
LUT
University

Before our lectures, some ground rules for online lectures and discussion

Please keep your microphone muted when you are not talking.

- We have many simultaneous people in the virtual lecture room at the same time
  - Talking aloud is fully allowed, but let's take turns: If someone is already speaking, please use the "raise hand" function or ask in the chat
  - You can also write directly in the chat
  - If you'd like to avoid your voice being recorded, use the chat
- Don't screen share without asking for permission first. With great power comes great responsibility.
- You can keep video on or off . I do like seeing all the participants at the beginning, but it's not required.
- Please **don't share the lecture link** to people outside the course to avoid the Zoom-bombing phenomenon.

User Interfaces and Usability 2022: Course Introduction

Antti Knutas

Dominik Siemon

Today:
Lecture 0a – Course introduction
Lecture 0b – What are UIs
Lecture 0c – Conventional UIs

Course Introduction

Who and what?

Course staff

- Lecturer: Antti Knutas (antti.knutas@lut.fi)
  - Assistant professor in software construction
  - Research interests include collaborative software development, grassroots SWE, gameful interaction
- Lecturer, Lahti: Dominik Siemon (dominik.siemon@lut.fi)
  - Associate professor
  - Research interests include information systems, collaboration technology, design science, intelligent systems
- TA Hasan Mahmud (hasan.mahmud@lut.fi)
- TA Marianne Seppänen (marianne.seppanen@lut.fi)
- All have experience in multiple software engineering courses from programming to processes and interaction design

Course description: CT30A2803 Introduction to User interfaces and Usability

BSc. year 1, periods 3-4, 6 ECTS

Content: Design principles, techniques. Usability and experience evaluation design. Considerations for modern systems.

Every second week

Events: Bi-weekly lectures and exercises

Evaluation: Group assignments, final project, online exam

Course learning goals

Introduction to user interfaces and usability, with following goals

- Understand what contributes to good user interface design and usability (and how user experience is related)
- Design interactive systems that are usable and provide a good experience
- How to conduct user studies and apply the findings to create a conceptual design of an interactive systems
- Understand and apply interactive system design processes and techniques
- Apply the design knowledge to common contemporary environments, such as mobile and web

Motivation & what to expect

Interaction design is a **vital** skill to any software engineer / information technology / computer science professional. All software is eventually interactive and affects end-users somewhere.

This course gives you an overview of usable interaction design from the perspective of software user interfaces – theory and basic skills. Some will pick up the required basics to be a successful software professional. Some want to make this a career and complete all in-depth reading and optional exercises. *Both goals are fine.*

Even if you will not work directly on front-end programming, you might *lead* a programming team with designers or *work with* front-end programmers.

Course material and coursebooks

Firstly, everything that is provided in Moodle.

1. Sharp, H., Rogers, Y., Preece. J. 2019. Interaction design: beyond human-computer interaction. Fifth Edition. Wiley.
2. Tidwell. (2010). Designing interfaces: Patterns for effective interaction design
3. Ideo.org. (2019). Human-centered design process.

Lectures and exercises will involve additional online materials and recommended reading in the form of articles, videos, and podcasts.

Basic principles

How do we work?

