Course number	U-LAS12 10012 LE57		
Course title (and course title in English)	Elementary Course of Physics A-E2 Elementary Course of Physics A-E2	Instructor's name, job title, and department of affiliation	Graduate School of Science Senior Lecturer,PETERS,Robert

Group	Natural Sciences	Field(Classification)	Physics(Foundations)

Language of instruction	English	Old group	Group B	Number of credits	2

Number of weekly time blocks	1	Class style	Lecture (Face-to-face course)	Year/semesters	2024 • First semester

Days and periods	Mon.3	Target year	Mainly 1st year students	Eligible students	For science students

[Overview and purpose of the course]

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.

[Course objectives]

- getting a basic understanding of theoretical approaches to physical problems in mechanics
- learning fundamentals of kinematics and dynamics
- being able to use the learned concepts in simple problems.

[Course schedule and contents)]

In principle, the course will be offered as the following plan. However, there may be changes depending on the progress of the course.
The course will be adapted to the level of the students!

1.-2. Introduction to necessary mathematics used during the course
3.-4. Kinematics: Describing the motion of objects; Learn about position, velocity, acceleration of objects
5. Introduction to Newton's laws
6.-7. Simple applications of Newton's laws.
8. Friction
9. Curved motion
10.-11. Oscillations
12. Work
13. Energy and potential
14. Using concepts of energy and potential to solve problems

<<Final examination>>
15. Feedback

Continue to Elementary Course of Physics A-E2(2)↓↓↓

Elementary Course of Physics A-E2(2)

[Course requirements]

This course is intended mainly for students who did not select [physics] in the entrance examination.

[Evaluation methods and policy]

Worksheets/reports (50%) + examination (50%)

[Textbooks]

Not fixed

[References, etc.]

（References, etc.）

Introduced during class

[Study outside of class (preparation and review)]

Revision of the course by doing the work sheets

[Other information (office hours, etc.)]

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.