

科目ナンバリング		U-LAS12 10006 LE57							
授業科目名 <英訳>	Fundamental Physics B-E2 Fundamental Physics B-E2				担当者所属 職名・氏名	工学研究科 准教授 Jorge Luis Puebla Nunez			
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	2026・後期		曜時限	木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]									
This course will explain the fundamentals of electrostatics and magnetostatics to students. Problems will be solved during the lectures to understand the concepts better.									
[到達目標]									
<ul style="list-style-type: none"> Understand the fundamental laws of electrostatics and magnetostatics. Understand the concepts better by applying the laws and concepts to solve problems. 									
[授業計画と内容]									
<ol style="list-style-type: none"> Overview of the course, introduction to vector calculus (1 week) Coulomb's law, electric field, electrostatic potentials, Gauss's law (2 weeks) Gauss ' s theorem (not Gauss ' s law), Laplace ' s Equation, Stokes's theorem (2 week) Electrostatic capacitance, conductors and insulators (2 weeks) Charge conservation, Ohm ' s law, Metals, Semiconductors (2 weeks) Circuits and circuit elements (1 week) Magnetic field, Field of a current in a wire, Field of rings and coils (2 weeks) Maxwell ' s equations and electromagnetic waves (2 weeks) Feedback (1 week) 									
[履修要件]									
This course is intended mainly for students who studied physics at high school									
[成績評価の方法・観点]									
Evaluation will be based on participation (20%), mid-term examination (30%), and final examination (50%).									
[教科書]									
使用しない									
[参考書等]									
(参考書)									
Edward M. Purcell 『Electricity and Magnetism』 ISBN:9781139005043									
[授業外学修(予習・復習)等]									
Students are required to do their homework. When trouble is encountered during homework, please refer to the recommended textbook or ask the instructor.									
[その他(オフィスアワー等)]									
Office hours: Anytime by email, and appointments should be made via email.									
[主要授業科目(学部・学科名)]									
理学部									