

Statistics

Code: 101586
ECTS Credits: 6

Degree	Type	Year	Semester
2501002 Geography and Spatial Planning	FB	1	2

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Prerequisites

It is necessary to have previously studied the subject Estudi de cas: Tècniques en Geografia.

Objectives and Contextualisation

Statistics is taught the First Course of the Degree in Geography and Territorial Planning.

The objective is to introduce students to the use of statistical methods for the design and analysis of data related to Geography. The orientation is eminently practical applying the statistical procedures through the software MS Excel.

1. To introduce students to the basic concepts of descriptive and inferential statistics
2. To decide what the appropriate statistical method is based on the data and the research objectives.
3. To apply basic and multivariate statistics tests
4. To argue the results obtained from the graphic representation, exploration and analysis of the information to describe and characterize territories.

Competences

- Developing critical thinking and reasoning and communicating them effectively both in your own and other languages.
- Mastering the necessary theoretical knowledge in order to pose geographical problems in an integrated way and combining a generalist approach with a specialised analysis.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.

- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.

Learning Outcomes

1. Applying the necessary theoretical knowledge in order to pose problems related to the management of resources and territory.
2. Contrasting and comparing several interpretations of geographical maps.
3. Describing the main economic, social and cultural problems of the world.
4. Identifying the main and secondary ideas and expressing them with linguistic correctness.
5. Solving problems autonomously.

Content

Block 1. Introduction to statistics for geographers

Unit 1.1 Definition of the concept of statistics

Unit 1.2 Characteristics of the variables according to the type of data

Block 2. Univariate and bivariate exploratory statistics

Unit 2.1 Measures of central position and dispersion

Unit 2.2 Transformation of variables, classification and grouping of data

Unit 2.3 Measures of concentration and inequality: Lorenz curve, Gini index and other indicators that measure the inequality of distributions.

Block 3. Bivariate exploratory statistics

Unit 3.1 Relationship between categorical variables: contingency tables and chi square.

Unit 3.2 Relationship between numerical and ordinal variables: correlation, linear regression and Spearman's Rho

Block 4. Inferential statistics

Unit 4.1 Introduction to inference in statistics

Unit 4.2 Interval of confidence of a mean

Unit 4.3 Comparison of means

Methodology

The course is structured from supervised and autonomous activities where the student will learn to develop in the contents of the subject with the virtual support of the teacher at different levels.

- Supervised activities: virtual monitoring of the practices, exposition of examples of resolution of practices.

- Autonomous activities: study of the theoretical contents and of the complementary readings and realization of the practices.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Supervised			
Realization of supervised practices at a distance	37	1.48	1, 2, 3, 4, 5
Tutorials	3	0.12	1, 2, 3, 4, 5
Type: Autonomous			
Completion of the course practices	75	3	1, 2, 3, 4, 5
Personal study, test preparation	30	1.2	1, 2, 3, 4, 5

Assessment

The evaluation of the course consists of three blocks:

- Theoretical and practical test. Two exams (face-to-face and/or virtual depending of the health situation). Each exam represents 20 percent of the final grade.
- There will be 10 individual practices that will score 50 percent of the grade.
- Some text comments that introduce the statistical treatment of the dimension of gender and social minorities: 10 percent.

Key aspects to take into account in the evaluation:

- To do an average it is necessary to pass the two partial exams.
- The presentation of the practices after the deadline will have a 5 as a maximum grade.
- The completion of all practices is mandatory to pass the course.
- The plagiarism or copy of an exercise will have a 0. The repetition of a copy will have the consequence of suspending the subject.
- There will be a partial re-evaluation of the two exams as long as they have been submitted to the evaluation.
- Final re-evaluation will be done as long as they have been submitted to the evaluation of the two partial exams.
- Students who reach the re-evaluation phase without having met the above requirements will be classified as NOT EVALUABLE.

The copy or plagiarism of any activity will merit the qualification of suspense and can not be recovered. The copying or plagiarism of material, in any of the activities, constitutes a crime that will be sanctioned with a zero in the activity. In case of recidivism the entire subject will be suspended. Remember that a work that reproduces all or a large part of the work of one or the other partner is considered a "copy". "Plagiarism" is the fact of presenting all or part of an author's text as his or her own without citing the sources, whether on paper or in digital format. See documentation on "plagiarism" at:
http://wuster.uab.es/web_argumenta_obert/unit_20/sot_2_01.html

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Individual practices	50 percent	2.5	0.1	1, 2, 3, 4, 5

Text comments on gender statistics and social minorities	10 percent	0.5	0.02	1, 2, 3, 4, 5
Theoretical and practical test	40 percent	2	0.08	1, 2, 3, 4, 5

Bibliography

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