



IDENTIFYING DATA

Statistics: Statistics

Subject	Statistics: Statistics			
Code	O04G020V01204			
Study programme	(*)Grao en Administración e Dirección de Empresas			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Basic education	1st	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	Pérez González, Ana Mosquera Rodríguez, Manuel Alfredo			
Lecturers	Mosquera Rodríguez, Manuel Alfredo Pérez González, Ana			
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Web				
General description	The subject "Statistics" is a subject of basic education where the basic statistical concepts will be studied, starting from the subjects of descriptive statistics, calculation of probabilities, random variables, statistical inference and index numbers.			

Competencies

Code	
B1	Ability to analyse and synthesise
B2	Critical and self-critical thinking
B3	Skills related to the use of those computer applications used in business management
B13	Capacity for learning and independent work
B14	Capacity to apply the theoretical and practical knowledge acquired in a specialised academic context
C7	Acquire and understand knowledge regarding: The main instrumental techniques applied to the business context
C9	Identify the generalities of the economic problems posed in companies, and know how to apply the main instruments available in order to address these problems
C10	Assess the situation and foreseeable evolution of a company based on the relevant information records
C12	Solve problems effectively and make decisions using the appropriate quantitative and qualitative methods, including the identification, expression and solution of business problems
C16	Skills in looking for, identifying and interpreting sources of relevant economic information
D3	Responsibility and the capacity to take on commitments
D4	Ethical commitment in work
D5	Motivation for quality and continuous improvement

Learning outcomes

Expected results from this subject	Training and Learning Results
Be able to identify the statistical appearances inside an empirical problem and elaborate conclusions from the existent information applying the concepts studied in the matter. Know, know, apply and interpret properly the descriptive technicians and of calculation of basic probabilities and value his interest like fundamental tool in the analysis of data.	C7 C9 C10
Solve of effective way problems and questions of each one of the subjects of the program using the appropriate quantitative methods.	C12
Know the importance of the information and be able to value it and classify it in each field of decision. Know apply and interpret properly the basic descriptive technicians for the analysis of one-dimensional and two-dimensional variables.	C12 C16

Enter to the student in the handle of computer packages related with the statistics. Of this way, favour a positive attitude to the quantitative, in general, and the statistics, in particular, as well as to his computer manipulation.	B3
Boost the sensitivity to the own values of the scientific thought, favouring the attitudes associated to the use and development of the statistical methods like the *cuestionamiento of the intuitive ideas, the critical analysis of the affirmations, the need of verification, the capacity of analysis and synthesis or the taking of rational decisions.	B1 B2 B13 B14
Improve an attitude of ethical commitment, *incidiendo in the relative to the obtaining of the data, to the no manipulation of the results or the not copying the studies of others neither take advantage of of his work.	D3 D4
Wake up the taste by the use and study of the Statistics, seeing it as a tool that allows to learn more on the own field of knowledge and initiate in the realisation of own investigations.	D5

Contents

Topic	
Subject 1. Descriptive statistics	1.1 Frequency distributions. 1.2 Measures of position, dispersion and form. 1.3 Graphic representations. 1.4. Simple and complex index numbers. Properties. IPC.
Subject 2. Introduction to the calculation of probabilities	2.1 Basic concepts of the calculation of probabilities. 2.2 Conditional probabilities and concept of independence.
Subject 3. Random variables	3.1 Definition of a random variable and his distribution function. 3.2 Characteristics of a random variable. 3.3 Main distributions of probability. 3.4 Applications of the Central Limit Theorem.
Subject 4. Concepts and methodological principles of statistical inference	4.1 Population, sample and his characteristics. Simple random sampling. Sampling distributions in normal populations. 4.2 Point estimation. Concept of estimator and his properties. 4.3 Confidence intervals in normal populations. 4.4 Hypothesis testing. Hypothesis statement. Classical testings in normal populations.
Subject 5. Use of common statistical packages.	5.1 Introduction to the use of the statistical package. 5.2 Descriptive analyses and calculation of probabilities. 5.3 Random variables and main distributions of probability. 5.4 Statistical inference.

Planning

	Class hours	Hours outside the classroom	Total hours
Master Session	20	40	60
Autonomous troubleshooting and / or exercises	20	40	60
Group tutoring	5	10	15
Long answer tests and development	3	6	9
Troubleshooting and / or exercises	2	4	6

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Master Session	Exhibition by part of the professor of the contents on the subject object of study, theoretical bases and/or guidelines of a work, exercise or project to develop by the student.
Autonomous troubleshooting and / or exercises	Resolution of problems and questions of each one of the subjects of the program of the subject. Suitable software will be used.
Group tutoring	Exercise tests and/or exhibition by part of the students of the group of exercises commissioned to each one of them.

