Master's degree in Aerospace Engineering
2021/2022

CURRICULUM AERONAUTICS

First year		
First semester#		
Courses	**Language**	**Credits**
Mechanics applied to Aerospace Engineering **OR** **Mathematical Methods for Engineering**	Italian	9
Flight Dynamics and simulation	Italian	9
Aerospace Advanced Structures	Italian	9
Second semester#		
Reliability and risk in Aerospace Engineering **OR** **Economy and organization of aerospace industry**	Italian	6
Aircraft Aerodynamics	Italian	9
Avionics	Italian	9

Second Year			
Activities	**Language**	**Credits**	**Semester#**
Curriculum autonomous choice Courses* (2 courses of 9 credits + 2 courses of 6 credits)	**English/Italian**	**30**	**I/II**
Other autonomous choice Courses§ (1 course of 9 credits + 1 courses of 6 credits)	**English/Italian**	**15**	**I/II**
Traineeship	English	12	II
Thesis	English	12	II

(*) Curriculum autonomous choice Courses (30 Credits) – Aeronautics

*Curriculum autonomous choice Courses	Language	Credits	Semester#
Rotary wing Aerodynamics	Italian	9	I
Aerospace Constructions 2	Italian	6	I
Structural dynamics	Italian	6	I
Fluid-Structure Interaction	English	6	I
Numerical and experimental methods for Aircraft Design	English	9	I
Unmanned Aircraft Systems	English	9	I
Aeroelasticity	English	6	II
Aircraft on board systems	English	6	II
Aircraft Design	English	9	II
Air Traffic Management and Control	English	9	II
Flight Test	English	6	II

(§) Autonomous choice Courses (15 Credits)

Autonomous courses can be selected among the following:
1. Aerospace Engineering Master's Degree Curricula (Aeronautics, <u>Fluid dynamic/Propulsion</u>, <u>Space</u>)
2. Other courses

Other courses			
Courses	**Language**	**Credits**	**Semester[#]**
Combustion and Fluid Dynamics of reactive systems	**Italian**	**6**	**I**
Chemical fundamentals of technologies	**Italian**	**9**	**I**
Electro-magnetic basics for Space applications	**Italian**	**9**	**I**
Geometrical Modelling and virtual Prototyping for Aerospace Engineering	**Italian**	**9**	**I**
Design Principles for wind and ocean renewable energy systems	**Italian**	**6**	**I**
Radar Systems	**Italian**	**9**	**I**
Statistical lab for industrial data analysis	**English**	**9**	**I**
Signal and Image Processing	**Italian**	**9**	**II**
Elastodynamics and structural health monitoring principles	**English**	**6**	**II**
Experimental Vibroacoustics	**English**	**6**	**II**
Electrical basics for Aeronautics	**Italian**	**6**	**II**
Impact dynamics	**English**	**6**	**II**
Machine Learning and big data	**English**	**9**	**II**
Automotive Propulsion systems	**Italian**	**9**	**II**
Aerospace Design Project	**English**	**9**	**Annual**

#Calendar of didactic activities - Year 2021/2022

	Start	End
1st didactic period	20 September 2021	17 December 2021
1st exams period	18 December 2021	26 February 2022
March exams	2 March 2022	31 March 2022
2nd didactic period	7 March 2022	10 June 2022
2nd exams period	11 June 2022	30 July 2022
3rd exams period	1 September 2022	30 September 2022
October exams	1 October 2022	31 October 2022