



## Course syllabus

School of Business and Economics  
Department of Economics and Statistics

4NA061 Avancerad Ekonometri, 7,5 högskolepoäng  
Advanced Econometrics, 7.5 credits

**Main field of study**

Economics

**Subject**

Economics

**Level**

Second cycle

**Progression**

A1N

**Date of Ratification**

Approved 2018-12-13.

Revised 2025-06-16. Literature revision.

The course syllabus is valid from autumn semester 2025.

**Prerequisites**

General entry requirements for second-cycle studies and a minimum of 30 credits in Economics, Statistics, Finance, Mathematics, or the equivalent. English 6, or the equivalent.

**Objectives**

After completing this course the student should be able to:

- derive and explain the linear regression model and its properties, using matrix algebra
- derive and explain the instrumental variables method
- perform inference on econometric models using the least squares method and the

maximum likelihood method

- formulate and perform statistical tests, as well as explain the basic idea behind the Lagrange Multiplier, Likelihood Ratio and the Wald tests
- analyze models with discrete outcomes
- analyze models and perform inference on panel data models
- perform empirical analyses using software

## Content

The course covers the following areas and concepts:

- linear and non-linear regression models
- diagnostic tests
- analysis of cross-sectional, time series, and panel data
- empirical exercises using software

## Type of Instruction

The teaching consists of lectures and exercises.

## Examination

The course is assessed with the grades A, B, C, D, E or F.

The course is examined through an individual written examination 7.5 credits.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail.

Resit examination is offered in accordance with Linnaeus University's Local regulations for courses and examination at the first- and second-cycle levels.

In the event that a student with a disability is entitled to special study support, the examiner will decide on adapted or alternative examination arrangements.

## Course Evaluation

A course evaluation should be conducted during the course or in connection with its conclusion. The results and analysis of the completed course evaluation should be promptly communicated to students who have completed the course. Students participating in the next course instance should be informed of the results of the previous course evaluation and any improvements that have been made, no later than at the start of the course.

## Required Reading and Additional Study Material

### Required reading

Huntington-Klein, N. *The Effect: An Introduction to Research Design and Causality*. Boca Raton: CRC Press, Taylor & Francis Group. (Also available as open source.) About 640 pages.

Stock, J. H. and Watson, Mark W. *Introduction to Econometrics*. Global Edition, 4th Edition. London: Pearson. About 800 pages.

Scientific articles. About 200 pages.