UNIVERSIDADE DA CORUÑA

Teaching Guide			
Identifying Data			2017/18
Subject (*)	Advanced Computer Science and Integrated Design in Manufacturing	Code	771G01019
Study programme	Grao en Enxeñaría de Deseño Industrial e Desenvolvemento do Produto		

Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	Third	Optativa	6

Language	Spanish		
Teaching method	Face-to-face		
Prerequisites			
Department	Enxeñaría Naval e Industrial		
Coordinador	Gonzalez Castro, Manuel Jesus	E-mail	manuel.gonzalez@udc.es
Lecturers	Dopico Dopico, Daniel Gonzalez Castro, Manuel Jesus	E-mail	daniel.dopico@udc.es manuel.gonzalez@udc.es
Web	http://moodle.udc.es		
General description	Informática avanzada e integración do deseño e a producción.		

Study programme competences	
Code	Study programme competences
A5	Identificar, formular e resolver problemas de enxeñaría.
A6	Formación amplia que posibilite a comprensión do impacto das solucións de enxeñaría nos contextos económico, medioambiental, social e global.
A7	Capacidade para deseño, redacción e dirección de proxectos, en todas as súas diversidades e fases.
A8	Capacidade de usar as técnicas, habilidades e ferramentas modernas para a práctica da enxeñaría.
A10	Comprensión das responsabilidades éticas e sociais derivadas da súa actividade profesional.
B5	Resolver problemas de forma efectiva.
C6	Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.
C7	Asumir como profesional e cidadán a importancia da aprendizaxe ao longo da vida.
C8	Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade.

Learning outcomes			
Learning outcomes	Study programme competences		
Adquirir coñecementos básicos de CAD/CAE/CAM/PDM e recoñecer as súas aplicacións no deseño de produto.	A5 A6 A7 A8 A10	B5	C6 C7 C8
Modelar produtos con software CAD Mecánico 3D.	A5 A7 A8	B5	

Contents	
Topic	Sub-topic

Os bloques ou temas seguintes desenvolven os contidos establecidos na ficha da Memoria de Verificación	Introducción. CAD (Computer Aided Design). CAE (Computer Aided Engineering). CAT (Computer Aided Testing). CAM (Computer Aided Manufacturing). CAPP (Computer Aided Processing and Planning). RE (Reverse Engineering). VR (Virtual Reality). RP&T (Rapid Prototyping and Tooling). CAT&M (Computer Aided Testing and Maintenance). PDM (Product Data Management).
Ferramentas informáticas no ciclo de vida do produto	Introducción CAD (Computer Aided Design) CAE (Computer Aided Engineering) CAT (Computer Aided Testing) CAM (Computer Aided Manufacturing) CAPP (Computer Aided Processing and Planning) RE (Reverse Engineering) VR (Virtual Reality) RP/RT(Rapid Prototyping and Tooling) CAT&M (Computer Aided Testing and Maintenance) PDM (Product Data Management)
Modelado 3D con software CAD Mecánico	Introdución a SolidWorks Pezas Ensamblaxes Planas Configuracións Introdución a superficies

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Introductory activities	C6 C7 C8	1	0	1
Guest lecture / keynote speech	A5 A10 A6	18	27	45
Laboratory practice	A5 A7 A8 B5	15	15	30
Problem solving	A5 A7 A8 B5	6	54	60
Workbook	A10 A6 C6 C7 C8	0	7	7
Mixed objective/subjective test	A5 A7 A8 B5 C6	6	0	6
Personalized attention		1	0	1
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
Introductory activities	Presentación da materia.
Guest lecture / keynote speech	Exposición de conceptos teóricos.
Laboratory practice	Prácticas na aula de informática.
Problem solving	Resolución de exercicios prácticos co software manexado na materia.
Workbook	Profundizar obre os contidos teóricos da materia.
Mixed objective/subjective test	Examenes teóricos (tipo test) e prácticos (resolución de problemas con computador) dos temas da materia.

Personalized attention

Methodologies	Description
Problem solving	Resolución de dúbidas sobre os exercicios.

Assessment			
Methodologies	Competencies / Results	Description	Qualification
Mixed objective/subjective test	A5 A7 A8 B5 C6	Exámen(es) parcial(es) e exame final.	100
Others			

Assessment comments

Sources of information	
Basic	- Manuel González (). Apuntes da materia. - Varios (). Axuda de SolidWorks.
Complementary	- Robert A. Malloy (). Plastic Part Design for Injection Molding. Hanser Publishers - Harold Belofsky (). Plastics: Product Design and Process Engineering. Hanser Publishers - MoldFlow (). http://www.plasticszone.com . - (). www.deskeng.com.

Recommendations
Subjects that it is recommended to have taken before
Computer Aided Engineering/771G01013 Computer Aided Design/771G01017
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Product Development Technologies/771G01014 Project Workshop/771G01018
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.