UNIVERSITÀ DEGLI STUDI DI PALERMO

Department: Engineering

A.Y. 2016/2017

DEGREE COURSE IN AEROSPACE ENGINEERING

Characteristics

Class of Master's Degree (MSc) on Aerospace and aeronautical engineering (LM-20)	2 YEARS	PALERMO	FREE ACCESS	2024

Educational objectives

2nd cycle graduates in Aerospace engineering must:
- Possess advanced knowledge of the theoretical-scientific aspects of mathematics and other cores sciences and be able to use this knowledge to interpret and describe complex engineering problems or problems requiring an interdisciplinary approach;
- Possess advanced knowledge of the theoretical-scientific aspects of engineering, and namely of aerospace and astronautic engineering, in which they are able to identify, formulate and solve, in an innovative way, complex problems, or problems requiring an interdisciplinary approach;
- Be able to conceptualize, plan, design and manage complex and/or innovative systems and processes;
- Be able to design and manage highly complex experiments;
- Be equipped with knowledge of context and soft skills;
- Have knowledge in the field of corporate organization (corporate culture) and professional ethics;
- Be fluent in written and oral form in at least one European language other than Italian, with reference also to subject specific vocabularies.

Admission to degree courses of the class requires, an adequate command of general scientific methods and contents in basic scientific disciplines and in engineering disciplines, which are propaedeutic to the class specific disciplines.

The degree courses of the culminate in a major design work, ending up with a paper in which the candidate shows his/re command of the subjects, the ability to work independently and good communication skills.

The main career opportunities provided by master's degree courses are: production innovation and development, advanced design, planning and programming, management of complex systems, both in self-employment and in manufacturing or service companies and public administration. Graduates may find work in aircraft and aerospace industries; public and private companies for testing in the aerospace sector; business aviation; air traffic management institutions; military aviation and other aviation sectors; industries for the production of machinery and equipment where aerodynamics and lightweight construction are important.

The universities organize, in collaboration with public and private agencies, internships and apprenticeships.

Professional opportunities

Public and private agencies for experimentation and research in the aerospace sector, Universities.

Final examination features

It consists of the presentation and discussion of a written dissertation, containing the results of a work where the candidate will apply the knowledge and capabilities acquired during the course. The dissertation consists of an original project or a research on advanced aerospace issues. During the presentation and discussion of the dissertation, candidates should show their command of the subject, the capability of working autonomously and good communication skills. Students will carry out their activity under the guidance of one or more supervisors, one of which should be a professor of the Degree Course. The preparation of the final dissertation may be carried out at other Italian or foreign, public or private institutions and companies, in the framework of cooperation agreements.

Legenda: Per. = periodo o semestre, Val. = Valutazione (V=voto, G=giudizio), TAF= Tipologia Attività Formativa (A=base, B=caratterizzante, C=Affine, S=stages, D=a scelta, F=altre)

Subjects 1 ° year	CFU	Sem.	Val.	SSD	TAF
14427 - AERONAUTICAL PRODUCTION TECHNOLOGIES *Fratini(PO)*	9	1	V	ING-IND/16	C
07140 - AERONAUTICS STRUCTURES *Davi'(PQ)*	6	1	V	ING-IND/04	B
16951 - AIRCRAFT AND SYSTEMS DESIGN *Benedetti(PO)*	9	2	V	ING-IND/04	B
02190 - AUTOMATIC CONTROL *D'Ippolito(PO)*	9	2	V	ING-INF/04	C
03549 - GAS DYNAMICS *Marretta(PA)*	12	2	V	ING-IND/06	B
Optional subjects	6				C
Free subjects	9				D
	60				

Subjects 2 ° year	CFU	Sem.	Val.	SSD	TAF
04913 - AEROSPACE MATERIALS *Milazzo(PO)*	9	1	V	ING-IND/04	B
02374 - FLIGHT DYNAMICS *Grillo(PA)*	12	1	V	ING-IND/03	B
12658 - AEROSPACE ENGINES *Lombardo(PA)*	12	2	V	ING-IND/07	B
05917 - FINAL EXAMINATION	15	2	G		E
Optional subjects II	6				C
Stage and others	6				F
	60				

OPTIONAL SUBJECTS

Stage and others	CFU	Sem.	Val.	SSD	TAF
11033 - INTERNSHIP 3 CREDITS	3	1	G		F
15458 - INTERNSHIP 4 CREDITS	4	1	G		F
11351 - INTERNSHIP 5 CREDITS	5	1	G		F
11028 - INTERNSHIP 6 CREDITS	6	1	G		F
11034 - OTHER EDUCATIONAL ACTIVITIES - 1 CREDIT	1	1	G		F
11035 - OTHER EDUCATIONAL ACTIVITIES - 2 CREDITS	2	1	G		F
11036 - OTHER EDUCATIONAL ACTIVITIES - 3 CREDITS	3	1	G		F
11037 - OTHER EDUCATIONAL ACTIVITIES - 4 CREDITS	4	1	G		F
11038 - OTHER EDUCATIONAL ACTIVITIES - 5 CREDITS	5	1	G		F
11039 - OTHER EDUCATIONAL ACTIVITIES - 6 CREDITS	6	1	G		F

Optional subjects	CFU	Sem.	Val.	SSD	TAF
17647 - MOBILE AND COOPERATING ROBOTICS *Fagiolini(PA)*	6	2	V	ING-INF/04	C
18552 - SCIENCE AND TECHNOLOGY OF COMPOSITE MATERIALS FOR AEROSPACE ENGINEERING *Valenza(PO)*	6	2	V	ING-IND/22	C

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OPTIONAL SUBJECTS

Optional subjects	CFU	Sem.	Val.	SSD	TAF
02103 - COMPLEMENTS OF AUTOMATIC CONTROL *Sferlazza(RD)*	6	2	V	ING-INF/04	C
18053 - CORROSION AND PROTECTION OF AEROSPACE MATERIALS *Santamaria(PO)*	6	1	V	ING-IND/23	C
01258 - EXPERIMENTAL STRESS ANALYSIS *Pitarresi(PA)*	6	1	V	ING-IND/14	C
10069 - PROCESS DESIGN *Buffa(PO)*	6	1	V	ING-IND/16	C
02375 - STRUCTURAL DYNAMICS *Pirrotta(PO)*	6	2	V	ICAR/08	C

Optional subjects II	CFU	Sem.	Val.	SSD	TAF
17647 - MOBILE AND COOPERATING ROBOTICS *Fagiolini(PA)*	6	2	V	ING-INF/04	C
18552 - SCIENCE AND TECHNOLOGY OF COMPOSITE MATERIALS FOR AEROSPACE ENGINEERING *Valenza(PO)*	6	2	V	ING-IND/22	C
02103 - COMPLEMENTS OF AUTOMATIC CONTROL *Sferlazza(RD)*	6	2	V	ING-INF/04	C
18053 - CORROSION AND PROTECTION OF AEROSPACE MATERIALS *Santamaria(PO)*	6	1	V	ING-IND/23	C
01258 - EXPERIMENTAL STRESS ANALYSIS *Pitarresi(PA)*	6	1	V	ING-IND/14	C
10069 - PROCESS DESIGN *Buffa(PO)*	6	1	V	ING-IND/16	C
02375 - STRUCTURAL DYNAMICS *Pirrotta(PO)*	6	2	V	ICAR/08	C

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