



PRESENTATION

Brief description: This is an introductory course aimed at providing the basic tools for empirical analysis of the relationships between economic variables. It is expected that students choose those more appropriate for a given economic/entrepreneurial problem, being aware of the advantages and disadvantages, as well as being able to interpret the results. In order to ease comprehension, a set of applications using data and software will be provided.

ACADEMIC YEAR 2025-2026

- **Department:** Economics
- **School:** Economics and Business Administration
- **Degrees:** Gr.Eco+Data A.b-20; Gr.Eco+Int.Ec.b-20; Gr.EC Eco+DN(b)-20; Gr. Eco+Lead.b-20
- **Module/Subject:** Quantitative Methods / Basic econometrics
- **Timing:** 2º year, 2º semester (Gr.Eco+Lead.b-20: 3º year, 2º semester)
- **ECTS:** 6 ECTS
- **Type of course:** Compulsory
- **Language:** English
- **Instructor:** Miguel Ángel Borrella-Mas (mborrella@unav.es)
- **Time and place of classes:** Check directly here: [Horario](#)

Students with special needs: Please, contact the instructor at the beginning of the semester.

LEARNING OUTCOMES (Competences)

Basic Competences

BC3 - Students can gather and interpret relevant data (usually within their field of study) to make judgments that include reflections on relevant social, scientific, or ethical issues.

Specific Competences (Economics)

SC5 - Apply mathematical reasoning and/or quantitative tools to the analysis of economic reality.

SC6 - Use software tools in the quantitative and/or qualitative analysis of economic and/or business issues with sound judgment.

SC8 - Apply economic logic and/or econometric techniques to specific areas of Economics.

PROGRAM

Chapter 1: Economic issues and data



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Chapter 2: Review of Probability and Statistics

Chapter 3: Linear regression with one regressor

Chapter 4: Hypothesis testing and confidence intervals with one regressor

Chapter 5: Linear regression with multiple regressors

Chapter 6: Hypothesis tests and confidence intervals in multiple regression

Chapter 7: Non-linear regression functions: Logarithms, polynomials and interactions

Chapter 8: Studies based on multiple regression

- Applications with software tools

EDUCATIONAL ACTIVITIES

On campus (54 hrs): There will be two types of classes: theoretical and practical. Students are encouraged to attend all classes.

In theoretical classes, the most important concepts of the course will be explained. The instructor will post in ADI all necessary documents (compulsory and elective) for each chapter. Students are invited to ask any questions about this material during office hours.

In practical classes, the exercise sheets will be covered and additional problems may be considered. Students are advised to try to solve the exercise sheets on their own before coming to class.

Individual study: (85-90 hrs) Time devoted to studying and personal work. This time includes that devoted to learning concepts, solving problems, watching online videos, doing online tests, etc

Tutorials: (2 hrs): Presenting and solving of doubts and questions with the instructor

Assesment (4 hrs): Both midterm and final exam will last around 2 hours. Students are recommended to read and briefly plan the time distribution before starting to answer the questions. The evaluation method is described in the section "Assessment". Students must show they have learnt the material and acquired the required competences.

ASSESSMENT

CONVOCATORIA ORDINARIA

- Midterm (date: check school's web): 30%
- Class quizzes (unannounced): 15%
- Final (comprehensive, date: check school's web): 55%

A minimum grade of 3.5 in the final exam is required to pass the subject. If the grade in the exam is lower, the maximum final mark of the subject will be 4.5.



CONVOCATORIA EXTRAORDINARIA

- Final Exam C.Ord.: 10%
- Midterm: 20%
- Class quizzes (unannounced): 15%
- Final Exam C.Ext.: 55%

A minimum grade of 3.5 in the final exam (C.Ext.) is required to pass the subject. If the grade in the exam is lower, the maximum final mark of the subject will be 4.5.

Description of assessment activities:

The **exams** (midterm, final and June exam) will take place at the places and times announced in the school's website. The exact structure of these exams will be announced through the course.

Observations:

- Class quizzes will be solved in-class. The grade for this part will be calculated using only a % (to be determined) of the total number of tests carried out, so that missed supervised tests need not be justified. Absences will simply count towards the other % of non-graded activities.

- Both final and midterm are compulsory

- The final is comprehensive

- **HONESTY IS THE BEST POLICY** ([Regulation](#))

We value honesty. Without it, there can be no trust or any meaningful social relations. Therefore, the School expects honesty and fairness from all of its members: professors, non-academic staff and students. Dishonest behaviours will be sanctioned in accordance with the University Norms on Student Academic Discipline of August 2015, and include lying, cheating in exams and plagiarism in written work. We take such violations seriously. Depending on their gravity, these offences will be dealt with by the Professor in charge of the subject, by the Dean of Students and in very severe cases, by the Vice President for Student Affairs. Sanctions include:

- formal warnings

- prohibition from entering University premises for a given period

- loss of admission rights to exams

- loss of scholarships

- A failing grade for the piece of work or the whole course

Students with special needs:

Please, contact the instructor at the beginning of the semester.



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OFFICE HOURS

Instructor: Miguel Ángel Borrella-Mas (mborrella@unav.es)

- Place: 2170 (2nd floor, Hilera, Amigos Building)
- Time: Tuesdays (15:00-17:00) and Thursdays (17:00-19:00)

Other times may be scheduled by appointment.

BIBLIOGRAFÍA

This course introduces students to multiple regression methods for analyzing data in economics and related disciplines. Extensions include regression with discrete random variables, instrumental variables regression, analysis of random experiments and quasi-experiments. Regression with time series data is covered in a more advanced course. The objective of the course is for the students to learn how to conduct -and how to critique- empirical studies in economics and related fields. Accordingly, the emphasis of the course is on empirical applications, using STATA software in many cases.

Main books:

- Stock, J.H. and Watson M.W. Introduction to Econometrics. Pearson: Global Edition, 4th edition. 2018. [Find it in the Library](#) (3rd edition).
- Wooldridge, J.M. Introductory Econometrics: A Modern Approach. South-Western, 6th edition. 2015. [Find it in the Library](#)

Others:

- Gujarati, D.N. and Porter, D.C. Basic Econometrics. McGraw Hill International Edition, 5th edition. 2009. [Find it in the Library](#)

The student will have access to the following in the intranet as they become available:

- Slides for theoretical sessions.
- Exercise sheets for practice sessions.