ML1604 Applied Statistics, Basic Course 6.0 credits

Tillämpad statistik, grundkurs

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

Establishment

Course syllabus for ML1604 valid from Spring 2018

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

On completion of the course, the student should be able to:

- compile statistical data in an adequate form
- illustrate the data as bar charts, Pareto charts, box plots and histograms
- calculate the mean value, standard deviation, median value and quartiles for statistical data
- account for the fundamental concepts of probability theory
- be able to calculate probabilities for experiments
- determine probability density and distribution function
- use the following probability distributions: Binomial distribution, Poisson distribution, Uniform distribution, Exponential distribution, Weibull distribution, Normal distribution and T distribution
- calculate expected value, variance and standard deviation
- state a confidence interval for the mean value
- estimate the parameters of a normal distribution
- be familiar with random numbers and be able to carry out simulations of e g rolling of a dice, Exponential distribution, Normal distribution and Binomial distribution
- decide if there are significant differences between groups of measurement data
- understand the correlation between data and be able to calculate the same with regression methods

Course contents

- Statistical computing
- Probability theory
- Statistical applications

Course literature

Meddelas vid kursens start.

Examination

- TEN1 - Written 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.

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

Other requirements for final grade

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.