



**Karolinska
Institutet**

Course syllabus for

Scientific Methods 3-Quantitative and Qualitative Methods, 9 credits

Vetenskap 3-kvantitativ och kvalitativ metod, 9 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:

Autumn2012 , Autumn2013 , Autumn2014 , Autumn2015 , Autumn2016 , Spring2024

Course code	1AU043
Course name	Scientific Methods 3-Quantitative and Qualitative Methods
Credits	9 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Audiology
Level	G2 - First cycle 2
Grading scale	Pass, Fail
Department	Department of Clinical Science, Intervention and Technology
Decided by	Programnämnd 4
Decision date	2012-05-03
Revised by	Programnämnd 4
Last revision	2013-05-06
Course syllabus valid from	Autumn 2013

Specific entry requirements

For admission to the course, it is required that the student has managed at least 105 HE credits from Semester 1-4.

Objectives

The course is included in a scientific streak which includes total of 15 HE credits that runs in parallel with the study programme. The general aim with the scientific streak is to provide the student knowledge research methodology and skills in scientific working method. The specific aims of this course, Scientific methods 3; are to give the student basic knowledge in quantitative and qualitative methods and statistics.

The expected learning outcomes of the course

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

- Explain scientific theoretical concepts and different research traditions within the audiological subject

area

- Explain and define different qualitative and quantitative methods and concepts
- Apply statistical methods and hypothesis tests in calculations and arguments
- Produce a project idea that can lead to a degree project
- Present the project idea in poster form. Focus on hypothesis and research question as well as study design with quantitative or qualitative methods

Content

Scientific concepts and research methodology, 1.5 hp This part gives an introduction to scientific concepts, to give an understanding of the different research traditions that occur within the audiological subject area. Furthermore, evidence-based research method is treated. This part contains lectures about basic scientific concepts with a focus on qualitative methodology. Seminar and group assignments on Interview techniques, collection of data and data processing of interviews, evidence-based research and ethics. **Quantitative method and statistics, 4.5 hp** This part focuses on quantitative method with an emphasis on descriptive statistics and hypothesis test linked to the subject area audiology. This part is examined in the form of a take-home examination (peer-review) which also gives training in critical review of a report. This part also gives an introduction to statistical programs. **Pilot project and Project idea, 3 hp** This part contains seminar and group assignments on collection of data and data processing of questionnaires. Advanced study in an optional part of the main field of study audiology based on scientific articles and literature in the area and practical work in a smaller pilot project. The project work implies training in how one plans and set up a study. The project work is presented in the form of a poster. As supports for the pilot project and the design of the project idea, follow-up exercise in literature search in databases is carried out, for example pubmed, web of science and similar at the KI libraries.

Teaching methods

Lectures, group assignments, exercises and seminars.

Group assignments, exercises and seminars are compulsory. If absent from a compulsory part, the student is responsible for contacting the course coordinator for complementary assignments.

The course director assesses how absence from compulsory education elements may be compensated. Before the student has participated in the compulsory parts or has replaced compulsory education, in accordance to the instructions of the course coordinator, the final study results cannot be reported. Absence from a compulsory education element result in that the student cannot recover the occasion until next time the course is given.

Examination

Scientific concepts and research methodology 1.5 credits

Active participation in compulsory seminars.

Self-tests about scientific theoretical concepts

Quantitative methodology and statistics 4.5 credits

Self- tests about statistical concepts

An individual take-home examination with application of statistical methods based on articles

Peer-review of take-home examination

Pilot project and Project idea 3 credits

An oral poster presentation of the independently implemented project work including the project idea, hypothesis and problem specification preparing to Scientific methods 4 and the Degree Project.

For a Pass grade in the course, attendance and active participation in compulsory parts are also required. For students who have not passed the regular examination, possibility for examination is offered at a

total of six examinations, of which the three last are in connection to the next occasion when the course is given. As examination, the times are counted that the student participated in the same test. Supplementary addition to a written assignment is counted as one examination.

Transitional provisions

Examination may take place according to an earlier literature list during a time of a year after the renewal of the literature list has been made. Examination will be provided during a time of two years after a possible close-down of the course.

Literature and other teaching aids

Ejlertsson, Göran

Statistik för hälsovetenskaperna

2., moderniserade och utök. uppl. : Lund : Studentlitteratur, 2012 - 303 s.

ISBN:978-91-44-07048-3 LIBRIS-ID:13374003

URL: [Övningsmaterial](#)

[Library search](#)

Harris, Michael; Taylor, Gordon

Medical statistics made easy 2

2. ed. : Bloxham : Scion, cop. 2008. - xii, 115 p.

ISBN:978-1-904842-55-2 (pbk.) LIBRIS-ID:11894343

[Library search](#)

Nordenström, Jörgen

Evidensbaserad medicin i Sherlock Holmes fotspår

4., [omarb.] uppl. : Stockholm : Karolinska University Press, 2007 - 106 s.

ISBN:978-91-85565-12-2 LIBRIS-ID:10352883

[Library search](#)

Trost, Jan

Enkätboken

4., uppdaterade och utök. uppl. : Lund : Studentlitteratur, 2012 - 178 s.

ISBN:978-91-44-07643-0 LIBRIS-ID:12751087

[Library search](#)

Kvale, S.; Brinkman, S.

Den kvalitativa forskningsintervjun

2 upp. : Lund : Studentlitteratur AB, 2009

ISBN:91-44-05598-6

[Library search](#)

Scientific papers and other relevant materials may be added.