

BIOLOGY 400/600: SPECIES INTERACTIONS & BIODIVERSITY

Spring 2014

M, W 3:45 – 5:05 PM

126 Life Sciences Complex

INSTRUCTOR:

Dr. David Althoff
440 LSC, 443-1096
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Office hours: by appointment

COURSE OBJECTIVES AND LEARNING OUTCOMES:

This course will introduce students to the study of species interactions. Students will read book chapters and peer-reviewed scientific journal articles to investigate the ways in which organisms interact with other. Students will critique both historical and current concepts to help develop a more refined view of species interactions. The goal will be to offer an improved framework for studying the evolutionary and ecological consequences of species interactions. By completing this course students will gain the skills necessary to implement and evaluate current theory and practices in studies of Species Interactions and learn to convey these principles to other students and scientists. Prerequisite: Biology 345.

COURSE POLICIES:

Textbooks & Readings. There is one assigned book for this course—The forest unseen by David George Haskell. Other readings from the primary literature will be posted in Blackboard. Students also will use the library and world wide web to find information for completing the course assignments.

Course Evaluation - Students will be evaluated based on attendance, participation in class discussions, in class assignments, and oral presentations. Evaluations will be based on a student's ability to collect, synthesize, and present information concerning Species Interactions and their study. Assignments not received by the due date and time will have 10 percentage points deducted per day until completed.

Types of assignments:

Questionnaire for each reading-- short survey to be completed at the beginning of each class.

Species natural history presentations-- a one page handout and short presentation about an organism

Oral presentations-- 15 minute presentation on an article or topic related to Species Interactions

Participation in discussions-- active role in exploring and evaluating the assigned readings.

Grading Scheme:

Attendance	30%	
Participation	30%	
Natural History Reports	20%	(Grad students will write a 3 page perspective in lieu of reports)
Oral Presentations	20%	

Attendance - Students are required to attend all course meeting times and participate in the discussions and evaluations of oral presentations.

Religious observances— SU's religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition (http://supolicies.syr.edu/emp_ben/religious_observance.htm). Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class. Students should contact the instructor in advance to arrange for any missed coursework due to a religious observance.

Academic Integrity-- Syracuse University's Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the policy and know that it is their responsibility to learn about course-specific expectations, as well as about university policy. The university policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same written work in more than one class without receiving written authorization in advance from both instructors. The presumptive penalty for a first offense by an undergraduate student is course failure, accompanied by a transcript notation indicating that the failure resulted from a violation of Academic Integrity Policy. The standard sanction for a first offense by a graduate student is suspension or expulsion. For more information and the complete policy, see <http://academicintegrity.syr.edu>.

Disability Statement-- If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call (315) 443-4498 or TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

Course schedule

DATE		TOPIC	ASSIGNMENT
January	13 M	Course Intro and goals	
	15 W	Critiquing scientific papers	Temple 1977; Sumoski & Orth 2011
	20 M	No Class	
	22 W	What are species interactions?	<i>Haskell—Preface, Partnerships, The experiment</i>
	27 M	Categorizing species interactions	Odum 1953; Lidicker 1979
	29 W	Ecology and Evolution principles	No readings
February	3 M	Predation	Thompson Ch. 2; <i>Salamander</i>
	5 W	Predation	Hembre & Peterson 2013; Svanbäck & Eklöv 2011
	10 M	Parasitism	Price 1980; <i>Ripples, Quest</i>
	12 W	Parasitism	Eberhardt et al. 2013; Lafferty & Morris 1996
	17 M	Herbivory/Grazing	Thompson Ch. 8 ; <i>Footprints, Herbivory, Caterpillar, Medicine</i>
	19 W	Herbivory/Grazing	Relva et al 2010; Sinkkonen et al. 2012
	24 M	Mutualism	Thompson Ch. 4; <i>Spring ephemerals, walking seeds, Litter</i>
	26 W	Mutualism	Little et al 2006; Jansen et al. 2012
March	3 M	Competition	Thompson Ch. 3; <i>Eft and Coyote, Twigs</i>
	5 W	Competition	Grant & Grant 2006; Enge et al. 2013
	10 M	Spring Break	
	12 W	Spring Break	
	17 M	Commensalism	Althoff et al 2004; TBA
	19 W	Interaction continuums	Bronstein 2004; TBA
	24 M	Geographic mosaic of interactions	Thompson 1994; TBA
	26 W	Issues in studying interactions	Abrams 1987
	31 M	Categorizing species interactions	TBA
April	2 W	TBA	TBA
	9 M	TBA	TBA
	11 W	TBA	TBA
	16 M	TBA	TBA
	18 W	Student Presentations	
	23 M	Student Presentations	
	25 W	Student Presentations	
	28 M	Course synthesis	

Instructor reserves the right to make changes to the course schedule. Any changes will be announced in class.