

## Frontiers in Plant Biology

Meets for an hour once per week, beginning in Spring semester, 2017.

Prerequisites: Junior standing and completion of an Introductory Biology sequence.

This seminar class is intended as a unifying academic experience for the Plant Biology Option and a capstone experience for students in Agronomy, Horticulture, and Plant Pathology. Its larger objective is to mediate substantive intellectual interactions among both the students and the faculty in the program. To date, only Horticulture has approved it for capstone. Two faculty members will co-teach each offering of Frontiers in Plant Biology. Faculty instructor pairs will come from different plant biology departments to ensure that each version of the class has an inclusive, interdisciplinary perspective. The instructors will choose a topic for the semester from a current area in which they have interest and expertise. (Sample topics might include: Physiology of plant stress response to droughts and floods; Current topics in sustainable food production; Ecological and agronomic roles of endophytic microbes; Perspectives on genetically modified plants; Understanding the functions of plant structure). The teaching faculty will present initial foundational material and assemble a list of assigned papers in the topic area. Each week one or two students will present background material and lead a discussion on a current article from the peer-reviewed literature or other relevant source material. This course will be an active, participatory learning experience rather than a passive speaker-of-the-week seminar. The course will expose students to a challenging small-group experience involving extensive interaction with faculty. Because the topic will change each offering, this course may be taken more than once for credit. The course's projected learning outcomes are that students will: 1) acquire depth of knowledge in a specific sub-discipline; 2) develop skills in oral presentation of plant biology research; and 3) have advanced skills and confidence in critical scientific analysis.