UNIVERSIDADE DA CORUÑA

Teaching Guide				
Identifying Data				2016/17
Subject (*)	ESTATÍSTICA		Code	730G04008
Study programme	Grao en enxeñaría en Tecnoloxías Industriais			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	First	FB	6
Language	Spanish			
Teaching method	Face-to-face			
Prerequisites				
Department	Análise Económica e Administración de Empresas			
Coordinador	Garcia del Valle, Alejandro	E-mail	alejandro.garcia.delvalle@udc.es	
Lecturers	Crespo Pereira, Diego Garcia del Valle, Alejandro Ríos Prado, Rosa	E-mail	diego.crespo@udc.es alejandro.garcia.delvalle@udc.es rosa.rios@udc.es	
Web				
General description				

Study programme competences / results	
Code	Study programme competences / results

Learning outcomes			
Learning outcomes	Study programme competences / results		
Capacity for abstraction, understanding, analysis and simplification of instances and processes.	A1	B2 B3 B4 B5 B6 B7	C1 C4
Using statistical software for solving engineering problems involving randomness and large volume of data.	A1		C1
Ability to solve statistical problems encountered in engineering.	A1		C1

Contents	
Topic	Sub-topic
Introduction to Statistics	
2. Exploratory data analysis.	
3. Probability.	
4. Ramdom variables.	
5. Discrete random variables and probability distributions.	
6. Continous random variables and probability distributions.	
7. Joint probability distributions.	
8. Statistical inference.	
9. Point estimation of parameters.	
10. Statistical intervals for a single sample.	
11. Test of hypotheses for a single sample.	
12. Regression an analysis of variance (ANOVA).	

Planning

Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Guest lecture / keynote speech	A1 B2 B7	30	36	66
Problem solving	B3 B4 B5 C1 C4	20	18	38
ICT practicals	A1 B6	10	10	20
Mixed objective/subjective test	A1 B2 B3 B4 B5	3	9	12
Objective test	A1 B2 B3 B4	3	9	12
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	Lectures about the course topics.
Problem solving	Solving exercises and statistical problems encountered in engineering.
ICT practicals	Resolution of practical cases of statistical problems by Excel.
Mixed objective/subjective test	Midterm exam of the first issues of the subject.
Objective test	Final exam

Personalized attention	
Methodologies	Description
ICT practicals Objective test Mixed objective/subjective test	The personalized attention will be made in the tutorials.

Assessment			
Methodologies	Competencies / Results	Description	**Qualification**
ICT practicals	A1 B6	Evaluation of case studies solved in small groups.	25
Objective test	A1 B2 B3 B4	Final exam with test questions and troubleshooting.	50
Mixed objective/subjective test	A1 B2 B3 B4 B5	Midterm exam with test questions and troubleshooting.	25

Assessment comments
IMPORTANT: Attendance to at least the 80% of classes is required in order to pass the course, unless justified and autorized by the professor. Students who do not meet this requirement will have the qualification of SUSPENSE.The "students with recognition of a part-time academic and exemption of assistance" will communicate at the beginning of the course your situation to the teachers of the subject, as established by the "Standard that regulates the dedication to the study of undergraduates in the UDC "(Art.3.be 4.5) and the" Standards for evaluation, review and claim of the qualifications of undergraduate and master's degree (Art. 3 and 8b).Students in this situation will be assessed on the date approved by the School Board, by an objective test consisting of solving exercises on the contents of step 3 of the Guide.

Sources of information

Basic	- García del Valle, Alejandro; Crespo, Diego (2010). Apuntes de Estadística para Ingenieros. Moodle UDC - Douglas C. Montgomery, George C. Runger (2011). Applied Statistics and Probability for Engineers. John Wiley
Complementary	- S. Christian Albright, Wayne Winston, Christopher J. Zappe (1999). Data Analysis & Decision Making with Microsoft Excel. Duxbury - Ronald E. Warpole (1999). Probabilidad y Estadística para Ingenieros. Pearson

Recommendations
Subjects that it is recommended to have taken before
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
ORGANIZACIÓN DE EMPRESAS/730G03024 SIMULACIÓN DE PROCESOS INDUSTRIAIS E OPTIMIZACIÓN/730G04065
Other comments
Existe unha bibliografía moi ampla e actualizada sobre Estatística na biblioteca da Escola Politécnica Superior (moita dela en inglés). Os apuntamentos da materia estarán dispoñibles en Moodle así como os enunciados de casos propostos.