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.

Quantitative Research Methods II

Course Code	E_EBE2_QRM2
Credits	6
Period	P1
Course Level	200
Language Of Tuition	English
Faculty	School of Business and Economics
Course Coordinator	S.J.D. van Alten MSc
Examiner	S.J.D. van Alten MSc
Teaching Staff	S.J.D. van Alten MSc
Teaching method(s)	Lecture, Written partial exam, Instruction course, Computer lab

Course Objective

In this course you will learn about several important statistical and econometric topics and several quantitative techniques that are relevant and often used in Economics and Business Economics (Academic and Research Skills). These techniques are not only relevant in an academic context, but also help in solving concrete practical economic and business economic problems (Bridging Theory and Practice - Knowledge). You will not only learn the techniques, but also how to abstract from a practical problem in the real world to a statistical problem, and back from a statistical solution to a solution that is relevant for the real world (Academic and Research Skills).

After successfully completing this course, you are able to:

- properly use statistical notation (both passively and actively);
- calculate elementary probabilities;
- model events with the Bernoulli distribution, the binomial, uniform and normal distribution;
- calculate and interpret descriptive statistics (mean, median, variance, correlation coefficient, etc.);
- use the concepts population, sample and sampling variation;
- calculate confidence intervals;
- distinguish statistical and practical significance;
- perform hypothesis tests;
- perform and interpret simple regression analysis;
- visualize data and relationships;
- use R for statistical analyses on the above topics.
- to read and write texts in which statistics occurs;
- use standard software for solving statistical problems.

Course Content

Economics is a scientific discipline in which quantitative data are key. Theoretical considerations of the effect of minimum wages on unemployment, or the effect of bonuses on the performance of employees, are useful, but the final test is not the theory but confrontation with practical data. Unfortunately such data are rarely if ever completely unambiguous. Business cycles go up one day, and go down the other day, and usually there are more factors to cause noise in the data. Statistics provides means to draw reliable conclusions from data. The modern economist must therefore be able to handle statistics and to handle statistical software to visualize data. In this course such skills are taught: statistical analyses connected to theoretical topics are carried out using R.

Additional Information Teaching Methods

Lectures, tutorials and computer tutorials (R)

Method of Assessment

- Exam with open questions - individual assessment
- One digital exam with R - individual assessment
- Tutorial/Computer practical assignments

Literature

- D.P. Doane & L.E. Seward, Applied Statistics in Business & Economics, 6/7th Edition, 2019/2021, McGraw-Hill International Edition (4th and 5th Edition are also usable).
- Supplementary documents via Canvas

Additional Information

For this course we use the R statistical programming language with RStudio software, which is available on the computers in the campus.

Recommended background knowledge

Quantitative Research Methods I.