



## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### TIA108 Prototyping in Interaction design, 7.5 credits

Prototyping in Interaction design, 7,5 högskolepoäng

*Second Cycle*

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#### Confirmation

This course syllabus was confirmed by The IT Faculty Board on 2010-12-21 and was last revised on 2018-02-09 by Department of Computer Science and Engineering to be valid from 2018-08-19, autumn semester of 2018.

*Field of education:* Design 50% and Science 50%

*Department:* Department of Computer Science and Engineering

#### Position in the educational system

The course is offered as a free standing course.

The course can be part of the following programmes: 1) Computer Science, Master's Programme (N2COS), 2) Game Design & Technology Master's Programme (N2GDT) and 3) Computer Science, Bachelor's Programme (N1COS)

#### *Main field of studies*

Interaction Design

Computer Science-Interaction Design

#### *Specialization*

A1N, Second cycle, has only first-cycle course/s as entry requirements

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#### Entry requirements

To be eligible for this course as a free standing course and as a programme student in Computer Science, Master's Programme N2COS the student must have a Bachelor degree of 180 hec. Additionally, the course TIG095 Human computer Interaction 7.5 credits, or equivalent is required.

To be eligible for this course as a programme student in Computer Science, Bachelor's Programme N1COS, the student must have passed at least 90 credits in programme

courses including the course TIG095 Human Computer Interaction 7.5 credits, or the equivalent.

### **Learning outcomes**

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

#### *Knowledge and understanding*

- Describe how prototypes are used in interaction design.
- List the pros and cons with different types of prototypes.
- Explain what can be learned from a certain prototype and why.
- Explain what can not be learned from a certain prototype and why.

#### *Competence and skills*

- Create physical prototypes in various materials, with various techniques.
- Create video prototypes to present a concept or proposal.
- Create simple illustrations and carry out basic image manipulation.
- Create graphic user interface designs using mock-up tools.
- Perform basic programming of micro-controllers connected to sensors and actuators.
- Program simple interactive prototypes.

#### *Judgement and approach*

- Decide which type of prototype to use in order to find out what needs to be learned or tested, taking possible constraints into account, e.g. time and budget.
- Evaluate a prototype.
- Incorporate suitable prototypes at the right stages in a design process.

### **Course content**

The course gives an introduction to, and practice in, creation of different types of prototypes in Interaction Design. The contents cover both physical prototypes (e.g. paper prototypes, prototyping through controllers and micro-controllers, and prototyping through tinkering and physical modelling) and digital, screen-based prototypes (sketching, coding and design of interactive prototypes, video prototypes). The course also gives an understanding of what to test with different prototypes, and when.

### **Form of teaching**

Education is performed through lectures, workshops, and hands-on lab tasks.

*Language of instruction:* English

### **Assessment**

The course is examined through two modules:

1. Participation in workshops and oral and written presentation of these (4 credits) and
2. Individual written home exam (3.5 credits).

If a student, who has failed the same examined component twice, wishes to change examiner before the next examination, a written application shall be sent to the department responsible for the course and shall be granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In cases where a course has been discontinued or has undergone major changes, the student shall normally be guaranteed at least three examination occasions (including the ordinary examination) during a period of at least one year from the last time the course was given.

### **Grades**

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

The grade Pass means that the student shows basic skill and understanding of physical as well as screen-based prototyping. The grade Pass with Distinction means that the student presents a deepened knowledge in one of the two paths, and besides technical skill also presents critical and reflective capabilities.

The module workshops will be given the grade Pass or Fail. The module home exam will be given the grade Pass with Distinction, Pass or Fail.

In order to receive Pass on the entire course, the student needs to receive Pass on both modules. In order to receive Pass with Distinction (VG) the student must receive Pass on the workshops and Pass with Distinction on the home examination.

### **Course evaluation**

After completion of the course the students are to be given the possibility of participating in a course evaluation anonymously. The processed results of the course evaluations and possible changes are to be made accessible to students and also made

available to new students at the beginning of the next course.