Exchange programme Vrije Universiteit Amsterdam

Vrije Universiteit Amsterdam - Exchange programme Vrije Universiteit Amsterdam - 2024-2025

Exchange

Vrije Universiteit Amsterdam offers many English-taught courses in a variety of subjects, ranging from arts & culture and social sciences, neurosciences and computer science, to economics and business administration.

The International Office is responsible for course approval and course registration for exchange students. For details about course registration, requirements, credits, semesters and so on, please visit the exchange programmes webpages.

Introductory Econometrics for Business and Economics

Course Code	E_MFAE_IEBE
Credits	6
Period	P1
Course Level	300
Language Of Tuition	English
Faculty	School of Business and Economics
Course Coordinator	J.O. Bauer
Examiner	J.O. Bauer
Teaching Staff	J.O. Bauer
Teaching method(s)	Lecture, Study Group, Computer lab

Course Objective

By the end of this course students will have had an introduction to modern econometric techniques, that will enable them to conduct an empirical study on their own. In particular, students will be familiar with econometric methods for cross-sectional and panel data, and apply them to real-world applications in macroeconomics, finance and business.

Course Content

First, a review is given of least squares estimation and testing in the simple linear cross-sectional regression model. We study the classical assumptions, and the consequences arising when these assumptions are not fulfilled. The linear model with multiple regressors is discussed using matrix notation. Furthermore, we cover maximum likelihood estimation, and models that are nonlinear in variables. Finally, an introduction to panel data analysis is given.

Throughout the course, the focus lies on developing an intuition for state-of-the-art econometric concepts. A balance is struck between theoretical derivations and empirical applications. Extensive use is made of the programming language Python, both for in-class illustration and for hands-on exercises. Students can develop and practice their programming skills using Jupyter Notebooks that provide instructions and feedback on the quality of the code.

Additional Information Teaching Methods

Lectures (4h per week) and tutorials (2h per week). The latter are used to discuss theoretical and practical exercises.

Method of Assessment

Final written exam (85%) and practical assignment (15%)

Literature

Main reference: Stock and Watson (2011), "Introduction to Econometrics", Pearson, 3rd edition or newer.

Supplementary literature: Wooldridge (2013), "Introductory Econometrics: A Modern Approach", Cengage Learning, Inc. 4th edition or newer.

Additional Information Target Audience

The course is part of the regular track of the SBE faculty minor "Applied Econometrics: A Big Data Experience for All". It is targeted at students who are currently not enrolled in the Bachelor in Econometrics or a similar study program.

Additional Information

Participation in this course is a worthwhile preparation for the remaining courses in the regular track of the Minor "Applied Econometrics: A Big Data Experience for All".

Explanation Canvas

All materials (slides, theory exercises, practice exams, etc.) are provided on Canvas.

Recommended background knowledge

This course assumes familiarity with probabilistic concepts such as discrete and continuous random variables, conditional expectations, hypothesis testing and central limit theorems, with the basics of matrix calculus, and with the essentials of regression analysis. This material, excluding matrix calculus, corresponds more or less to chapters 1-5 in the book by Stock and Watson (see literature references) and students are recommended to refresh their memory prior to the first lecture, see also Probability and Statistics: A Concise Review athttps://www.k-moussa.com/teaching.