



SF2960 Statistical Theory 6.0 credits

Inferensteori

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for SF2960 valid from Autumn 2007

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Mathematics

Specific prerequisites

SF1906 (5B1506) Mathematical statistics, basic course, SF2940 (5B1540) Probability theory or equivalent courses.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

To pass the course, the student should be able to do the following:

- define concepts and derive results in statistical inference theory
- determine if a statistical model is suitable for a particular statistical problem
- perform statistical analysis on real data, and
- critically examine and analyse the correctness and reasonability of calculated results.

To receive the highest grade, the student should in addition be able to do the following:

- Combine all the concepts and methods mentioned above in order to solve more complex problems.

Course contents

Likelihood, sufficiency, consistency, ML-estimations. Most powerful and uniformly most powerful estimators, likelihood ratio test. Exponential families.

Course literature

Lindgren, B.W. Statistical theory. The MacMillan Company. (The book may be changed by another book.) Material from the Department of Mathematics at the Stockholm University.

Examination

- TEN1 - Examination, 6.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

A written examination.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.

- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.