6. Applied Physics 応用物理系			**AP-S1**
授業科目名 Course Title	Introduction to Applied Physics II (Experimental Physics)	単位数 Credit	**2**
担当教員 Instructor	ASANO Takayuki, KUMAKURA Mitsutaka, MORIYASU Takeshi, NISHIUMI Toyohiko, FUKUNARI Masafumi, ISHIKAWA Yuya, FURUYA Takashi	開講学期 Semester	Spring
キーワード Keywords	Material engineering, Optical engineering, Far-infrared engineering	曜日/時限 Day & Time	Wednesday, fourth period

授業概要　Course summary

This course provides an Introduction to Applied Physics, especially Experimental Physics. This introduction mainly includes three kinds of experimental fields: (1) Material engineering, (2) Optical engineering, and (3) Far-infrared / Terahertz engineering. Each field has two or three themes, and an instructor of each theme has two classes.

到達目標　Course goal

After taking this course in introduction to applied physics, students obtain fundamental knowledge of physical / chemical phenomena and experimental techniques in applied physics research.

授業内容　Course description

01: Class guidance (ASANO Takayuki)
<Material engineering>
02-03: Material synthesis and physical property (ASANO Takayuki)
04-05: Electrochemistry (NISHIUMI Toyohiko)
06-07: Magnetic resonance (ISHIKAWA Yuya)
<Optical engineering>
08-09: Interaction between light and matter (MORIYASU Takeshi)
10-11: Laser and its applications (KUMAKURA Mitsutaka)
<Far-infrared / Terahertz engineering>
12-13: Introduction to high-power sub-terahertz wave generation and application (FUKUNARI Masafumi)
14-15: Introduction to terahertz wave engineering (FURUYA Takashi)

準備学習（予習・復習）等　Preparation / Review

At least a one-hour review is necessary for each of the classes.

授業形式　Class style

Lectures with exercises will be mainly provided.

成績評価の方法・基準　Method of evaluation

Reports on each theme: 100 %
If absences count five or more, the credit will not be given.

教科書・参考書等　Textbook and material

Handouts, including presentations, will be provided to students in each class.
受講要件・予備知識　Prerequisite
None
その他の注意事項　Note
This lecture will be conducted in person.