

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 Associate Professor,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	2025 • 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]							
<ul style="list-style-type: none"> - 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]							
<p>The course will be adapted to the level of the students!</p> <p>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"> - introduction into necessary mathematics used during the course (1-2 weeks) - Kinematics (speed, acceleration, rotation) (2-3 weeks) - Dynamics (Newton axioms, examples, rotating systems) (4 - 6 weeks) - harmonic oscillator (1-2 week) - energy, work, potential (2-3 weeks) - collisions of two bodies (1-2 weeks) - Summary and repetition of the whole course (1 week) 							
[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%)							
<div style="text-align: right;">Continue to Elementary Course of Physics A-E2(2)</div>							

Elementary Course of Physics A-E2(2)

[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.

[Essential courses]