



DH2400 Fysisk interaktionsdesign 7,5 hp

Physical Interaction Design and Realization

Kursplan för DH2400 gäller från och med VT19

Betygsskala: P, F

Utbildningsnivå: Avancerad nivå

Huvudområde: Datalogi och datateknik, Informations- och kommunikationsteknik, Informationsteknik

Lärandemål

Students will:

- get familiar with techniques and technologies allowing them to create interactive systems that work outside, or along with the classical mouse-keyboard-and-screen paradigm.

For that, the students will:

- be able to identify the sensors, actuators and microcontrollers needed for a system
- use sensors, actuators and microcontrollers for prototypes of various levels of fidelity
- put together prototypes in a hands-on manner.

Kursens huvudsakliga innehåll

Design:

- interaction with physical objects. Elements of industrial design
- state of the art "tangible" devices, giveaway sensor projects
- other physical forms of interaction: e.g. haptics, eye tracking, two-hand interaction, feet interaction, dance.

Technology:

- recap of electronic circuit basics, including resistors, capacitors and LEDs
- sensors and actuators for various destinations, built with various technologies
- prototyping interactive installations with Phidgets
- simple microcontrollers: BASIC Stamp, Arduino
- communicating with a computer or with another installation
- elements of advanced microcontrollers, wireless sensor networks
- elements of augmented reality.

Undervisningsspråk

Undervisningsspråk anges i kurstillfällesinformationen i kurs- och programkatalogen.

Behörighet

Litteratur

To be announced at least 4 weeks before course start.

Examination

- PRO1 - Projekt, 7,5 hp, betygsskala: P, F

I denna kurs tillämpas skolans hederskodex, se: <http://www.kth.se/csc/student/hederskodex>.

Krav för slutbetyg

Installation construction and programming exercises, reflective diary and project (PRO1; 7,5 hp).