Course number	U-LAS70 10002 SE50		

Course title (and course title in English)	ILAS Seminar-E2 :Technology and Modern Society - A Historical Perspective ILAS Seminar-E2 :Technology and Modern Society - A Historical Perspective	Instructor's name, job title, and department of affiliation	Kyoto University Not fixed

Group	Seminars in Liberal Arts and Sciences	Number of credits	2	Number of weekly time blocks	1

Class style	seminar (Face-to-face course)	Year/semesters	2024　Second semester	Quota (Freshman)	10 (10)

Target year	Mainly 1st year students	Eligible students	For all majors	Days and periods	Fri.5

Classroom	32, Yoshida-South Campus Bldg. No. 1	Language of instruction	English

Keyword	Technology / Semiconductor industry / Modern society

[Overview and purpose of the course]

We can describe human history in terms of the evolution of technology and how it shaped society. The course will discuss the evolution of different technologies and their impacts on society. The course will also try to predict the future, and what kind of new technologies may come. This course aims at developing analyzing ability by surveying the evolution of a particular technology and the impact on society. The students will give presentations on several topics. The course will be aiming at having the students to learn from each other, by presenting, commenting, and discussing the results.

[Course objectives]

1. To develop the ability to identify how art and technology contribute to modern society
2. Realize the meaning of active learning and learning through discussion
3. Understand the evolution of technology

[Course schedule and contents)]

1. Introduction [1 week]
2. Interaction between technology and society [3 weeks]
   2-a) Impact of the industrial revolution
   2-b) Impact of the digital revolution
   2-c) Impact of AI and robotics
   2-d) What is the role of humans in the future?
3. Evolution of user interfaces: from simple to automated [3 weeks]
   3-a) Mechanical interface
   3-b) Command-line interface
   3-c) Graphical user interface
   3-d) Touch-screen
   3-e) Voice and gesture
   3-f) Impact on society
4. Evolution of storage devices: from large wardrobe to tiny objects [3 weeks]
   4-a) Magnetic drums
   4-b) Floppy disks

4-c) Hard disks
4-d) Solid-state drives (SSD)
4-e) Flash drives
4-f) Cutting-edge technology
4-g) Impact on society
5. Evolution of computing devices: from mechanical to electrical [3 weeks]
5-a) Mechanical switch
5-b) Bipolar transistor
5-c) MOS transistor
5-d) CMOS
5-e) Cutting-edge technology
5-f) Impact on society
6. Predicting the future [2 weeks]
6-a) New technologies
6-b) Future world

[Course requirements]

None

[Evaluation methods and policy]

Assignments (50%) and term-end report (50%)

[Textbooks]

Not fixed
Handouts will be given and online materials will be announced in the class.

[References, etc.]

References, etc.

Introduced during class

[Study outside of class (preparation and review)]

The students are encouraged to actively participate in the discussions and share their opinions.

[Other information (office hours, etc.)]

Questions are always welcome. Appointments should be made by e-mail.