Teaching Guide				
Identifying Data				2016/17
Subject (*)	Acoustic Waves		Code	730495015
Study programme	Mestrado Universitario en Materiais Complexos: Análise Térmica e Reoloxía (plan 2012)			
Descriptors				
Cycle	Period	Year	Type	Credits
Official Master's Degree	1st four-month period	First	Optativa	4
Language	English			
Teaching method	Face-to-face			
Prerequisites				
Department				
Coordinador	López Beceiro, Jorge José	E-mail	jorge.lopez.beceiro@udc.es	
Lecturers	Derode , Arnoud	E-mail	arnoud.derode@espci.fr	
Web				
General description	By focusing on the core concepts of propagation of sound waves, this course provides students with the skills necessary to study the acoustical problems in complex fluids.			

Study programme competences / results	
Code	Study programme competences / results
A4	Knowing and applying statistical methods to analyze data from complex material testing
A5	Understanding the relationships between structure and properties of materials
B1	Knowledge and understanding to provide a basis or opportunity for originality in developing and / or applying ideas, often in a research context
B2	The students have the skill to apply their knowledge and their ability to solve problems in new or unfamiliar contexts within broader (or multidisciplinary) contexts related to their field of study
B4	That the students can communicate their conclusions and the knowledge and last reasons behind that conclusions to specialized and non specialized audience in a clear and unambiguous way
B8	Applying a critical, logical and creative way of thinking
B12	Communicate effectively in the work environment
B18	Ability for abstraction, understanding and simplification of complex problems
B19	Will of continuous improvement
B21	To assess the importance of research, innovation and technological developments in the socio-economic and cultural progress of society
C2	Have a good command of spoken and writing expression and understanding of a foreign language.
C6	Critically assessing the knowledge, technology and information available to solve the problems they face with.
C7	To assume as a professional and citizen the importance of learning throughout life.
C8	To assess the importance of research, innovation and technological development in the socio-economic and cultural progress of society.

Learning outcomes			
Learning outcomes	Study programme competences / results		
	AR4 AR5	BR1 BR2 BR4 BR8 BR12 BR18 BR19 BR21	CR2 CR6 CR7 CR8

Contents	
Topic	Sub-topic

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Guest lecture / keynote speech	A4 A5 B1 B4 B18 C2	10	18	28
Laboratory practice	B2 B8 B12 B19 B21 C8	20	20	40
Supervised projects	B4 B19 B21 C2 C6 C7	5	25	30
Personalized attention		2	0	2
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
Guest lecture / keynote speech	Presentation given by the professor, on a schematic basis, focusing on the main topics, covering both theoretical and practical issues.
Laboratory practice	Performance of practical activities such as demonstrations, exercises, experiments, etc..
Supervised projects	Activities whose purpose is that the students enlarge the study of the topics pesented in the program and consolidate their acquired knowledge and capabilities. These activities should also help the students learn and improve their capabilities in literature survey.

Personalized attention	
Methodologies	Description
Guest lecture / keynote speech	The personalized attention to students, understood as a support in the teaching-learning process, will take place in the hours of tutoring of the professor.

Assessment			
Methodologies	Competencies / Results	Description	**Qualification**
Guest lecture / keynote speech	A4 A5 B1 B4 B18 C2	Examination or objective test.	50
Laboratory practice	B2 B8 B12 B19 B21 C8	Continuous assessment through monitoring of student work in the classroom, laboratory and / or tutorials.	20
Supervised projects	B4 B19 B21 C2 C6 C7	Presentation (oral and written) of the supervised work.	30

Assessment comments

Sources of information	
Basic	
Complementary	

Recommendations
Subjects that it is recommended to have taken before
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Other comments

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.