

Academic Year: ( 2022 / 2023 )

Review date: 19-04-2022

Department assigned to the subject: Economics Department

Coordinating teacher: CARRASCO PEREA, RAQUEL

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 2

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

Statistics, Introduction to Econometrics

**OBJECTIVES**

This course aims at providing the student with econometric skills used in empirical microeconomic research. The student should gain an understanding and working knowledge of instrumental variables, panel data, and non-linear estimation techniques. This goal will be accomplished through classroom lectures, practical sessions, and problem sets.

**DESCRIPTION OF CONTENTS: PROGRAMME**

The objective of this course is to deal with some important topics in the empirical analysis of micro data (households, firms). We will study issues in the specification, estimation and testing of different models. The emphasis of the course is both on the econometric techniques and in the economic applications. Development of programming skills in Stata will be an essential part of the course. The course is divided in the following major topics:

1. Instrumental Variables Estimation: Two-stage least squares. Testing and endogenous variables.
2. Pool of cross sections: Chow test. Policy evaluation using difference-in-differences estimator.
3. Linear Models for Panel Data: Static models and control for unobserved heterogeneity. First differences, within-groups, between-groups and GLS estimators. Specification tests. Dynamic models. Anderson-Hsiao and Arellano-Bond estimators.
4. Discrete Choice Models: Binary choice models for cross sectional data: linear probability models, probit and logit models. Interpretation. Maximum likelihood estimation. Multiple choice models: multinomial probit and multinomial logit.
5. Sample Selection Models: The Tobit model for corner solution responses. Censored and Truncated Regression models. Sample selection corrections.

**LEARNING ACTIVITIES AND METHODOLOGY**

Practice is essential to learning and understanding econometric tools. Therefore, there will be computer practice sessions and also computer exercises as homework. Database management will be an integral and essential part of the course. The course will focus on how the nature of the data available and the research questions lead to the choice of appropriate econometric techniques. Moreover, most of the motivations for all topics dealt with in the course will stress the need to be able to infer policy implications from the results of the research.

An important component of this course is experience with analyzing data. There are several statistical packages for analyzing data. In this course the chosen software is STATA. Students will also be encouraged to attend the office hours in order to receive clarification on material covered in class.

**ASSESSMENT SYSTEM**

Grades will be based on:

- o 2 Quizes: 100%.

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

**BASIC BIBLIOGRAPHY**

- Wooldridge, Jeffrey . M. Introductory Econometrics: A Modern Approach, Thompson, 2002

#### ADDITIONAL BIBLIOGRAPHY

- Arellano, M. Panel Data Econometrics, Oxford University Press., 2003
- Cameron, A.C. y P.K. Trivedi Microeconometrics, Cambridge University Press, 2005
- Wooldridge, J.M. Econometric Analysis of Cross Section and Panel Data, The MIT Press, 2010