DH2642 Interaction Programming and the Dynamic Web 7.5 credits

Interaktionsprogrammering och dynamiska webben

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

Establishment

Course syllabus for DH2642 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. Swedish B, or equivalent and 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 the course, the student will be able to (DH2641 goals):

- choose a user interface technology platform that is most suitable for a new system
- prototype digital interactive systems using specific tools for running prototypes
- program digital interactive systems based on various technology platforms and approaches to interaction
- judge usability of and improve existing interaction programming
- work together with other peers to design, prototype, and implement interactive systems.

DH2642 specific goal:

- program highly interactive and data-persistent web applications using different JavaScript frameworks

To achive that, the student will:

- get familiar with techniques, technologies and processes allowing them to prototype, develop and improve digital interactive systems based on various user interface technology platforms.

Course contents

- elements of software design and development processes
- recap of principles of object oriented programming
- general principles of interaction programming
- Graphical User Interface interaction programming
- interaction-intensive internet programming
- mobile interaction programming
- various data sources and data binding techniques
- advanced frameworks for programming interaction
- advanced interaction (augmented reality, multitouch surfaces, sensors and actuators)

Tehcnologies used in the labs and projects are Java Swing, Java FX, Android SDK, JavaScript, AngularJs, NodeJs and other JavaScript libraries.

Course literature

To be announced at least 4 weeks before course start at course web page.

Examination

- PRO1 - Project, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Lab, 3.0 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.

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.