Course arrangements: One course, same assignments, multiple sites

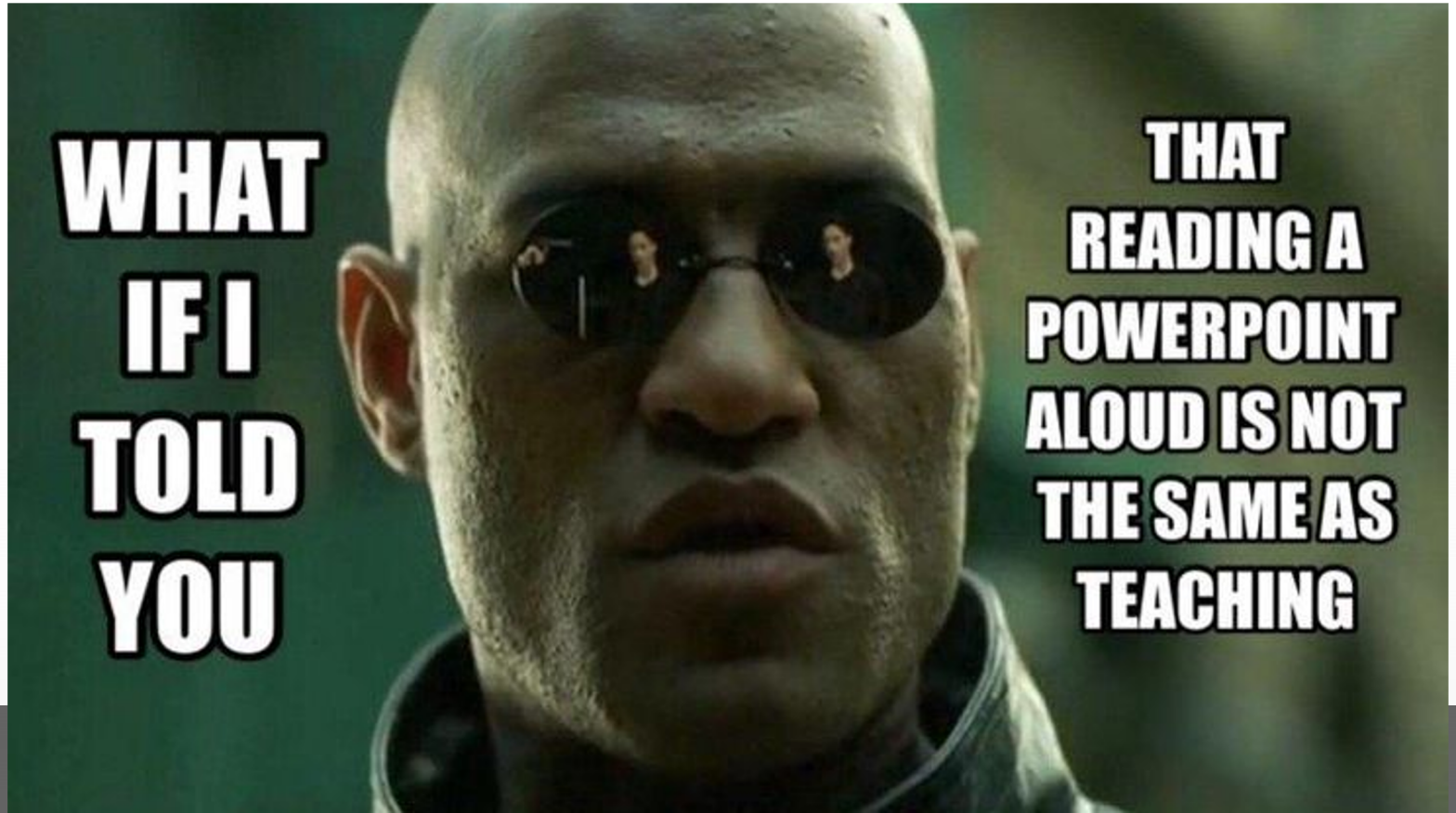
This is a large, distributed course with two sites, four staff, over 200 participants distributed over two campuses and the world ➡ everything is coordinated through **Moodle**, from distributing materials to returning assignments.

This is also a flexible course. There are optional live events: You can join at the (campus or) **online**. If you'd rather NOT join, you can also only watch async materials and return assignments online.

We still recommend for you to have an interactive learning experience – please come to the exercise classes to work with other students (also available online). Feedback is mainly provided there and you learn best when working with other future professionals.

*We have **different learners with different backgrounds** (2 software engineering majors, 4-5 minors from LUT). Some materials will be easy, some difficult. Concentrate on the theory and tasks that are most challenging and rewarding for you. (but still complete the easy ones)*

