UNIVERSIDADE DA CORUÑA

Teaching Guide				
Identifying Data				2014/15
Subject (*)	PHYSICS I		Code	730G01102
Study programme	Grao en Arquitectura Naval			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	1st four-month period	First	FB	6
Language				
Prerequisites				
Department	Enxeñaría Industrial 2			
Coordinador	Alvarez Feal, Jose Carlos Juan	E-mail	carlos.alvarez@udc.es	
Lecturers	Alvarez Feal, Jose Carlos Juan	E-mail	carlos.alvarez@udc.es	
Web				
General description				

Study programme competences	
Code	Study programme competences

Learning outcomes	
Subject competencies (Learning outcomes)	Study programme competences

Contents	
Topic	Sub-topic
Chapter I INTRODUCTION	Section 1 Introduction Section 2 Physical magnitudes Section 3 Magnitudes vectoriais
Chapter II STATIC EQUILIBRIUM	Section 4 Equilibrium of particles Section 5 Forces Section 6 Equilibrium of rigid bodies
Chapter III KINEMATICS	Section 7 Kinematics of particles Section 8 Relative movements
Chapter IV DYNAMICS OF A SINGLE PARTICLE	Section 9 Principles Section 10 Work and energy
Chapter V DYNAMICS OF RIGID BODIES	Section 11 Dynamics of particles systems Section 12 Dynamics of rigid bodies
Chapter VI DYNAMICS OF DEFORMABLE MEDIA	Section 13 Deformable media Section 14 Statics of fluids Section 15 Dynamics of fluids
Chapter VII WAVES	Section 16 Wave movement Section 17 Mechanical waves

Planning			
Methodologies / tests	Ordinary class hours	Student?s personal work hours	Total hours
Guest lecture / keynote speech	21	25.2	46.2
Problem solving	13	52	65
Laboratory practice	10	2	12
Objective test	2	2.8	4.8

Objective test	4	8	12
Personalized attention	10	0	10
(*)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	Lecture Explanation and resolution of fundamentals.
Problem solving	Medium group: Study of cases and problem solving.
Laboratory practice	Laboratory: students will perform 4 laboratory practices (2 h per sesion) and an exam about the practices
Objective test	The curse is divided in 2 parts, each one with their exam. The first part includes: vectors, static and kinematics. The exam will be held on a date fixed by the official calendar.
Objective test	The second exam includes: dynamics of particles, dynamics of rigid bodies, fluids and waves. The date coincides with the final exam which will be approved by the Xunta de Centro.

Personalized attention	
Methodologies	**Description**
Problem solving	Tutorials about the lectures, the exercies, and other situations in relation with the course.

Assessment		
Methodologies	**Description**	**Qualification**
Guest lecture / keynote speech	Attendance at lectures is compulsory. 5 unexcused absences are only allowed.	10

Problem solving	Attendance at problem solving is compulsory. ? It required a minimum of 3 partnership before each exam. For the medium group: ? Each problem sheet will consist of a fixed number of cases. ? During this class it will be to explain the methodology. ? In total, there will be 70 problems (30+40). A minimum limit is required to score, 80 % of right solutions. Score will be distributed in the following way, if the student makes: ? Less than the limit, score is zero. ? Equal to the limit, score is 5. ? Exceending the limit, score is added one point per right solution. ? At this class the work falls on students. It will be valued both the contributions made by students and the group collaborations. The qualification is presented at the section Objetive test	0
Laboratory practice	Attendance at lab is compulsory. Laboratory practices must be made during the first year of registration Qualification of the practices will be held for three consecutive years. They will be not admitted lack of assistance without justification Students must made 4 lab practices plus an exam about them. Qualifiaciton of practices represents 10% of the total.	10
Objective test	There will be a Objetive test that will be held during the four-month period, this exam represents 30% of total. The test will be in 2 parts: theory (T = 40 % of the score) and problems solving (60 % of the score). The theory test will take place either with problems or by your computer Problems solving qualification is divided in two scores: the problems test (P = 50 % of the score) and the problems sheet score (E = 50 % of the score) The total qualification is: NOTA (E1)=0.4T+0.3P+0.3E	30

Objective test	The final Objective test will include the second part of the course: dynamics of particles, dynamics of rigid solid, fluids and waves. The exam date will coincides with the final exame date to be approved in the Xunta de Centro. This Objectiv test represents 50% of total. It will follow the same criteria as in the previous test (40% theory, 30% problems exam, and 30% right solutions), In July, students will only have to examine suspended parts.	50

Assessment comments
Final qualification is given by the equation: Nota = 0.1* Practices + 0.1*Asistence + 0.3*E1 + 0.5*E2 where: Practices is the score of lab practices Asistence is the ratio number of attendance/ total E1 is the score of the first Objective test E2 is the score of the first Objective test

Sources of information	
Basic	- Tipler, Paul Allen (1992). Física. Reverté - Serway, Raymond A. (1992). Física. McGraw-Hill - Francis Sears, Zemansky, Young (1986-1998). Física Universitaria. Addison-Wesley
Complementary	

Recommendations
Subjects that it is recommended to have taken before
Subjects that are recommended to be taken simultaneously
CÁLCULO/730G02101 EXPRESION GRAFICA/730G02103 ÁLXEBRA/730G02106 ECUACIÓNS DIFERENCIAIS/730G02110
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.