



Faculty of Arts and Social Sciences

Statistics

Syllabus

Course Approval

The syllabus was approved by the Faculty Board of Arts and Social Sciences on 12 March 2013, and is valid from the Autumn semester of 2013 at Karlstad University.

Course Code: STGB04

Multivariate Methods, 7.5 ECTS Credits

(Multivariata metoder, 7.5 Swedish credit points)

Degree Level: Bachelor

Progressive Specialisation: G1F (First cycle, has less than 60 credits in first-cycle course/s as entry requirements)

Language of Instruction

The language of instruction is Swedish unless teachers or students are international, in which case the course is taught in English.

Prerequisites

A minimum of 30 credits in Statistics.

Major Field of Study

STA (Statistics)

Learning Outcomes

Upon completion of the course, students should be able to:

- understand and explain concepts such as vectors, matrices, determiners, eigenvectors and eigenvalues,
- give an account of basic theories of multivariate normal distribution, multivariate analysis of variance, and multivariate regression,
- apply various classification and discrimination methods such as cluster analysis and discriminant analysis, and
- conduct component analyses such as principal component analysis and factor analysis as well as canonical correlation.

Content and Form of Instruction

The course covers the following subject areas:

- matrix algebra and multivariate normal distribution,
- cluster analysis and discriminant analysis,
- principal component analysis, factor analysis and canonical correlation.

Reading List

See separate document.

Examination

Examination is in the form of a final written exam and take-home assignments.

Grades

One of the grades Distinction (VG), Pass (G), or Fail (U) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course assessment is based on student views and experiences as reported in written course evaluations and/or group discussions. Students will be informed of the result of the evaluation and of the measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional Information

Students who enrolled before 1 July 2007 will complete their studies in accordance with the requirements of the earlier admission. Upon completion students may request degree and course certificates to be issued under the current ordinance if they meet its requirements.

The local regulations for studies at the Bachelor's and Master's levels at Karlstad University stipulate the obligations and rights of students and staff.

Karlstads universitet 651 88 Karlstad, Sweden
Tel +46-54-700 10 00 Fax +46-54-700 14 60
information@kau.se www.kau.se