Course syllabus

Avancerad ekonometri
Econometrics, Advanced Course

EXTN05, 7,5 credits, A (Second Cycle)

Valid for: 2023/24
Faculty: Faculty of Engineering, LTH
Decided by: PLED I
Date of Decision: 2023-04-14

General Information

Elective for: I4
Language of instruction: The course will be given in English

Aim

Students shall have developed the ability to pursue further studies in the subject and should be able to search for and evaluate information with a high degree of independence. Students shall also have developed the ability to individually write an empirically orientated essay.

Learning outcomes

Knowledge and understanding
For a passing grade the student must

- have a deeper understanding of linear regression models, including the representation using matrix algebra,
- be able to estimate linear and nonlinear models using least squares, generalised least squares, maximum likelihood and instrumental variables, and have an understanding of when these methods should be used,
- be able to formulate and test linear and nonlinear hypotheses,
- be able to analyse cross-sectional models with limited dependent variables,
- be able to analyse stationary and non-stationary time series models,
- be able to analyse panel data models,
- be able to generalise their knowledge to econometric problems that haven't been treated

during the course,
- be able to understand relevant empirical and econometric research.

Competences and skills
For a passing grade the student must

- apply advanced econometric tools to economic problems,
- evaluate whether the assumptions made by the chosen model are reasonable,
- apply rational modelling strategies even when basic assumptions must be rejected,
- implement econometric analyses using econometric software,
- be able to give an account of and discuss their econometric abilities.

Students shall also have sufficient competence to individually write an empirically orientated paper at the master level.

Judgement and approach
For a passing grade the student must

Students shall have the ability to pursue further studies in the subject and should be able to search for and evaluate information with a high degree of independence.

Contents

This course gives the basis that is needed to enable students to empirically analyse economic data without making unrealistic assumptions. Modern econometric techniques are treated, and at the same time considerable emphasis is placed on fundamental econometric thinking. Theoretical studies are interwoven with practical applications in the form of computer exercises, which are carried out using econometric software on a PC.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)
Assessment: The examination consists of a written exam and graded computer exercises. The written exam takes place at the end of the course. There will be further opportunities for examination close to this date. Points from the computer exercises can only be carried forward to examinations taken the same term.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Admission

Admission requirements:

- EXTG65 Econometrics or TEK190 Econometrics

The number of participants is limited to: No
The course overlaps following course/s: NEKM23, NEKN31

Reading list

- Verbeek, Marno (2017): A Guide to Modern Econometrics, fifth edition, Wiley (Paperback, ISBN: 9781119472117).
- Supplementary material.
- Recommended literature: Kennedy, Peter (2008): A Guide to Econometrics, sixth edition, Blackwell Publishing (Paperback, ISBN: 9781405182577).

Contact and other information

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Course homepage: http://www.nek.lu.se
Further information: Identical to NEKN31