IDENTIFYING DATA
Statistics: Introduction to administrative statistics

Subject	Statistics: Introduction to administrative statistics				
Code	P04G091V01202				
Study programme	(*)Grao en Dirección e Xestión Pública				
Descriptors	ECTS Credits		Choose	Year	Quadmester
	6		Basic education	1st	2nd
Teaching language	Spanish Galician English				
Department					
Coordinator	Vidal Puga, Juan José				
Lecturers	Vidal Puga, Juan José				
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General description	Basic notions of statistics are provided for their application in management and public administration.				

Competencies

Code	
A1	(*)Que os estudantes demostren posuír e comprender coñecementos nunha área de estudo que parte da base da educación secundaria xeral e adoita atoparse a un nivel que, malia se apoiar en libros de texto avanzados, inclúe tamén algúns aspectos que implican coñecementos procedentes da vangarda do seu campo de estudo.
A2	(*)Que os estudantes saiban aplicar os seus coñecementos ó seu traballo ou vocación dunha forma profesional e posúan as competencias que adoitan demostrarse por medio da elaboración e defensa de argumentos e a resolución de problemas dentro da súa área de estudo.
A3	(*)Que os estudantes teñan a capacidade de reunir e interpretar datos relevantes (normalmente dentro da súa área de estudo) para emitir xuízos que inclúan unha reflexión sobre temas relevantes de índole social, científica ou ética.
A4	Students can transmit information, ideas, problems and solutions to a specialized and non-specialized audience.
A5	Students develop those skills of necessary learning to undertake back studies with a high degree of autonomy.
B1	Habilidades en la búsqueda de información, en relación con fuentes de información primarias y secundarias, incluyendo el uso de ordenadores para búsquedas en línea
B2	Capacidad de analizar, sintetizar e integrar conocimientos y enfrentarse a la complejidad de formular juicios con información limitada
B4	Comunicación a través de Internet y, en general, manejo de herramientas multimedia para la comunicación a distancia
B5	Ser capaz de interpretar datos derivados de las observaciones en relación con su significación y relacionarlos con las teorías apropiadas en el ámbito de la dirección y gestión pública
C8	Saber aplicar métodos, modelos y técnicas de datos cualitativos y cuantitativos (estadísticos) para procesos de gestión y dirección pública
D4	Skill for independent resolution of problems in relation with information qualitative and quantitative know
D5	Capacity for taking autonomous and independent decisions Know be / be
D7	Motivación por la calidad y la mejora continua y la innovación
D9	Capacidad para el razonamiento crítico creativo y el autocrítico

Learning outcomes

Expected results from this subject	Training and Learning Results			
Distinguish and differentiate the basic concepts of the statistical analysis: individual, observation, case, variable, value, category, data, population and sample.	A5	B2	C8	D4 D9

Classify the variables according to the type of values that can take and the operations that can realise with them.	A1 A3 A5	B2 B5	C8	D4 D9
Identify the basic forms of sampling.	A1 A2 A3	B1		D7 D9
Use on-line questionnaires.	A3 A5	B1 B4	C8	D4 D9
Order, organise and summarice one-dimensional data by tables.	A1 A2 A3 A4 A5	B2 B5	C8	
Illustrate the behaviour of variables by means of suitable graphic representations.	A1 A2 A3 A4	B2 B5	C8	D4 D7 D9
Calculate and interpret the main measures of position, dispersion and form.	A1 A2 A3 A4	B2 B5	C8	D5 D7 D9
Recognise and describe the relation between two variables.	A1 A4	B2 B5	C8	D4 D5 D7 D9
Simple analysis of information: series, formulas and tables.	A1 A4 A5	B2 B5	C8	D5 D7
Basic descriptive analysis of a one-dimensional statistical variable: tables and graphic representations.	A1 A2 A3 A4 A5	B2 B5	C8	
Create tables with data grouped by intervals.	A1 A2 A3 A4 A5	B2 B5	C8	D4
Represent a continuous one-dimensional statistical variable by histograms, area charts and polygons of frequencies.	A1 A3 A4 A5	B2 B5	C8	D4 D7
Simulate a process of sampling.		B2 B5		D4 D5 D7 D9
Represent a discrete numerical variable.	A1 A3 A4 A5	B2 B5	C8	
Calculate the functions for descriptive measures of a quantitative variable.	A1 A2	B2	C8	D4 D7
Create new variables from others already existent.	A1 A2 A5		C8	D4 D7
Descriptive analysis of two statistical variables of continuous quantitative type: graphic representation by means of diagrams of dispersion, calculation and interpretation of the covariance, the coefficient of correlation and the coefficient of determination, and linear prediction.	A1 A2 A4 A5	B2 B5	C8	D4
Use spreadsheets to describe the relation between two qualitative variables: graphic representation by means of charts of bars and of columns grouped and piled, calculation and interpretation of the Chi-square value, the coefficient of association and the coefficient of contingency.	A1 A2 A4	B2 B5	C8	D4 D5 D7 D9
Quote the main organic appearances and legislative of the statistical systems publics in either European, Spanish and Galician levels.	A5			D7

