



## IDENTIFYING DATA

### Administration Statistics

|                     |  |           |      |            |
|---------------------|--|-----------|------|------------|
| Subject             | Administration Statistics  |           |      |            |
| Code                | P07G095V01202  |           |      |            |
| Study programme     | Grado en Dirección y Gestión Pública   |           |      |            |
| Descriptors         | ECTS Credits   | Choose    | Year | Quadmester |
|                     | 6  | Mandatory | 2nd  | 1st        |
| Teaching language   | #EnglishFriendly<br>Spanish<br>Galician  |           |      |            |
| Department          |  |           |      |            |
| Coordinator         | Vidal Puga, Juan José  |           |      |            |
| Lecturers           | Vidal Puga, Juan José  |           |      |            |
| E-mail              | vidalpuga@uvigo.gal  |           |      |            |
| Web                 | <a href="http://moovi.uvigo.gal">http://moovi.uvigo.gal</a>  |           |      |            |
| General description | Basic notions of statistics are provided for their application in management and public administration. International students may request from the readers: a) materials and bibliographic references in English, b) tutoring sessions in English, c) exams and assessments in English. |           |      |            |

## Training and Learning Results

|      |   |
|------|---|
| Code |   |
| A1   | Students will have shown they have sufficient knowledge and understanding of an area of study, starting after completion of general secondary education, and normally reaching a level of proficiency that, being mostly based on advanced textbooks, will also include familiarity with some cutting-edge developments within the relevant field of study. |
| A2   | Students will be able to apply their knowledge and skills in their professional practice or vocation and they will show they have the required expertise through the construction and discussion of arguments and the resolution of problems within the relevant area of study.   |
| A3   | Students will be able to gather and interpret relevant data (normally within their field of study) that will allow them to have a reflection-based considered opinion on important issues of social, scientific and ethical nature.   |
| A4   | Students will be able to present information, ideas, problems and solutions both to specialist and non-specialist audiences.  |
| A5   | Students will acquire the learning skills that are required to pursue further studies with a high degree of independence.   |
| B1   | Analysis, synthesis, problem-solving, decision-making, information- and time-management skills.   |
| B2   | Organizing and planning their own professional careers in the best possible way.  |
| B4   | Commitment to ethical values and public service vocation.   |
| B5   | Critical thinking skills.   |
| B6   | To put their knowledge on public management and administration into practice.   |
| C5   | To describe the structure, organization and functioning of multi-level Public Administrations, analyzing their relationship with the citizenry.   |
| C12  | To analyze international politics and/or the structure and functioning of the European Union.   |
| C13  | To apply the social policies and research methods and techniques and to be able to use quantitative and qualitative research methods.   |
| C14  | Ability to use the information and communication technologies (ICT) that can be applied in public management.   |
| D2   | To be able to communicate, both orally and in writing, in the two official languages (Spanish and Galician) and in a foreign language.  |
| D3   | Raising awareness about environmental issues.   |
| D4   | To master the specific ICT techniques in their respective academic and professional fields.   |
| D5   | To acquire independent learning skills.   |
| D6   | To acquire independent learning skills.   |

