



## IDENTIFYING DATA

### Statistics: Statistics

Subject	Statistics: Statistics			
Code	V03G020V01204			
Study programme	Grado en Administración y Dirección de Empresas			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Basic education	1st	2nd
Teaching language	#EnglishFriendly Spanish Galician			
Department				
Coordinator	Sestelo Pérez, Marta			
Lecturers	Sestelo Pérez, Marta			
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Web	<a href="http://moovi.uvigo.gal">http://moovi.uvigo.gal</a>			
General description	Statistics is a basic subject where basic statistical concepts will be studied in deep: descriptive statistics, calculation of probabilities, random variables, and parametric inference.			

English Friendly subject: International students may request from the teachers: a) resources and bibliographic references in English, b) tutoring sessions in English, c) exams and assessments in English.

## Training and Learning Results

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

## Expected results from this subject

Expected results from this subject	Training and Learning Results
Be able to identify the statistical aspects within an empirical problem and draw conclusions from the existing information applying the concepts studied in the subject. Learn, know, apply and correctly interpret the descriptive techniques and the calculation of basic probabilities and assess their interest as a fundamental tool in data analysis.	C7 C9 C10
Effectively solve problems and issues of each of the lessons in the program using the appropriate quantitative methods.	C12
Know the importance of information and be able to assess and classify it in each decision area.	C12
Know how to correctly apply and interpret the basic descriptive techniques for the analysis of one-dimensional and two-dimensional variables.	C16

Introduce the student in the use of Excel spreadsheet, in particular in the use of its statistical functions. And, in this way, favor a positive attitude towards the quantitative, in general, and the statistics, in particular, as well as towards its computer manipulation.	B3
Promote sensitivity to the values of the scientific thinking, favoring attitudes associated with the use and development of statistical methods such as: the questioning of intuitive ideas; the critical analysis of statements; the need for verification; the ability to analyze and synthesize; or the rational decision-making.	B1 B2 B13 B14
Promote an attitude of ethical commitment, focusing on: how to obtain the data; not manipulating the results or; not copying the studies of others or taking advantage of their work.	D3 D4
Awake a taste for the use and study of Statistics, seeing it as a tool that allows us to learn more about our own field of knowledge and to start carrying out our own research.	D5

## Contents

Topic	
Lesson 1: Probability theory.	1.1. Basic probability concepts. 1.2. Conditional probability and independent events.
Lesson 2: Random variables.	2.1. Definition of a random variable and its distribution function. 2.2. Characteristics of a random variable. 2.3. Main probability distributions. 2.4. Applications of the central limit theorem.
Lesson 3: Descriptive statistics.	3.1. Distribution of frequencies. 3.2. Measures of position, dispersion, and form. 3.3. Graphic representations. 3.4. Index numbers.
Lesson 4: Statistical inference.	4.1 Population, sample and their characteristics. Simple random sampling. Distributions associated with sampling in normal populations. 4.2. Point estimation. Concept of estimator and its properties. 4.3. Confidence intervals in normal populations. 4.4. Hypothesis testing. Formulation of hypotheses. Classic tests in normal populations.
Lesson 5. Use of statistical software of common use.	5.1. Introduction to the statistical software. 5.2. Descriptive analysis and probabilities. 5.3. Random variables and main probability distributions. 5.4. Statistical inference.

## Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	22.5	45	67.5
Problem solving	24.5	53	77.5
Problem and/or exercise solving	5	0	5

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

## Methodologies

	Description
Lecturing	The teacher will explain the different lessons of the subject, and s/he will provide the theoretical bases and / or the guidelines of a work, exercise or project that the student has to develop.
Problem solving	Resolution of problems and questions of each one of the lessons of the subject. Microsoft Excel may be used.

## Personalized assistance

### Methodologies Description

Problem solving	Each student will be able to ask the teacher any doubts he/she has about the subject. The teacher will also propose a topic to be discussed and solved among the students in the group.
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## Assessment

Description	Qualification	Training and Learning Results
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Problem and/or exercise solving	Continuous Assessment (CA): Students will have three continuous assessment tests/activities throughout the semester that will consist of solving problems and/or exercises with the weights on the final grade indicated: the first test (CA1) will have a weight of 40%, the second test (CA2) will have a weight of 20% and the third test (CA3) will have a weight of 40%. The last of these tests will take place on the same day as the official GA date of the first opportunity.	100	B1 B2 B3 B13 B14	C7 C9 C10 C12	D3 D4 D5
	Global Assessment (GA): Students who wish to take advantage of the GA will only have one exam at the end of the semester that will account for 100% of the grade.				

