Course no	umber	U-LAS70 10002 SE50									
Course title (and course title in English)	I neorencal Physics   ( 字 冊 沙片字 字 取 川 緑				Instructor's name, job title, and department of affiliation		Yukawa Institute for Theoretical Physics Associate Professor, Antonio De Felice				
Group	Seminar	minars in Liberal Arts and Sciences Number of credits 2				2		Number of weekly 1 time blocks			
Class style semin (Face		nar e-to-face course	re course) Year/semes		2025 • First semester		er	Quota (Freshman) <sup>8</sup>		8 (8)	
Target year Mainl		y 1st year students	Eligible stude	ents F	For all majors			ys and riods Wed		1.5	
Classroom	Classroom 305, 3F Yukawa Institute for Theoretical Physics (North Campus) Language of instruction English										
Keyword	Theoretical Physics / 理論物理学 / modern physics / 現代物理学										
[Overview	[Overview and nurnose of the course]										

### [Overview and purpose of the course]

This will be in the form of a small class (around 7 students). The purpose is to learning interactively various up-to-date topics in theoretical physics. Topics will be taken from journals like Physics Today, Physics World, Nature etc.. The topics taken in this course are different from those in the course "Frontiers in Theoretical Physics II".

# [Course objectives]

The students will be able to read an article from some journal and enucleate the main message from it.

The student will closely interact with professor and other students, so that ideas/comments can be exchanged.

#### [Course schedule and contents)]

- 1. Each student would read in turn a paper and report her/his impressions to the other people.
- 2. The paper will be freely chosen consistently with field of theoretical physics.
- 3. In case the paper requires more work, analysis, the same paper can be discussed in groups.
- 4. As for the paper, the student must be able to get the key-message and show to the others why the paper might (or might not) be of inportance in theoretical physics.
- 5. Share comments, and toss out possible new ideas to expand the idea of the original paper.

#### [Course requirements]

None

## [Evaluation methods and policy]

Discussion in class.

#### [Textbooks]

Instructed during class

ILAS Seminar-E2: Frontiers in Theoretical Physics I(理論物理学最前線 I)(2)
[References, etc.]
(References, etc.)
Introduced during class
[Study outside of class (preparation and review)]
The students will be given a paper to read a week before class, and, in turn, they will present and discuss it with other students.
[Other information (office hours, etc.)]
[Essential courses]