Course syllabus for

Statistics and scientific methods, 3 credits

Statistik och vetenskapsmetodik, 3 hp
This course syllabus is valid from autumn 2021.
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	Pass with distinction, Pass, Fail
Department	Department of Clinical Neuroscience
Decided by	Programnämnden för Optikerprogrammet
Decision date	2009-03-18
Revised by	Education committee CNS
Last revision	2021-03-24
Course syllabus valid from	Autumn 2021

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 main purpose is to lay the foundation for a scientific approach in order for an optometrist to be able to work with evidence-based optometry and with research and development work. The course also aims for the student to be able to develop and use relevant scientific knowledge in patient work already during the education. In addition, the course aims to prepare for the implementation of independent work.

Learning objectives
After completing the course the student should be able to

- explain, perform and correctly interpret descriptive statistics as well as basic statistical analyzes
- explain different types of research design
- reflect on research ethics principles and critically evaluate research articles based on an ethical

approach
- answer questions in the course assignment in a scientifically correct way and present work to the group.

Content

The course contains the following parts: general statistical concepts, data levels, descriptive statistics, normal distribution and the principles of parametric and non-parametric statistical analyzes, confidence intervals, hypothesis testing, estimation, and research ethics guidelines.

In addition to this the course is part of the teaching of general scientific knowledge within the program. In relation to teaching of general scientific knowledge, the students continue to broaden their knowledge related to the scientific base of optometry, science and proven experience and scientific communication. They also develop their knowledge and understanding, skills and abilities, their judgement, scientific thought and attitude, in relation to optometry and a lifelong learning. The teaching of general scientific knowledge is described in a separate document.

Teaching methods

The course includes self-studies, practical home assignments, group sessions, discussions in seminars, laboratory sessions, presentations and lectures.

Examination

The course is examined in the following way:
a) compulsary oral presentation of practical course element, is graded U (Fail) or G (Pass)
b) active participation in compulsary group assignment, is graded U or G
c) written presentation of group assignment, is graded U, G or VG (Pass with distinction)
The grade VG on the written presentation of group assignment requires that the work is handed in at deadline, as well as a virtuous ability to reason scientifically in the assignment.

Course grade
The entire course is graded U, G or VG. The grade G requires fulfillment of compulsory course element a and b, and G on examination c. The grade VG requires fulfillment of compulsory course element a and b, and VG on examination c.

Absence from or unfulfillment of compulsory course elements
The examiner decides whether, and if so how, absence from or unfulfillment of compulsory course elements can be made up for. Study results cannot be reported until the student has participated in or fulfilled compulsory course elements, or compensated for any absence/ failure to fulfill in accordance with instructions from the examiner. Absence from or unfulfillment of a compulsory course element may imply that the student can not retake the element until the next time the course is offered.

Possibility of exception from the course syllabus' regulations on examination
If there are special grounds, or a need for adaptation for a student with a disability, the examiner may decide to deviate from the syllabus' regulations on the examination form, the number of examination opportunities, the possibility of supplementation or exemptions from the compulsory section/s of the course etc. Content and learning outcomes as well as the level of expected skills, knowledge and attitudes may not be changed, removed or reduced.

Transitional provisions

If the course is cancelled or goes through substantial changes, information about interim regulations will be stated here.

Other directives

Course evaluation takes place according to KI's local guidelines. Students are informed of the results and any measures taken on the course website.

Teaching in English may occur.

Literature and other teaching aids

Ejlertsson, Göran

Statistik för hälsovetenskaperna

Tredje upplagan : Lund : Studentlitteratur, [2019] - 279 sidor
ISBN:9789144122694 LIBRIS-ID:8jv80nr76h70c6m3
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