

# User Experience and Interaction Design

Programme course

12 credits

Användarupplevelse och interaktionsdesign

TDDE36

Valid from: 2019 Spring semester

**Determined by**

Board of Studies for Computer Science  
and Media Technology

**Date determined**

2018-08-31

## Main field of study

Graphic Design and Communication

## Course level

First cycle

## Advancement level

G1X

## Course offered for

- Bachelor's Programme in Graphic Design and Communication

## Specific information

Exchange students; The course is only available to exchange students within the area of Graphic Design and Communication.

## Intended learning outcomes

This course is about how to study and evaluate user experience (UX), and how to conduct human-centred design of interactive products and services (interaction design). The overarching aim of the course is that the participant will develop knowledge in basic user experience research and evaluation methods (qualitative and quantitative), as well as interaction design methods.

The student shall after the course be able to:

- Use and account for basic qualitative user research methods (e.g. interviews, observation, and thematic analysis).
- Use and account for basic quantitative user experience testing methods (e.g. task success, time, self-report questionnaires), including analysis of the results using descriptive statistics.
- Ideate and sketch interaction design concept proposals, assess them, and make a convincing argument for one proposal based on user research results.
- Sketch, develop and present interaction design prototypes.
- Conduct and account for a user experience evaluation of interaction design prototypes.
- Assess user research and evaluations with respect to scientific criteria.
- Review interaction design projects with respect to societal and ethical aspects, as for example research ethics, gender, and sustainability.

## Course content

**Skills:** Conducting an interaction design process with customer and user perspectives. Designing well-functioning interactive products and services. Researching and evaluating user experience.

**Subjects:** Fundamental concepts in human–computer interaction. Design principles and guidelines for user interfaces. Prototyping of interactive products and services. User research methods. Design methods. Different kinds of user interfaces. User experience and usability evaluation methods.

**Technologies:** Prototyping tools for development of interactive products and services. Interaction technologies.

## Teaching and working methods

Lectures, teaching sessions, readings, design work in collaboration with different user groups (i.e. third stream activities), oral presentations, and written assignments.

## Examination

UPG5 Evaluation of prototype	2 credits	U, 3, 4, 5
UPG4 Prototypning i interaktionsdesign	3 credits	U, 3, 4, 5
UPG3 Interaction concept design	3 credits	U, 3, 4, 5
UPG2 Quantitative user experience testing and descriptive statist	2 credits	U, 3, 4, 5
UPG1 Qualitative user research	2 credits	U, 3, 4, 5

The course is assessed through a combination of group assignments and individual assignments. The final course grade is calculated as the median of the grades in the examinations.

## Grades

Four-grade scale, LiU, U, 3, 4, 5

## Department

Institutionen för datavetenskap

## Director of Studies or equivalent

Jalal Maleki

## Examiner

Mattias Arvola

## Education components

Preliminary scheduled hours: 120 h

Recommended self-study hours: 200 h

## Course literature

### Books

Tullis, Tom, Albert, Bill, (2013) *Measuring the user experience. collecting, analyzing, and presenting usability metrics, second edition* 2nd ed. Waltham, Mass. : Morgan Kaufmann, c2013  
ISBN: 9780124157811

### Articles

Marsden, N., & Haag, M., Stereotypes and Politics: Reflections on Personas  
*Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16)* 2016/4017-4031  
<http://dx.doi.org/10.1145/2858036.2858151>

Raghavan, B., & Pargman, D., Means and Ends in Human-Computer Interaction: Sustainability through Disintermediation  
*Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17)* 2017/786-796  
<https://doi.org/10.1145/3025453.3025542>

### Websites

Blandford, A., *Semi-structured qualitative studies* <https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/semi-structured-qualitative-studies>

In The Encyclopedia of Human-Computer Interaction, 2nd Ed.. The Interaction Design Foundation.

Cairns, P., *Experimental Methods in Human-Computer Interaction*  
<https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/experimental-methods-in-human-computer-interaction>

In The Encyclopedia of Human-Computer Interaction, 2nd Ed.. The Interaction Design Foundation.

### Other

*Huvudbok/Main book*

Choose one of the following four books as main book:

- Arvola, M. (2014). Interaktionsdesign och UX: Om att skapa goda användarupplevelser. Lund: Studentlitteratur.
- Saffer, D. (2009). Designing for Interaction: Creating Innovative Applications and Devices, 2nd Ed.. Berkeley: New Riders.
- Preece, J., Rogers, Y., & Shrap, H. (2015). Interaction Design: Beyond Human-Computer Interaction, 4th Ed.. Chichester: John Wiley & Sons
- Preece, J., Rogers, Y., & Shrap, H. (2016). Interaktionsdesign: bortom människa-dator-interaktion. Lund: Studentlitteratur.

Students will also be assigned scientific articles in the study guide by the start of the course.

## Common rules

### Course syllabus

A syllabus has been established for each course. The syllabus specifies the aim and contents of the course, and the prior knowledge that a student must have in order to be able to benefit from the course.

### Timetabling

Courses are timetabled after a decision has been made for this course concerning its assignment to a timetable module. A central timetable is not drawn up for courses with fewer than five participants. Most project courses do not have a central timetable.

