Universidad de Navarra

Advanced Econometrics

Guía docente 2025-26

PRESENTACIÓN

Welcome to 'Econometrics I,' a course designed to introduce the essentials of econometrics to students of courses in Economics, ADE, Data Analytics and othersds.

The course starts describing the main disciplines in Econometrics, mainly Time Series, Cross Sectional data and Panel Data. This course focuses on the main two sub-areas with particular interest in Time Series Analysis.

'Econometrics I' is a gateway to the skills needed in today's data-centric economic and financial sectors.

General Information

Degree	
Module/Subject Matter	Degree in Economics (compulsory). Other degrees (optative)
ECTS	3,5 (87.5 hours of work)
Semester, Year	Spring, 2025/26
Instructor	Prof. Luis Alberiko Gil-Alana
Instructor's Email and Office	alana@unav.es
Office Hours	Contact the instructors by email for an appointment.
Class Schedule | Classroom Location	TBD (link to the web)
Language	English
Prerequisite Knowledge and Skills *(Please contact the instructor if you have not yet taken these or similar courses)*	Some basis on analytical skills

RESULTADOS DE APRENDIZAJE (Competencias)

GENERAL COMPETENCIES

CG1) Train high-level specialists in both economic theory and finance

CG2) Provide students with the appropriate and necessary mathematical and econometric techniques for both theoretical and empirical work in the fields of economic theory and finance.

CG3) Familiarize students with research fields and the most relevant literature in economic theory and finance

CG4) Develop students' critical capacity towards economic or financial phenomena and enhance their communication skills.

CG5) Provide students with the basic theoretical foundations to start doctoral studies in economics or finance.

SPECIFIC COMPETENCIES

CE1) Study the main concepts and techniques of mathematical analysis, probability, and statistics required in the areas of economics and finance.

CE3) Appropriately use econometric techniques employed in the analysis of microeconomic data and in the analysis and modeling of financial time series.

CE4) Handle the main statistical and econometric programs used in the areas of economics and finance.

PROGRAMA

1. Introduction to Econometrics
2. ARMA modelling
3. Estimation
4. Testing Hypothesis
5. Box and Jenkins methodology
6. Seasonality
7. Prediction in Time Series
8. Nonstationarity and Unit roots
9. Strcutural Time Series
10. Frequency domain and Long Memory processes

ACTIVIDADES FORMATIVAS

Face-to-face classes (lectures) and problem sets.

Clases teoricas y / o practicas: 30 horas teoticas

Trabajos individuales y / o grupos: 60 horas

Estudio personal: 200 horas

Tutorias: 10 horas

EVALUACIÓN

CONVOCATORIA ORDINARIA

There will be a continuous evaluation that will be related to class participation and exercises during the course.

Valoración trabajos individuales 5%

Valoración de ejercicios con programas informáticos de 15%

Examen final 80%

CONVOCATORIA EXTRAORDINARIA

- Final exam: 100%

HORARIOS DE ATENCIÓN

Prof. Luis Alberiko GIL-ALANA, alana@unav.es

- Despacho..... Edificio Amigos. Planta 2 Torre.
- Horario de tutoria: Any time by email contact

BIBLIOGRAFÍA

Prof. Luis A. Gil-Alana's class notes

Box, G. and Jenkins, G. (1970) Time Series Analysis: Forecasting and Control. Holden-Day, San Francisco. Localízalo en la biblioteca.