **CREDITS MANDATORY UNITS AEROSPACE STRUCTURES 2** MANUFACTURING TECHNOLOGIES OF AEROSPACE MATERIALS 9 MEASUREMENTS FOR SPACE PROJECTS 9 ADVANCED AERODYNAMICS 9 **ASTRODYNAMICS** 9 SPACE PROPULSION 9 MECHANICAL VIBRATIONS 6 2nd YEAR **MANDATORY UNITS CREDITS** SPACECRAFT ATTITUDE DYNAMICS AND CONTROL 9 SPACE INSTRUMENTATION 9 SPACECRAFT THERMAL CONTROL 6 FREE-CHOICE UNIT AMONG THE FOLLOWING ACTIVITIES (9 **CREDITS** credits) AEROSPACE STRUCTURES LABORATORY SPACE PROPULSION LABORATORY 9 SPACE SYSTEMS LABORATORY 9 FREE-CHOICE UNIT (9 credits) INCLUDING ACTIVITIES NOT ALREADY SELECTED IN THE PREVIOUS OPTION (AUTOMATIC **CFU STUDY PLAN**) SPACE ROBOTIC SYSTEMS 9 SPACE OPTICS INSTRUMENTATION 9 MECHANICAL MODELING AND SIMULATION OF AEROSPACE SYSTEMS 9 MODELLING AND CONTROL OF ELECTRIC DRIVES 9 GLOBAL POSITIONING AND NAVIGATION 9 COMPOSITE MATERIALS 9

AEROSPACE STRUCTURES LABORATORY	9
SPACE PROPULSION LABORATORY	9
SPACE SYSTEMS LABORATORY	9
ENGLISH LANGUAGE B2 (PRODUCTIVE SKILLS)	3
MASTER'S THESIS	15

### **Final notes:**

Although not mandatory, classroom attendance is strongly recommended.

There are no propaedeutic units to attend the second-year activities.

Students are required to submit their study plan through the UNIWEB platform as early as possible during the first enrolment year (between middle of October and middle of July).

This document has been prepared in Spring 2024.

It is strongly recommended to check, at the beginning of each academic year, the correct placement of the course units in the semesters and the actual activation of the free-choice activities.

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The request must include the words "Exam program overlapping" and students need to attach the program of the exam already taken.