科目ナンバリング	U-LAS70 10002 SE50						
授業科目名<英訳>	ILAS Seminar-E2 :Wonders of semiconductor（半導体のふしぎ） ILAS Seminar-E2 :Wonders of semiconductor			担当者所属職名・氏名	工学研究科　准教授　Jorge Luis Puebla Nunez		
群	少人数群	単位数	2単位	週コマ数	1コマ	授業形態	ゼミナール（対面授業科目）
開講年度・開講期	2026・前期	受講定員(1回生定員)	15 (15) 人	配当学年	主として1回生	対象学生	全学向
曜時限	木5	教室	共北36			使用言語	英語
キーワード	Semiconductors / Physics / Electronics						

[授業の概要・目的]

This seminar aims for students to understand the physics/working principle behind semiconductor devices such as solar cells, laser diodes, sensors, transistors, etc. Fabrication processes of some semiconductor devices (such as laser diodes and solar cells) will also be discussed. Ongoing trends of research and development of semiconductor technologies including those related to quantum physics will be also discussed.

[到達目標]

- Understand the physics/working principle behind semiconductors.
- Understand the fabrication processes of semiconductor devices.
- Learn the latest semiconductor technologies.

[授業計画と内容]

1. Overview of the course (1 week)
2. Introduction to semiconductor physics: basics to understand the working principles of semiconductor devices (3 weeks)
3. Learn about the working principles of solar cells, laser diodes, sensors, and transistors (4 weeks)
4. Discuss the fabrication processes of some semiconductor devices (2 weeks)
5. Design and build electronic circuits (2 weeks)
6. Learn the latest semiconductor technologies (2 weeks)
7. Feedback (1 week)

[履修要件]

特になし

[成績評価の方法・観点]

Evaluation will be based on participation (30%), discussion (30%), and short presentations (40%).

[教科書]

使用しない

[参考書等]

（参考書）
授業中に紹介する

ILAS Seminar-E2 :Wonders of semiconductor（半導体のふしぎ）(2)へ続く↓↓↓

ILAS Seminar-E2 :Wonders of semiconductor（半導体のふしぎ）(2)

[授業外学修（予習・復習）等]

Students are required to do their short presentations.

[その他（オフィスアワー等）]

Office hours: Anytime by email, and appointments should be made via email or during the seminars.

[主要授業科目（学部・学科名）]