DEPARTMENT OF ECONOMICS

NEK301 Basic Econometrics, 7.5 credits

Grundläggande ekonometri, 7,5 högskolepoäng
First Cycle

Confirmation

This course syllabus was confirmed by Department of Economics on 2019-08-07 and was last revised on 2023-02-10 to be valid from 2023-08-28, autumn semester of 2023.

Field of education: Social Sciences 100%
Department: Department of Economics

Position in the educational system

The course is a 7.5 higher education credits intermediate course within the first-cycle level.

The course can be part of the following programmes: 1) Program in Environmental Social Science (S1SMI) and 2) Programme in Business and Economics (S1EPG)

Main field of studies	Specialization
Economics	G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements
Financial Economics	G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

Entry requirements

Admission to the course requires a minimum of 30 credits of Economics, of which at least 15 credits have obtained a passing grade.

Learning outcomes

On successful completion of the course the student will be able to:

1. estimate the coefficients in a linear model describing cross-sectional, panel or time series data using least squares or instrumental variable regression. They can

interpret the estimates and understand under what assumptions they have a causal interpretation. The students are able to assess whether these assumptions are appropriate for a given economic application.

2. understand how statistical inference is used to extrapolate from the sample to the population. They can translate economic hypotheses into restrictions on the coefficients in a linear model and are able to select appropriate statistical tests to test these restrictions.

3. by using a statistical software, process data and conduct a replicable econometric analysis.

How overall learning goals of the bachelor's degree are related to the learning outcomes of the course:

Overall learning goals	Learning outcomes
Knowledge and understanding	1+2
Skills and abilities	1+2+3
Judgement and approach	1+2

Course content

This course discusses the use of data to establish and quantify causal relationships between economic variables. We consider cross-sectional, as well as panel and time series data. The students learn to distinguish between causal relationships and correlations. An empirical analysis of a causal relationship requires a source of correlations. An empirical analysis of a causal relationship requires a source of exogenous variation.

This course introduces two econometric methods (ordinary least squares and instrumental variable regression) that exploit different sources of exogenous variation. The students learn about the role of control variables, measurement error and equilibrium conditions ("simultaneous equations") in assessing the plausibility of an exogeneity assumption. They learn how to use the framework of statistical testing to account for the fact that a dataset does not contain 1) data on all relevant economic units, 2) measurements of all determinants of unit behavior. In addition to learning about the theoretical foundations of econometric methods, the students will learn how to apply them to real economic data. To this end, they will learn how to process and analyze economic data using a statistical software.

Form of teaching

The content of the course is presented mainly at lectures and in group exercises. A large part of the knowledge acquisition on the course is done through own work by the

student.

Language of instruction: English

Assessment

The final grade is based on

1. Three graded assignments. To pass the course, a student has to receive a pass grade on at least two assignments. Students who fail this part of the examination, will have the opportunity to retake it the next time the course is taught. Between courses, there is no opportunity to retake this part of the examination. A pass on this part of the examination allows a student to pass the course if they pass the written exam within a period of 15 months after the hand-in date of the last assignment.
2. A written exam.

If a student, who has failed the same examined element on two occasions, wishes to change examiner before the next examination session, such a request is to be submitted to the department in writing and granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In the event that a course has ceased or undergone major changes, students are to be guaranteed at least three examination sessions (including the ordinary examination session) over a period of at least one year, though at most two years after the course has ceased/been changed. The same applies to work experience and VFU, although this is restricted to just one additional examination session.

Grades

The grading scale comprises: Excellent (A), Very good (B), Good (C), Satisfactory (D), Sufficient (E) and Fail (F).

Course evaluation

Course evaluation is done digitally and anonymously at the end of the course.

The survey material is compiled and the results from the course evaluation and proposals for possible improvement measures are discussed at the course committee meeting. After the course evaluation is completed, the result will be published at the course homepage.

If a change of course is done based on the course evaluation, this will be communicated at the course introduction for the upcoming student group.

Additional information

1. Transitional rules: The course replaces the sub-course "Basic Econometrics" within the course block "NEG300"

2. Limitations: The course may not be included in the same degree as the sub-course "Basic Econometrics, 7.5 ECTS", which is part of NEG300, as well as HNE485.