Course number	U-LAS70 10002 SE50				
Course title (and course title in English)	ILAS Seminar-E2 :Sensors in Everyday Life（日常生活におけるセンサー） ILAS Seminar-E2 :Sensors in Everyday Life	**Instructor's name, job title, and department of affiliation**	Institute for Chemical Research Senior Lecturer,PINCELLA, Francesca		
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**	2025・First semester	**Quota (Freshman)**	12 (8)
Target year	Mainly 1st year students	**Eligible students**	For all majors	**Days and periods**	Tue.5
Classroom	35, Yoshida-South Campus Academic Center Bldg. North Wing			**Language of instruction**	English
Keyword	sensor / chemo-sensor / bio-sensor				

[Overview and purpose of the course]

The aim of this course is to find the answers to some very basic questions like: what is a sensor? What makes a sensor a good sensor? What kind of sensors will improve our lives in the future?
This course will introduce the general concept of sensor and its ubiquity in our daily life. Some examples of well-known sensors are presented, followed by the new frontiers in chemo- and bio-sensors. The students will be involved in an active discussion throughout the course and the final examples of new frontiers in chemo- and bio-sensors will be chosen based on the students' interest and curiosity.

[Course objectives]

In this course students will familiarize themselves with the concept of sensor and the basic principles that govern its functioning. The students will gain insight in the importance and pervasiveness of sensors in our daily lives. The students will be encouraged to reflect on the current challenges regarding the development and applications of chemo- and bio-sensors especially in relation to ongoing societal changes (e.g. graying society, etc..).

[Course schedule and contents)]

Week 1:
- General principle: signal, transducer, output
- Fundamentals: sensitivity, specificity and reproducibility
- Sensors classification

Week 2-5:
- Sensors in everyday life and their evolution:
  - o In our homes: Thermometer and smoke detector
  - o For our health: Blood glucose sensor
  - o In our smartphones: Accelerometers
  - o For our safety: seismometers

Week 6:
- Presentation of group assignments

Week 7-14:
- New frontiers in chemo- and bio-sensors

Week 15: Final presentations

Continue to ILAS Seminar-E2 :Sensors in Everyday Life（日常生活におけるセンサー）(2)↓↓↓

ILAS Seminar-E2 :Sensors in Everyday Life（日常生活におけるセンサー）(2)

Week 16: Feedback

[Course requirements]

None

[Evaluation methods and policy]

Evaluation will be based on attendance and active class participation (40%), group assignment (20%), and final oral presentation (40%).

[Textbooks]

Not used

[References, etc.]

（References, etc.）

Introduced during class

[Study outside of class (preparation and review)]

Students are encouraged to revise the class material regularly and submit assignments on time. Furthermore, students shall independently research the chosen topic for the final presentation, taking advantage of the material recommended in class.

[Other information (office hours, etc.)]

[Essential courses]