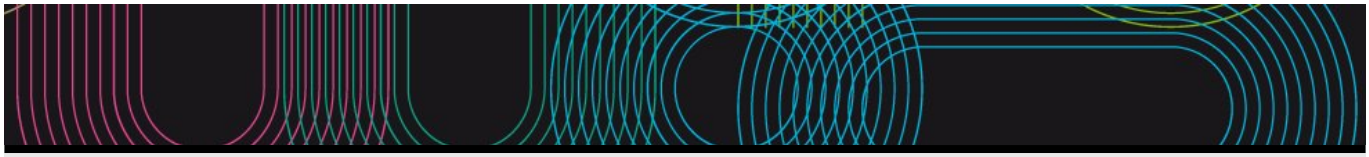

IDENTIFYING DATA				
Audiovisual Technology				
Subject	Audiovisual Technology			
Code	V05G300V01631			
Study programme	Degree in Telecommunications Technologies Engineering			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Optional	3rd	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	Torres Guijarro, María Soledad			
Lecturers	Martín Rodríguez, Fernando Torres Guijarro, María Soledad			
E-mail	marisol@gts.uvigo.es			
Web	http://faitic.uvigo.es			
General description	In this subject the student will learn to design audiovisual systems,with respect to sound take and sound reinforcement, image take and visual coating, synchronisation, wiring, connections and supply. Indoor and outdoor applications of audiovisual networks, as well as distinct multimedia platforms, will be analysed.			

Competencies	
Code	
B1	CG1: The ability to write, develop and sign projects in the field of Telecommunication Engineering, according to the knowledge acquired as considered in section 5 of this Law, the conception and development or operation of networks, services and applications of Telecommunication and Electronics.
B6	CG6: The aptitude to manage mandatory specifications, procedures and laws.
B9	CG9: The ability to work in multidisciplinary groups in a Multilanguage environment and to communicate, in writing and orally, knowledge, procedures, results and ideas related with Telecommunications and Electronics.
B12	CG12 The development of discussion ability about technical subjects
C36	CE36/SI3 The capacity to implement projects at places and installations for the production and recording of audio and video signals.
C38	CE38/SI5 The ability to create, modify, manage, broadcast and distribute multimedia contents taking into account the use and accessibility criteria to audiovisual, broadcasting and interactive services.
D4	CT4 Encourage cooperative work, and skills like communication, organization, planning and acceptance of responsibility in a multilingual and multidisciplinary work environment, which promotes education for equality, peace and respect for fundamental rights.

Learning outcomes		
Expected results from this subject		Training and Learning Results
Understand which elements have an influence on audiovisual quality.		C36 C38
Design a system of sound take and sound reinforcement given a certain enclosure, comparing different subsystems and elements.	B1 B6	C36
Create atmospheres addressing acoustic and visual appearances	B12	C36
Design the wiring and connections of an audiovisual network for his control and supply	B1 B6	C36 C38
Analyse different indoor and outdoor applications of Audiovisual Networks.		C36 C38
Apply and analyse distinct multimedia systems: videoconference, streaming, audiovisual databases, synchronisation, metadata processing, exchange of multimedia contents.	B6 B12	C38

Organize a working group to carry out a project, including the following: * technical ability to collect information, interpret technical specifications of equipment, discuss different options and select a combination of certain equipment. * use of theoretical calculations and simulation software tools to support the design of sound systems and visual coating. * conduction of meetings, discussion of partial results and oral presentation of a definitive work in front of a demanding audience. * writing of progress reports, minutes of meetings and a final technical report. * adaptation to new environments, management of internal roles in the group and conflict resolution.	B6 B9 B12	D4

Contents	
Topic	
Sound reinforcement	Sizing and distribution in the processes of take and presentation of sound
Visual overlay	Design of systems of visual take and presentation indoor and outdoor. Sizing and distribution of the visual coverage, in the processes of take and presentation
Connections and supply	Design of the wiring and connecting of an audiovisual network and his supply. Audiovisual networks, indoor and outdoor applications.
Synchronisation and control	Synchronisation of audio and video signals in an audiovisual network. Control systems. Audiovisual quality: sound/image interaction. Ambient creation addressing visual and acoustic issues
Multimedia systems	Videoconference, streaming, audiovisual databases, synchronisation, metadata procesing, exchange of multimedia contents

Planning	Class hours	Hours outside the classroom	Total hours
Practice in computer rooms	12	0	12
Projects	7	57	64
Master Session	21	42	63
Short answer tests	2	0	2
Reports / memories of practice	0	9	9
*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.			

Methodologies	Description
Practice in computer rooms	Use and adjustment of analysis tools and algorithms, identifying which one should be used in each situation. With this methodology they work the CE36 competence.
Projects	Collaborative work in reduced groups on a complex design that applies several topics covered in the subject. The work is periodically followed-up and it fosters working in group, role sharing, information sharing, planning and public defending of results. With this methodology they work the CG1, CG6, CG9, CG12, CE36, CE38 and CT4 competences.
Master Session	Presentation by the teacher of the contents of the subject, fostering the critical discussion of the concepts. The theoretical grounds of algorithms and procedures used to resolve problems are given. With this methodology they work the CG1, CG6, CG12, CE36 and CE38 competences.

