TIG095   Human-Computer Interaction, 7.5 credits

Människa-datorinteraktion, 7,5 högskolepoäng

First Cycle

Confirmation

This course syllabus was confirmed by The IT Faculty Board on 2010-12-21 and was last revised on 2019-02-07 by Department of Computer Science and Engineering to be valid from 2020-01-20, spring semester of 2020.

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

Position in the educational system

The course is provided as a part of the Computer Science and Engineering Bachelor's Programme. It is also a single subject course at the University of Gothenburg.

The course can be part of the following programmes: 1) Applied Data Science Master's Programme (N2ADS), 2) Computer Science, Bachelor's Programme (N1COS) and 3) Software Engineering and Management Master's Programme (N2SOF)

Main field of studies	*Specialization*
Interaction Design	G1F, First cycle, has less than 60 credits in first-cycle course/s as entry requirements
Computer Science-Interaction Design	G1F, First cycle, has less than 60 credits in first-cycle course/s as entry requirements

Entry requirements

The requirement for the course is to have successfully completed a course in programming.

Learning outcomes

On successful completion of the course the student will be able to:

Knowledge and understanding
- Describe stages of the design process
- Describe methods for working with human-computer interaction
- Describe the similarities and differences of designing for different user groups
- Describe considerations for involving users in the design process

Competence and skills
- Create designs specifically adapted for certain user groups
- Design with regards to users
- Modify design methods to fit the context and needs of users
- Identify needs and requirements for users

Judgement and approach
- Analyze designs taking into account the needs of users
- Make an informed evaluation of the ethical and societal impacts of a design
- Criticize designs and design processes with respect to the needs of users

Course content

The purpose of this course is to give students basic knowledge regarding methods for designing and evaluating user interfaces. The course consists of both theoretical and practical parts.

The theoretical part presents the history and development of human-computer interaction from research to practical development of applications. Relevant areas include:

- Human perception and cognition,
- Interaction design theories,
- Task analysis methods,
- Theories and methods regarding design processes,
- Usability principle and evaluation techniques,
- Theories and models for multimodal interaction,
- Theories and models for ubiquitous computing,
- Theories and models for augmented and tangible user interfaces,
- Theories and models for social-organizational issues, and
- Theories and models for collaboration and Groupware

The practical part consists of hands-on exercises with different design and evaluation methods, and of a small project work using design and evaluation processes to reach set

usability goals.

Sub-courses

1. **Individual report** *(Individuell rapport),* 4.5 credits
    Grading scale: Pass with Distinction (VG), Pass (G) and Fail (U)

2. **Project** *(Projekt),* 3 credits
    Grading scale: Pass with Distinction (VG), Pass (G) and Fail (U)

Form of teaching

The course consists of a series of lectures, exercises and a project. The exercises and the project are carried out in small groups of normally 4-6 students.

Language of instruction: English

Assessment

The examination consists of two sub-courses, namely:
- Exercises and project, 3 credits
- An individual report consisting of two parts: one with focus on literature and one with focus on reflections about the project work, 4.5 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).
A Pass grade (G) for the entire course requires at least a Pass grade for all sub-courses.
To pass with distinction the student must obtain pass with distinction on both sub-courses.

Course evaluation

The course is evaluated through meeting after the course between teachers and student representatives. Further, an anonymous questionnaire is used to ensure written information. The outcome of the evaluations serves to improve the course by indicating

which parts could be added, improved, changed or removed.

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.