

科目ナンバリング									
授業科目名 ＜英訳＞		Elementary Course of Physics A-E2 Elementary Course of Physics A-E2			担当者所属 職名・氏名		理学研究科 准教授 PETERS,Robert		
群	自然科学科目群			分野(分類)	物理学(基礎)		使用言語	英語	
旧群	B群	単位数	2単位	週コマ数	1コマ	授業形態	講義（対面授業科目）		
開講年度・ 開講期	2025・前期		曜時限	月3		配当学年	主として1回生	対象学生	理系向
【授業の概要・目的】									
By using simplified models, we will describe the movement of particles, and learn the physical meaning of force, energy, work, and potential. We will learn how to predict the movement of objects in different situations. With these concepts, we will analyze simple examples such as the linear movement, rotations, the harmonic oscillator, collisions of two bodies and thereby understand theoretical approaches to physical problems.									
【到達目標】									
<ul style="list-style-type: none"> <li>- getting a basic understanding of theoretical approaches to physical problems in mechanics</li> <li>- learning fundamentals of kinematics and dynamics</li> <li>- being able to use the learned concepts in simple problems.</li> </ul>									
【授業計画と内容】									
<p>The course will be adapted to the level of the students! Therefore, the number of weeks may change in order to increase or decrease the speed of the lecture.</p> <ul style="list-style-type: none"> <li>- introduction into necessary mathematics used during the course (1-2 weeks)</li> <li>- Kinematics (speed, acceleration, rotation) (2-3 weeks)</li> <li>- Dynamics (Newton axioms, examples, rotating systems) (4 - 6 weeks)</li> <li>- harmonic oscillator (1-2 week)</li> <li>- energy, work, potential (2-3 weeks)</li> <li>- collisions of two bodies (1-2 weeks)</li> <li>- Summary and repetition of the whole course (1 week)</li> </ul>									
【履修要件】									
This course is intended mainly for students who did not select [physics] in the entrance examination.									
【成績評価の方法・観点】									
Worksheets/reports (50%) + examination (50%)									
【教科書】									
未定									
【参考書等】									
（参考書） 授業中に紹介する									
----- Elementary Course of Physics A-E2(2)へ続く -----									

## Elementary Course of Physics A-E2(2)

### [授業外学修（予習・復習）等]

Revision of the course by doing the work sheets

### [その他（オフィスアワー等）]

Office hour: After the course

Although no specific knowledge about physics is needed for taking this course, basic skills in differential and integral calculus are expected.

The worksheets will give students an opportunity to practice their English skills in science.

### [主要授業科目（学部・学科名）]