



**Karolinska  
Institutet**

Course syllabus for

## **Statistics and Methodology 2, 7 credits**

Statistik och metod 2, 7 hp

This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

Please note that the course syllabus is available in the following versions:

Spring2012 , Spring2014 , Spring2015 , Spring2016 , Spring2017

Course code	2LG051
Course name	Statistics and Methodology 2
Credits	7 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	GX - First cycle
Grading scale	Pass, Fail
Department	Department of Clinical Science, Intervention and Technology
Decided by	Programnämnd 4
Decision date	2011-11-02
Revised by	Programme Committee 4
Last revision	2014-11-05
Course syllabus valid from	Spring 2015

### **Specific entry requirements**

For admission to semester 4, the student may have a maximum of 15 credits remaining from preceding semesters in The Study Programme in Speech and Language Pathology.

### **Objectives**

The course consists of two modules: Statistics and Test methodology.

Statistics, 4 credits On completion of this module, the student should be able to within both basic descriptive and hypothesis testing statistics,

- explain basic statistical concepts and terms
- carry out the statistical analytical methods that have been presented in the course
- make correct and relevant interpretations of the results of these analytical methods

Test methodology, 3 credits On completion of this module, the student should be able to

- describe the theoretical bases in psychological measurement theory
- analyse and review tests critically
- design an own test and be able to calculate and draw conclusions from the test result.

## Content

The aim of the course is to give the participants an understanding of hypothesis testing statistics and of test methodology. Thereby, the course should give participants increased understanding of the research process and in ability to assess research results. The course should also introduce the participants to test construction and data collection. The course is based on knowledge acquired during the course in statistics in the first semester. The course consists of two parts: Statistics and Test methodology.

**Statistics, 4 hp** Statistics, 4 credits During this module descriptive statistics is repeated at a general level. Basic inferential (hypothesis testing) statistics is introduced and discussed in detail.

During this module the following subjects are discussed:

- Repetition of descriptive statistics with special focus on distribution
- Z and t-test
- Variance analysis
- Regression analysis

**Test methodology, 3 hp** Test methodology, 3 credits During this module an introduction to test theory is given. The main part of the time is further devoted to a test construction task. The assignment that is solved in groups consists of, under supervision, design a test, carry out testing, carry out various calculations and present and discuss the results in the form of a written report and oral presentation.

During this module be following subjects are discussed:

- Reliability
- Validity
- Test design
- Processing of own data

## Teaching methods

The course consists of lectures and group work and a seminar. Individual home assignments will be connected to the subject of the lectures so that the participants' understanding and problem formulations of the material should have influence on the lectures. Compulsory attendance can be required at seminars and exercises.

In case of absence from compulsory activity, the student is responsible to contact course coordinator for supplementary assignment. Course coordinator decides, how absence from compulsory teaching activity can be made up for. Study results cannot be reported until the student has participated in compulsory course elements or compensated for any absence in accordance with instructions from the course coordinator.

Absence from a compulsory course element could mean that the student can not retake the element until the next time the course is offered.

## Examination

Statistics, 4 credits Examination of the part is arranged through written individual examination.

Test methodology, 3 credits Examination of the module is conducted, by the group handing in a written test-rapport and orally presenting the work at an examination seminar. The written examination is graded anonymously (using a identification number for each student). In case the student fails the written examination, the student has the right to five additional examinations of which the first within fourteen days after information of results. The second before the beginning of the following semester. The third re-examination is the following regular examination in the course. Submission of blank exam is counted as an examination session. An examination for which the student registered but did not participate in, will not be counted as an examination.

## Transitional provisions

Examination can take place according to an earlier literature list during a period of one year after the date when a renewal of the literature list was made. Examination will be provided during a time of two years after a possible close-down of the course

## Other directives

The course is given as a whole at The Department of Psychology, Stockholm University.

Course evaluation will be carried out according to the guidelines established by the Board of Education.

## Literature and other teaching aids

*Borg, Elisabet; Westerlund, Joakim*

### **Statistik för beteendevetare. : Faktabok**

3., [uppdaterade och omarb.] uppl. : Malmö : Liber, 2012 - 552 s.

ISBN:978-91-47-09737-1 (korr.) LIBRIS-ID:13434322

[Library search](#)

*DeVellis, Robert F.*

### **Scale development : theory and applications**

2. ed. : Newbury Park : Sage, cop. 2003 - 171 s.

ISBN:0-7619-2604-6 LIBRIS-ID:9357632

[Library search](#)

*Borg, Elisabet; Westerlund, Joakim*

### **Statistik för beteendevetare. : Övningsbok**

1. uppl. : Stockholm : Liber, 2013 - 240 s.

ISBN:9789147097388 (korr.) LIBRIS-ID:14677096

[Library search](#)