

Entomology 451 Laboratory- Syllabus

Course Number: Entomology 451*
Course Name: Basic and Applied Insect Ecology Laboratory
Credits: 1
Format: Lab/Discussion, Wednesdays 1:20 – 4:20p
Location: 147 Russell Labs
Offering: Every other fall semester
Instructor: Dr. Claudio Gratton, cgratton@wisc.edu
3111 Wisconsin Energy Institute
Office hours by appointment

***Companion course:** Entomology 450 - Basic and Applied Insect Ecology Lecture, 3 cr., Tuesdays and Thursdays, 11a – 12:15p, 147 Russell, concurrent enrollment is required.

Course Description:

Basic and Applied Insect Ecology Laboratory/Discussion is the companion course for the lecture-based Basic and Applied Insect Ecology (Entomology 450). This course will include hands-on experiences such as labs, field trips, computer exercises, and discussions based on readings in the primary literature to enhance and delve into more details on materials introduced in the course lectures, and to expand the topics covered as well. This course is intended for graduate students, but exceptionally motivated undergraduates will be considered by instructor's consent.

Student learning objectives:

Upon completion of the course, students will have demonstrated:

1. Comprehension of ecological concepts/principles at the physiological, population, community and ecosystem levels.
2. Understanding of the mechanisms mediating interactions of insects with their biotic and abiotic environments.
3. Proficiency in the application of ecological theory to the understanding of novel insect systems and their applied implications
4. Ability to view and understand applied entomological problems through the lens of basic ecological theory
5. Ability to carry out experiments working with live insects, analyze and interpret experimental data
6. Ability to understand and communicate the significance of own research and specific research studies published in the primary literature

Required Textbook: None. Readings will come from primary literature.

Course Web site:

We will use the Learn@UW site for the Lab/Discussion Ent 451 part of the class.

Course Requirements and Grading:

Attendance (20 points)

Students are expected to attend all labs and discussion. I will subtract 10 points per absence from your attendance grade if they are unexcused. Excused absences require communicating with me in advance of missing class and explaining the circumstances of the absence. Valid excuses include medical absences or UW-approved religious observances (<http://www.secfac.wisc.edu/governance/ReligiousObservancesMemo.htm>). Other reasons will be considered after a meeting in person but are not guaranteed.

If you miss 2 or more labs periods without an approved and valid justification, you will receive an **F grade** (fail) in the class. If you miss a class, you are responsible for the material covered or announcements made that day.

Students who may need special accommodations for lab/field activities, exams, etc. will need to speak with me by the end of the second week of class, <Sept. 18, 2015>, to make certain that these accommodations can be met. Requests made after this date may not be accommodated.

Laboratory exercises (5 x 20 pts = 100 points)

There will be five hands-on laboratories and demonstrations throughout the semester aimed at illustrating various concepts in insect ecology. Several of these exercises are open-ended and inquiry based, while others are more structured. At the end of the each exercise there will be a short writeup that varies depending on the lab. These often will include data visualizations and statistical analyses along with a description of the main findings and the conclusions.

Participation (50 points)

Participation points reflect your engagement and leadership in the laboratories and discussion portions of the class. Later in the semester, there will be more discussion-based sessions, where students will be expected to lead discussions based on primary literature, or to engage with guest lecturers who will introduce advanced topics. Your participation score will reflect the level of preparation and involvement in these activities.

Grading:

The course will be graded on a straight scale, $\geq 91\%$ A, $\geq 81\%$ B, etc. based on total accumulated points out of a total 170 possible points.

Syllabus Topics: These topics will mirror the lecture topics in Entomology 450.

See calendar of events and topics. As always, I reserve the right to shift and replace topics as circumstances change.

Basic and Applied Insect Ecology Laboratory

Entomology 451, Fall 2015 – Gratton

Wednesday	Topic	Notes	Assignments Due
2-Sep	Solidago Lab 2 and 3 - field		
9-Sep	Solidago - lab		
16-Sep	Solidago - lab		
23-Sep	Solidago discussion		
30-Sep	Nutritional Ecology Lab 1		Solidago Lab 2
7-Oct	Aquatic Ecology Field Trip	<i>Bobbi Peckarsky</i>	Solidago Lab 3
14-Oct	[Jim Estes WE Talk]		
21-Oct	TBD Nasonia Lab 4 - setup		
28-Oct	Functional Response Lab 5	<i>Tania Kim (CG out)</i>	
4-Nov	Landscape Ecology of Agroecosystems		
11-Nov	Nasonia Lab breakdown		
18-Nov	No Class	ESA meetings	
25-Nov	Ecology of Fear	<i>Shawn Steffan</i>	
2-Dec	Nutritional ecol lab - breakdown		Nasonia Lab 4
9-Dec	Mutualisms, Evolution	<i>Cameron Currie</i>	Functional Response Lab 5
15-Dec	[Last day of classes]		Nutritional Ecol Lab 1