## Expected results from this subject

| Expected results from this subject  | Training and Learning Results |    |     |    |
|---|-------------------------------|----|-----|----|
|   | A1                            | B1 | C13 | D5 |
| Students will be able to classify the variable second the type of values that can take and the operations that can realize with them                | A3                            | B2 |     | D6 |
|   | A5                            | B6 |     |    |
|   |                               |    |     |    |
| Students will be able to use surveys in sampling  | A3                            | B1 | C13 | D5 |
|   | A5                            | B2 |     | D6 |
|   |                               | B4 |     |    |
|   | B6                            |    |     |    |
| Students will be able to organize and summarize one-dimensional data using tables of frequencies  | A1                            | B1 | C13 | D4 |
|   | A2                            | B2 |     | D5 |
|   | A3                            | B6 |     | D6 |
|   | A4                            |    |     |    |
|   | A5                            |    |     |    |
| Students will be able to illustrate variables by means of relevant charts   | A1                            | B1 | C13 | D2 |
|   | A2                            | B2 |     | D4 |
|   | A3                            | B6 |     | D5 |
|   | A4                            |    |     | D6 |
| Students will be able to calculate and interpret the main measures of position, dispersion and shape  | A1                            | B1 | C13 | D4 |
|   | A2                            | B5 |     | D5 |
|   | A3                            | B6 |     | D6 |
|   | A4                            |    |     |    |
| Students will be able to identify and describe the relation between two variables   | A1                            | B1 | C13 | D5 |
|   | A4                            | B2 |     | D6 |
|   |                               | B5 |     |    |
|   |                               | B6 |     |    |
| Students will be able to use spreadsheets in a simple analysis of the data: create series, formulas and tables with a suitable format               | A1                            | B1 | C13 | D4 |
|   | A4                            | B2 |     | D5 |
|   | A5                            | B6 |     |    |
| Students will be able to use spreadsheets for a basic descriptive analysis of one-dimensional variables: frequency tables and charts                | A1                            | B1 | C13 | D4 |
|   | A2                            | B2 |     | D5 |
|   | A3                            | B6 |     | D6 |
|   | A4                            |    |     |    |
|   | A5                            |    |     |    |
| Students will be able to use spreadsheets to create tables of frequencies with data grouped by intervals  | A1                            | B1 | C13 | D4 |
|   | A2                            | B2 |     | D5 |
|   | A3                            | B6 |     | D6 |
|   | A4                            |    |     |    |
|   | A5                            |    |     |    |
| Students will be able to use spreadsheets to represent continuous one-dimensional variables   | A1                            | B1 | C13 | D4 |
|   | A3                            | B2 |     | D5 |
|   | A4                            | B6 |     | D6 |
|   | A5                            |    |     |    |
| Students will be able to use spreadsheets to simulate a sampling process  | A1                            | B1 |     | D4 |
|   | A2                            | B5 |     | D5 |
|   | A3                            |    |     | D6 |
|   | A4                            |    |     |    |
|   | A5                            |    |     |    |
| Students will be able to represent a discrete variable  | A1                            | B1 | C13 | D2 |
|   | A3                            | B2 |     | D3 |
|   | A4                            | B6 |     | D4 |
|   | A5                            |    |     | D5 |
|   |                               |    | D6  |    |
| Students will be able to find in a spreadsheet the relative functions to the descriptive measures of a quantitative variable                        | A1                            | B1 | C13 | D4 |
|   | A2                            | B6 |     | D5 |
|   |                               |    | D6  |    |
| Students will be able to use spreadsheets for a descriptive analysis of two continuous variables  | A1                            | B1 | C13 | D4 |
|   | A2                            | B2 |     | D5 |
|   | A4                            | B6 |     | D6 |
|   | A5                            |    |     |    |
| Students will be able to use spreadsheets to describe the relation between two nominal variables  | A1                            | B1 | C13 | D4 |
|   | A2                            | B2 |     | D5 |
|   | A4                            | B6 |     | D6 |
| Students will be able to quote the main organic and legislative aspects of the statistical public systems at European, national and regional levels | A5                            |    | C5  | D2 |
|   |                               |    | C12 | D4 |
|   |                               |    |     | D5 |
|   |                               |    |     | D6 |

|   |    |                            |                  |                            |
|---|----|----------------------------|------------------|----------------------------|
| Students will be able to find and analyze public statistics from the databases of the European Union, Spain and Galicia | A3 | B1<br>B2<br>B4<br>B5<br>B6 | C5<br>C13<br>C14 | D2<br>D3<br>D4<br>D5<br>D6 |
|---|----|----------------------------|------------------|----------------------------|

### 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           |
| Lecturing                       | 15          | 46                          | 61          |
| Discussion Forum                | 0           | 3                           | 3           |
| Problem and/or exercise solving | 8           | 16                          | 24          |
| Problem and/or exercise solving | 8           | 16                          | 24          |
| Problem and/or exercise solving | 8           | 16                          | 24          |
| Objective questions exam        | 0           | 12                          | 12          |
| Objective questions exam        | 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

|                         | Description  |
|-------------------------|--|
| Introductory activities | Introductory activities.   |
| Lecturing               | Basic concepts and theory.   |
| Discussion Forum        | Clarification of questions and collaborative work using the forums in the learning platform. |

### Personalized assistance

#### Methodologies Description

Discussion Forum Communication between readers and students will be through the forums for general queries and the internal chat for particular doubts.

