

科目ナンバリング							
授業科目名 <英訳>	ILAS Seminar-E2 :Frontiers in Theoretical Physics II (理論物理学最前線 II) ILAS Seminar-E2 :Frontiers in Theoretical Physics II			担当者所属 職名・氏名	白眉センター 特定助教 Werner , Marcus Christian		
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	2024・前期	受講定員 (1回生定員)	14 (7) 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	基礎物理学研究所 研究棟 K202 (北部構内)			使用言語	英語
キーワード	Theoretical Physics / 理論物理学 / Astrophysics / 天体物理学						
[授業の概要・目的]							
<p>It is an exciting time to study the fundamental physics of the universe! For example, the recently announced first observation of gravitational waves will open up an entirely new gravitational sky.</p> <p>In this course, we will approach the frontiers of physics by reading articles in English, mainly from Physics Today. There will be a focus on astrophysics-related topics, but the course will cover the entire range including, for example, quantum mechanics and fluid dynamics. The papers discussed here will be different from those in ``Frontiers in Theoretical Physics I," though broadly similar in style.</p> <p>Each seminar will consist of three parts: first, I will give a lecture-style introduction to the topic; then one of the students will present the content of a paper which all of us will have read in advance; followed by a general discussion of the material and, perhaps, suggestions of new ideas. The class will be small, informal and interactive.</p>							
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<p>The primary goal of the course is to gain an overview of recent developments in physics, as well as a deeper understanding of selected aspects. Students will also be encouraged to reflect critically upon methodological issues in physics.</p> <p>At the same time, the course aims to improve students' skills of English conversation and text comprehension. This is particularly important in science, where basically all research is published in English.</p>							
[授業計画と内容]							
<p>1. In the first week, I will discuss a paper so that students can gauge typical contents of the articles and the style of presentation;</p> <p>2. Then each week, a small selection of articles to be prepared for a later week is presented to one of the students, who can make the choice based on his or her preference;</p> <p>3. The students will present papers in turn, and the cycle will depend on the total number of class attendees. If necessary or preferred, papers may also be prepared in groups;</p> <p>4. There will be no examination or class meeting during the exam week;</p>							
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5. I will provide a course summary for the feedback session which will take place in the last week, after the end of exams.

【履修要件】

Interest in physics. Prior knowledge of advanced topics, though beneficial, is not required.

【成績評価の方法・観点】

There is no final examination. The evaluation will be based upon students' attendance and contributions 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】

Students will be expected to read or prepare one paper per week in advance, as assigned during class.

【その他(オフィスアワー等)】

Office hours will be announced during class.