## UniversidadeVigo

Subject Guide 2019 / 2020

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IDEN	ITIFYIN	G DATA					
Air t	ranspo	rt and airborne systems					
Subje	ect	Air transport and					
		airborne systems					
Code		O07G410V01404					
Study	ý	(*)Grao en					
progr	ramme	Enxeñaría					
		Aeroespacial					
Desc	riptors	ECTS Credits		Choose	Year	Quadmester	
		6		Mandatory	2nd	<u>2nd</u>	
Teacl	hing	#EnglishFriendly					
langu	lage	Spanish					
Depa	rtment						
Coord	dinator	Orgeira Crespo, Pedro					
Lectu	irers	Orgeira Crespo, Pedro					
E-ma	il	porgeira@uvigo.es					
Web		http://aero.uvigo.es					
Gene	eral	The subject is divided in two main	areas. First, civil a	aerial transport fun	damentals are	introduced, as well as the	
descr	ription	regulatory laws, the elements that	constitute it, and	its interactions. Se	econd, airborne	systems are described.	
		English Friendly subject: Internatio	nal students may	request from the t	eachers: a) mai	terials and bibliographic	
		references in English, b) tutoring s	essions in English	, c) exams and ass	essments in En	giish.	
Com	petenci	ies					
<u>Code</u>							
B1	Capabili establis materia manage	Diliity for design, development and management in the field of aeronautical engineering (in according with what is lished in section 5 of order CIN / 308/2009), aerospace vehicles, aerospace propulsion systems, aerospace rials , airport infrastructures, air navigation infrastructures and space management, air traffic and transport					
	Capabil	ity to analyze and assess the social	and environment	al impact of technic	cal solutions.		
C14	Underst	and the air transport system and th	e coordination with	th other transport i	modes.		
C19	Applied	knowledge of: science and technolo	pay of materials: r	mechanics and the	modynamics: f	luid mechanics:	
	aerodvr	namics and flight mechanics: naviga	tion and air traffic	systems: aerospa	ce technology:	theory of structures:	
	airborne	e transportation; economy and prod	uction; projects; e	environmental impa	act.	, ,	
C21	Appropr	iate knowledge applied to engineer	ing: foundations o	of sustainability, m	aintenance and	operation of aerospace	
D1	Capabil	ity of analysis, organization and plar	nification.				
D2	Leaders	hip, initiative and entrepreneurship					
D3	Capabil	ity of oral and written communication in native lenguage					
D4	Capabil	ity of autonomous learning and info	rmation managen	nent			
D5	Capabil	ity to solve problems and draw deci	sions				
D6	Capabil	ity for interpersonal communication	]				
D8	Capabil	ity for critical and self-critical reaso	nina				
D13	Sustain	ability and environmental commitme	ent. Equitable, reg	sponsible and effici	ent use of reso	urces	
						· · · · ·	
Lear	ning ou	itcomes					

Expected results from this subject		Training and Learning			
		Res			
New		C14	D1		
			D5		
			D8		
Knowledge of the way in the that the aerial way inserts in the system of transport and the distinct			D1		
forms of cooperation and competition *intermodales			D4		
			D5		
			D8		
			D13		

Knowledge the economic and social profits of the aerial transport	Β7	C14 C21	D1 D4 D5 D6 D8 D13
Understanding of the legal characteristics of the aerial transport and knowledge of the system *regulatorio international in this way	B1 B7	C14 C21	D1 D2 D3 D4 D8 D13
Knowledge of the different elements that integrate the system of transports: aerial companies, manufacturing, airports, *proveedores of services of aerial navigation	B1 B7	C14 C19	D1 D2 D4 D6 D8 D13
Comprise the most important aspects of the situation of the aerial transport in the actuality, so much in Spain how in the rest of the world	B1 B7	C14 C19 C21	D1 D2 D3 D4 D6 D8 D13
Comprise the different systems and *subsistemas @embarcar in vehicles *aeroespaciales	B1 B7	C14 C19 C21	D1 D3 D4 D8 D13

Contents	
Торіс	
Aerial transport	Structure and elements that constitue current world-wide transport system. Insertion of the aerial mode in the transport system and the different ways of cooperation and intermodal competition. Economic and social benefits of the aerial transport. Legal frame of the aerial transport and international law system. Elements that constitute the system of transportation: aerial companies, manufacturing, airports, aerial navigation suppliers. Situation of the aerial transport nowadays, in Spain and in the rest of the world.
Onboard systems	Flight reference systems. Flight forces and performance. Stability. Control systems. Navigation systems. Inertial navigation. Positioning navigation. GPS. ILS.

Planning						
	Class hours	Hours outside the classroom	Total hours			
Introductory activities	1	0	1			
Lecturing	26	65.5	91.5			
Problem solving	11.5	16	27.5			
Laboratory practical	8	8	16			
Case studies	0	8	8			
Problem and/or exercise solving	2	0	2			
Problem and/or exercise solving	2	0	2			
Essay questions exam	2	0	2			
*The information in the planning table is for	or guidance only and does no	ot take into account the het	erogeneity of the students.			

Methodologies

	Description
Introductory activities	Activities oriented to take contact and gather information for the students, as well as to present the subject.
Lecturing	The teacherwill expose the theoretical bases of the subject. The students will have basic reference texts
Problem solving	The professor will solve problems and exercise and the students will have to solve similar exercises
Laboratory practical	IT and laboratory solutions will be used to solve problems and exercises and apply the knowledge achieved.
Case studies	The teacher will solve problems and exercises and the students will have to solve similar exercises

Personalized assistance			
Methodologies	Description		
Lecturing	The teacher will attend personally the doubts and queries of the students, in person, or by telematic support.		
Problem solving	The teacher will attend personally the doubts and queries of the students, in person, or by telematic support.		
Laboratory practical	The teacher will attend personally the doubts and queries of the students, in person, or by telematic support.		

Assessment						
	Description	Qualification	Trair	ning and Resu	l Learning lts	
Problem and/or exercise solving	Exams and projects will be done to evaluate autonomous resolution of exercises and/or problems as well as the assistance and active participation.	20	B1 B7	C14 C19 C21	D1 D2 D3 D4 D5 D6 D8 D13	
Problem and/or exercise solving	Evaluation of the acquisition of knowledge will be performed by exams.	10	B1 B7	C14 C19 C21	D13 D1 D2 D3 D4 D5 D6 D8 D13	
Essay questions exam	Final written exam.	70	B1 B7	C14 C19 C21	C14 D1 C19 D2 C21 D3 D4 D5 D6 D8 D13	

## Other comments on the Evaluation

The examination has to reach at least a 4 (on a scale of 0 to 10)

To be able to pass the subject; if it does not reach the 4, the final note be the minimum between the weighted note (according to the indicated percentages) and 4.9.

Non-assistent students will have the possibility to make an examination that covers all the matter.

The assessment of July follows the same way (saves the results of the continuous evaluation).

The calendar of the exams approved officially by the Xunta de Centro of the EEAE is published in the web page http://aero.uvigo.es/gl/docencia/exames

Sources of information	
Basic Bibliography	
L. Tapia, <b>Derecho aeronáutico</b> , Bosch,	_

A. Benito, **Descubrir las líneas aéreas**, AENA, J. Anderson, **An Introduction to flight**, McGraw&Hill, **Complementary Bibliography** 

## Recommendations

## Subjects that it is recommended to have taken before

Aerospace technology/007G410V01205