Find and analyse the distinct public statistics from the databases of the European Union, Spain and Galicia.	A3	B1 B2 B4 B5	C8	D4

Contents

Topic	
Chapter 1. Basic concepts in Statistics	Population, sample data, types of data. Tables. Graphical representation.
Chapter 2. Univariate analysis	Tendency, dispersion and shape of a single variable.
Chapter 3: Bivariate analysis	Contingency tables, graphical representation via scatterplots and grouped bar charts. Correlation and association.
Chapter 4: Public statistics	Organisation of the statistical activity in the administrations: local (Galicia), national (Spain) and international (Europe). Legislation. Access and basic manipulation of official database (EuroStat, INEBase, IGE)
Chapter 5: Introduction to Statistical Computing	Introduction to electronic spreadsheets with statistical functions. Resolution of practical cases.

Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Master Session	15	0	15
Troubleshooting and / or exercises	14	0	14
Autonomous troubleshooting and / or exercises	0	85	85
Practice in computer rooms	9	0	9
Autonomous troubleshooting and / or exercises	0	20	20
Short answer tests	3	0	3
Practical tests, real task execution and / or simulated.	3	0	3

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

Methodologies

	Description
Introductory activities	Introductory activities.
Master Session	Contents and theoretical bases of the subject.
Troubleshooting and / or exercises	Resolution of problems and/or exercises related with the subject.
Autonomous troubleshooting and / or exercises	Resolution of proposed problems and/or exercises related with the subject.
Practice in computer rooms	Use of computer tools applied to Statistics.
Autonomous troubleshooting and / or exercises	Resolution of proposed problems and/or exercises. The students should upload the answers on time using the eLearning platform.

Personalized attention

Methodologies	Description
Troubleshooting and / or exercises	The exercises realised in class will be corrected in the same session.
Master Session	Very applied.
Practice in computer rooms	Students will practice the contents.
Introductory activities	Presentation at the beginning of the course, where planning, methodology and evaluation will be explained.
Autonomous troubleshooting and / or exercises	Generally, the resolution of the proposed exercises will be available so that the students can check their answers.

Assessment

	Description	Qualification	Training and Learning Results

Autonomous troubleshooting and / or exercises	Individual assignments proposed at the theoretical and practical classes.	20	A1 A2 A3 A4 A5	B1 B2 B4 B5	C8	D4 D5 D7 D9
Short answer tests	Evaluation of the theory.	40	A1 A2 A4 A5	B1 B2 B5	C8	D4 D5 D7 D9
Practical tests, real task execution and / or simulated.	Use of computer tools to practice the theory.	40	A5	B1 B2 B4	C8	D4 D5 D7

Other comments on the Evaluation

There will be two midterm exams, in addition to the final exam in the official dates. It is necessary to achieve 3.75 (out of 10) in each one of the midterm exams.

Second call: The second call will be a single exam.

Sources of information

Basic Bibliography

Vidal Puga, J., **Apuntes de clase**,

Complementary Bibliography

Alba Fernández, V.; Muñoz Vázquez, A., **Introducción a la Estadística Pública**, Universidad de Jaén, 2000

Cao Abad, R. et al., **Introducción a la estadística y sus aplicaciones**, Pirámide, 2001

Martín Pliego, F.J., **Introducción a la Estadística económica y empresarial: teoría y práctica**, Thomson, 2005

Peña Sánchez de Rivera, D.; Romo Urroz, J., **Introducción a la Estadística para las ciencias sociales**, Mc.Graw-Hill, 1999

Bogado, D.S.;Bernardi, E.A., **Manual de OppenOffice Calc**, GuGler, 2006

Pérez López, C., **Estadística aplicada a través de Excel**, Pearson Prentice Hall, 2002

IGE, **Portal Educativo**,

Recommendations

Subjects that continue the syllabus

Social research techniques and methodologies applied to public administrations/P04G091V01604

Other comments

Both in-class and blended learning share the same study plan, whose subjects (from 1st to 4th) help to develop a learning of competitions based in the continuous evaluation.