IDENTIFYING DATA

Econometrics I

Subject	Econometrics I
Code	V03G100V01501
Study programme	Degree in Economics

Descriptors	ECTS Credits		Type	Year	Quadmester
	6		Mandatory	3rd	1st

Teaching language	Spanish English
Department	
Coordinator	Álvarez García, María Begoña Fernandez-Jardón Fernandez, Carlos Maria
Lecturers	Álvarez García, María Begoña Fernandez-Jardón Fernandez, Carlos Maria Miles Touya, Daniel Gustavo
E-mail	cjardon@uvigo.es alvarez@uvigo.es
Web	
General description	This course is an introduction to multiple regression methods for analyzing data in economics and related fields. Students learn how to conduct empirical studies, as well as how to analyze and interpret results from other empirical works.

Competencies

Code	
CE1	Understand the basic mathematical tools required to formalize economic behavior.
CE10	Ability to use technical tools to formulate simple models concerning economic variables.
CT1	Respect civic and ethical values. Strong commitment to work ethic.
CT5	Skills to make coherent and intelligible statements both in oral and written form.
CT7	Promote critical and self-critical thinking.

Learning outcomes

Learning outcomes	Competences	
Understand basic econometric tools from a theoretical and applied point of view.	CE1	
Use of basic tools and procedures to quantify relationships between economic variables.	CE1 CE10	
Ability to use econometric tools for solving economic problems.	CE1 CE10	CT1 CT7
Develop skills to argue and obtain conclusions from empirical evidence.		CT5 CT7

Contents

Topic	
TOPIC 1: Econometric Modeling	Definition of Econometrics. Steps in empirical economic analysis. The structure of economic data
TOPIC 2: The Classical Linear Regression Model	Model specification. Assumptions. Mechanics and interpretation of Ordinary Least Squares. Properties of estimators. Goodness-of-fit. Hypotheses testing. Confidence intervals. Prediction. Dummy variables. Specification and data problems (omitted variable bias; inclusion of irrelevant variables; proxy variables; multicollinearity).
TOPIC 3: Violations of the Classical Assumptions	Analysis, consequences, diagnosis and possible solutions of non-compliance with classical hypotheses (heteroskedasticiy; autocorrelation; stochastic explanatory variables...)

Planning

	Class hours	Hours outside the classroom	Total hours
Seminars	5	0	5
Autonomous problem solving	8	20	28
Practices through ICT	15	30	45
Lecturing	20	30	50
Objective questions exam	2	20	22

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Seminars	Interviews with students to solve questions and clarify doubts.
Autonomous problem solving	Students have to solve a sequence of problem sets (homework) that will be distributed regularly during the course. The purpose of this activity it to enhance econometric problem solving capabilities and to encourage students' discussion within the classroom on the solution.
Practices through ICT	Computer practices are designed to train students to explore a dataset, write code to analyze relationships and to test hypotheses about some economic phenomenon. The course requires use of GRETL, a free econometric software.
Lecturing	Lectures will develop the concepts and methodologies of the subject.

Personalized assistance

Methodologies	Description
Seminars	Interviews with students to solve questions and clarify doubts.
Autonomous problem solving	Supervision of students' work on the problem sets.
Practices through ICT	Supervision of students' work on the computer-oriented exercises in lab sessions.

Tests	Description
Objective questions exam	Students may contact the lecturer during the exam preparation if some issues are still unclear. All enquiries about the subject material should be made during office hours or through email.

Assessment

	Description	Qualification	Evaluated Competencess	
Autonomous problem solving	Problem sets and tests.	30	CE1 CE10	CT5
Practices through ICT	Exercises with real-world data. The course will use the econometric package GRETL.	30	CE1 CE10	CT1 CT5 CT7
Objective questions exam	Exam. Questions will require interpretation of computer output in addition to theoretical topics.	40	CE1 CE10	CT1 CT5 CT7

Other comments on the Evaluation

All students are entitled to two examination calls:

   - Ordinary call, in the teaching semester.

   - Extraordinary call, in June/July

In both calls, students may choose between two types of assessment procedures:

   1. Continous assessment: coursework (60%) and exam (40%). A minimum grade in the exam (3 out of 10 points) may be required to pass the course. A high-level performance in coursework may allow students to achieve the maximun grade without doing the exam.

   2. Final exam: 100% of the total grade is obtained through a final examination.

* Only for Spanish students: The assessment in the "Convocatoria Fin de Carrera" will be through final exam (100%).

Exams schedules are available at: http://fccee.uvigo.es

Sources of information

Basic Bibliography

Wooldridge, JM, **Introduction to econometrics: A modern approach**, 5th, Cengage Learning, 2013

Stock, JH and Watson, MW, **Introduction to econometrics**, 3th, Pearson, 2015

Fernández-Jardón, C. M, Verdugo, V. Cal, I., **Econometría Estática Aplicada.**, 1, Torculo, 1997

Novales, A., **Econometría.**, 5, McGraw-Hill., 2010

Greene, W.H. ., **Análisis Econométrico**, Prentice-Hall, 1998

Verdugo, M.V., Cal, I., **Guía De Introducción A La Econometría Utilizando Gretl**, Eumed, 2014

Complementary Bibliography

Dougherty, C, **Introduction to econometrics**, 5th, Oxford University Press, 2016

Recommendations

Subjects that continue the syllabus

Econometrics II/V03G100V01601

Subjects that it is recommended to have taken before

Statistics: Statistics 1/V03G100V01205

Statistics II/V03G100V01403

Contingency plan

Description

=== EXCEPTIONAL PLANNING ===

Given the uncertain and unpredictable evolution of the health alert caused by COVID-19, the University of Vigo establishes an extraordinary planning that will be activated when the administrations and the institution itself determine it, considering safety, health and responsibility criteria both in distance and blended learning. These already planned measures guarantee, at the required time, the development of teaching in a more agile and effective way, as it is known in advance (or well in advance) by the students and teachers through the standardized tool.

=== ADAPTATION OF THE METHODOLOGIES ===

- Regular teaching (lectures, practical sessions and tutorials) will be given online, at the scheduled dates and times, using the platform Campus Remoto.

- Any change in the timetable of lectures and practical sessions will be communicated in advance.

- Slides and other material will be available on our course webpage.

- The econometric software for the course (GRETL) is free. Students can download it from http://gretl.sourceforge.net/

- For office hours, students may use email or they can request personal appointments through the teacher's virtual office:

Virtual office: 82
https://campusremotouvigo.gal/access/public/meeting/754282313
Student password: 337-BegoñaAlvarez

=== ADAPTATION OF THE TESTS ===

- Continuous assessment through exercises, quizzes and exams will be done using MooVi and Campus Remoto online tools.