



INSTITUTE OF NEUROSCIENCE AND PHYSIOLOGY

SN00043 Gothenburg Research School of Health and Engineering, Seminar Course II, 3 credits

Gothenburg Research School of Health and Engineering, Seminariekurs II, 3 högskolepoäng

Third-cycle level / Forskarnivå

Confirmation

This syllabus was confirmed by the Council for PhD Education at Sahlgrenska Academy on 2021-09-24, and is valid from Spring semester 2022.

Responsible Department

Institute of Neuroscience and Physiology, Sahlgrenska Academy

Entry requirements

PhD students that are registered in a postgraduate education in a project that has a clear connection to both health and technology are eligible for admission.

Learning outcomes

After completing the course the doctoral student is expected to be able to:

- Gained understanding of how one's own research can be utilized and disseminated.
- Gained a basic knowledge about AI and medical technology solutions which can be utilized to benefit healthcare.
- Been able to identify and discuss ethical aspects of their research.
- Learned how to go about translating results from their research project into utilization.
- Gained skills in demonstrating and communicating their research project with key actors and stakeholders from a utilization and innovation perspective.

Course content

The course contains seminars that treat the following themes:

- From research question to utilization in the health sector: on innovation processes, product development, and translation of research results to utilization.

- Utilization and dissemination of research results in the field of health and technology.
- System innovation - what is it and how can healthcare collaborate with the technical faculty to change healthcare systems.
- What ethical aspects need to be considered when AI is applied in medical research and healthcare?
- Communication of research on technology and health.
- How to write a good research application and where to apply for funding in health and technology.
- How, with the help of technology, can we meet today's and tomorrow's challenges in healthcare?
- How can we use AI in healthcare?
- Implementation of new algorithms in healthcare and for prevention.
- Health economics: what will be the economic effects of implementing technical solutions in healthcare?
- Introduction to automated decision support in healthcare.
- How can technology be used to objectively measure health status?

Course literature

Prior to each seminar, a current article or book chapter that demonstrates the methodology, problem, theory or concept will be distributed. These are discussed at the seminar.

Types of instruction

The course is carried out in the form of a seminar series of 10+ seminars, held by various external lecturers with expert knowledge in each area. Participants will be given preparatory literature to read before each seminar. The seminars consist of two parts. A lecture, which is then followed by group discussions where the doctoral students will reflect on their own research project in relation to the topic of the seminar.

Language of instruction

The course is given in English.

Grades

The grade Pass (G) or Fail (U) is given in this course.

Types of assessment

Students should attend at least 75% of the seminar sessions (50% of the grade). If the student has more absences, written supplementation will be requested. Examination takes place through an individual home examination (25% of the grade) and group presentation (25% of the grade).

If a PhD student, who has been failed on the same examining course component twice, requests a change of examiner before the next examination session, a request of this kind should be sent in writing to the department responsible for the course, and granted, unless there are special

reasons to the contrary (Chapter 6, Section 22, Higher Education Ordinance).

Course evaluation

The course evaluation will be provided both as a written questionnaire (joint for Sahlgrenska Academy) and orally as a discussion between the students and the course leader(s). The course responsible teacher compiles analysis of the course evaluation and makes suggestions for further development of the course. The result and any changes in the set-up of the course shall be communicated both to the students that carried out the evaluation and to the students who are about to start the course.