UNIVERSITY OF GOTHENBURG

DEPARTMENT OF APPLIED INFORMATION TECHNOLOGY

TIG121 Cognitive perspectives on human-technology interaction, 15 credits

Kognitiva perspektiv på människa-teknikinteraktion, 15 högskolepoäng

First Cycle

Confirmation

This course syllabus was confirmed by Department of Applied Information Technology on 2022-09-08 to be valid from 2022-11-02, autumn semester of 2022.

Field of education: Technology 50% and Design 50%
Department: Department of Applied Information Technology

Position in the educational system

The course can be given as a freestanding course.

The course can be part of the following programme: 1) Bachelor in Cognitive Science (N1KOG)

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

Entry requirements

Registration on the previous courses TIG100 Introductory Course in Cognitive Science, 7,5 credits, TIG001 Cognitive Psychology, 7,5 credits and TIG003 Introduction to Programming, 7,5 credits, or equivalent courses, is required.

Learning outcomes

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

Knowledge and understanding

- A1) account for basic concepts and principles in human-technology interaction;

- A2) account for themes and specialisations in human-technology interaction;
- A3) account for methods in human-technology interaction;
- A4) account for research and application areas for complex interaction, in relation to challenges concerning sustainable development;

Competence and skills

- B1) analyse artifacts and interfaces regarding cognitive aspects on human-technology interaction;
- B2) analyse artifacts and interfaces in relation to the sustainable development goals of the United Nations;
- B3) carry out empirical studies of human-technology interaction;
- B4) suggest design improvements of existing systems regarding principles of human-technology interaction;

Judgement and approach

- C1) understand methodological differences between deductive/empirical sciences and applied research;
- C2) analyse what is possible or desirable from different user perspectives on short and long term regarding technology in relation to the sustainable development goals of the United Nations.

The course is sustainability-related, which means that at least one of the learning outcomes clearly shows that the course content meets at least one of the University of Gothenburg's confirmed sustainability criteria.

Course content

The course address basic concepts in human-technology interaction. Concepts and principles of the analysis of cognitive aspects of human-technology interaction are taken up as well as cognitive aspects of human-technology interaction in design of artifacts, technology and systems. Furthermore, dynamic, user adapted intelligent interfaces based on a cognitive-scientific perspective are treated. All this in relation to the sustainable development goals of the United Nations.

Sub-courses

1. **Cognitive Perspectives on Human-Technology Interaction** *(Kognitiva perspektiv på människa-teknikinteraktion),* 6 credits
   Grading scale: Pass (G) and Fail (U)
   Module 1 focus on concepts and principles of the analysis of artifacts and interface, based on cognitive aspects on human-technology interaction.
2. **Challenges of the Global Society** *(Det globala samhällets utmaningar),* 3 credits

Grading scale: Pass (G) and Fail (U)
Module 2 deals with how it is possible to design for the challenges of the global society.

3. **Project in Human-Technology Interaction** *(Projekt i människa-teknikinteraktion),* 6 credits

   Grading scale: Pass (G) and Fail (U)
   In module 3 a project work, that includes an empirical study of human-technology interaction and proposals for improvements of design based on cognitive principles, is carried out.

Form of teaching

The course includes lectures, seminars and project work.

Language of instruction: Swedish and English

Assessment

Module 1 is examined through oral presentation and written assignments.
Module 2 is examined through written assignments.
Module 3 is examined through oral presentation and written report.

Module 1 examine learning objectives A1, A2, A3, B1 and C1.
Module 2 examine learning objectives A4, B2 and C2.
Module 3 examine learning objectives B3 and B4.

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

If a student has received a recommendation from the University of Gothenburg for special educational support, where it is compatible with the learning outcomes of the course and provided that no unreasonable resources are required, the examiner may decide to allow the student to sit an adjusted exam or alternative form of assessment.

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) over a period of at least one year from the last time the course was given.

Grades

The grading scale comprises: Pass (G) and Fail (U).
For the grade Pass on the whole course the student must Pass all sub-courses.

Course evaluation

Students who participate in or have completed a course should be given the opportunity to offer experiences and views on the course in an anonymous course evaluation. It should be carried out electronically as far as possible.

The result and possible changes in the course structure will be shared with students who participated in the evaluation and to those students who are starting the course.

Additional information

The course may not be included in a degree together with **TIG044** *Cognitive science: Psychological aspects of human computer interaction*, 7.5 credits