



**Karolinska
Institutet**

Course syllabus for

Statistics and scientific methods, 3 credits

Statistik och vetenskapsmetodik, 3 hp

This course syllabus is valid from autumn 2015.

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

[Autumn2009](#) , [Autumn2011](#) , [Autumn2013](#) , Autumn2015 , [Autumn2018](#) , [Autumn2021](#) , [Autumn2022](#)

Course code	1OP026
Course name	Statistics and scientific methods
Credits	3 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	GX - First cycle
Grading scale	Fail (U), pass (G) or pass with distinction (VG)
Department	Department of Clinical Neuroscience
Decided by	Programnämnden för Optikerprogrammet
Decision date	2009-03-18
Revised by	Programme Committee 8
Last revision	2015-05-07
Course syllabus valid from	Autumn 2015

Specific entry requirements

Passed results of at least 55 higher education credits from The Optometry program semester 1 and 2 and at least 45 credits from semester 3 and 4.

Objectives

The aim is to give the students a knowledge in statistics, research and ethics so that they can obtain a scientific and evidence-based approach to optometry and health care in general. The course is also aimed at students already in training to be able to retrieve and use relevant scientific knowledge in patient care. Furthermore, the course aims to prepare for the implementation of an independent assignment.

Learning outcomes

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

- apply search strategies to find various types of scholarly journals in medical databases
- explain various types of research design

- critically evaluate research articles
- explain describing statistics and basic statistical test and basic qualitative analytical methods
- reflect around research-ethical principles and an ethical scientific attitude.

Content

The course contains the following parts: general statistical concepts, describing statistics, normal distribution, analyses of interval - and quotient data, relationship studies, analyses of confidence interval at normally distributed and non-normally distributed data, hypothesis test, parametric and non-parametric tests and research-ethical guidelines.

Teaching methods

The learning takes place through theoretical self-study, group assignments, discussions in seminars, and via internet and lectures.

Examination

The course is examined by written examinations and assignments. Re-examination may be oral. The examination grade according to the scale Failed/Passed/Pass with credit.

Students who have not passed the regular examination are entitled to participate in five more examinations. If the student has failed six examinations/tests, no additional examination or new admission is provided. The number of times that the student has participated in one and the same examination is regarded as an examination session. Submission of a blank examination is regarded as an examination. An examination for which the student registered but not participated in, will not be counted as an examination.

Transitional provisions

If the course is closed down or undergoes major changes, students who have not completed the course are given the possibility, during four semesters from the date when the student first registered in the course, to be examined under the then current syllabus. After four semesters, the student is examined under the new syllabus.

Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Board of Higher Education.

Literature and other teaching aids

Ejlertsson, G

Statistik för hälsovetenskaperna

Lund : Studentlitteratur, 2003

ISBN:9144031238

[Library search](#)

Petrie, Aviva; Sabin, Caroline

Medical statistics at a glance

2. ed. : Malden, Mass. : Blackwell Publ., 2005 - 157 p.

ISBN:978-1-4051-2780-6 (alk. paper) LIBRIS-ID:9981725

[Library search](#)