Linnæus University



Course syllabus

School of Business and Economics

Department of Economics and Statistics

1ST904 Ekonomisk statistik, 15 högskolepoäng 1ST904 Business Statistics, 15 credits

Main field of study Statistics

Subject Group Statistics

Level of classification First Level

Progression G1N

Date of Ratification

Approved 2019-10-30 Revised 2022-03-14 by School of Business and Economics. Adjustment of fieldspecific entry requirements, linguistic adjustment of objectives and update of standard texts.

The course syllabus is valid from autumn semester 2022

Prerequisites

General entry requirements + Civics 1b alt. Civics 1a1 +1a2, Mathematics 3b alt. Mathematics 3c and English 6.

Objectives

Module 1 Business Statistics I, 7.5 credits

After completing this module the student should be able to:

- discuss the meaning of statistical averages and dispersion
- describe the differences between point estimation and interval estimation
- discuss the meaning and relevance of the central limit theorem
- present, summarise and analyse data using SPSS
- calculate simple probabilities
- test statistical hypotheses regarding averages
- assess the general usability and limitations of the statistical methods used in the course

Module 2 Business Statistics II, 7.5 credits

After completing this module the student should be able to:

- · discuss the benefits and drawbacks of parametric and nonparametric methods
- describe the sample methods that are included in the course
- carry out basic regression analyses using SPSS and present a statistical analysis in a document
- establish an adequate model for a given statistical problem
- detect an incorrectly specified model
- assess the general usability and limitations of the statistical methods used in the course

Content

Module 1: Business Statistics I, 7.5 credits

The module contains:

- descriptive statistics
- probabilities and combinatorics
- random variables
- basic discrete and continuous distributions,
- samples and sample distribution, especially the central limit theorem
- point and interval estimation of averages
- hypothesis testing of averages

Module 2: Business Statistics II, 7.5 credits

The module contains:

- correlation analysis
- multiple linear regression
- time series data
- nonparametric methods
- sample methodology

Type of Instruction

Teaching is carried out as distance learning with help from a learning platform and consists of self-studies based on instructions from the course coordinator. The teaching consists of lectures, seminars and group assignments. Group assignments are made up of, with help of statistical software, compiling, analyzing and presenting quantitative data material. The course requires access to a computer and the internet. No compulsory meetings on campus are included.

Examination

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

Module 1: Business Statistics I, 7.5 credits

The module is examined through a digital query (1 credit), a computer exercise with hand in assignment (1.5 credits) and a final written examination (5 credits).

Module 2: Business Statistics II, 7.5 credits

The module is examined through a digital query (1 credit), a computer exercise with hand in assignment (1.5 credits) and a final written examination (5 credits).

The following applies to all modules:

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. Grading criteria for the A–F scale are communicated in writing to the student by the start of the module at the latest, as well as how the weighting and weighting of grades on individual examining elements to the final course grade takes place. The basis for the student's grade is determined by the student's fulfillment of the objectives.

Repeat examination is offered in accordance with Local regulations for courses and examination at the first and second-cycle level at Linnaeus University. An examiner can, in exceptional cases, decide that a student who is close to the level for a passing grade may carry out supplementary assignments in order to reach the passing grade.

If the university has decided that a student is entitled to special pedagogical support due to a disability, the examiner has the right to give a customised exam or to have the student conduct the exam in an alternative way.

Course Evaluation

During the implementation of the course or in close conjunction with the course, a course evaluation is to be carried out. Results and analysis of the course evaluation are to be promptly presented as feedback to the students who have completed the course. Students who participate during the next course instance receive feedback at the start of the course. The course evaluation is to be carried out anonymously.

Credit 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: 1ST060 and 1ST061 with 7.5 credits each.

Required Reading and Additional Study Material

The following applies to all modules: Required reading

Anderson, D. R., Sweeney, D. J., Williams, T. A., Freeman, J. & Shoesmith, F. *Statistics for Business and Economics*. SouthWestern Cengage Learning. Latest edition. About 600 pages.