



**Karolinska
Institutet**

Course syllabus for

Current Research and Trends in Health Informatics, 15 credits

Aktuella forskningsfrågor och trender inom hälsoinformatik, 15 hp

This course syllabus is valid from autumn 2018.

Please note that the course syllabus is available in the following versions:

Autumn2018 , Autumn2020

Course code	5HI021
Course name	Current Research and Trends in Health Informatics
Credits	15 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Health Informatics
Level	AV - Second cycle
Grading scale	Excellent, Very good, Good, Satisfactory, Sufficient, Fail, Fail
Department	Department of Learning, Informatics, Management and Ethics
Decided by	Education committee LIME
Decision date	2018-03-20
Course syllabus valid from	Autumn 2018

Specific entry requirements

Bachelor of Science or professional qualification of at least 180 credits within health care, biomedicine, technology, data and software engineering or informatics. Furthermore, knowledge in English equivalent to English B (with at least the Pass grade) is required.

At least 45 credits from courses in year 1 at the Master's programme in health informatics.

Objectives

The purpose of this course is to acquaint the students with current research and trends in health informatics. The students will apply relevant methods and tools to analyse the current state of research, identify knowledge gaps, and explore these knowledge gaps further through a practical or theoretical project.

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

Knowledge and understanding

- identify, describe, and discuss current research and trends in health informatics

Skills

- critically analyse and review literature on current trends in health informatics research and practice, and identify knowledge gaps
- critically assess and comment on state-of-the art work in health informatics
- plan and conduct a suitable project based on identified knowledge gaps
- present the results and findings of a practical or theoretical research project in different forms

Attitudes

- reflect on the use of health informatics and what impact the introduction of the analysed trends would have in different contexts
- discuss ethical aspects of current trends in health informatics

Content

Health informatics is a rapidly evolving research area, and the current trends in health informatics changes from year to year. In this course, the students will familiarize themselves with a few current topics or areas of research. The topics will be proposed by experts in the beginning of the course, and the students will then explore the current literature within these topics and plan and conduct projects to further deepen their knowledge within a specific area.

The course will be divided into two blocks/moment which will be examined separately.

Literature Review, 5.0 hp

Grading scale: AF

During the first part of the course, current research topics or areas will be presented by experts in inspirational lectures. The students will then individually perform a literature review on one of the presented topics and identify knowledge gaps. The students will also perform peer reviews of each other's literature reviews according to pre-defined assessment criteria.

Project, 10.0 hp

Grading scale: AF

The second part of the course will mainly be performed as a group project where the students work together on a project they propose themselves based on the identified knowledge gaps from the first part of the course. This includes planning the project, conducting it and reporting on the results. The projects can e.g. be focused on information modelling, evaluation of an already existing health information system, or design and implementation of a new health information system. The team will present their results in two ways; (1) as a poster to be presented in a poster session, and (2) as short papers.

Teaching methods

Lectures/teaching sessions, seminars, individual and group assignments. Each topic or theme in the course will have a designated "coach" who will continuously guide the students through both blocks.

Examination

The two blocks/moment of the course are graded separately.

Moment/Block 1:

The examination consists of individually written literature reviews identifying important knowledge gaps. The literature reviews will be graded on a scale of A-F. In addition, each student has to peer review the literature reviews of two other students. Their peer review reports will be graded PASS/FAIL.

Moment/Block 2:

The examination consists of two parts; (1) a group assignment presenting their project results as a poster during a mandatory poster session seminar, as well as short papers presenting the project results, and (2) an individual take home exam. The first part of the examination (poster, oral presentation and short paper) is graded on a three-point scale where:

0 = fail

1 = pass

2 = pass with distinction

The individually written take home exams will be graded on a four-point scale where:

0 = Fail

1 = Pass

2 = Pass with distinction

3 = Pass with special distinction

To receive a pass grade (A-E) on the whole second block (10 credits) you need at least Pass (1) on both parts. The final grade on the second block is calculated as follows:

Group assignment + Individual assignment = Grade

1 + 1 = E

1 + 2 = C

1 + 3 = B

2 + 1 = D

2 + 2 = B

2 + 3 = A

The final grade for the course is a weighted sum of the two blocks, where the first block corresponds to one third of the final grade and the second block two thirds.

Compulsory participation

Active participation in group work and participation in the seminars where the group assignments are presented are compulsory. The course director assesses if and, in that case, how absence can be compensated. Before the student has participated in all compulsory parts or has compensated for absence in accordance with the course director's instructions, the student's results for the moment/course will not be registered in LADOK.

Limitation of number of occasions to write the exam

The student has the right to write the exam six times. If the student has not passed the exam after four participations he/she is encouraged to visit the study advisor.

Transitional provisions

Examination will be provided during a time of two years after a possible cancellation of the course. Examination can take place according to an earlier literature list during a time of one year after the date when a major renewal of the literature list has been made.

Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Board of Education.

The course is given in English.

Literature and other teaching aids

Course literature will be provided online during the course.