

SPRING 2013
Prof. Smith

BIOL 7061/PLHL 7061
Plant Growth and Development

“Effects of naturally occurring growth substances and environmental conditions on plant growth.”

Lecture: T/Th, 1:30 - 2:50; A347 LSA

Instructor: Aaron P. Smith
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Laboratory: A755 Life Sciences Annex
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Office hours: after class or by appointment

Text (not required): *The Molecular Life of Plants* by Jones, Ougham, Thomas, and Waaland

Course Objectives: This course uses a molecular approach to introduce plant developmental processes. It will cover the biosynthesis, perception, and action of plant hormones; flower and seed development; senescence and programmed cell death; and the responses of plants to environmental stimuli, including light and biotic and abiotic stresses.

Format: Topics will generally be covered with an introductory lecture by the instructor, followed by a discussion of a scientific paper. For the first few weeks, the instructor will lead the discussions of papers, but students will each take a turn leading a discussion of a specific article. A list of papers to be covered during the semester will be available soon.

Grading: There will be two exams: a mid-term and the final. Each will be worth 100 points. The exams will be given in class. Students will be expected to give one oral critique of a recently published paper. Classroom participation in these discussions is expected. By the end of the semester, each student is required to write a short paper that summarizes a recently published research article selected by the student and approved by the instructor.

Mid-term exam:	100 points
Final exam:	100 points
Oral presentation:	50 points
Class participation:	50 points
<u>Final paper:</u>	<u>100 points</u>
Total:	400 points

TOPICS

Introduction

Gibberellins

Abscissic acid

Cytokinins

Auxin

Ethylene

Brassinosteroids

Jasmonic acid

Salicylic acid

Responses to light

Flowering

Seed development

Senescence

Programmed Cell Death

Responses to Pathogens

Responses to Abiotic Stresses

IMPORTANT DATES

Jan 17, NO CLASS

Jan 22, NO CLASS

Feb 12, NO CLASS (Mardi Gras)

March 28, Mid-term exam

April 2, NO CLASS (Spring Break)

April 4, NO CLASS (Spring Break)

May 10, Final exam