esade

TEACHING GUIDE - 2025-2026

Econometrics

UGRA_013014

Departments	Department of Economics, Finance & Accounting
Teaching Languages	English
ECTS	7
Teacher responsible	Vladimir Manaev - vladimir.manaev@esade.edu Paolo Mengano - paolo.mengano@esade.edu Omar Rachedi - omar.rachedi@esade.edu Jan Sandoval - jan.sandoval@esade.edu

Course Goals

The objective of the course is to teach students how to use the linear regression analysis, as a major tool in their research project. Moreover, the course has two specific goals. First, it introduces the basic econometric methodology in the context of the classical linear regression model, particularly OLS estimation and inference. Secondly, the course aims to help the students to become more sophisticated consumers of empirical work done by others. In order to reach these targets great stress is done during the course on the interpretation of estimates that come from real applications and on the intuition behind the model's assumption.

Previous knowledge

All topics learned in Mathematics Applied to Economic Analysis and Statistics.

Prerequisits

It is highly recommended that the student has successfully completed Mathematics Applied to Economic Analysis and Statistics. The latter lays the mathematical foundation for this course, and some of the material will be extensively used here. Success in this course will in no small part be due to your mastery of the concepts learned in Statistics. This course covers a lot of material in a short period of time. Do not expect to understand everything immediately. I recommend reviewing your notes and the textbook between classes. Sometimes it will help to see the material from another point of view (Google is very useful here. Wikipedia is a great starting point for reviewing the math and statistics in the course. StackExchange provides some invaluable discussion on some of the harder concepts). This course is rewarding only if you are willing to put in the effort.

Description

Short description

This course covers the essential econometrics and statistical tools needed to understand empirical research and to execute independent research projects. Topics include introduction to statistical programming, regression analysis, regression inference, and advanced topics such as instrumental variables, qualitative response models and panel data. You will learn how to use statistical programming for econometric modeling through in-class computer tutorials involving analysis of real-world datasets. You are expected to be conversant with elementary probability and statistics as well as the basics of programming.

Activities

Other

Student will be sorted in groups and will have to hand in as part of their final evaluation a report on an econometric analysis of a data set.

Content

#	Topic
1	Review of Probability and Statistics
2	Introduction to Statistical Programming
3	Regression Analysis
4	Regression Inference
5	Advanced Topics in Regression Analysis

Assessment

Tool	Assessment tool	Category	Weight %
Written and/or oral exams		Ordinary round	50.00%
Group project		Ordinary round	40.00%
Attendance and punctuality	Active participation	Ordinary round	10.00%

PROGRAMS

G114-Global Governance Exchange Program (Undergraduates: Law)
G114 Year 1 (Optative)

G114S-Global Governance Exchange Program (Undergraduates: Law)
G114S Year 1 (Optative)

GBL24-Double Degree in Business Administration and Global Governance, Economics and Legal Order (Undergraduates: Business)

GBL24 Year 2 (Optative)

GBL25-Double Degree in Business Administration and Global Governance, Economics and Legal Order (Undergraduates: Business)

GBL25 Year 2 (Optative)

GDL20-Double Degree in Law and Global Governance, Economics and Legal Order (Undergraduates: Law)
GDL20 Year 3 (Optative)

GDL23-Double Degree in Law and Global Governance, Economics and Legal Order (Undergraduates: Law)
GDL23 Year 3 (Optative)

GEL19-Bachelor of Global Governance, Economics and Legal Order (Undergraduates: Law)
GEL19 Year 3 (Optative)

GEL23-Bachelor of Global Governance, Economics and Legal Order (Undergraduates: Law)
GEL23 Year 3 (Optative)