DT2140 Multimodal Interaction and Interfaces 7.5 credits

Multimodala interaktioner och gränssnitt

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 DT2140 valid from Spring 2019

Grading scale

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

Education cycle

Second cycle

Main field of study

Computer Science and Engineering

Specific prerequisites

Single course students: 90 university credits including 45 university credits in Mathematics or Information Technology. English B, or equivalent.

Language of instruction

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

Intended learning outcomes

After completing the course, you should be able to:

- describe the functionality of state-of-the-art multimodal or alternative HCI interfaces
- evaluate the strengths and weaknesses of multimodal interfaces
- implement human-computer interaction interfaces employing new interaction techniques for restricted tasks
- propose efficient designs for new interfaces employing different modalities

in order to be able to

- deepen your knowledge about the interaction modalities of interest in advanced courses
- employ multimodality in applied project work
- choose suitable interfaces for a given task (from an HCI and technical perspective).

Course contents

The course will give the students theoretical and practical introductions to multimodal communication and different types of HCI interfaces.

The main focus is on techniques for

- user input, such as speech recognition, touch screens or eye and gesture tracking, and

- computer output, such as unconventional display devices, speech synthesis, sounding objects and haptic devices.

In particular the effects of combining different modalities are addressed.

Examination

- INLA - Assignments, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- LABA - Laboratory Assignments, 1.5 credits, grading scale: P, F
- PROA - Project, 4.5 credits, grading scale: A, B, C, D, E, FX, 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.

In this course all the regulations of the code of honor at the School of Computer science and Communication apply, see: http://www.kth.se/csc/student/hederskodex/1.17237?l=en_UK.

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.