

## 27423 - Econometrics I

### Syllabus Information

**Academic year:** 2024/25

**Subject:** 27423 - Econometrics I

**Faculty / School:** 109 - Facultad de Economía y Empresa

**Degree:** 417 - Degree in Economics

**ECTS:** 6.0

**Year:** 3

**Semester:** First semester

**Subject type:** Compulsory

**Module:**

### 1. General information

The main objective of this subject is that the student learns the basic concepts of econometrics: its definition and the procedure to follow in the econometric methodology. For this purpose, the basic statistical concepts are reviewed, adapting them to the economic field. The basic assumptions in a linear economic model are described in detail, and the four stages of the procedure to be followed are developed: specification, estimation, validation and exploitation of the model.

These approaches and goals are aligned with the Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), specifically, the activities planned in the subject will contribute to the achievement of the goals Quality education (goal 4), Gender equality (goal 5), Reduction of inequalities (goal 10).

### 2. Learning results

It is expected that upon passing the subject the student will be able to quantify the relationship between a variable under study and the factors that explain it. They must know how to use the hypothesis tests to validate the specified and estimated model, and make an adequate use of the results, both in terms of their economic interpretation, through the sign and magnitude of the coefficients, and in the prediction for unknown values of the variable of interest.

### 3. Syllabus

#### **PART I: INTRODUCTION.**

Unit 1: Concept and role of Econometrics.

#### **PART II: REVIEW OF STATISTICAL TOOLS**

Unit 2: Basic statistical concepts.

#### **PART III: THE GENERAL LINEAR MODEL**

Unit 3: General Linear Model. Specification and estimation.

Unit 4: General Linear Model. Validation and Prediction.

Unit 5: Compliance with the hypotheses of the systematic part.

### 4. Academic activities

Lectures: 30 hours

Practical classes: 30 hours

Personal Study: 88 hours

Assessment tests. 2h (another 2h outside class hours)

6 ECTS = 150 hours

In principle, the teaching methodology and its evaluation is planned to be based on face-to-face classes. However, if circumstances so require, they may be carried out online.

### 5. Assessment system

The subject will be evaluated in first and second calls through a final test. However, during the term there will be two midterm tests that are weighted with the final grade if that benefits the student. The first is worth 20% and the second 40%.

#### **Midterm tests:**

The first test will contain theoretical and theoretical-practical questions on the content of topics 1, 2 and 3. It will assess if the student understands and uses econometric concepts adequately. The second test will take place in computer classrooms. It will deal with topics 4 and 5, considering it necessary to have assimilated the content of topic 3. In this test, will use the Gretl software and an Excel database. The handling of statistical series and the ability to interpret the results obtained will be valued.

**Global Evaluation:**

All students who want to pass the subject must take the final exam on the dates established by the centre.

**Assessment Criteria:**

The final grade will be calculated as the maximum between the following two options:

- a. Weighting of the two midterm tests (20% and 40%) with the final test (40%).
- b. The final test grade (100%).

The two midterm tests will be taken into account (only if it benefits the student) in the two calls of the academic year.

**6. Sustainable Development Goals**

- 4 - Quality Education
- 5 - Gender Equality
- 10 - Reduction of Inequalities