Personalized attention

Methodologies	Description
Group tutoring	The students will resolve problems that the professor have commissioned them and will be able to expose doubts on the subject to the professor. Also it will be used for the students to discuss on the development of the subject in order to improve the educational quality in a future.

Assessment

	Description	Qualification	Training	and Learning Results
Master Session	Realisation of test of each subject.	10	B13 B14	C7 C9 C10 C12 D3 D4 D5
Group tutoring	Realisation of test and/or exhibition of exercises in class and delivery of exercises of the bulletins	15	B1 B2 B13 B14	C7 C9 C10 C12 C16 D3 D4 D5
Long answer tests and development	Final practical/theoretical exam of the subject.	60	B1 B2 B13 B14	C7 C9 C10 C12 C16 D3 D4
Troubleshooting and / or exercises	Realisation of test on the practices	15	B3 B13 B14	C7 C9 C10 C12 C16 D3 D4 D5

Other comments on the Evaluation

The day of the final exam (official), both the first and the second opportunity, the student will be able to decide his method of evaluation between the following:

- **CONTINUOUS EVALUATION:** taking into account that:
 - The notes obtained in the distinct activities developed along the course will be taken into account in the final grade only if it is obtained a minimum **grade of 2 points**. (on a maximum of 6 points) in the final exam.
 - In case of not reaching this minimum grade, the final note will be the note of the final exam.
 - Will be able to implement alternative methodologies to determine if the student can or not following with the continuous evaluation.
- **NO CONTINUOUS EVALUATION:** This system is thought for that student that can not assist to class or to the activities developed along the course. It will consist of a final exam with two parts: a part of exercises and another of theory and practical with computer.

That student that use or cooperate in **fraudulent procedures** (copy, present by another student, plagiarism, ...) in any of the activities of evaluation will be evaluated by the **NO continuous evaluation** method.

The dates and schedules of the evaluation exams of the different periods are the specified in the calendar of evaluation exams approved by the Board of Centre for the course 2017-18. In case of conflict or disparity between the dates of the examinations will prevail the indicated in the web of the FCETOU

Sources of information

Basic Bibliography

- Arriaza Gómez, A. J.; Fernández Palacín, F.; López Sánchez, M. A.; Muñoz Márquez, M.; Pérez Plaza, S, **Estadística Básica con R y R Commander**, Universidad de Cádiz, 2008
- Cao Abad, R.; Francisco Fernández, M.; Naya Fernández, S.; Presedo Quindimil, M.A.; Vázquez Brage, M, **Introducción a la estadística y sus aplicaciones**, Pirámide, 2001
- Esteban García, J. y otros, **Estadística Descriptiva y nociones de probabilidad**, Thomson, 2005
- Gonick, L. y Smith, W., **A Estadística en Caricaturas**, SGAPEIO, 2001
- Levin, R.I. y Rubin, D.S., **Estadística para Administración y Economía**, 7, Pearson Prentice Hall, 2010
- Martín-Pliego F. J.; Montero-Lorenzo, J. M. y Ruíz-Maya, L., **Problemas de Inferencia Estadística**, AC, 2002
- Martín Pliego, F. J. y Ruíz-Maya, L., **Estadística I: Probabilidad.**, Thomson, 2004
- Martín Pliego, F. J. y Ruíz-Maya, L., **Fundamentos de Inferencia Estadística**, Thomson, 2005
- Newbold, P.; Carlson, W. L. y Thorne, B., **Estadística para Administración y Economía**, 8, Pearson Prentice Hall, 2013

Complementary Bibliography

- Casas Sánchez, J.M. y Santos Peñas, J., **Introducción a la Estadística para Economía y Administración de Empresas**, Centro de Estudios Ramón Areces, 1995
- Espejo Miranda, I.; Fernández Palacín, F.; López Sánchez, M. A.; Muñoz Márquez, M.; A. M. Rodríguez, **Estadística Descriptiva y Probabilidad**, Universidad de Cádiz, 2006

Espejo Miranda, I.; Fernández Palacín, F.; López Sánchez, M. A.; Muñoz Márquez, M.; A. M. Rodríguez, **Inferencia Estadística**, Universidad de Cádiz, 2007

García Pérez, C.; Casas Sánchez, J.M. y Rivera García, L.F., **Problemas de estadística descriptiva, probabilidad e inferencia**, Pirámide, 1998

Recommendations

Subjects that continue the syllabus

Econometrics/O04G020V01304

Statistical operational techniques/O04G020V01912

Subjects that it is recommended to have taken before

Mathematics: Mathematics/O04G020V01104

Other comments

It recommends have basic knowledges of software of leaf of calculation (*Calc, *Excel, ...) And of computing in general
