Courses number			ULLAS70 10002 SE50									
Course number			U-LAS/0 10002 SE30									
Course title (and course title in English)	。 ILAS S 物理的理想	Sem 学) Ser	inar-E2 :Physic ninar-E2 :Phy	of Life(生命の ics of Life		Instructor's name, job title, and department of affiliation		Graduate School of Science Senior Lecturer, DECHANT, Andreas				
Group	Group Semina		ars in Liberal Arts and Scien			lumbe	er of credits	2		Number weekly time blo	r of ocks	
Class style	sem (Fa	seminar (Face-to-face course)		year/sem	Year/semeste		2025 • Secon	nd semester		Quota (Freshman) 15		5 (15)
Target yea	r Mai	aly 1	lst year students	Eligible stude	ents	Fo	or all majors	Da per		ys and riods	Wed.5	
Classroom 02, Yoshida-South Campus Academic Cente							Bldg. West Wing Language of instruction				Englis	sh
Keyword Science / Physics / Biology												
[Overview and purpose of the course]												
 behavior of swarms of animals. We will also learn how the physical description of living matter can allow us to emulate it to develop new materials and devices. In this seminar, we will learn about selected topics in biophysics by reading articles from scientific journals. For each topic, we will start with one or two weeks of lectures explaining the necessary background. After that, we will read a scientific article together. We will discuss the contents of the article and its importance for the field of biophysics. The following week, some students will be asked to give a brief presentation about a part of last week 's article. [Course objectives] Understanding how living matter is different. Becoming familiar with some of the techniques currently used in biophysics. 												
 Becoming familiar with some of the techniques currently used in biophysics. Learning to read scientific articles and present their contents. 												
[Course	schedu	ıle	and content	ts)]								
Class 1-3: Motion and machines at small scales. Class 4-6: Biological and artificial molecular motors. Class 7-9: Randomness, noise, and fluctuations. Class 10-11: Collective motion and swarming. Class 12-14: Polymers and DNA. Class 15 : Feedback												
[Course requirements]												
Knowledge about statistical mechanics and/or thermodynamics is helpful but not required.												

ILAS Seminar-E2: Physics of Life(生命の物理学)(2)

[Evaluation methods and policy]

The students will be graded based on their participation in class (25%) and their presentation (75%). Students will need at least 60% in total to pass.

[Textbooks]

No textbook, articles will be given as handouts.

[Study outside of class (preparation and review)]

Each student will be asked to prepare a short presentation on a part of a scientific article once during the course.

[Other information (office hours, etc.)]

Office hour: Thu. 15:00-16:00