Syllabus

for course at advanced level

Multivariate Analysis

Multivariat analys

7.5 Higher Education Credits

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Course code:	ST744A
Valid from:	Autumn 2014
Date of approval:	2014-02-19
Department	Department of Statistics
Main field:	Statistics
Specialisation:	A1N - Second cycle, has only first-cycle course/s as entry requirements

Decision

This syllabus is approved by the Board of the Department of Statistics on February 19, 2014.

Prerequisites and special admittance requirements

90 ECTS credits in Statistics or equivalent. Mathematics for Economic and Statistical Analysis, first cycle, 7,5 ECTS credits, or equivalent. Swedish upper secondary school course English B or equivalent.

Course structure

Examination code	Name	Higher Education Credits
12MA	Compulsory Exercise in Multivariate Analysis	1.5
11MA	Multivariate Analysis	6

Course content

The course consists of two course modules:

1. Multivariate analysis
2. Compulsory exercise in multivariate analysis

The course provides knowledge within multivariate statistics: theory, calculation technique and applications within many fields. The course will also provide some deeper studies of the inference theory in multivariate analysis.

The concepts that are more thoroughly treated are:
Matrix algebra and multivariate normal distribution. Confirmatory factor analysis. Multivariate analysis of variance. Discriminant analysis. Structural equation models.

Learning outcomes

To pass the course the student should be able to:

- account for important theorems and concepts in multivariate analysis
- account for the most common multivariate methods
- use multivariate methods to analyse data with statistical software

Education

The teaching consists of lectures and exercises.

Forms of examination

a. Examination will be done by assessing the learning outcomes. Examination will be in the form of a written test and a written report of a compulsory exercise

b. Grading is done according to a seven-point scale related to the specified learning outcomes:

A = Excellent
B = Very Good
C = Good
D = Satisfactory
E = Adequate
Fx = Inadequate
F = Totally Inadequate

c. The assessment criteria for the course will be distributed at the beginning of the course.

d. In order to pass the course, the grade E or higher is required on course unit 1 and Pass on course unit 2.

e. Students who have received the grade Fx or F on an examination are entitled to at least four additional examinations to achieve the lowest grade E as long as the course is given.

If a student has received the grade Fx on the written reports but is close to passing the assignment, there may be a possibility to hand in an additional assignment. The assignment should be handed in within the given time frame and after the examiner having advised on the need to revise the assignment.

Students who have received the grade E on an examination may not retake this examination in order to attempt to achieve a higher grade.

Students who have received the grade Fx or F on an examination on two occasions by the same examiner have the right to request that a different examiner be appointed to set the grade of the examination. The request must be in writing and sent to the head of the department. The examination denotes all compulsory elements of the course.

Every time the course is given, there should be two examination opportunities during the current semester.

Interim

When the course syllabus has been withdrawn, the student has the right to request examination once per semester during a period of three semesters in accordance with this syllabus. The request must be in writing and sent to the head of department.

Limitations

This course may not be included in a degree together with the course Multivariate Methods (ST731A) 7,5 ECTS credits, or equivalent.

Required reading

The course literature is described in an appendix to the syllabus.