

Academic Year: ( 2023 / 2024 )

Review date: 24-05-2023

Department assigned to the subject: Economics Department

Coordinating teacher: MORA VILLARRUBIA, RICARDO

Type: Electives ECTS Credits : 6.0

Year : Semester :

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

An introductory course in Econometrics. Knowledge of the Econometric software gretl is recommended.

**OBJECTIVES**

This course aims at providing you with basic/intermediate econometric skills used in empirical microeconomic research. The goal is to help you develop not only the ability to do empirical research in economics, but also the ability to understand estimators properties and critically read published research. This goal will be accomplished through classroom lectures, classroom practical sessions, and problem sets.

Specifically, by the end of the course you should be able to:

- Apply basic/intermediate econometric methods in problems of microeconomic choices.
- Use microeconomics to understand empirical analysis.
- Use appropriate software to implement quantitative microeconomics research.

Specific skills you will be able to gain during the course are:

- Understanding data limitations and their consequences in empirical analysis.
- Choosing appropriate empirical strategies for each research question.
- Interpreting results in terms of policy implications.

General skills you will be able to develop during the course are:

- Understanding the usefulness of alternative quantitative methods.
- Programming skills in quantitative research.
- Ability to use flexibly your knowledge of quantitative methods in different research scenarios.

Last, the course should help you in gaining

- Critical thinking in economic research.
- A more open and constructive approach to research based on available information.

**DESCRIPTION OF CONTENTS: PROGRAMME**

This course presents a wide range of quantitative methods for the empirical analysis of microeconomic decisions. The characteristics of the data, either by their nature or by the limitations of the available databases, introduce problems that require the use of specific econometric techniques. To delve into the study of these problems, practical applications are made to develop and analyze the practical properties of the techniques. Finally, Monte Carlo techniques useful for studying the properties in finite samples of the studied estimators will be presented.

Throughout the course, a reference microeconomic problem (the decision to work) will be explicitly analyzed, highlighting at all times the applicability of the analysis to other contexts. The fundamental contents of the course are:

- The Maximum Likelihood estimator.
- Qualitative binary decisions: binary choice models.
- Other qualitative dependent variable models: ordered, multinvariant and counting models.
- Decisions with corner solutions: censored models.
- Monte Carlo simulation.

A more detailed program will be available at Aula Global.

**LEARNING ACTIVITIES AND METHODOLOGY**

The methodology will prioritize the intuitive presentation of problems and methodological solutions, as well as the management of microeconomic databases, in order for the student to learn to use econometric techniques and software competently.

Particular emphasis will be placed on how the techniques presented are motivated by the nature of the economic problem and the limitations of the data. Likewise, the final objective of drawing relevant conclusions will prevail.

The subject will be taught through theoretical lessons, computer practices and worksheets. To facilitate the follow-up of the theoretical lessons, students will have basic reference texts and slides with the outline of their contents. The worksheets will be corrected in the small classes. Likewise, students will have manuals for learning the computer programs that will be used in the subject. There will be four midterms and there will be four worksheets.

Each teacher, at the beginning of each semester, will indicate the day of the week, the time and the place where the tutorials will take place.

#### ASSESSMENT SYSTEM

To obtain the final mark through the evaluation of the term's workload, students must, at least, hand in two of the four exercise sets, and sit for two of the four midterm exams. The worst mark obtained from the mid-term exams and the worst mark obtained from the exercises will not be included in the evaluation. The final grade will result from the weighted average of all evaluations, the weights being: 60% for the midterm exams, 30% for the exercise sets, 10% for solving exercises in class.

More information on the assessment system will be made available in the web page of the course.

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

#### BASIC BIBLIOGRAPHY

- Damodar N. Gujarati, Dawn C. Porter Basic Econometrics, Mc Graw Hill, 2004
- JEFFREY M. WOOLDRIDGE Introduction to Econometrics: A modern approach, Thomson USA, Second Edition