### Other comments on the Evaluation

Students may choose to be evaluated through the continuous assessment system (CA), or alternatively opt for a Global Assessment (GA). The default evaluation is CA. Students may choose GA according to the procedure and the period established by the center. Choosing GA implies waiving the right to continue evaluating through the remaining CA activities and the grade obtained up to that moment in any of the tests that have already been taken.

- CA. In case of rejecting the continuous assessment system:
  - Assessment: Students will have three continuous assessment tests/ac throughout the semester that will consist of solving problems and/or exercises with the weights on the final grade indicated: the first test (CA1) will have a weight of 40%, the second test (CA2) will have a weight of 20% and the third test (CA3) will have a weight of 40%. The last of these tests will take place on the same day as the official GE date of the first opportunity.
  - There will not be a minimum grade in each of the parts.
  - The minimum grade to pass will be 5 points.
  - Practices are not compulsory.
  - Students will be considered to have taken the continuous assessment when they have taken any of the tests/assessment activities of this modality.
- GA at the first opportunity (February 1st semester session/May-June 2nd semester session). The students will be evaluated by means of a global evaluation exam that will suppose 100% of the note. The minimum grade to pass will be 5 points.
- GA on the second opportunity (extraordinary call in July) and in the end-of-career call. The students will be evaluated by means of a global evaluation exam that will suppose 100% of the note. The minimum grade to pass will be 5 points.

Students who do not participate in the CA or the GA will appear as "not presented".

It is recommended that students take into account the Title VII (Do uso de medios ilícitos), of *Regulamento sobre a Avaliação, a calificação e a qualidade da docência e do processo de aprendizagem do estudantado* (<https://secretaria.uvigo.gal/uv/web/normativa/public/normativa/documento/downloadbyhash/4904ced4d24eb81fe5715ddde2c48c59c0a7c4d624cd0e7491df7a753985ccfa>).

The dates and times of the GA tests (first and second chance) are those specified in the assessment activities calendar approved by the Xunta de Facultade for the 2023/24 academic year. In case of conflict or disparity between exam dates, those published on the faculty website will prevail, <http://fccee.uvigo.es/organizacion-docente.html>.

### Sources of information

#### Basic Bibliography

Cao Abad, R.; Presedo Quindimil, M.A. e Naya Fernández, S., **Introducción a la estadística y sus aplicaciones**, Pirámide, 2001

Casas Sánchez, J.M. e Santos Peñas, J., **Introducción a la Estadística para Administración y Dirección de Empresas**, Centro de Estudios Ramón Areces, 2002

Martín-Pliego López, F. J. e Ruiz-Maya Pérez, L., **Fundamentos de Inferencia Estadística**, Thomson, 2005

Martín Pliego, F. J. e Ruiz-Maya, L., **Estadística I: Probabilidad.**, Thomson, 2004

#### Complementary Bibliography

Esteban García, J. y otros., **Estadística Descriptiva y nociones de probabilidad**, Thomson, 2005

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

Gonick, L. e Smith, W., **A Estatística en Caricaturas**, SGAPEIO, 2001

Gutiérrez, R.; Martínez, A. e Rodríguez, C., **Curso Básico de Probabilidad**, Pirámide, 1993

Levin, Rubin, Balderas, Del Valle y Gómez, **Estadística para Administración y Economía**, Prentice Hall, 2010

Martín-Pliego, Montero-Lorenzo e Ruiz-Maya, **Problemas de Inferencia Estadística**, Thomson, 2005

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### **Recommendations**

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### **Subjects that it is recommended to have taken before**

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Mathematics: Mathematics/V03G020V01104

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### **Other comments**

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This subject in the PCEO Degree in Business Administration and Management - Degree in Law is taught in the second semester of the first year and the teacher is María Gómez Rúa.

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