



Course syllabus

School of Business and Economics
Department of Economics and Statistics

4NA099 Avancerad statistisk dataanalys, 7,5 högskolepoäng
Advanced statistical data analysis, 7.5 credits

Main field of study

Economics

Subject

Economics

Level

Second cycle

Progression

A1N

Date of Ratification

Approved 2023-01-23.

Revised 2024-02-19. Revision of objectives, content and scored examination components and updating standard texts.

The course syllabus is valid from autumn semester 2024.

Prerequisites

General entry requirements for studies at the second-cycle level and specific entry requirements: a bachelor's degree in economics or in another main field of study in the social or natural sciences. 15 credits of statistics at the G1N level, or the equivalent. English 6, or the equivalent.

Objectives

After completing this course the student should be able to:

- carry out import/export of different data sets formats to/from different statistical software

- perform statistical analysis with the statistical software covered in the course
- produce data visualizations using statistical software
- Show understanding of and interpret the results produced from statistical software covered in the course
- critically differentiate usefulness of statistical software covered in the course for a given setting
- create and explain basic program using loops and conditional statements

Content

The course contains:

- R software
- SAS software
- sampling distributions
- point- and interval estimators
- correlation and regression analysis.
- introduction of data visualisation
- introduction to statistical programming
- other statistical software such as Python, SPSS, Excel and Ox may be introduced in the course

Type of Instruction

The teaching consists of computer lab introductions and individual communication between students and teacher.

Examination

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

The course is examined through three individual written assignments that are performed using statistical software covered in the course 2 credits each and an individual digital query 1.5 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.

Overlap

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course:
1ST817 and 4NA909 with 7.5 credits each.

Required Reading and Additional Study Material

Required reading

The teaching material for the course consists of the following online software manuals. References and links to additional online resources that may be used will be distributed by the course coordinator before the start of the course.

Additional study material

R online manual (electronic resource that is part of the software R. The manual cannot/should not be bought).

SAS online manual (electronic resource that is part of the software SAS. The manual cannot/should not be bought).

References to other online resources and study material that may be of relevance will be supplied by the course coordinator before the start of the course.