



# FHN3012 Research Methodology in Technology and Health - Part 1 4.0 credits

Forskningsmetodik inom teknik och hälsa, del 1

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

## Establishment

Course syllabus for FHN3012 valid from Spring 2016

## Grading scale

## Education cycle

Third cycle

## Specific prerequisites

The course is specifically designed for early stage doctoral students in the area of technology and health. Anyone admitted to a PhD study can attend the course. All the lectures are designed to give basic skills and assume little prior knowledge.

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

After finishing the course, the student shall be able to:

- Critically reflect on the predominant and alternative research methods in technology and health, particularly his/her own research approach
- Consider the validity implications of alternative research designs and, on that basis, choose an appropriate design,
- Evaluate methodological approaches in published research in the context of broader methodological discourses,
- Critically review the research approach and methodology of another field within technology and health,
- Articulate, in oral and written forms, a research design and methodology appropriate to the student's own research,
- Identify and handle potential ethical issues both in operative research activity and in research designs in themselves.

The above criteria, expressed through active participation in class sessions, written reflections, and research presentations, are those used to determine whether students receive a passing grade.

## Course contents

The course is designed to introduce research students at the early stage of their study to appropriate concepts, approaches, tools and methods to conduct research in the area of technology and health.

The course gives an overview of research methodologies and it deals with research processes including information retrieval, discussion and evaluation of results, and presentation of research work for the scientific community and for the general public. It also introduces how to better make use of research for the benefit of industry, health care and society, and introduce the students with research ethics and scientific working methods in technology and health as part of the course.

## Disposition

The course includes a range of seminar lectures and experience sharing. There are six lecture / seminar combinations of two hours each on the key topics of the course. These course sessions are given in an interactive way by the instructor and several experienced researchers. All sessions incorporate mixed learning methods, including lectures, discussion and exercise.

During the course, students will write two-page reflections on each of the main themes of the course, placed in the context of his / her own research methods.

At the end of the course, each student is required to give a presentation on his / her research design & methodology, taken in the context of the field's predominant methodologies.

## Course literature

Creswell, 2009. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Los Angeles: Sage Publishing.

## Examination

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Attendance of all the lecture seminars is compulsory. A pass grade shall give the student 4,0 hp. To get this the student must:

- Attend all the lectures on different key topics and give a short overview seminar on his/her research project (one session can be substituted by a written assignment if absolutely necessary, but you must notify the instructors in advance)
- Give critical oral presentation of his/her research methodology at the final course session(s) and hand in a written methodology placed in the context of a critical review of literature.
- Hand in 2-page reflections after each lecture.

## Other requirements for final grade

- Pass / Fail Evaluation of all reflections handed in.
- Pass / Fail evaluation of presentation of own research methodology
- Attendance of all lectures

## Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.