



## COURSE DATA

### Data Subject

<b>Code</b>	34412
<b>Name</b>	Socio-statistics
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	9.0
<b>Academic year</b>	2023 - 2024

### Study (s)

Degree	Center	Acad. year	Period
1310 - Degree in Sociology	Faculty of Social Sciences	1	Annual
1924 - D.D. in Political and Public Admin. Sciences-Sociology	Faculty of Law	1	Annual
1925 - D.D. in Sociology-Political and Public Admin. Sciences	Faculty of Social Sciences	1	Annual
1931 - D.D. in Sociology-Political and Public Adminis. Sciences	Faculty of Social Sciences	1	Annual

### Subject-matter

Degree	Subject-matter	Character
1310 - Degree in Sociology	5 - Statistics	Obligatory
1924 - D.D. in Political and Public Admin. Sciences-Sociology	1 - Year 1 compulsory subjects	Obligatory
1925 - D.D. in Sociology-Political and Public Admin. Sciences	1 - Year 1 compulsory subjects	Obligatory
1931 - D.D. in Sociology-Political and Public Adminis. Sciences	1 - Asignaturas obligatorias de primer curso	Obligatory

### Coordination

Name	Department
CASTELLO COGOLLOS, RAFAEL	330 - Sociology and Social Anthropology



## SUMMARY

This subject is part of the Sociology degree and is included in the module of Methods and Techniques of Social Research. It is worth 9 ECTS credits (equivalent to a 225-hour workload) and it is a compulsory first-year subject.

*Social Statistics* is closely linked to most subjects of the same module, especially with *IT Applied to Sociological Research* (annual and mandatory first-year subject) and *Quantitative Techniques in Social Research* (annual and mandatory second-year subject). Social statistics is the base for both of them since it introduces students to IT applications and different types of data analysis.

## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

Relationship with other subjects of the same degree

No enrolment restrictions have been specified.

Other types of prerequisites

It is advisable that students take Social Statistics simultaneously with IT Applied to Social Sciences.  
No specified prerequisites.

## OUTCOMES

### 1310 - Degree in Sociology

- Students must have acquired knowledge and understanding in a specific field of study, on the basis of general secondary education and at a level that includes mainly knowledge drawn from advanced textbooks, but also some cutting-edge knowledge in their field of study.
- Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.
- Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.



- Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.
- Students must have developed the learning skills needed to undertake further study with a high degree of autonomy.
- Work in a team with a multidisciplinary perspective.
- Respect and promote the principles of fundamental rights, gender equality, equal opportunities and non-discrimination, democratic values and sustainability.
- Manage documentary sources and statistics referring to social reality.
- Learn independently and develop initiative in the field of sociology.
- Analyse empirical data on social structure, change and problems.
- Know and apply statistical techniques for the analysis of social reality.
- Know and use secondary data sources useful for sociology.
- Use software and computer applications useful for sociology.
- Identify and measure social vulnerability factors.

## LEARNING OUTCOMES

- Appreciate and evaluate possibilities of probabilistic knowledge and decision making under uncertainty.
- Distinguish and relate the basics of descriptive statistics and inferential statistics.
- Identify and apply the basic elements and measures of descriptive statistics.
- Identify and apply the basic elements and measures of inferential statistics.
- Calculate and describe parameters and statistics of populations and samples.
- Contrasting hypotheses about the parameters and make estimates of ranges of parameters.
- Contents social inferences made from statistical information.

## DESCRIPTION OF CONTENTS

### 1. Organization and y basis of Social Statistics.

1.1 Methods and stages of a quantitative empirical research. Place it within the framework of scientific research. Establish the characteristics and specificities of social research and the need of Statistics.

1.2. The basic concepts of Social Statistics. Measuring and the creation of variables as the first step of social statistics. Types of variables.

**2. Unidimensional descriptive social statistics.**

2.1. Unidimensional description. Isolated study of individual variables without considering the relationships with the remaining variables considered in data matrix.

Distribution of frequencies and graphical representations. Measures of position. Measures of dispersion. The Lorenz Curve and the Gini Coefficient. Joint consideration the measures of position and dispersion.

**3. Bidimensional descriptive social statistics.**

3.1. Bidimensional descriptive. We take one step forward and include the unidimensional study plus the relationship between pairs of variables. Distribution of frequencies and graphical representation. Association and co-variation. Chi-squared distribution. Correlation and regression. Lineal model.

**4. Probability and introduction to Inference.**

4.1. Inference: basic concepts and the need for probability. Induction as a necessary but inexact procedure. Populations and samples.

4.2. Probability distributions. Values of variables and their probabilities. Revision of the main probability distributions and their main characteristics from a sociological analysis perspective.

**5. Sampling**

5.1. Central Limit Theorem. Set of results (or theorems) that reveal the reasons why normal or nearly normal distributions are sometimes found in many fields of application.

5.2. Sampling: statistic procedures where the empirical information available does not represent the total. Sampling. Estimation and contrasts. Errors as unavoidable aspects of our work.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theoretical and practical classes	90,00	100
Attendance at events and external activities	5,00	0
Development of group work	30,00	0
Development of individual work	30,00	0
Study and independent work	30,00	0
Preparing lectures	20,00	0
Preparation of practical classes and problem	20,00	0
<b>TOTAL</b>	<b>225,00</b>	



## TEACHING METHODOLOGY

- Lecture participatory
- Troubleshooting
- Cooperative work
- Search documentary and statistical data
- Individual and group tutorials

## EVALUATION

- Written exam: 50% of the final cualification.
- Evaluation of practical activities: 50% of the final qualification.

Attendance and participation of the students in both classes classroom and mentoring or complementary activities organized will be assessed. It is necessary to pass both parts in order to pass the subject.

## REFERENCES

### Basic

- DIAZ DE RADA, V. (2009), Análisis de datos de encuesta. Desarrollo de una investigación completa utilizando SPSS, Madrid: Editorial UOC.
- GARCIA FERRANDO, M. (2006), Socioestadística. Introducción a la Estadística en Sociología, Madrid: Alianza Editorial.
- SPIEGEL, M. R. (1990), Estadística, Madrid: McGraw-Hill.
- VISAUTA VINACUA, B. (2007): Análisis estadístico con SPSS 14. Estadística básica, Madrid: McGraw-Hill.