Human Factors

Human Factors
6 credits

Single subject and programme course

769A19

Valid from: 2024 Autumn semester

Determined by	**Main field of study**	
Course and Programme Syllabus Board at the Faculty of Arts and Sciences	Cognitive Science	
Date determined	**Course level**	**Progressive specialisation**
2021-12-07	Second cycle	A1N
Revised by	**Disciplinary domain**	
Chairman of the Course and Programme Syllabus Board at the Faculty of Arts and Sciences	Technology	
Revision date	**Subject group**	
2024-04-23	Technology from a Social Perspective	
Offered first time	**Offered for the last time**	
Autumn semester 2022		
Department	**Replaced by**	
Institutionen för datavetenskap		

Course offered for

- Master Programme in Cognitive Science

Entry requirements

- Bachelor's Degree in Cognitive Science, Computer Science, Information Systems, Informatics, Information Technology, Programming, Psychology, Cognitive Neuroscience or corresponding, equivalent to a Swedish Kandidatexamen
- English and Swedish corresponding to the level of English and Swedish in Swedish upper secondary education (Engelska 6 and Svenska 3)

Intended learning outcomes

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

- Account for and critically discuss theories, models, and methods in Human Factors, both verbally as well as in writing
- Apply Human Factors methods to study complex phenomena and knowledge gaps of scientific or societal interest
- Analyze and interpret complex phenomena, data and knowledge gaps based on relevant and current scientific theories and models within the Human Factors field
- Critically reflect over and problematize current Human Factors research based on scientific, societal and ethical viewpoints
- Generalize current Human Factors research to societal challenges as well as identify further research needs
- Identify one's need of further knowledge in Human Factors and develop one's competency in relation to that

Course content

The course covers theories, models, and methods from the Human Factors discipline, as well as central concepts connected to these. This can for instance be automation, physical ergonomics, expertise, human error, individual differences, human performance in extreme environments, macrocognition, situational awareness, stress, task analyses, team performance, training, augmented cognition, vigilance, warnings and alarm design, communication, or mental workload. The course also covers current research in Human Factors and the relation to scientific, societal, and ethical challenges.

Teaching and working methods

This course includes lectures, seminars, and practical exercises. The student is expected to study independently, individually or in groups.

Examination

The course is examined through:

- individual written exam, grading scale: EC
- individual written assignments in preparation for, as well as active participation in, seminars, grading scale: UG
- practical exercises in groups with written reports, grading scale: UG

Final grades for the course are based on the written examination, assuming that the assignments have been passed.

Detailed information can be found in the study guidelines.

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

ECTS, EC

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 conducted in such a way that there are equal opportunities with regard to sex, transgender identity or expression, ethnicity, religion or other belief, disability, sexual orientation and age.

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.

About teaching and examination language

The teaching language is presented in the Overview tab for each course. The examination language relates to the teaching language as follows:

- If teaching language is “Swedish”, the course as a whole could be given in Swedish, or partly, or as a whole, in English. Examination language is Swedish, but parts of the examination can be in English.
- If teaching language is “English”, the course as a whole is taught in English. Examination language is English.
- If teaching language is “Swedish/English”, the course as a whole will be taught in English if students without prior knowledge of the Swedish language participate. Examination language is Swedish or English depending on teaching language.