Plant Molecular Biology

Syllabus Number 5I366
Special Subjects
Elective 2 credit
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1. Course Description

This class will provide several topics on plant molecular biology, including seed germination and vegetative growth; flower development and reproductive growth; responses to environmental factors; current topics of biotechnology and plant molecular biology.

2. Course Objectives

This class aims to provide an understanding of the molecular mechanisms involved in growth regulation and responses to environmental factors in plants, including plant evolution and structure; plant growth and development; flowering and flower development; responses to environmental factors; plant biotechnology such
as GMO.

3. Grading Policy

Progress report and Take-home Examination (20%), Practical Test (80%)

4. Textbook and Reference

Textbook
A handout and resources will be provided throughout the course.
Reference
N/A

5. Requirements(Assignments)

To Be Announced.

6. Note

N/A

7. Schedule

[1] Life cycle of plant
[2] Gene expression and regulation
[3] Development and morphogenesis of root
[4] Development and morphogenesis of leaf
[5] Seed germination and dormancy
[6] Cross talk of phytohormone
[7] Vegetative growth
[8] Reproductive growth
[9] Flowering and pollen tube guidance
[10] Embryogenesis
[11] Environmental response; light
[12] Environmental response; gravity
[13] Environmental response; low humidity and temperature
[14] Photorespiration
[15] Current topics in plant biology