| 科目ナンバリング | U-LAS14 10009 LE68 | | | | | | |
|---|---|---|---|---|---|---|---|
| 授業科目名<英訳> | Introduction to Plant Science-E2<br>Introduction to Plant Science-E2 | | | 担当者所属職名・氏名 | 理学研究科　准教授　TAKENAKA, Mizuki | | |
| 群 | 自然科学科目群 | | | 分野(分類) | 生物学(総論) | 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 | 金2 | 配当学年 | 主として1・2回生 | 対象学生 | 全学向 |

**[授業の概要・目的]**

In this lecture series, the basics of the survival strategy of plants will be learned at the cellular and molecular level. Despite that the achievement of plant science are very frequently described in high school textbooks, university students have very few opportunities to study them unless they specifically learn plant physiology. In this classes, the contents of plant science, which are mentioned only widely and shallowly at high school level will be provided more deeply with the latest knowledge.

**【内容説明】この講義シリーズでは、植物の生存戦略の基本を細胞・分子レベルで学ぶ。植物科学の成果は高校の教科書には頻繁に記述されているにもかかわらず、大学では植物生理学を特別に学ばない限り、ほとんど学ぶ機会がない。本授業では、高校レベルでは広く浅くしか触れられていない植物科学の内容を、最新の知識を加えながらより深く学べる。**

**[到達目標]**

To understand the fundamentals of plant physiology
To understand how plants use light-energy.
To understand the signal transduction in plants.
To understand the basics of plant development and reproduction

**[授業計画と内容]**

1)Plant and cell architecture
2)Genome structure and gene expression
3)Water in plants
4)Mineral Nutrition
5)Photosynthesis
6)Cell wall
7)Signal transduction
8)Embryogenesis
9)Seed dormancy germination and seedling
10)Vegetative growth and organogenesis
11)Flower controlling
12)Gametophytes pollination , seeds, and fruits
13)Plant senescence and cell death
14)Biotic and Abiotic interaction
≪A final written exam≫
15)An oral exam and feedback

Introduction to Plant Science-E2(2)へ続く↓↓↓

**Introduction to Plant Science-E2(2)**

**[履修要件]**

This course is open to all students, BUT it is recommended that students have at least a high school "basic biology" level of knowledge.

**[成績評価の方法・観点]**

Class attendance and active participation (20%), weekly small tests (30%) an oral exam (25%) and a final written exam (25%)

**[教科書]**

Lincoln Taiz et al. 『Plant Physiology and Development, Sixth Edition』 （Sinauer）ISBN:9781605353531

**[参考書等]**

**（参考書）**

Summary of the lecture contents will be provided at the class.

**[授業外学修（予習・復習）等]**

Reading the textbook before the lecture will help the students to understand the lecture.
Students should review the textbook after the lecture.

**[その他（オフィスアワー等）]**

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Any questions and requests are welcome by prior arrangements via E-mail.

**[主要授業科目（学部・学科名）]**

**理学部**