Linnæus University

Jnr: 2021/2480-3.1.2.2

Course syllabus

School of Business and Economics
Department of Economics and Statistics

1NA071 Ekonometri, 7,5 högskolepoäng
Econometrics, 7.5 credits

Main field of study
Economics

Subject Group
Economics

Level of classification
First Level

Progression
G1F

Date of Ratification
Approved 2014-10-15
Revised 2021-06-30 by School of Business and Economics. Literature revision.
The course syllabus is valid from autumn semester 2021

Prerequisites
Economics 30 credits, including course credits in basic micro- and macroeconomics, and Statistics 15 credits or course credits in time series analysis and regression analysis, and English B/English 6, or equivalent

Objectives

After finished course, the student is expected to be able to:

- formulate a hypothesis based on economic theory and specify a testable econometric model
- explain and describe regression models (simple and multiple), their properties and inference
- identify, explain and solve for problems such as heteroscedasticity, autocorrelation and multicollinearity
- explain and interpret time series models such as ARIMA and ARCH / GARCH
- explain and identify Granger-causality, (non-)stationarity and co-integration
- apply regression models to estimate and analyze economic relationships
- explain the possibilities and limitations associated with different data when using regression analysis
- explain and understand the intuition of the most common statistical methods to isolate causal effects
- interpret results in written and oral form from a regression analysis in both a scientific and a popular way
- use statistical software to perform data processing and estimation

Content

The purpose of the course is to go through fundamental regression analysis which is frequently used in economics.

The course covers the following topics:

- Ordinary Least Squares
- model specification and diagnostics testing
- dynamic econometrics models
- causality and instrumental variables
- identification, estimation, diagnostic testing and prediction of ARIMA models

Type of Instruction

Lectures, laboratory sessions and obligatory seminars. Obligatory parts are stated in the schedule.

Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.
The assessment of the performance of the students is based on the laboratory session, oral and written presentations and written examination.

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.

After each regular examination there will be at least one new examination in close proximity to the date the results of the regular exam were posted. A minimum of five occasions for written exams will be offered in relation to the syllabus to which the student was accepted. Usually three occasions per academic year are offered. Students that fail reports can complement after instructions from the examiner to obtain a pass grade.

Grading criteria for the A–F scale are communicated in writing to the student by the start of the course/module at the latest, as well as how grades on separate elements of examination are weighed to a final course grade.

Course Evaluation

A written course evaluation is carried out and compiled in a report, which is archived at the faculty. The results and possible measures taken are communicated by the course coordinator and presented to the students the next time the course is given, or in another way deemed suitable by the course coordinator. Other types of course evaluations, for example regular evaluations throughout the course or discussions with students, will be included and encouraged with the aim of ensuring continuous quality development.

Credit Overlap

The course cannot be included in a degree along with the following courses of which the content fully, or partly, corresponds to the content of this course: 1NA005:2, 2NA001, 2FE045:2, 1NA004:2, 1NA011 and 1NA016:2 with 7.5 credits each.

Required Reading and Additional Study Material

Required reading

Wooldridge, J. *Introductory Econometrics.* Cengage. Latest edition. About 830 pages.

Scientific articles and statistics provided by the teacher. About 100 pages.