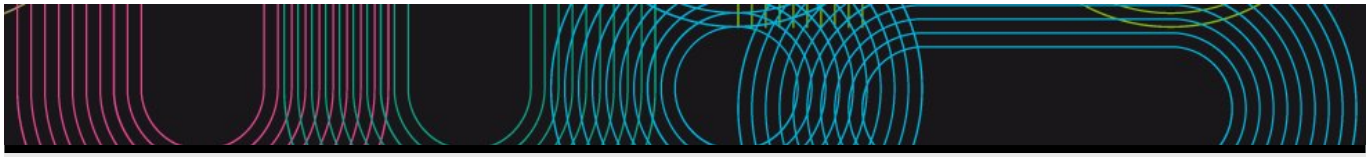

IDENTIFYING DATA				
Avionics				
Subject	Avionics			
Code	O07M197V01205			
Study programme	(*)Máster Universitario en Enxeñería Aeronáutica			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Mandatory	1st	2nd
Teaching language	Spanish			
Department				
Coordinator	González Jorge, Higinio			
Lecturers	González Jorge, Higinio			
E-mail	higiniog@uvigo.gal			
Web	http://aero.uvigo.es			
General description	This course aims to teach students the main electronic systems present in an aircraft, both in terms of communication and navigation systems.			

Training and Learning Results	
Code	
A21	Adequate knowledge of avionics and on-board software, simulation and control techniques used in air navigation.
A22	Adequate knowledge of wave propagation and the problems of links with ground stations.
A23	Ability to design RADAR systems and air navigation aids.
A24	Adequate knowledge of aeronautical information technologies and communications.

Expected results from this subject	Training and Learning Results
Adequate knowledge of avionics and on-board software, simulation and control techniques used in air navigation	A21
Adequate knowledge of wave propagation and the problems of links with ground stations	A22
Ability to design RADAR systems and air navigation aids	A23
Adequate knowledge of aeronautical information technologies and communications	A24

Contents
Topic
1. Introduction and specific problems in on-board equipment.
2. Noise and interference. EM compatibility. Optical and optoelectronic solutions.
3. Power supply systems. Requirements and structures.
4. Sensors, actuators and other input and output devices.
5. Electronic signal collection and delivery and preprocessing.
6. Baseband signal transmission. ARINC and MIL buses.
7. Information processing and on-board software. Simulation and Control Techniques.

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	29	0	29
Laboratory practical	16.5	0	16.5
Mentored work	0	102	102
Objective questions exam	1.25	0	1.25
Objective questions exam	1.25	0	1.25

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Lecturing	Exposure of the contents of the course through audiovisual media.
Laboratory practical	Troubleshooting through laboratory assemblies.
Mentored work	The student will carry out a project based on technical specifications defined by the professor.

Personalized assistance

Methodologies	Description
Lecturing	Classroom attention. Tutorials with previous appointment. Attention by email. Mail: higiniog@uvigo.gal
Laboratory practical	Classroom attention. Tutorials with previous appointment. Attention by email. Mail: higiniog@uvigo.gal
Mentored work	Tutorials with previous appointment. Attention by email. Mail: higiniog@uvigo.gal

Assessment

	Description	Qualification	Training and Learning Results
Laboratory practical	Laboratory report	10	A21 A22 A23 A24
Mentored work	Project	30	A21 A22 A23 A24
Objective questions exam	Partial exam I	30	A21 A22 A23 A24
Objective questions exam	Partial examn II	30	A21 A22 A23 A24

Other comments on the Evaluation

The student has the right to opt for the global assessment according to the procedure and the deadline established by the centre for each call.

The continuous assessment will be carried out during university class hours.

The official exam dates are used for the student to take an exam-only assessment of the course if he/she does not follow the continuous assessment or fails it. This exam will correspond to 100% of the course and will have a duration of 2.5 hours.

No marks for each of the parts will be kept between different exam sessions.

The calendar of evaluation tests officially approved by the Faculty is published on the web page:

http://aero.uvigo.es/es/docencia/examenes/

Sources of information

Basic Bibliography

Jesús Martínez Rueda, **Avionica básica en aeronaves**, 9788428341158, Ediciones Paraninfo, 2021

Ian Moir, Allan Seabridge, **Aircraft Systems: Mechanical, electrical, and avionics subsystems integration**, 9780470770931, John Wiley & Sons, Ltd, 2008

R.P.G. Collinson, **Introduction to Avionics Systems**, 978-94-007-0708-5, Elsevier, 2011

Complementary Bibliography

Recommendations

Subjects that are recommended to be taken simultaneously

Advanced air navigation systems/O07M197V01204