CT30A2803 User Interfaces and Usability Spring 2021

The official course information can be found at LUT SISU: https://sis-lut.funi-data.fi/student/courseunit/otm-c492256e-1bb8-4196-a6d0-6470bbfbdfb6/brochure

Teacher in Charge: Assistant Professor Antti Knutas

Year: BSc (Tech.) 1

Course Schedule:

This third and fourth period course is lectured from 11th of January until 25th of April. The course has assignments that need to be returned biweekly. The course project will be published at the start of 4th period (early March). There will be an online exam in late April or early May and subsequent opportunities in August and October.

Assessment scale and assessment methods: Grades 0-5. Project 40%, weekly assignments 35%, online exam 25%. Some weekly assignments might require online attendance and video presentations.

Aims: At the end of the course the student will be able to:

1. Understand what good usability is, how user experience relates to it, and which factors contribute to both.
2. Know about the evolution of interfaces and how they led to current practices.
3. Design interactive systems that provide a good usability and how user experience relates to it.
4. Understand the most common usability techniques and evaluation methods.
5. Design and conduct a small user study using basic HCI research methods.
6. Use the findings of a user study to create a conceptual design of an interactive system.
7. Apply design knowledge to most common contemporary interactive environments, such as mobile and web.

Contents:

Design principles of web based and mobile interfaces. Human-centered design process. Understanding users through basic HCI research methods and applying this knowledge in design. Design techniques, such as use cases, prototyping, storyboarding, and usability evaluation. Usability and user experience as concepts. Usability standards in interface design and usability testing. Design patterns and considerations of designing interfaces for modern software systems.

Some assignment returns might require attending biweekly exercises online or recording video presentations.

Teaching Methods: Online lectures and exercises 16 h, exercise classes 15 h, independent reading 4h, weekly projects 15h, 1st period. Online lectures and exercises 16 h, exercise classes 15 h, independent reading 4h, weekly projects 15h, final project 40h, preparing for exam 16h, 2nd period. Totally 156 h.

Prerequisites: To participate in this course you need to have taken courses in programming and software engineering first. At LUT the required programming skills can be attained in the course CT60A0203 Introduction to Programming, and the software engineering understanding in the course CT60A4002 Software Engineering.

Teaching Language: English

Study materials:

Benyon, D. (2014). Designing Interactive Systems: A comprehensive guide to HCI, UX and interaction design, 3/E.

Tidwell, J. (2010). Designing interfaces: Patterns for effective interaction design. O'Reilly Media, Inc.

Ideo.org (2015). The Field Guide to Human-Centered Design. PDF available at https://www.designkit.org/resources/1

Other materials announced during the course.