



**Karolinska
Institutet**

Course syllabus for

Theory and methodology of science in odontology, 15 credits

Vetenskapsteori och forskningsmetodik inom odontologi, 15 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:

Autumn2011 , Autumn2014 , Autumn2018

Course code	2QA172
Course name	Theory and methodology of science in odontology
Credits	15 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Odontology, Odontological Prophylaxis, Dental Technology
Level	Second cycle, has only first-cycle course/s as entry requirements
Grading scale	Fail (U) or pass (G)
Department	Department of Dental Medicine
Decided by	Styrelsen för utbildning
Decision date	2010-12-22
Revised by	Board of Higher Education
Last revision	2013-12-04
Course syllabus valid from	Autumn 2014

Specific entry requirements

A Bachelor's degree or a professional degree equivalent to a Swedish Bachelor's degree of at least 180 credits in within dentistry, odontological prophylaxis or dental technology. And proficiency in Swedish and English equivalent to Swedish B/Swedish 3 and English A/English

Objectives

The major aim of the course is that the student should obtain necessary comprehension within the theory of knowledge and research methodology to be able to carry out a degree project within the field of dentistry, odontological prophylaxis or dental technology for second-cycle studies. The course intends to give the student the possibility to take part of and participate in research and development with an advanced scientific approach, with the opportunity to perform independent analysis, reflection and critical assessment.

The student should on completion of the course independently be able to:

- Explain basic scholarship- and epistemological concepts and relate these to their own field of knowledge within dental research.
- Carry out information retrieval in relevant scientific medical databases and be able to utilise their specific properties, be able to choose appropriate information retrieval strategies and be able to account for their choice of strategy.
- Interpret, review and determine the scientific value of research articles mainly within the field dentistry critically.
- Analyze and apply research-ethical basic principles and show an ability to make research-ethical assessments to their own scientific issues.
- Formulate an ethical application concerning a research project directed to the research-ethical committee.
- Apply and interpret basic principles of statistical analytical methods.
- Design, plan, write and present a research plan within a limited field.
- Give a general description of the current research within their dental subject area and be able to propose appropriate collaborative projects with patient-close care to stimulate transnational research.

Content

The course covers:

- Theory of Science
- Research methodology
- Research ethics
- Research design
- Literature search and critical review of scientific articles
- Statistical analytical methods

Teaching methods

The course contains varying working methods consisting of lectures, demonstrations, journal clubs, seminars and student-activating group work that stimulates the cooperation between dentists, dental hygienists and dental technicians.

The course is a modified distance education that starts with one introduction week of overview of the theoretical components. Remaining parts of the course are based on self-study combined with compulsory sessions once per month, for two to three days.

Compulsory attendance applies to all lectures, seminars and presentations. For possible absence, complementary assignments by agreement with the course administration are made.

Examination

Oral and written presentations at seminars and written assignments in the form of a minor essay, ethical application and research plan. In the examination, a review of one other's written assignment is also required.

Students who do not pass after the regular examination session/presentation session can participate in further five examination sessions. If the student has failed six examinations/tests, no more examinations are offered. An examination for which the student is registered but not participated in, will not be regarded as an examination.

Transitional provisions

Examination will be provided during a time of two years after a possible close-down of the course.

Other directives

Language of instruction: Swedish

Literature and other teaching aids

Recommended literature

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](#)

Forsman, Birgitta

Forskningsetik

Studentlitteratur AB, 2010

ISBN:978-91-44-06350-8 LIBRIS-ID:11909240

URL: [Omslag och förlagets beskrivning](#)

[Library search](#)

Helgesson, Gert

Forskningsetik för medicinare och naturvetare

Lund : Studentlitteratur, 2006 - 262 s.

ISBN:91-44-04414-3 LIBRIS-ID:10164939

[Library search](#)

Nilstun, Tore; Lundqvist, Anita; Löfmark, Rurik

Vetenskapsteori i medicin och klinik

1. uppl. : Lund : Studentlitteratur, 2007 - 127, [1] s.

ISBN:978-91-44-03461-4 LIBRIS-ID:10414475

URL: [Omslagsbild](#)

[Library search](#)

Strålfors, Peter; Olsson, Anders G.; Simonsson, Nisse

Vetenskapligt förhållningssätt : introduktion till vetenskapligt tänkande och arbetssätt speciellt inom biomedicinsk forskning

Lund : Studentlitteratur, 1998 - 108 s.

ISBN:91-44-00951-8 ; 235:00 LIBRIS-ID:8352764

[Library search](#)

Wallén, Göran

Vetenskapsteori och forskningsmetodik

2. uppl. : Lund : Studentlitteratur, 1996 - 151 s.

ISBN:91-44-36652-3 LIBRIS-ID:8353602

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