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.

Financial Econometrics

Course Code	E_EOR3_FTR
Credits	6
Period	P5
Course Level	300
Language Of Tuition	English
Faculty	School of Business and Economics
Course Coordinator	dr. P. Gorgi
Examiner	dr. P. Gorgi
Teaching Staff	dr. P. Gorgi
Teaching method(s)	Computer lab, Study Group, Lecture

Course Objective

This course introduces students to econometric methods in financial econometrics.

By the end of this course, participants will:

- know how to design, code, estimate and analyze time-varying parameter models used in Finance;
- understand the interplay between econometric techniques and modeling assumptions;
- have used computational methods to solve econometric exercises;
- have gained experience in working with real data.

Participation in this course is a worthwhile preparation for the master courses in the MSc Econometrics program. The econometric techniques discussed will also be beneficial to everyone planning to write a Bachelor's thesis in Financial Econometrics.

Course Content

This course covers both theoretical and practical aspects of modern econometric models that are used for measuring financial risk, volatility forecasting and portfolio optimization.

The students are introduced to financial econometrics models that feature nonlinearities, time-varying parameters and latent variables. In particular, the students learn how to design, implement, estimate and analyze both observation-driven and parameter-driven models.

Additional Information Teaching Methods

Lectures (3 hrs per week) and tutorials (1.5 hrs per week).

Method of Assessment

Exam and group assignment.

Entry Requirements

None

Literature

Lecture notes and other material provided by teacher.

Other reading material:

- Francq and Zakoian, 2011, GARCH Models: Structure, Statistical Inference and Financial Applications. John Wiley & Sons.
- Tsay, 2010, Analysis of Financial Time Series. John Wiley & Sons.

- Gourieroux and Monfort, 1996, Simulation-Based Econometric Methods. Oxford University Press.

Additional Information Target Audience

This course is targeted at both econometrics and non-econometrics students that have an understanding of basic probability theory, statistics, linear regression models, and time-series analysis.

Recommended background knowledge

This course builds on introductory time-series concepts. Attending courses such as "Introduction to Time-Series" in the minor of Applied Econometrics, or the third-year Bachelor course "Econometrics III", is not required, but certainly provides an adequate background knowledge.