Academic Year/course: 2024/25

27427 - Econometrics II

Syllabus Information

Academic year: 2024/25
Subject: 27427 - Econometrics II
Faculty / School: 109 - Facultad de Economía y Empresa
Degree: 417 - Degree in Economics
ECTS: 6.0
Year: 3
Semester: Second semester
Subject type: Compulsory
Module:

1. General information

The objective of this subject is that the student first learns to contrast the basic hypotheses concerning the random part of the general linear model, as a complement to what has been studied in Econometrics I. And in a second part, focusing on the univariate analysis of time series, the student learns the Box-Jenkins methodology, in order to obtain predictions of these time series.

2. Learning results

Upon passing the subject, the student should master the techniques that make up the four essential stages of the econometric method: specification, estimation, validation and exploitation of the model, both in the case of an econometric model with several explanatory variables as well as from the point of view of univariate time series analysis.

3. Syllabus

PART 1: EXTENSION OF THE GENERAL LINEAR MODEL

    Unit 1: Extensions of the general linear model Topic 1. Sphericity analysis and use of models

PART II: TIME SERIES ANALYSIS

    Unit 2: Basic concepts: ARMA and ARIMA models.

    Unit 3: Box-Jenkins Methodology (I): General scheme and identification

    Unit 4: Box-Jenkins Methodology (II): Estimation, testing and forecasting

4. Academic activities

Theoretical concepts will be taught in the master classes

Lectures: 30 hours

Practical classes: 30 hours

Personal Study: 88 hours

Assessment tests. 4h (2h will be outside class hours)

ECTS = 150 hours

In principle, the teaching methodology and its assessment 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 continuous evaluation in the first call and by means of global evaluation in the second call.

Continuous assessment

There will be two tests consisting of theoretical and practical questions as well as practical exercises of computer to be solved with the Gretl program. The first test will be on the first part of the program Extensions of General Linear Model. This midterm test will represent 25% of the final grade. The second test will be on part two of the Time Series Analysis program. This test will represent 75% of the final grade. To pass the continuous evaluation a minimum of 3.5 must be obtained in each test and the weighted sum must be greater than or equal to 5.

Global assessment

It will consist of theoretical and practical questions of the contents of the program, some of these questions will be outputs of the Gretl program to interpret or problems to solve using this program. The global exam will also have two parts corresponding to

the two parts of the program, respectively, and the weight of each of them in the final grade will be as in the continuous evaluation option (25% for the first and 75% for the second).

Assessment Criteria:

Students who have not passed the continuous evaluation but in any of the tests have a grade equal to or higher than 5 may choose to take the final exam only for the part not passed, with the corresponding percentage or the whole exam, and their final grade will be the maximum between the grade of the global exam or the weighted average of the part passed in the continuous evaluation and that of the other part, in the global exam.

6. Sustainable Development Goals

4 - Quality Education
5 - Gender Equality