

Academic Year: ( 2024 / 2025 )

Review date: 23-04-2024

Department assigned to the subject: Economics Department

Coordinating teacher: CACERES DELPIANO, JULIO

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 2

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

A 14-week introductory course on Econometrics.

## OBJECTIVES

This is an introductory course to applied research in Economics. Linear econometric techniques together with the required programming skills will be studied. Actual examples of influential studies will be presented, and in some cases, replicated in computer sessions.

## DESCRIPTION OF CONTENTS: PROGRAMME

Section 1: Data Management and regression: Linear regression model. Models with binary dependent variable. Use and organization of gretl databases. Gretl regression.

Section 2: Instrumental Variables: Endogenous explanatory variables . Consequences on estimation and inference. Valid instruments. Tests of endogeneity and overidentifying restrictions .

Section 3: Pooled Data with Cross Sections. The difference-in-differences estimator. Panel data. First difference estimator. Fixed effects estimator. Random effects estimator.

## LEARNING ACTIVITIES AND METHODOLOGY

The course will consist of three parts:

- Theoretical lectures based on the presentation of influential empirical papers. Reference bibliography will be provided in order to aid the students in delving deeper into the topics they find more interesting.
- Theoretical lectures to teach the students the use of econometric software at an intermediate level. Class notes will be provided.
- Reduced classes in computer classrooms to allow the students to replicate some of the empirical papers presented in class.

The theoretical lessons have the goal of facilitating the understanding of several academic empirical papers. Computer classes aim to give the students the chance of apply the econometric techniques learnt in several courses in order to do empirical work.

## ASSESSMENT SYSTEM

<b>% end-of-term-examination:</b>	0
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	100

The continuous evaluation is based on three assessments. Each of these evaluations is made of a quiz and participation. Each of the quizzes cannot be taken on any dates or times other than those established at the beginning of the semester for each of the groups. Not taking one of the quizzes will mean a grade of zero in this evaluation, and not taking to two of the quizzes will mean a final grade of zero. Those students who have not taken one of the quizzes but have taken the remaining ones, in the last week of the course could take a recovery quiz to replace the grade of zero in the missing quiz. The participation grade will be implemented by each instructor with a weighting of 10% of each evaluation. Finally, the weighting of each evaluation in the continuous evaluation grade will be 25% (first evaluation), 35% (second evaluation), and 40% (third evaluation).

<b>% end-of-term-examination:</b>	0
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	100

The recovery quiz will be scheduled in the last week of the course and it will cover the material that has not been evaluated.

Note in Ordinary Call = Continuous Evaluation

Note in Extraordinary Call =  $\max \{\text{Continuous Evaluation; Final}\}$

#### BASIC BIBLIOGRAPHY

- James H. Stock y Mark M. Watson Introduction to Econometrics, Pearson Education, 2011
- Joshua Angrist and Jörn-Steffen Pischke Mastering 'Metrics. The Path from Cause to Effect, Princeton University Press, 2014