



# FAH3451 Applied Statistics 7.5 credits

## Tillämpad statistik

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 FAH3451 valid from Spring 2019

## Grading scale

P, F

## Education cycle

Third cycle

## Specific prerequisites

The course is open for students from all programs and requests knowledge corresponding to the basic course in mathematics/statistics at KTH (7,5 hp).

## Language of instruction

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

## Intended learning outcomes

The aim of the course is to give the students an understanding of fundamental principles in statistics and ability to choose the right statistical method for a given situation. After completing the course, the students should be able to independently carry out a statistical project work within their own research area.

## Course contents

Descriptive statistics; measures of central tendency and measures of dispersion, Probability and probability distributions; the Binomial distribution, the Normal distribution. Statistical inference theories; sampling, estimation and hypothesis testing. 2-analysis. Regression and correlation. Analysis of variance. Non-parametrical methods; Mann-Whitney U-test, sign test, Fischer's exact test.

## Course literature

Johnson. Miller & Freund's Probability and Statistics for Engineers. Prentice-Hall (2011)

## Examination

- INL1 - Homework, 7.5 credits, grading scale: P, 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.

## 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.