



Syllabus

for course at first level

Statistical Analysis
Statistisk analys

**7.5 Higher Education
Credits**
7.5 ECTS credits

Course code:	MT4001
Valid from:	Autumn 2007
Date of approval:	2006-09-27
Department	Department of Mathematics (incl. Math. Statistics)
Subject	Mathematical Statistics
Specialisation:	G1N - First cycle, has only upper-secondary level entry requirements

Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University on 27 September 2006.

Prerequisites and special admittance requirements

Prerequisites for the course is a course equivalent to Probability Theory 1 FC, 7.5 hp.

Course structure

Examination code	Name	Higher Education Credits
TENT	Statistical Analysis, exam	6
LABO	Computer Exercises	1.5

Course content

a. The course covers descriptive statistics, estimation of parameters, unbiasedness and efficiency, the method of moments, introduction to the likelihood method, interval estimation, testing of common hypotheses for one and two samples, and for paired observations with or without assumption on normal distribution, linear regression, Spearman correlation and some about Bayesian statistics.

b. The course includes the following elements:

- i) Theory, 6 hp
- ii) Computer Exercises, 1.5 hp

Learning outcomes

It is expected that the student after taking the course will be able to:

- * define the basic ideas of statistical analysis
- * carry out simple statistical analysis on real problems
- * use computer programs as a tool for statistical analysis
- * critically judge whether the results of the analyses are reasonable
- * do written presentation of statistical analysis

Education

The education consists of lectures, exercises, computer exercises and tests. Participation in the computer exercises is compulsory. An examiner may rule that a student is not obliged to participate in certain compulsory education if there are special grounds for this after consultation with the relevant teacher.

Forms of examination

a. Examination for the course is in the following manner: measurement of knowledge takes place through written examination.

b. Grading is carried out according to a 7-point scale related to learning objectives:

A = Excellent

B = Very Good

C = Good

D = Satisfactory

E = Sufficient

F_x = Fail

F = Fail

c. Grading criteria for the course will be distributed at the start of the course.

d. A minimum grade E is required to pass the course, together with pass of computer exercises.

e. Students who fail to achieve a pass grade in an ordinary examination have the right to take at least further four examinations, as long as the course is given. The term “examination” here is used to denote also other compulsory elements of the course. Students who have achieved a pass grade on an examination may not retake this examination in order to attempt to achieve a higher grade. Students who have failed to reach a pass grade on two occasions have the right to request that a different teacher be appointed to set the grade of the course. A request for such appointment must be sent to the departmental board.

Interim

Students may request that the examination is carried out in accordance with this syllabus even after it has ceased to apply. This right is limited, however, to a maximum of three occasions during a two-year-period after the end of giving the course. A request for such examination must be sent to the departmental board.

Limitations

The course may not be included in a degree together with the course "Statistical Analysis" (MS 1140).

Misc

The course is a component of the Bachelor's Programme in Mathematics, Bachelor's Programme in Biomathematics, and Bachelor's Programme in Mathematics and Economics, and it can also be taken as an individual course.

Required reading

Course literature is decided by the departmental board and is described in an appendix to the syllabus.