Thinking with Representations

Single subject and programme course

6 credits

Representationer som tänkande

769A03

Valid from: 2021 Spring semester

Determined by
Course and Programme Syllabus Board
at the Faculty of Arts and Sciences

Date determined
2018-02-13

Revision date
2020-05-05

Offered for the last time
Spring semester 2022

Replaced by
769A23

Main field of study
Cognitive Science

Course level
Second cycle

Advancement level
A1F

Course offered for
- Master Programme in Cognitive Science

Entry requirements
- Bachelor's degree in Cognitive Science equivalent to a Swedish Kandidatexamen
  or
- Bachelor's degree in Computer Science or equivalent
- 30 ECTS credits passed in one of the following subjects:
  - Psychology
  - Linguistics
  - Philosophy
  - Neuroscience
  - Anthropology

  or equivalent
  or
- Bachelor's degree in one of the following subject areas equivalent to a Swedish Kandidatexamen:
  - Psychology
  - Neuroscience
- 30 ECTS credits passed in Computer Science or equivalent
  and
- 12 ECTS credits passed in deisgn, with 6 ECTS credits passed on advanced level (for example "Interaktionsdesign och användarupplevelse 9 hp", "Avancerad interaktionsdesign 6 hp" or "Interaktionsdesign studio 6 hp") or equivalent
  and
- English and Swedish corresponding to the level of English and Swedish in Swedish upper secondary education (Engelska 6 and Svenska 3)

Intended learning outcomes

After completion of the course, the student shall on an advanced level be able to:

- apply basic concepts from distributed cognition,
- represent alternatives in a design space,
- reflect on the value of representations,
- use and develop tools and methods for representations, and reflect on what the tools enable and confine,
- describe and systematically reflect on how to represent complex situations on a detailed as well as holistic level.

Course content

Ability and knowledge about what the roles of representations are in design, including the ability and knowledge to use different tools to plan and use representations is developed, by conducting a series of assignments. Literature from design and cognitive science is used to reflect on the process. Emphasis is put on reflecting in- and on action to further the understanding of mechanisms for learning with the help of representations and the connection between the built representation and the knowledge it makes available. More general implications for design of placing representation at the center of the design process is also considered in the course.

Teaching and working methods

The course circles around a sequence of assignments and design work that are concluded with seminars and examination sessions. In addition, the student should conduct self-study.

Examination

The course is examined through an individuell assignment, and a group assignment. Detailed informaton can be found in the course's study guide.

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it. If the coordinator has instead recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

Grades

Three-grade scale, U, G, VG

Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

Department

Institutionen för datavetenskap