Interactive systems design 7.5 credits D7048E

Konstruktion av interaktiva system

Course syllabus admitted: Autumn 2023 Sp 1 - Present

DECISION DATE
2022-11-07

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Interactive systems design 7.5 credits D7048E

Konstruktion av interaktiva system

Second cycle, D7048E

Education level	**Grade scale**	**Subject**	**Subject group (SCB)**
Second cycle	U G VG	Datateknik	Computer Technology

Main field of study

Computer Science and Engineering

Entry requirements

Bachelor-level knowledge in computer science. Knowledge corresponding to D0020E Project in computer science and D7032E Software engineering.
Good knowledge in English equivalent to English 6.

Selection

The selection is based on 30-285 credits

Course Aim

The course aims to design, create, and evaluate interactive systems from psychological, technical, and application specific needs.

Knowledge and understanding

- understand and reflect on psychological, technical, and application specific needs when constructing and designing interactive systems.
- understand consequences of design choices from application, gender, and target group perspectives.
- understand design criterias for different types of interactive systems.
- demonstrate extensive knowledge in human-computer interaction.

Competence and skills

- demonstrate basic knowledge and understanding of software engineering both individually and in a group.
- demonstrate ability to create good design of interactive systems based on a given scenario, as well as an application and target group.
- demonstrate ability to construct and implement interactive systems given a design.

Judgement and approach

- demonstrate ability to critically, independently, and creatively identify, formulate, and solve a problem in the construction of an interactive system.
- demonstrate ability to critically judge and evaluate the quality of interaction in an interactive system from relevant evaluation criteria.
- demonstrate ability to acquire new knowledge and continuously develop skills using entrepreneurial methodologies.

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Contents

The course focus on theory and applications for construction of single- and multiuser systems. This includes principles for human-machine-interaction including psychological and behavioural aspects in different types of interactive systems (e.g. VR, AR, Desktop, Web, Mobile, etc.) and different use-cases. The course includes a number of assignments, which are to be completed in groups, and that are evaluated in both written and oral form, as well as seminars where current topics are explored, presented, and discussed.

Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
Teaching consists of lectures, seminars, project and laboratory work.The lab assignments may be associated with a deadlined.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Active participation in seminars, weekly meetings and compulsory seminars. Assignments. Oral and written presentation of projects. The final grade is based on performance in all elements of the course.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Course offered by

Department of Computer Science, Electrical and Space Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Examination	U G VG	7.5	Mandatory	S20	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Robert Brännström 2022-11-07

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Syllabus established

by Jonny Johansson, HUL SRT 2019-02-15

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