Teaching (learning) principles: Active learning and constructive alignment

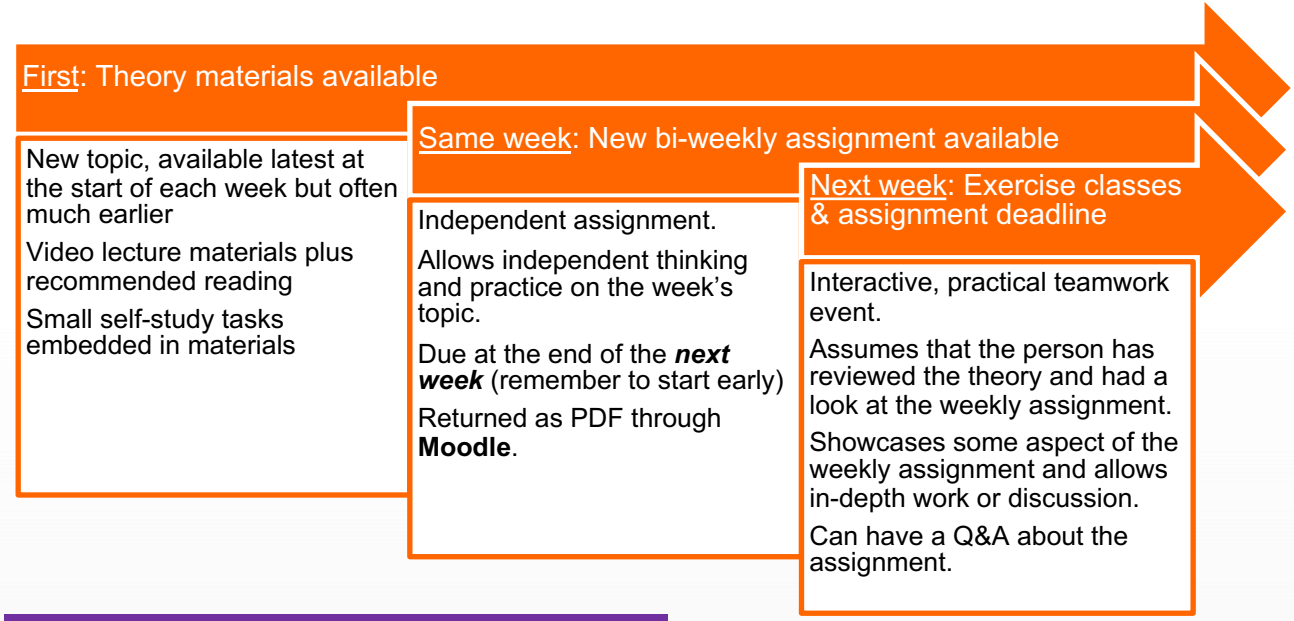


Flipped classroom and constructive alignment

- Flipped classroom, as applied here: **Theory** is learned **independently**, either through attending lectures, reading books, or watching video lectures
  - **Maximal learning** benefits come through working together on assignments and discussing challenges with the TA or classmates during exercises
    - ⇨ learning to apply the skills in practice
- *Design is a skill, not a knowledge*
- Constructive alignment (**principles**)
  - Learning goals should be clear, serve a purpose, and set in advance.
  - Students need to be placed in situations and environments that elicit the required learnings, with declarative teaching minimized.
  - Students are then required to provide evidence, either by self-set or teacher-set tasks, as appropriate, that their learning can match the stated objectives.

Show why and how!

Bi-weekly process in period 3



Remember: Moodle is the place to be

Course component: Lectures

- Delivered online, asynchronously
- Mix of web content and videos produced by Dominik and Antti
- Has recommended reading (displayed in Moodle in advance), which will provide theoretical basis for assignments and exercises

Mostly arranged by Antti and Dominik

Course component: Exercises

- Practical, interactive work through Zoom and shared online tools (e.g., Miro)
- Tasks are given at the beginning of the exercise and worked through the 1½ hour event
- Bonus points of attendance (2 pts. per event)
- Intention is to provide an environment where participants can develop skills after learning theory in lectures

Mostly arranged by TAs Marianne and Hasan

Course component: Bi-weekly assignments

- Independent work
- Written assignments in Moodle and work also returned through Moodle
- First assignment given by start of course

There will be a total of four assignments plus two extra credit assignments.

