Ecology and Evolution of Plant Interactions – HONR 1000.710

Spring 2015

Instructor:

Dr. Janette Steets, 230G HBRC, janette.steets@okstate.edu, x43521, Office hours by appointment

Meeting time: Mondays 3:30-4:20 in 301B Physical Sciences

Objectives: Plants are involved in a myriad of interactions with other organisms. We will examine the mutualisms and antagonisms between plants and their animal, fungal, and microbial partners and explore the evolutionary adaptations of plants to these interactions. Through weekly class discussions of scientific papers and popular news items, students will summarize key scientific findings, evaluate the science represented in the news, interpret data, and synthesize scientific information on the evolutionary ecology of species interactions. We will also explore how ongoing global change is effecting plant ecological interactions, such as decline of pollinating insects and introductions of pest species in croplands, and how these changes may influence humanity.

Corequisites: Must be enrolled in BOT 1404 for the Spring 2015 semester.

Readings: Journal articles, book chapters, and articles from popular news will be required.

Format: Class periods will be spent discussing papers from the primary literature or articles from the popular news. Each student will be responsible for leading two class discussions. Discussions will cover the necessary background to understand the papers, clarify difficult concepts, and explore the results and implications of the research. Students will have two roles in the discussions: discussion leader and discussion participant. You will be graded on each of these roles.

Grading: Each activity will be worth the following percentages in determining your final grade:

Activity	**%**
Leading two class discussions	40
Participating in class discussions	60
Total	**100**

Final grades will be assigned on the basis of: 90-100%=A, 80-89%=B, 70-79%=C, 60-69%=D, below 60%=F. I will not raise this scale but may lower part or all of it at my discretion.

Leading a discussion: On a discussion day, a student will be assigned to facilitate the discussion of the assigned reading. The student should give a *brief* overview of the reading at the start of class. The overview should last less than 5 minutes and should include:

- The objectives of the paper(s)

- The study system
- Major results
- Major conclusions

Following the overview, the discussion leader will lead the discussion of the paper(s). Thus, discussion leaders must come to class with questions that will facilitate the group discussion. Discussion leaders will be graded on the clarity of their overview, the quality of their discussion questions, and their ability to facilitate the group discussion and convey the major points.

Participating in discussions: Prior to each class discussion, you are expected to:

(1) Read the assigned paper(s) thoroughly

(2) For each reading, answer the following questions (~1/2 to 1 page total in length; post your answers to these questions on the D2L dropbox by 2 pm the day of a class discussion)

   a. For a scientific article/book chapter:
      i. What important new thing did you learn?
      ii. What was something that you did not understand?
      iii. How can this study be extended?
   b. For an article in a popular news venue:
      i. Does this news story present a biased or unbiased view?
      ii. Does this news story present the underlying science accurately?

(3) Participate actively and constructively in the discussion

Late policy: Any assignments turned in after the specified due date and time will lose points. Late assignments will be penalized 5% off the total possible points if turned in within the first 24-hour period after the specified due date and time, and 5% per 24-hour period after that time. Assignments turned in more than one week late will not be accepted.

Academic Honesty: Oklahoma State University is committed to the maintenance of the highest standards of integrity and ethical conduct of its members. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and fraudulently altering academic records) will result in sanctions. Violations will subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or course, receiving a notation of a violation of academic integrity on your transcript (F!), and being suspended from the University. You have the right to appeal the charge. Contact the Office of Academic Affairs, 101 Whitehurst, 405-744-5627, academicintegrity.okstate.edu. (Source = http://academic integrity.okstate.edu). More complete policies on Academic Integrity, Drop/Add and special accommodations that govern this course are included in the **Syllabus Attachment**.

Special accommodations: According to the ADA, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need classroom accommodations, contact the office of Student Disability Services (SU 315). Please advise the instructor of your disability as soon as possible to ensure timely implementation of appropriate accommodations. Faculty have an

obligation to respond when they receive official notice of a disability from SDS but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process during which the existence of a qualified disability is verified and reasonable accommodations are identified. Call 744-7116 v/t for more information.

Tentative Schedule

Date	**Topic**
1/12/15	Introduction to the course
1/19/15	University Holiday - No class
1/26/15	Plant-pollinator interactions
2/2/15	Plant-pollinator interactions
2/9/15	Plant-pollinator interactions
2/16/15	Plant-pollinator interactions
2/23/15	Plant-herbivore interactions
3/2/15	Plant-herbivore interactions
3/9/15	Plant-herbivore interactions
3/16/15	University Holiday - No class
3/23/15	Plant-herbivore interactions
3/30/15	Plant-fungal interactions
4/6/15	Plant-fungal interactions
4/13/15	Plant-fungal interactions
4/20/15	Plant-microbe interactions
4/27/15	Plant-microbe interactions