1. BASIC INFORMATION

Course	ECONOMETRICS II
Degree program	Economics Degree
School	Economic, Business and Communication Sciences
Year	3º
ECTS	6
Credit type	Compulsory
Language(s)	English
Delivery mode	In person
Semester	S5
Academic year	2025-2026
Coordinating professor	Nicolás Ignacio Salorio

2. PRESENTATION

Econometrics II delves into advanced econometric analysis, focusing on the relaxation of classical assumptions of the general linear model, structural issues in simultaneous equation models, time series analysis, and discrete choice models. The course equips students with theoretical and practical tools for causal inference, robust econometric modeling, and the interpretation of complex economic phenomena.

3. COMPETENCIES AND LEARNING OUTCOMES

KNOWLEDGE:
CON02. Identify the most relevant economic indicators through the mathematical models

- Select a theoretical reference framework for the development of various econometric analyses.
- Identify econometric techniques for the empirical modelling (ceteris-paribus) of the behaviour of individual economic agents (organisations and households).
- Differentiate relationships among economic variables, quantify them and assess the results obtained in complex situations (failure to comply with basic hypotheses).
- Define the econometric consequences of choosing the wrong economic model.

SKILLS:

HAB02. Solve problems and cases using data analysis techniques and tools to identify patterns, trends and predictions in economic decision-making.

- Develop the ability to make critical judgements on International Economic Law within the framework of contemporary international society.
- Interpret the means and resources for economic growth assistance set in the International Bank for Reconstruction and Development and in the United Nations.

COMPETENCIAS/COMPETENCIES:

- COMP02. Use the necessary mathematical tools to solve problems using programming and analysis methods.
- COMP04. Employ knowledge of econometric models and implement them through the use of data analysis and calculation tools.
- COMP17. Calculate economic models identifying the different trends and impact on the economy.

4. CONTENT

1) Relaxation of basic assumptions and simultaneous equation models (SEM) Causality and exogeneity.
2) Extensions of the general linear model. Sphericity analysis and use of models. Stochastic regressors of a model.
3) Autocorrelation, multicollinearity and advanced heteroscedasticity.
4) Time series analysis using ARMA, ARIMA, SARSMA and SARISMA models (moving averages, autoregressive and mixed models, and integrated processes).
5) Box-Jenkins methodology. Stages.
6) Other models: discrete choice, linear probability, Logit and Probit models.

5. TEACHING-LEARNING METHODOLOGIES

- Lecture.
- Case study method.
- Cooperative learning.
- Problem-based learning.
- Workshop-based learning.
- Simulation environments.

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Campus-based mode:

Learning activity	Number of hours
Master Classes	12
Practical application seminars	18
Case studies	14
Oral presentation of work	4
Preparation of reports and written papers	16

Research and projects	8
Independent work	56
Debates and colloquiums	8
Face-to-face assessment tests	12
TOTAL	**150**

7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

Campus-based mode:

Assessment system	Weight
In-person assessment tests	50%
Case studies	20%
Laboratory/workshop practice notebook	30%

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

7.1. First exam period

To pass the course in the first exam period, you must obtain a final course grade of at least 5 out of 10 (weighted average).

In any case, you will need to obtain a grade of at 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

7.2. Second exam period

To pass the course in the second exam period, you must obtain a final grade of at least 5 out of 10 (weighted average).

In any case, you will need to obtain a grade of 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

The student must deliver the activities not successfully completed in the first exam period after having received the corresponding corrections from the professor, or those that were not delivered in the first place.

8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessable activities	Deadline
Activity 1 -2	Week 1 - 7
Activity 2 – 4	Week 8 - 10
Activity 3 – 5	Week 3 - 15
Exam	Week 16 -18

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

9. BIBLIOGRAPHY

The following is a recommended bibliography:
- Gujarati, D. N., & Porter, D. C. (2010). *Econometría* (5ª ed.). McGraw-Hill.
- Johnston, J., & DiNardo, J. (1997). *Métodos de econometría*. McGraw-Hill.
- Novales, A. (1993). *Econometría*. McGraw-Hill.
- Sosa Escudero, W. (2015). *El lado oscuro de la econometría*. Temas Grupo Editorial.

10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.
From this unit we offer to our students:
1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:
orientacioneducativa@universidadeuropea.es

11.   ONLINE SURVEYS

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the "surveys" section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.