### Interrupting a course

The vice-chancellor's decision concerning regulations for registration, deregistration and reporting results (Dnr LiU-2015-01241) states that interruptions in study are to be recorded in Ladok. Thus, all students who do not participate in a course for which they have registered must record the interruption, such that the registration on the course can be removed. Deregistration from a course is carried out using a web-based form: [www.lith.liu.se/for-studenter/kurskomplettering?l=sv](http://www.lith.liu.se/for-studenter/kurskomplettering?l=sv).

### Cancelled courses

Courses with few participants (fewer than 10) may be cancelled or organised in a manner that differs from that stated in the course syllabus. The board of studies is to deliberate and decide whether a course is to be cancelled or changed from the course syllabus.

### Regulations relating to examinations and examiners

Details are given in a decision in the university's rule book:  
<http://styrdokument.liu.se/Regelsamling/VisaBeslut/622678>.

### Forms of examination

#### Examination

Written and oral examinations are held at least three times a year: once immediately after the end of the course, once in August, and once (usually) in one of the re-examination periods. Examinations held at other times are to follow a decision of the board of studies.

Principles for examination scheduling for courses that follow the study periods:

- courses given in VT1 are examined for the first time in March, with re-

examination in June and August

- courses given in VT2 are examined for the first time in May, with re-examination in August and October
- courses given in HT1 are examined for the first time in October, with re-examination in January and August
- courses given in HT2 are examined for the first time in January, with re-examination at Easter and in August.

The examination schedule is based on the structure of timetable modules, but there may be deviations from this, mainly in the case of courses that are studied and examined for several programmes and in lower grades (i.e. 1 and 2).

- Examinations for courses that the board of studies has decided are to be held in alternate years are held only three times during the year in which the course is given.
- Examinations for courses that are cancelled or rescheduled such that they are not given in one or several years are held three times during the year that immediately follows the course, with examination scheduling that corresponds to the scheduling that was in force before the course was cancelled or rescheduled.
- If teaching is no longer given for a course, three examination occurrences are held during the immediately subsequent year, while examinations are at the same time held for any replacement course that is given, or alternatively in association with other re-examination opportunities. Furthermore, an examination is held on one further occasion during the next subsequent year, unless the board of studies determines otherwise.
- If a course is given during several periods of the year (for programmes, or on different occasions for different programmes) the board or boards of studies determine together the scheduling and frequency of re-examination occasions.

### **Registration for examination**

In order to take an examination, a student must register in advance at the Student Portal during the registration period, which opens 30 days before the date of the examination and closes 10 days before it. Candidates are informed of the location of the examination by email, four days in advance. Students who have not registered for an examination run the risk of being refused admittance to the examination, if space is not available.

Symbols used in the examination registration system:

\*\* denotes that the examination is being given for the penultimate time.

\* denotes that the examination is being given for the last time.

### **Code of conduct for students during examinations**

Details are given in a decision in the university's rule book:  
<http://styrdokument.liu.se/Regelsamling/VisaBeslut/622682>.

### **Retakes for higher grade**

Students at the Institute of Technology at LiU have the right to retake written examinations and computer-based examinations in an attempt to achieve a higher grade. This is valid for all examination components with code "TEN" and "DAT". The same right may not be exercised for other examination components, unless otherwise specified in the course syllabus.

### **Retakes of other forms of examination**

Regulations concerning retakes of other forms of examination than written examinations and computer-based examinations are given in the LiU regulations for examinations and examiners,  
<http://stydokument.liu.se/Regelsamling/VisaBeslut/622678>.

### **Plagiarism**

For examinations that involve the writing of reports, in cases in which it can be assumed that the student has had access to other sources (such as during project work, writing essays, etc.), the material submitted must be prepared in accordance with principles for acceptable practice when referring to sources (references or quotations for which the source is specified) when the text, images, ideas, data, etc. of other people are used. It is also to be made clear whether the author has reused his or her own text, images, ideas, data, etc. from previous examinations.

A failure to specify such sources may be regarded as attempted deception during examination.

### **Attempts to cheat**

In the event of a suspected attempt by a student to cheat during an examination, or when study performance is to be assessed as specified in Chapter 10 of the Higher Education Ordinance, the examiner is to report this to the disciplinary board of the university. Possible consequences for the student are suspension from study and a formal warning. More information is available at  
<https://www.student.liu.se/studenttjanster/lagar-regler-rattigheter?l=sv>.

### **Grades**

The grades that are preferably to be used are Fail (U), Pass (3), Pass not without distinction (4) and Pass with distinction (5). Courses under the auspices of the faculty board of the Faculty of Science and Engineering (Institute of Technology) are to be given special attention in this regard.

1. Grades U, 3, 4, 5 are to be awarded for courses that have written examinations.
2. Grades Fail (U) and Pass (G) may be awarded for courses with a large degree of practical components such as laboratory work, project work and group work.

### **Examination components**

1. Grades U, 3, 4, 5 are to be awarded for written examinations (TEN).
2. Grades Fail (U) and Pass (G) are to be used for undergraduate projects and other independent work.



3. Examination components for which the grades Fail (U) and Pass (G) may be awarded are laboratory work (LAB), project work (PRA), preparatory written examination (KTR), oral examination (MUN), computer-based examination (DAT), home assignment (HEM), and assignment (UPG).
4. Students receive grades either Fail (U) or Pass (G) for other examination components in which the examination criteria are satisfied principally through active attendance such as other examination (ANN), tutorial group (BAS) or examination item (MOM).

The examination results for a student are reported at the relevant department.

### **Regulations (apply to LiU in its entirety)**

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at [http://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva).