

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                                                                                         |           |  |      |                |  |                                             |                |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------|--|------|----------------|--|---------------------------------------------|----------------|--|--|
| 科目ナンバリング                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      | U-LAS70 10002 SE50                                                                                                      |           |  |      |                |  |                                             |                |  |  |
| 授業科目名<br><英訳>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                      | ILAS Seminar-E2 :Frontiers in Theoretical Physics I (理論物理学最前線 I)<br>ILAS Seminar-E2 :Frontiers in Theoretical Physics I |           |  |      | 担当者所属<br>職名・氏名 |  | 基礎物理学研究所 准教授 Antonio De Felice(アントニオデフェリチェ) |                |  |  |
| 群                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 少人数群                                                 | 単位数                                                                                                                     | 2単位       |  | 週コマ数 | 1コマ            |  | 授業形態                                        | ゼミナール (対面授業科目) |  |  |
| 開講年度・開講期                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2026・前期                                              | 受講定員<br>(1回生定員)                                                                                                         | 15 (15) 人 |  | 配当学年 | 主として1回生        |  | 対象学生                                        | 全学向            |  |  |
| 曜時限                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 水5                                                   | 教室                                                                                                                      | 4共10      |  |      |                |  | 使用言語                                        | 英語             |  |  |
| キーワード                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Theoretical Physics / 理論物理学 / modern physics / 現代物理学 |                                                                                                                         |           |  |      |                |  |                                             |                |  |  |
| [授業の概要・目的]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                                                                                                         |           |  |      |                |  |                                             |                |  |  |
| <p>● New discoveries and problems arise constantly in theoretical physics.</p> <p>● We will discuss about the latest achievements, puzzles in the class.</p> <p>● We will then read each week a couple of recent papers appeared on “ Scientific American ” of the subject of astronomy, cosmology, theoretical physics or experiments in particle physics.</p> <p>● Students are given a paper to discuss for the next week.</p> <p>● The students will be divided into groups and will answer some questions regarding the paper.</p> <p>● Each of the groups in turn will report their answers to everyone else.</p> |                                                      |                                                                                                                         |           |  |      |                |  |                                             |                |  |  |
| [到達目標]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      |                                                                                                                         |           |  |      |                |  |                                             |                |  |  |
| <p>● Students will develop critical thinking in a friendly environment.</p> <p>● The point is to understand and think about the message which lies at the core of each paper.</p> <p>● The discussion session will then be an arena to develop students ’ skills to create their own scientific ideas.</p> <p>● Students will be stimulated to have opinions, comments, criticism, questions.</p>                                                                                                                                                                                                                       |                                                      |                                                                                                                         |           |  |      |                |  |                                             |                |  |  |
| [授業計画と内容]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                                                                                                                         |           |  |      |                |  |                                             |                |  |  |
| <p>● 14 lectures per semester, no midterm/final exam.</p> <p>● For each lecture papers will be given to students to read for the next week.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                                                                                         |           |  |      |                |  |                                             |                |  |  |
| ILAS Seminar-E2 :Frontiers in Theoretical Physics I (理論物理学最前線 I) (2)へ続く ↓ ↓ ↓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                      |                                                                                                                         |           |  |      |                |  |                                             |                |  |  |

- Students are supposed to read the paper and prepare for the next week.
- Some papers are freshly new papers [from the latest issues of Scientific American], others are from previous years.

**[履修要件]**

特になし

**[成績評価の方法・観点]**

- The method of evaluation merely comes from the interaction, participation and discussion in class.

**[教科書]**

使用しない

**[参考書等]**

(参考書)  
授業中に紹介する

**[授業外学修（予習・復習）等]**

- The students will be given a paper to read a week before class.
- Students are then supposed to learn the material [inside each paper] and be able to present to others, to discuss its content with others, and to answer questions regarding the paper itself.

**[その他（オフィスアワー等）]**

**[主要授業科目（学部・学科名）]**