### Assessment

|                                 | Description  | Qualification | Training and Learning Results |    |     |    |
|---------------------------------|--|---------------|-------------------------------|----|-----|----|
| Problem and/or exercise solving | Resolution of problems and individual exercises proposed in the theoretical and practical lessons. | 20            | A1                            | B1 | C5  | D2 |
|                                 |  |               | A2                            | B2 | C12 | D3 |
|                                 |  |               | A3                            | B4 | C13 | D4 |
|                                 |  |               | A4                            | B5 | C14 | D5 |
|                                 |  |               | A5                            | B6 |     | D6 |
| Problem and/or exercise solving | Collection and analysis of official data.  | 20            | A1                            | B1 | C5  | D2 |
|                                 |  |               | A2                            | B2 | C12 | D3 |
|                                 |  |               | A3                            | B4 | C13 | D4 |
|                                 |  |               | A4                            | B5 | C14 | D5 |
|                                 |  |               | A5                            | B6 |     | D6 |
| Problem and/or exercise solving | Resolution of data analysis problems.  | 20            | A1                            | B1 | C5  | D2 |
|                                 |  |               | A2                            | B2 | C12 | D3 |
|                                 |  |               | A3                            | B4 | C13 | D4 |
|                                 |  |               | A4                            | B5 | C14 | D5 |
|                                 |  |               | A5                            | B6 |     | D6 |

|                          |   |    |    |    |     |    |
|--------------------------|---|----|----|----|-----|----|
| Objective questions exam | Evaluation in the partial and final examinations. | 40 | A1 | B1 | C5  | D2 |
|                          |   |    | A2 | B2 | C12 | D3 |
|                          |   |    | A3 | B4 | C13 | D4 |
|                          |   |    | A4 | B5 | C14 | D5 |
|                          |   |    | A5 | B6 |     | D6 |

---

### Other comments on the Evaluation

There are two ways to pass this course:

1. Continuous assessments include practical activities and the final test exam.
2. A final exam. Students are required to attend with a computer or equivalent.

Students are expected to follow the first option ("continuous assessments").

Exceptionally, and always by previous request, students may do the final examination during tutoring hours.

**Second call:** The second call will be a single exam. Students are required to attend with a computer or equivalent.

**Warning:** No grades will be saved for future calls.

---

### Sources of information

#### Basic Bibliography

#### Complementary Bibliography

Alba Fernández, V.; Muñoz Vázquez, A., **Introducción a la Estadística Pública**, 84-8439-023-3, Universidad de Jaén, 2000

Cao Abad, R. et al., **Introducción a la estadística y sus aplicaciones**, 84-368-1543-2, Pirámide, 2001

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

Gallardo, Agneta, **Curso básico de LibreOffice Calc**, SlideShare, 2017

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

IGE, **Portal Educativo**,

Ritchey, F.J., **Estadística para las ciencias sociales**, 978-970-10-6699-7, Segunda edición, McGraw-Hill, 2008

---

### Recommendations

#### Other comments

It will be necessary for the development of the course that the lecturer has an up-to-date photograph of the students who will need to access the platform at the beginning of the course, and always before September 30th. The sole purpose of handling this data is to allow the professor to verify the identity of the students enrolled in the course.

The legal basis for processing this data lies in Article 6.1and) of the RXPd, where the processing is deemed necessary for the exercise of public power granted to the data controller under Article 9 of Law 39/2015, dated October 1st, concerning the common administrative procedure of public administrations, and under Article 25.7 of RD 1791/2010, dated December 30th, which approves the Statute of the University Student.

Access to the images and personal data of the students is restricted to the respective subject professor for the purpose of conducting the academic activities outlined in this educational guide. This information must not be used or shared for any other purpose and must be kept confidential.

For more information, visit: <https://www.uvigo.gal/proteccion-Data>