



DEPARTMENT OF MATHEMATICAL SCIENCES

MVB200 Statistical thinking, 7.5 credits

Statistiskt tänkande, 7,5 högskolepoäng

First Cycle

Confirmation

This course syllabus was confirmed by Department of Mathematical Sciences on 2018-11-21 and was last revised on 2021-01-19 to be valid from 2021-08-30, autumn semester of 2021.

Field of education: Science 100%

Department: Department of Mathematical Sciences

Position in the educational system

The course is given as a freestanding course and is for everyone with an interest in mathematics and physics. The course cannot be included in the course requirements in the main field of study for a bachelor's degree in Mathematics or Mathematical Statistics. The course is of a less mathematical nature than for example MSG110 and can therefore not replace that course.

Main field of studies

Mathematical Statistics

Specialization

G1N, First cycle, has only upper-secondary level entry requirements

Entry requirements

General entrance requirements

Learning outcomes

On successful completion of the course, the student should have received a good insight in how statistics are used in science and society and sufficient familiarity with basic statistical concepts to be able to critically assess reporting of scientific and statistical studies in for example news media.

Course content

The course gives plenty of examples of how statistical methods are used in science and society. To be able to engage in a deepening discussion of the examples, we introduce some basic concepts and some simple arithmetical rules to handle these. Some of the most important concepts are probability, conditioning, independent, stochastic variable, expectation, variance, correlation, causality, normal distribution, point estimation, confidence interval and statistical hypothesis test.

Form of teaching

Language of instruction: Swedish

Assessment

The course is examined by means of written assignments that include both arithmetical problems, shorter questions and a longer essay part.

If a student, who has failed the same examination component twice, wishes to change examiner before the next examination, a written application shall be sent to the department responsible for the course and it shall be granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In the event that a course is discontinued or has undergone major changes the student should normally be guaranteed access to at least three examination sessions (this number including the regular examination session) during a period of at least one year based on the earlier set-up of the course.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

Course evaluation

The result and any changes to the course will be communicated to the students who carried out the evaluation and to the students who are to start the course.