Personalized attention	
Methodologies	**Description**
Master Session	Doubts can be solved in the rests of the classes and in the teacher tutorial sesions. These tutorial sessions will be done individually or in short groups (with a maximum of 2-3 students). The tutorial sessions are typically agreed with the professor. The meetng requests can be done personally or by email. The tutorial sessions are preferably done in the schedules and place officially reserved for them.
Practice in computer rooms	In the classes of practices is a good moment to consult doubts with the professor. The professor moves between the tables and some students take advantage of the proximity of the professor to consult doubts of the own class or punctual doubts of other classes.
Projects	The projects have its own classes of C group in which the students of each team consult their doubts about the project and the professor is with them helping to define the project and giving them support for the development of their particular project. They are classes with a very pleasant interaction.

Assessment

	Description	Qualification	Training and Learning Results		
Projects	Assessment of a project, developed through the four-month period, including the preparation and public presentation of a report. The corresponding individual mark to the works done in group is obtained as a ponderated sum of: 1) the common mark of the group (60%); 2) the individual mark (40%), obtained from one or various of the following methods of evaluation: cross-evaluation by the other members of the group, oral questions during the presentations of the works, written questions about the content of the work.	40	B1 B6 B9 B12	C36 C38	D4
Short answer tests	Assessment of a written exam, with brief questions and problems.	50	B1 B6 B12	C36 C38	
Reports / memories of practice	Assessment of a written inform that describes the work of several weeks in the computer classroom.	10		C36	

Other comments on the Evaluation

Following the study programme guidelines, the student can choose between two assessment methods: CONTINUOUS ASSESMENT, that is the recommended method linked to the educational activities and NON CONTINUOUS ASSESSMENT, only recommended for those students which can not follow the first method.

CONTINUOUS ASSESSMENT

The continuous assessment consists of the tests detailed in the following. The student opts by the continuous assessment method once she/he signs the document of commitment that will be available at week 1-3, so that she/he can begin the work in the corresponding group. Once signed, it is assumed that the student has taken the examination session and will be given the mark resulting of the application of the criterion detailed in the following, regardless of wheter she/he takes the final exam or not.

Types and assessment of activities:

Reports of the practical sessions (Weight: 10%): will be assessed around weeks 6 and 11.

Projects (Weight 40%): will be assessed around week 12. The individualized part of the assessment will be done through cross-evaluation, oral questions during presentations, and/or written exam questions.

Proof of short answer (Weight: 50%): it coincides with the final exam date. It includes all the contents of the subject.

The final note corresponds to the sum of the marks obtained in all the activities weighted by the corresponding percentages. The student should obtain, at least, a grade of 4 points over ten in each type activity, and a final grade of 5 points to pass the subject. If in any of the activities the grade does not reach 4 but the average exceeds 5, the final grade will be 4.

NON CONTINUOUS ASSESSMENT

If the student does not sign the document of commitment, she/he will be evaluated through a final examination in the official date assigned by the Centre. This exam will consist of two parts, of equal weight in the final mark: a written part that may include all the topics of the subjet, and an oral part relative to additional work. This additional work should be presented previously to the teacher. The student may take part in the continuous assessment activities of the practical sessions, but they will not be assessed in her/his case. The additional work to deliver will be specified in week 6 of term, and will have to be delivered to the teacher a week before the final exam.

The student should obtain, at least, a grade of 4 points over ten in each type activity, and a final grade of 5 points to pass the subject.

Sources of information

Basic Bibliography

John Eargle, **JBL Sound system design reference manual**, 3, JBL, 1999

Complementary Bibliography

John Eargle, Chris Foreman, **Audio Engineering for Sound Reinforcement**, Hal Leonard, 2002

Gary Davis and Ralph Jones, **Sound Reinforcement Handbook**, Hal Leonard, 1989

Philip Giddings, **Audio Systems Design and Installation**, Focal Press, 1990

Hilary Wyatt y Tim Amyes, **Postproducción de Audio para TV y Cine**, Escuela de Cine y Video de Andoain, 2005

Rüdiger Ganslandt, Harald Hofmann, **Handbook of Lighting Design**,
José Luis Sánchez Bote, **Sistemas de refuerzo sonoro**, Universidad Politécnica de Madrid, 2013
José María Mellado, **Fotografía de alta calidad: las técnicas y métodos definitivos.**, CS6. Anaya multimedia, 2013
Ben Simonds, **Blender master class : a hands-on guide to modeling, sculpting, materials, and rendering**, No Starch Press, 2013

Recommendations

Subjects that are recommended to be taken simultaneously

Room Acoustics/V05G300V01635
Imaging Systems/V05G300V01633

Subjects that it is recommended to have taken before

Fundamentals of Sound and Image/V05G300V01405
Audio Systems/V05G300V01532
Video and Television/V05G300V01533