Introduction to Information Systems

– Understanding the digital world

Liang Zhao

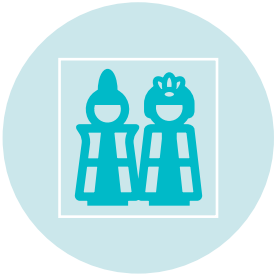
ILA, Doshisha University

12001102, Fall, 2023

Contact

liangzhao@acm.org

Office hour: n/a (no office in Doshisha University)



Language: Chinese, Japanese, English

Contact: E-mail, forum, or visit my lab at Kyoto University.

Syllabus (1/3)

NOT for these students.

- Expert level.
- Only interested in the use.

Summary: Provide an **overview** of information systems including hardware and software **fundamentals**, **coding**, effective and secure use of the Internet and other **communication** tools, **Artificial Intelligence** (AI), as well as the **ethical** use of computers in business and society through **hands-on activities** and **assignments**.

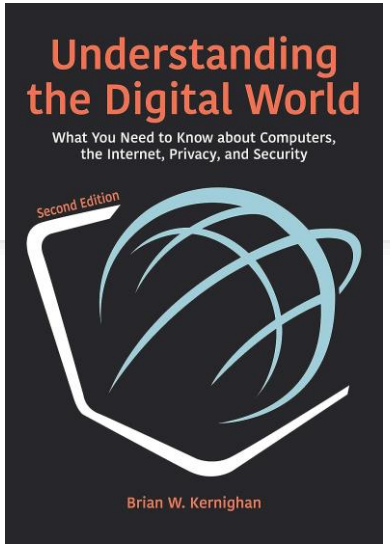
Goal: Learn **basic concepts and knowledge** to **understand** digital computers and communications including hardware, software, Internet, World-Wide Web (WWW), AI, software license, information security and others, as well as coding and web page creation.

Syllabus (2/3)

Style: Hybrid of **normal teaching** and **flip classroom** (i.e., in class: mini tests, reviews, summary videos, and classwork; at home: textbook reading and online learning).

Evaluation Criteria: **Each lecture** has **7pt** (**2 for attendance** and **5 for mini test**). Thus, the total is 7pt x 15 lectures = 105pt (max 100pt). **Bonus** points are given to **challenging** tasks. **General note**: Attendance is evaluated by if the student followed the instructions, while assignment (mini test) is evaluated by the correctness or completeness of the answer.

Syllabus (3/3)



Textbook: B.W. Kernighan, **Understanding the digital world**, Princeton University, 2021 (1st edition is also fine. Both paper and e-book are OK).

Schedule: 1 What is in a Computer, 2 Bit, Bytes and Representation of Information, 3 Inside the CPU, 4 Programming, 5 Algorithms, Programming and Programming Languages, 6 Programming with Python and Scratch, 7 Operating System and Software Systems, 8 Javascript and HTML, 9 Communication and Networks, 10 The Internet, 11 Data and Information, 12 Privacy and Security, 13 The World-Wide Web (WWW), HTML, and Wiki, 14 Artificial Intelligence (AI) and the Future of Computing, 15 The Future of Information System and Overall Review

Information

E-Class will be used as the major support platform.
You can find it from the Home Page of Doshisha Univ -> (Visitors menu) Current Students -> e-class.

Introduction of the SA:

After-lecture support: See Contact (questions and discussions are welcome).

General note: You are not expected to understand everything. If you find a topic or the textbook is difficult, please ask or skip it. If too simple, please go forward, challenge the bonus task, share with or teach other students - but **please keep your voice low**.

On the use of ChatGPT: By default, NO (for education purpose). Will have some practice with it.

Lecture 1. What is in a computer

History of computer (25')

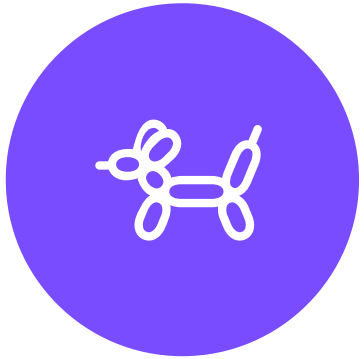
https://www.youtube.com/watch?v=05nskjZ_GoI
https://www.youtube.com/watch?v=LN0ucKNX0hc

Inside modern computer (10')

https://www.youtube.com/watch?v=ExxFxD40SZ0

Various computers around us (activity in the classroom)

Mini test and homework



MINI TEST (30')

HOMEWORK: READ CHAPTERS 1 AND 2 OF THE TEXTBOOK