

Course number	U-LAS70 10002 SE50				
Course title (and course title in English)	ILAS Seminar-E2 :Wonders of semiconductor (半導体のふしぎ) ILAS Seminar-E2 :Wonders of semiconductor	Instructor's name, job title, and department of affiliation	Graduate School of Engineering Senior Lecturer,DE ZOYSA , Menaka		
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・First semester	Quota (Freshman)	15 (15)
Target year	Mainly 1st year students	Eligible students	For all majors	Days and periods	Thu.5
Classroom	3B, Yoshida-South Campus Academic Center Bldg. North Wing			Language of instruction	English
Keyword	Semiconductors / Physics / Electronics				
[Overview and purpose of the course]					
This seminar aims for students to understand the physics/working principle behind semiconductor devices such as solar cells, laser diodes, sensors, transistors, etc. Fabrication processes of some semiconductor devices (such as laser diodes and solar cells) will also be discussed. Some electronic circuits will be designed and built to familiarize students with semiconductor devices.					
[Course objectives]					
<ul style="list-style-type: none"> • Understand the physics/working principle behind semiconductors. • Understand the fabrication processes of semiconductor devices. • Learn the latest semiconductor technologies. 					
[Course schedule and contents]					
1. Overview of the course (1 week) 2. Introduction to semiconductor physics: basics to understand the working principles of semiconductor devices (3 weeks) 3. Learn about the working principles of solar cells, laser diodes, sensors, and transistors (4 weeks) 4. Discuss the fabrication processes of some semiconductor devices (2 weeks) 5. Design and build electronic circuits (2 weeks) 6. Learn the latest semiconductor technologies (2 weeks) 7. Feedback (1 week)					
[Course requirements]					
None					
[Evaluation methods and policy]					
Evaluation will be based on participation (30%), discussion (30%), and short presentations (40%).					
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[Textbooks]

Not used

[References, etc.]

(References, etc.)

Introduced during class

[Study outside of class (preparation and review)]

Students are required to do their short presentations.

[Other information (office hours, etc.)]

Office hours: Anytime by email, and appointments should be made via email or during the seminars.