



School of Economics and Management

STAA41, Statistics: Basic Course 1, 15 credits

Statistik: Grundkurs 1, 15 högskolepoäng
First Cycle / Grundnivå

Details of approval

The syllabus was approved by The Board of the Department of Statistics on 2021-11-29 to be valid from 2022-08-29, autumn semester 2022.

General Information

The course constitutes part of the first semester in Statistics. It may be taken as single subject course or included as an optional course in some programmes. The course is compulsory in the Bachelor Programme in Business Administration and Economics and elective in the Bachelor of Science Programme in Politics and Economics.

Language of instruction: Swedish

Main field of studies

Statistics

Depth of study relative to the degree requirements

G1N, First cycle, has only upper-secondary level entry requirements

Learning outcomes

The overall learning outcome is that the student should develop statistical reasoning, i.e. the ability to use statistical methods to draw conclusions based on data.

Knowledge and understanding

For a passing grade, the student shall

- be able to explain the difference between censuses and sample surveys as well as between different levels of measurement,
- be able to account for concepts such as centre, variability and distribution,
- be able to account for fundamental concepts within probability theory,
- be able to account for fundamental concepts within statistical inference such as point estimation, interval estimation, and hypothesis testing, and
- be able to explain the difference between correlation and regression,

Competence and skills

For a passing grade, the student shall

- be able to independently visualise different types of data,
- be able to calculate descriptive statistics,
- be able to calculate probabilities for basic probability models,
- be able to calculate point and interval estimates,
- be able to analyse statistical relationships using correlation and regression models,
- be able to perform hypothesis testing of various parameter estimates,
- be able to in writing present the results of statistical analyses,
- be able to independently perform analyses using statistical software, and
- be able to interpret and draw relevant conclusions from statistical analyses.

Judgement and approach

For a passing grade, the student shall

- be able to do appropriate choices of visualisations and descriptive statistics to illustrate data,
- be able to judge the choice of an appropriate probability model,
- be able to reason about choices of statistical methodology,
- be able to discuss sources of uncertainty in surveys, and
- be able to reason about the significance of statistics for society.

Course content

The course provides an introduction to statistical science. The following areas are covered:

- Visualisation of data and descriptive statistics,
- Basic probability theory,
- Statistical inference, e.g. point estimation, interval estimation, and hypothesis testing, and
- Analysis of statistical relationships, e.g. correlation analysis and regression analysis.

Course design

The course consists of lectures, exercises, tutorials, computer lab sessions, and group work. Attendance at the initial computer lab session is mandatory. If there are special reasons, the examiner may grant an exemption from the attendance requirement and instead decide on a replacement assignment.

Assessment

Students are examined using written assignments, quizzes, a test and a final written exam.

The University views plagiarism very seriously, and will take disciplinary actions against students for any kind of attempted malpractice in examinations and assessments. Plagiarism is considered to be a very serious academic offence. The penalty that maybe imposed for this, and other unfair practice in examinations or assessments, includes suspension from the University.

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.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, E, D, C, B, A.

A (Excellent) 85-100 points/percent. A distinguished result that is excellent with regard to theoretical depth, practical relevance, analytical ability and independent thought.

B (Very good) 75-84 points/percent. A very good result with regard to theoretical depth, practical relevance, analytical ability and independent thought.

C (Good) 65-74 points/percent. The result is of a good standard with regard to theoretical depth, practical relevance, analytical ability and independent thought and lives up to expectations.

D (Satisfactory) 55-64 points/percent. The result is of a satisfactory standard with regard to theoretical depth, practical relevance, analytical ability and independent thought.

E (Sufficient) 50-54 points/percent. The result satisfies the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought, but not more.

F (Fail) 0-49 points/percent. The result does not meet the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought.

To pass the course, the students must have been awarded the grade of E or higher.

Individual examinations may have the grading scale Pass/Fail.

The grade of the full course is determined as a weighted mean of the results of the examinations expressed as percentages of the maximum scores. The following weights are utilised:

Examination : Weight

Quizzes : 5 %

Assignments : 10 %

Test : 25 %

Exam : 60 %

Entry requirements

General and courses corresponding to the following Swedish Upper Secondary School Programs: English 6, Mathematics 3b/3c and Social Studies 1b/1a1+1a2.

Further information

The course may not be combined with STAA40 in a degree.

This course replaces STAA31 Statistics: Basic Course 1.

If the the course is discontinued, another five exam opportunities will be arranged within one year after the regular exam.

Subcourses in STAA41, Statistics: Basic Course 1

Applies from H22

- 2201 Quizzes, 1,0 hp
Grading scale: Fail, Pass
- 2202 Assignments, 2,0 hp
Grading scale: Fail, Pass
- 2203 Test, 4,0 hp
Grading scale: Fail, Pass
- 2204 Exam, 8,0 hp
Grading scale: Fail, Pass