COURSE DATA

DATA SUBJECT

Code: 34412
Name: Socio-statistics
Cycle: Undergraduate Studies
ECTS Credits: 9
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1310 - Degree in Sociology	Facultat de Ciències Socials	1	Annual
1925 - Double Degree Prog. Sociology-Political and Public Administration Sciences	Facultat de Dret	1	
1931 - Double Degree Program in Sociology-Political Sciences and Public Administr.	Facultat de Dret	1	Annual

SUBJECT-MATTER

Degree	Subject-matter	Character
1310 - Degree in Sociology	Statistics	COMPULSORY
1925 - Double Degree Prog. Sociology-Political and Public Administration Sciences	Year 1 compulsory subjects	COMPULSORY
1931 - Double Degree Program in Sociology-Political Sciences and Public Administr.	Asignaturas obligatorias de primer curso	COMPULSORY

COORDINATION

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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.

COMPETENCES / LEARNING OUTCOMES

1310 - Degree in Sociology

Analyse empirical data on social structure, change and problems.

Identify and measure social vulnerability factors.

Know and apply statistical techniques for the analysis of social reality.

Know and use secondary data sources useful for sociology.

Learn independently and develop initiative in the field of sociology.

Manage documentary sources and statistics referring to social reality.

Respect and promote the principles of fundamental rights, gender equality, equal opportunities and non-discrimination, democratic values and sustainability.

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 be able to communicate information, ideas, problems and solutions to both expert and lay audiences.

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 have developed the learning skills needed to undertake further study with a high degree of autonomy.

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.

Use software and computer applications useful for sociology.

Work in a team with a multidisciplinary perspective.

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.

3. Bidimensional descriptive social statistics.

3.1. Two-dimensional descriptive analysis: relationships between social variables. Exploration of contingency tables and graphical representations that allow us to observe how two variables may be related.

3.2 Introduction to descriptive approaches that could suggest possible associations between variables. Association and covariation

4. Probability and introduction to Inference.

4.1 Inference and sociological knowledge. Foundations of statistical inference. Introduction to the principles that allow us to generalize from a sample to a population. Statistical sampling. The concept of error in socio-statistical analyses.

4.2 Central Limit Theorem and main probability distributions. Revision of the main probability distributions and their main characteristics from a sociological analysis perspective.

4.3 Tests of difference between groups:

- Student's t-test: comparison of means between two groups based on a quantitative variable.
- ANOVA (Analysis Of Variance): analysis of mean differences among more than two grpups.

4.4 Association between cathegorical variables:

-Contingency tables and Chi-square test: degree of association between two categorical variables. Interpretation of results in terms of statistical dependence.

4.5 Relationship between numerical variables:

- Pearson's coefficient: degree and intensity of a lineal relationship between two numerical variables.

- Linear regression: analysis of explanatory relationships between variables, introducing concepts such as slope, statistical significance, and the predictive power of the model.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theoretical and practical classes	90,00
Total hours	**90,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	5,00
Individual or group project	60,00
Independent study and work	30,00
Preparation of lessons	40,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**135,00**

TEACHING METHODOLOGY

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

EVALUATION

Exam:

Socio-statistics is an annual subject and the exam accounts for 60% of the final grade.

Passing the exam is mandatory to pass the course.

The following evaluation periods are planned:

- First session: takes place at the end of the course, around late May.
- Second session: takes place in June.

Additionally, an optional partial exam is conducted at the end of the first semester, in January. Passing this partial exam exempts the student from the first semester content in the first session exam.

- Students who do not attend or fail the partial exam must take the full exam in the first session.
- Students who pass the partial exam will only need to take the second semester content in the first session.

Practicals:

Practicals represent the continuous work of the students throughout the course (continuous assessment) and account for 40% of the final grade.

- They must be submitted on time and according to the schedule established by the professor.
- Practicals submitted late cannot receive a grade higher than 5 out of 10 and must be submitted within the deadline set by the professor for the recovery of late submissions.

Attendance and active participation of students will be valued, both in classroom sessions and in tutorials or complementary activities that are organized.

REFERENCES

- 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.
- GARCÍA PÉREZ, A. (2014), Estadística aplicada. Conceptos básicos. Madrid: Editorial UNED
- LÓPEZ-ROLDÁN, P. I FACHELLI, S. (2015), Metodología de la Investigación Social Cuantitativa. Bellaterra: UAB
- SPIEGEL, M. R. (1990), Estadística, Madrid: McGraw-Hill.
- VISAUTA VINACUA, B. (2007): Análisis estadístico con SPSS 14. Estadística básica, Madrid: McGraw-Hill.