Course component: Course project

- Involves all steps of a design process, except for full implementation
- Announced at period 4
- Due by end of period 4

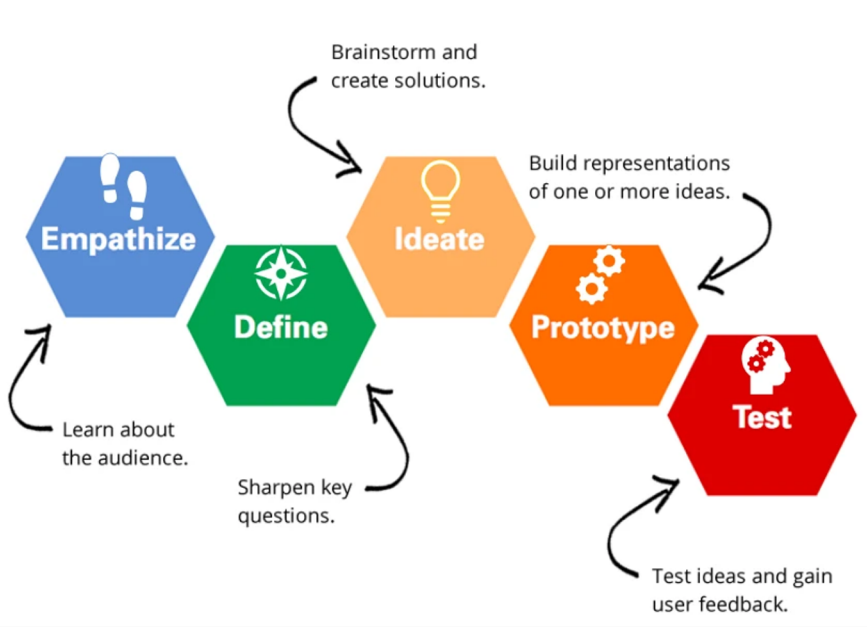


Image credit: d.school.
One example of a design process

Grading

- Final project 40 pts (10 required)
- Online exam 30 pts (5 required)
- Exercise participation 10 pts (0 required)
- Self-study quizzes 0-5 pts (0 required)
- Bi-weekly assignments 32 (7 required)

(total is 117 pts, with 90 pts awarding maximum grade)

From points to grades:
0-49 => 0; 50-59 => 1; 60-69 => 2; 70-79 => 3; 80 => 89 => 4, 90 and above => 5

Why a project AND an exam?

I want to you to have an opportunity to demonstrate your skills **both** as an effective member of a design team and as an individual.

Design and work practice is usually team work!

If you can complete weekly exercises with no difficulties and feel confident about being able to complete each part of the final project, you will have **no** trouble with the exam.

Regarding academic dishonesty

- **This is not a programming-heavy course;** but programming knowledge is required. Some course project and assignments require actual programming work.

- **This course is not difficult;** anyone with BSc. level software engineering knowledge, willingness to read all the materials, and patience can pass the course. However, this course will involve time, work, and patience.

- **Discussing with your peers is allowed and you can recommend them good reading sources or videos;** sharing solutions is not. Do not tempt your friends by showing them the finalized solution. Do not copy or buy your project work, either. Your assignments are automatically checked against each other and the Internet.

Do take care, be proud of your work, and present original materials. Even if you are participating online, this is no longer a MOOC. If ever in doubt about LUT academic integrity guidelines, do contact the course staff.

Tips

- Come and join course events if at all possible.
- Complete the assignments (they'll prepare you for the course project)
- Browse through the reading materials. They will deepen your understanding of lecture materials.
- Work with us and have fun!

Course tools

What facilitates our work?

Course tools

- Moodle: All materials, assignments, news, links
  - All **assignments** are given in writing in Moodle and returned to Moodle, according to instructions – emailed returns cannot be included in grading
  - Reading recommendations and new async lectures roughly every second week
- Zoom – synchronous video lectures where suitable, online exercises, and online office hours
- Moodle forums – course Q&A
- TimeEdit: Up to date course schedule (changes announced in Moodle news)
- Miro: Used within the exercises

Let’s have a look at course Moodle

- Where to find materials
- Where to return assignments
- Other features (forum, online office hours)

Who does what and whom to contact?

- Antti and Dominik
  - Exceptions, deadlines, complaints, re-checking grades
  - Exams, lecture materials, final project
  - Grading criteria
- Marianne and Mahmud
  - Exercises, practical advice for completing assignments
  - Mentoring for project work

In general questions, consider using the course forum first. This way everyone can benefit from the question. **Also**: Contacting someone is better than no one.

Concluding with a Q&A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