UNIVERSITY OF GOTHENBURG

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DIT493 Graphical Interfaces, 7.5 credits

Grafiska gränssnitt, 7,5 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Department of Computer Science and Engineering on 2022-12-09 to be valid from 2023-08-28, autumn semester of 2023.

Field of education: Science 100%
Department: Department of Computer Science and Engineering

Position in the educational system

The course is offered within several programmes. It is also a single subject course at the University of Gothenburg.

The course can be part of the following programmes: 1) Computer Science, Master's Programme (N2COS), 2) Applied Data Science Master's Programme (N2ADS) and 3) Computer Science, Bachelor's Programme (N1COS)

Main field of studies	*Specialization*
Computer Science	A1N, Second cycle, has only first-cycle course/s as entry requirements
Interaction Design	A1N, Second cycle, has only first-cycle course/s as entry requirements

Entry requirements

To be eligible for the course the student must have a Bachelor degree of 180 credits. Additionally, the course DAT420 Human - computer interaction, 7.5 credits, or the equivalent is required.

Applicants must prove knowledge of English: English 6/English B or the equivalent level of an internationally recognized test, for example TOEFL, IELTS.

Learning outcomes

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

Knowledge and understanding

- decide on how and when to use different graphical interface elements
- decide on how to use keypaths and scenarios to create an interaction sequence
- utilize commonly used interaction design solutions for graphical interfaces
- re-design an existing user interface, and decide on which part of the existing design solution needs to be changed and in what way

Competence and skills

- Design a graphical user interface adapted to a specific use and user in terms of: layout, interaction sequence, correct use of controls and look and feel.
- Design a graphical user interface which is manipulated via mouse and keyboard
- Design a graphical user interface for a touch-based interaction
- Verbally and in short written form present their design and motivate design decisions
- Evaluate usability and user experience in a graphical user interface

Judgement and approach

- Solve interaction design problems related to graphical interfaces and motivate your solutions
- Design a relatively complex graphical interface, and be able to provide a valid design rationale for it.
- Being able to select and apply previouly existing design solutions to new graphical interfaces.
- Being able to, from a scenario, extract a users needs.

Course content

Content includes, but is not limited to:

- Commonly used interaction design solutions in graphical interfaces
- Designing for users on different levels (e.g. beginners vs. experts)
- Designing interaction sequences
- Layout of graphical user interfaces;
- Designing look and feel; using color, text and graphics
- Correct use of graphical user interface elements such as controls, toolbars, menus, dialogues etc.
- The difference between regular user interfaces and touch-based interfaces.

Sub-courses

1. **Project** *(Projekt),* 4 credits

Grading scale: Pass (G) and Fail (U)

2. **Laboratory work** *(Laboration),* 1.5 credits
   Grading scale: Pass (G) and Fail (U)
3. **Take home examination** *(Hemtentamen),* 2 credits
   Grading scale: Pass (G) and Fail (U)

Form of teaching

The course is highly practical. Lectures and literature give a theoretical foundation, but this theory is immediately put into practice. When practicing, focus is upon motivating, making and analyzing the design decisions made. Most of the work is done in groups of various sizes but there is also a significant amount of individual work. The group project is done as a role-play with internal or external client as stakeholder.

Language of instruction: English

Assessment

The course is examined through three modules, namely:

- Group-based lab exercise (Fail, Pass)
- Home exam, (Fail, Pass)
- Individual design project (Fail, Pass)

To pass the course, one has to pass all parts of it.

Grades

The grading scale comprises: Pass (G) and Fail (U).
To pass the course, all mandatory components must be passed.

Course evaluation

After completion of the course the students are to be given the possibility of participating in course anonymously. As far as possible, evaluations are to be completed electronically. Continuous evaluation will be used, including three meetings between teacher(s) and student representatives. Additionally, the course will be evaluated with a course questionnaire, and discussed with the student representatives.

Additional information

The course is a joint course together with Chalmers.

Course literature to be announced the latest 8 weeks prior to the start of the course.

The course replaces the course TIA106, 7.5 credits. The course cannot be included in a degree which contains TIA106. Neither can the course be included in a degree which is

based on another degree in which the course TIA106 is included.

It is recommended that students completed the course TIA108 Prototyping in Interaction Design.