# *Information Systems Development, 37C00250 (6cr)*

# SYLLABUS 2023

**Version (28 Dec 2022) – Minor updates are possible**

| Instructor's contact information | Course information |
|---|---|
| Riitta Hekkala; riitta.hekkala@aalto.fi<br><br>Meeting Hours via Teams/ Zoom/ Office: by appointment<br>Instructor's Webpage:<br>http://people.aalto.fi/riitta_hekkala | Status of the course: Academic Year 2023<br>Lecture halls: U6 KONECRANES - U149<br>Language of Instruction: English<br>Course Website:<br>https://mycourses.aalto.fi/course/view.php?id=36997<br> Teaching Assistants: – |

## 1. OVERVIEW

This course introduces the information system (IS) development process to students. During the course the students will learn about the main development frameworks (waterfall, agile), defining of system requirements, and modeling of data, architecture, and components' interactions within an information system. The course has some guest speakers who will provide in-depth information about specific aspects of IS design. There will be five learning journals/ diaries during this course, an exam and a personal video presentation (4-7 minutes).

## 2. PREREQUISITES

None

## 3. LEARNING OUTCOMES

After the course, the students will have acquired knowledge on general issues of information system development (ISD) from many perspectives (leadership, different processes of ISD (waterfall/ agile), and different human perspectives on ISD (e.g., a leader perspective, a software developer perspective etc.) After the course, the students can describe different methods, techniques, tools of ISD, and the main tasks of an information systems development process. They can evaluate the pros and cons of different IS development process models. They can use the basic system development modeling techniques that are common in multi-disciplinary software projects. These contents will be concretized during different lectures.

## 4. WORKLOAD, ASSESSMENT AND GRADING/ More detailed information will be provided later

1. Lectures: 18 hours face to face and 6 hours self-studying

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2. 5 personal learning journals/diaries

3. An exam

4. A personal video presentation (4-7minutes)

**Assessment: Grading scale 1-5**:

    a. 30% personal learning journals from the selected lectures (5),

    b. 50% an exam,

    c. 20% a personal video presentation (4-7min)

**5. READINGS**

Avison, D. and Fitzgerald, G.: Information systems development. Methodologies, techniques & tools. 2006 (4th ed)

Hoffer, J.A., George, J.F. and Valacich, J.S., Modern Systems Analysis and Design, 4. edition, 2005; 5. edition 2008; 6. 2011; Pearson Prentice-Hall.

**Note**: the chapter numbers in the table (see below) may be different depending on the textbooks' editions.

The teacher will also provide some articles and online material in connection with the lectures. These contents will also be helpful in the group work and the personal video presentation.

**6. PRELIMINARY SCHEDULE**

**Lectures:**
        10.01 - 14.02  Tue 13:15-14:45
        12.01 - 16.02  Thu 13:15-14:45

**Note:** This is a draft and subject to minor change. MyCourses always has the most up-to-date version.

| Session | Date | Topic | Readings | Assignment Due Date |
|---------|------|-------|----------|---------------------|
| **Lecture 1** | Tue 10 Jan 2023 | Self-study: Readings an article - preparing for the key themes of the course. | Wyrzykowska, B. (2019) Baghizadeh, Z., Cecez-Kecmanovic, D., & Schlagwein, D. (2020) | Readings due 15 Jan |
| **Lecture 2** | Thu 12 Jan 2023 | Introduction lecture & Organization of the course | | |
| **Lecture 3** | Tue 17 Jan 2023 | ISD processes (Waterfall, and agile software development) | e.g., Hoffer et al. ch. 1 & Avison et al. ch. 3 | A learning journal due 22 Jan |
| **Lecture 4** | Thu 19 Jan 2023 | Critical Issues in Information Systems Development projects | TBA | A learning journal due 22 Jan |

| Lecture 5 | Tue 24 Jan 2023 | Future of Information Systems Development (ISD); different leadership philosophies | cf. Wyrzykowska, B. et al. (2019) | A learning journal due 29 Jan |
|---|---|---|---|---|
| Lecture 6 | Thu 26 Jan 2023 | Working as a software developer in ISD projects | e.g., Hoffer et al. ch. 6 and p. 225–9 | A learning journal due 29 Jan |
| Lecture 7 | Tue 31 Jan 2023 | Determining system requirements/ Use Cases (+ Object oriented analysis) | e.g., Hoffer et al. ch. 6 and p. 225–9 | A learning journal due 5 Feb |
| Lecture 8 | Thu 2 Feb 2023 | Human Perspectives for ISD // Virtual teams & leadership | TBA | A learning journal due 5 Feb |
| Lecture 9 | Tue 7 Feb 2023 | Entity Relationship Model | e.g., Hoffer et al. ch. 9 | A learning journal due 12 Feb |
| Lecture 10 | Thu 9 Feb 2023 | Relational Model + Normalization | e.g., Hoffer et al. ch. 10 | A learning journal due 12 Feb |
| Lecture 11 | Tue 14 Feb 2023 | Self-Study: A personal video presentation | | Due 26 Feb |
| Lecture 12 | Thu 16 Feb 2023 | Self-Study: A personal video presentation | | |
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## 7. COURSE WORKLOAD

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|---|---|
| **Lectures** | 18h |
| **5 personal learning journals/diaries** | 15h |
| **An exam** | 100h |
| **A personal video presentation (4-7 minutes)** | 27h |
| **Total** | 160h (6 op) |

## 8. ETHICAL RULES/ Code of Conducts

Aalto University Code of Academic Integrity and Handling Thereof:
https://www.aalto.fi/en/aalto-university/code-of-conduct

## 9. OTHER ISSUES
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