# Introduction to Statistical Methodology

Single subject and programme course

20 credits

Grunder i statistisk metodik

732G30

Valid from:

**Determined by**
The Quality Board at the Faculty of Arts and Sciences

**Date determined**
2010-03-26

**Revision date**
2016-04-11

## Main field of study
Statistics

## Course level
First cycle

## Advancement level
G1X

## Course offered for
- Bachelor´s Programme in Statistics and Data Analysis

## Entry requirements
For admission to the course, the general entry requirements apply Ma C + Sh A.

## Intended learning outcomes
On completion of the course, the student should be able to:
- use and correctly interpret quantitative information communicated via tables, diagrams and different describing measures and the ability to independently process such information so that it can be used to solve/highlight current problems,
- demonstrate a basic understanding of statistical inference,
- interpret acquired statistical results,
- assess the quality of collected data and inferences,
- collect data via an independently developed questionnaire and describe and analyse the data by means of basic statistical methods,
- analyse simple statistical issues by means of relevant computer programs.

## Course content

The course aims for the student to create and develop a constructive approach to quantitative data and to give the basis for future statistics courses.

The following is covered in the course:
- repetition of basic mathematical methods that are used in statistics,
- tables and diagrams and descriptive measures for a variable,
- contingency tables and table analysis,
- weighted averages and standard weighting,
- scales and distributions, normal distribution,
- basic probability theory,
- sampling distributions,
- point and interval estimation concerning means, proportions and variances,
- statistical tests concerning means, proportions and variances.

## Teaching and working methods

Apart from independent studies, the teaching consists of lectures, teaching sessions, computer exercises, supervised project work and seminars. The lectures provide an overview of the course contents and addresses central concepts and methods. The teaching sessions consist of overviews of more complex practical assignments and of supervision, where the students independently solve practical assignments. The computer exercises illustrate important parts of the course. The project work covers practical collection and analysis of primary and secondary data, and is reported both in writing and orally at seminars. The course includes report writing and oral presentation.

## Examination

The course is examined through two individual written examinations of which one for the mathematics part, and in groups written and oral presentation of implemented project work. Detailed instructions can be found in the study guide.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

## Grades

Three-grade scale, U, G, VG

# Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus. The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

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# Department

Institutionen för datavetenskap