



Universitat de Lleida

DEGREE CURRICULUM  
**QUANTITATIVE TECHNIQUES  
AND METHODS**

Coordination: FRAILE PEREZ DE MENDIGUREN,  
PEDRO

Academic year 2022-23

Subject's general information

<b>Subject name</b>	QUANTITATIVE TECHNIQUES AND METHODS			
<b>Code</b>	101158			
<b>Semester</b>	1st Q(SEMESTER) CONTINUED EVALUATION			
<b>Typology</b>	Degree	Course	Character	Modality
	Bachelor's Degree in Geography	2	COMMON/CORE	Attendance-based
<b>Course number of credits (ECTS)</b>	6			
<b>Type of activity, credits, and groups</b>	<b>Activity type</b>	PRALAB	PRAULA	TEORIA
	<b>Number of credits</b>	1	1	4
	<b>Number of groups</b>	1	1	1
<b>Coordination</b>	FRAILE PEREZ DE MENDIGUREN, PEDRO			
<b>Department</b>	GEOGRAPHY AND SOCIOLOGY			
<b>Teaching load distribution between lectures and independent student work</b>	60 contact hours (in the classroom or virtual) 90 hours of autonomous student work			
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
FRAILE PEREZ DE MENDIGUREN, PEDRO	pedro.fraile@udl.cat	6	

## Subject's extra information

See later sections.

Tutoring hours will be established to address individual problems in the monitoring of the subject

## Learning objectives

- O1. Understand the meaning of different types of variables and frequencies
- O2. Understand the meaning and calculation of position measures
- O3. Understand the meaning and calculation of dispersion and shape measurements
- O4. Understand and manage time series O5. Understand and calculate regression lines, and measure their quality
- O6. Management of index numbers and sampling

The learning outcomes should be as follows:

Mastery of the basic tools of descriptive statistics

Use of statistical sources: Catalan, Spanish, European, world

Ability to start a survey from start to finish

Use of some general graphic expression program (not cartographic)

## Competences

CB2 Apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study

CB3 Ability to gather and interpret relevant data (normally within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues

CB4 To be able to transmit information, ideas, problems and solutions to a specialized and non-specialized public)

CB5 Know how to develop those learning skills necessary to undertake further studies with a high degree of autonomy

CE1 Manage and use the methods and techniques of analysis and interpretation of statistical sources

CE2 Acquire the vocabulary and professional tools of the geographer and the planning of the territory

CE5 Acquire the habits of search, analysis, synthesis and exposure of geographic information (writing reports)

CE12 Acquire the skills of quantitative methodologies

CE14 Learn the use of GIS software in its different functions: data entry, editing and management, spatial queries and analysis

CT3 Acquire training in the use of new technologies and information and communication technologies

Ability to apply statistical techniques to the resolution of geographical problems and, in general proper to the CCSS

## Subject contents

1. Changes in Geography and CCSS and statistics.
  - 1.1. CCSS and quantitative methods.
  - 1.2. Applications of statistics to Geography. Descriptive statistics.
2. The basics
  - 2.1. Types of variables
  - 2.2. Frequencies. Its meaning
3. Position measurements
  - 3.1. Measures of central position
  - 3.2 Non-central position measurements
4. Measures of dispersion and shape
  - 4.1. Measures of dispersion.
  - 4.2. Coefficients of asymmetry.
  - 4.3 Concentration curve.
5. Time series
6. Regression lines
  - 6.1. Method of least squares
  - 6.2. Measures of the quality of the regression.
7. Indices and weights. Sampling

## Methodology

The exposition of theory and the resolution of problems will be combined in a continuous way

## Development plan

1. Changes in Geography and CCSS and statistics. (3 hours)
2. The basics (7 hours)
3. Position measurements (10 hours)
4. Measures of dispersion and shape (10 hours)
5. Time series (10 hours)
6. Regression lines (10 hours)
7. Indices and weights. Sampling (10 hours)

Four Wednesdays will be dedicated to the exclusive realization of problems, two to the resolution of doubts and another two to the realization of computable exercises for the evaluation.

## Evaluation

Exam 40%

Class participation 10%

Student portfolio (problems solved during the course) 25%

Problem solving in class 25%

It is necessary to have, at least, a 4 in the exam so that the other components of the final grade are assessed

Students who combine their degree with a full time job have the right to ask for alternative assessment within 5 days after the beginning of the semester. For information, please send an e-mail to [academic@lletres.udl.cat](mailto:academic@lletres.udl.cat) or ask for information at the Faculty's office (Secretaria de la Facultat de Lletres).

It is necessary to have, at least, a 4 in the exam so that the other components of the final grade are assessed

For continuous evaluation, attendance is compulsory. With an attendance of less than 80% (not justified) there will be the option of the final exam.

If plagiarised material is detected, we will apply what is established in the 'Regulations for the Assessment and Grading of Student Learning in UdL Bachelor's and Master's Degrees'.

## Bibliography

Grupo Chadule: *Iniciación a los métodos estadísticos en Geografía*. Barcelona: Ariel, 1980.

Juan Verdoy, P.: *Introducción a la estadística y probabilidad*, Valencia: Tilde, 2008

Martín Guzmán, P. (et al): *Manual de estadística descriptiva*. Navarra: Aranzadi, 2006

Serrano Lara, J. J. *Ejercicios de estadística para geógrafos*, Valenca: Tirant Humanidades, 2020