



# DH2624 Human-Computer Interaction - a Didactive Perspective 7.5 credits

Människa-datorinteraktion med didaktisk inriktning

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

## Establishment

On 2020-10-13, the Head of School of EECS has decided to establish this official course syllabus to apply from the spring semester 2021 (registration number J-2019-2042).

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

Second cycle

## Main field of study

Computer Science and Engineering

## Specific prerequisites

Completed course in basic programming equivalent to DD1312, and basic courses in pedagogy equivalent to DIK200, UCK310, UMK310 and UMK701.

Active participation in a course where the final examination is not yet reported in LADOK is considered equivalent to completion of the course.

Registering for a course is counted as active participation. The term 'final examination' encompasses both the regular examination and the first re-examination.

## Language of instruction

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

## Intended learning outcomes

After passing the course, the student should be able to:

- explain basic concepts in the field of HCI
- summarise the contents of research papers in the area
- explain and present design properties of interactive artifacts for different stakeholders
- carry out a smaller design project in a group (including basic project management)
- carry out an inspection method, e.g. Heuristic Evaluation, of existing interactive computer systems
- carry out formative usability tests of own prototypes
- apply a creativity technique, e.g. Brainstorming or similar
- create paper prototypes and digital interactive prototypes
- apply general theoretical concepts on concrete interfaces
- based on a given design task discover and identify what characterises the intended target group and situation of usage
- identify and formulate usability requirements after completed field studies
- identify advantages and disadvantages of a specific interactive computer system based on the perspectives and needs of different user groups
- argue for and against different solutions of a usability problem
- reflect on the strengths and weaknesses of their own design based on literature and own evaluations
- discuss didactic methods and examination in HCI

in order to

- get basic knowledge of fundamental concepts in the area of human computer interaction
- get tools to identify factors that influence the communication between human and computer positively and negatively
- experience design methods that support the development of useful systems.
- be able to carry out teaching in HCI.

## Course contents

- Theoretical and practical overview of human preconditions and consequences of using interactive computer systems, as well as how usability design and user experience design can support the users in performing their tasks smoothly. The course will give an overview of behavioural science methods and theories as well as how they relate to use and design of interactive computer systems. Focus will, however, be on different forms of established practice in human computer interaction.
- Within the scope of the course the students carry out and justify a relatively small design task that relates to a current HCI challenge. The students practice analysing user needs, user interfaces, and work situations and will be called upon to suggest how interactive computer systems can be designed.
- The didactic part will treat different didactic aspects of HCI based on the students' previous knowledge and skills in didactics. In addition the students will plan and design a teaching and learning occasion for upper secondary school students. This part is also included to create favorable conditions for others to learn the importance of human computer interaction.
- The teaching assumes that the students work independently and actively in parallel with scheduled teaching.

## Examination

- INL1 - Homework, 6.0 credits, grading scale: A, B, C, D, E, FX, F
- SEM1 - Seminars, 1.5 credits, grading scale: P, F

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.

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

## 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.