

## Thinking with Representations

Representationer som tänkande  
6 credits

Single subject and programme course

769A03

Valid from: 2021 Spring semester

<b>Determined by</b>	<b>Main field of study</b>	
Course and Programme Syllabus Board at the Faculty of Arts and Sciences	Cognitive Science	
<b>Date determined</b>	<b>Course level</b>	<b>Progressive specialisation</b>
2018-02-13	Second cycle	A1F
<b>Revised by</b>	<b>Disciplinary domain</b>	
	Technology	
<b>Revision date</b>	<b>Subject group</b>	
2020-05-05	Design	
<b>Offered first time</b>	<b>Offered for the last time</b>	
Spring semester 2018	Spring semester 2022	
<b>Department</b>	<b>Replaced by</b>	
Institutionen för datavetenskap	769A23	

## 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
  - Anthropologyor 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 design, 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 special circumstances prevail, and if it is possible with consideration of the nature of the compulsory component, the examiner may decide to replace the compulsory component with another equivalent component.

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 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.

An examiner may also decide that an adapted examination or alternative form of examination if the examiner assessed that special circumstances prevail, and the examiner assesses that it is possible while maintaining the objectives of the course.

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.

If special circumstances prevail, the vice-chancellor may in a special decision specify the preconditions for temporary deviations from this course syllabus, and delegate the right to take such decisions.