Syllabus
Biological Sciences 0390: Ecology Laboratory
Fall 2018

Instructors: Dr. Walter Carson (walt@pitt.edu)
212 Clapp Hall
Phone: 412-624-5496

Tiffany Betras (tlb96@pitt.edu)

Dr. Sam Donovon (sdonovan@pitt.edu)

Andrea Fetters (amf178@pitt.edu)

Laboratory location: 170 Crawford Hall

Office hours: See CourseWeb for office hours and locations.

Text: We will use sections of Testing Ecological Theory prepared by M. Henry H. Stevens, Zachary T. Long, Rachel Collins, Daniel E. Bunker, Stefan A. Schnitzer, Anthony Bledsoe, George Meindl, Sarah Pasquini, Michelle Spicer, and Walter Carson. All course material will be provided on CourseWeb and updated throughout the semester.

Each student must have a copy of the lab materials for use in class. The lab materials can either be printed or electronic versions on a tablet or computer.

Course overview: This course consists of an introduction to laboratory and field studies in ecology. Its goals are: (1) To provide students with experience in using basic ecological techniques; (2) To illustrate ecological principles through laboratory and field work; (3) To give students an opportunity to develop skills in data analysis, evaluation, and writing a complete scientific paper.

Attendance and excused absences: You must attend each laboratory session and the Eden Hall Campus of Chatham University field trip. The instructors will take attendance. You can miss a lab only under exceptional circumstances of illness, severe personal trauma, or in rare instances, university business and only if you bring a signed note from a doctor (illness), legal guardian (personal trauma), or a university official (university business). Even if you do miss a lab with an excused absence, you will still be responsible for the material. Excuses must be given to your instructor within one week of your last missed class. If you miss a lab without a valid reason, you will receive a zero on any assignment stemming from that lab.

Required field trip: To pass this course, all students must participate in the one weekend field trip to the Eden Hall Campus of Chatham University (either Saturday, October 6 or Sunday, October 7. Both Monday labs and the Tuesday morning lab will go on Saturday, October 6. The Tuesday afternoon lab, Wednesday lab, and Thursday lab will go on Sunday, October 7. Students missing the field trip should meet with Dr. Carson to drop the course. More information about this trip is on the syllabus (page 3) and the field trip handout on CourseWeb.

Email: Occasionally, the instructors may email you with important information for the course. You are responsible for maintaining a working Pitt email address and checking it regularly.
**Grading:** Assignments and Lab Reports are due at the beginning of the lab period. Any work submitted after the start of the lab period will be considered late and will lose 10% per day until turned in. Students that are habitually late to class will lose points on their assignments. In this course, students will commonly work in groups of two to four to collect data and to write reports. Written work including tables and figures should be 100% effort of your group along and not other groups unless your instructor tells you that you may work with other groups.

A single incident of plagiarism will result in a zero for the course. We use both Turnitin and Google searches to evaluate possible plagiarism.

Your grade will be determined by the total points you earn on assignments, lab reports, quizzes, and the final scientific paper. There will be three pop quizzes during the semester. The quizzes will be given at the beginning of the lab period and will cover material presented in the lab handouts and journal articles for that week's or previous week's lab.

If you feel points were taken off an assignment that should not have been, you may present your graded paper, with a written explanation of why you think the points should not have been taken off, to your instructor up to one week after your assignment is handed back. Grades will not be revised after one week.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific Method and Hypothesis Testing</td>
<td>10</td>
</tr>
<tr>
<td>CLASS Survey (Online)</td>
<td>5</td>
</tr>
<tr>
<td>Impoverished Eastern Deciduous Forests – Hypotheses Presentation</td>
<td>50 (11%)</td>
</tr>
<tr>
<td>Excel Assignment (In-Class)</td>
<td>10</td>
</tr>
<tr>
<td>Plant Spatial Distributions</td>
<td>10</td>
</tr>
<tr>
<td>Exotic Species and the Enemy Release Hypothesis</td>
<td>20</td>
</tr>
<tr>
<td>Coarse Woody Debris</td>
<td>30</td>
</tr>
<tr>
<td>Forest Tree Community Dynamics</td>
<td>30</td>
</tr>
<tr>
<td>Impoverished Eastern Deciduous Forests – Proposal Presentation</td>
<td>50 (11%)</td>
</tr>
<tr>
<td>Impoverished Eastern Deciduous Forests – Proposal</td>
<td>100 (22%)</td>
</tr>
<tr>
<td>Final Scientific Paper (Insect Herbivory and Plant Performance)</td>
<td>100 (22%)</td>
</tr>
<tr>
<td>Quizzes (3 x 10 points each)</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>445</td>
</tr>
</tbody>
</table>
Information for the Eden Hall Campus of Chatham University Field Trip

The Eden Hall Campus of Chatham University field trip scheduled on Saturday, October 6 and Sunday, October 7 is rain or shine. The field trip is required to pass the course.

When to meet: Both Monday labs and the Tuesday morning lab will meet at 8:30 am on Saturday, October 6. Tuesday afternoon lab, Wednesday lab, and Thursday lab will meet at 8:30 am on Sunday, October 7.

Where to meet: Meet at 8:30 am SHARP in the RA parking lot across from the loading dock of Clapp Hall. Some of your instructors will be there to meet you. Set two alarm clocks or use the buddy system. There will be vans there to take you to the Eden Hall Campus of Chatham University. You may not drive separately to the field trip. We will return to Pitt sometime before 6 pm.

What to wear: You will be outside most of the day, dress appropriately. Long pants and appropriate footwear are required due to poison ivy and thorny shrubs.

What to bring: Bring notebook or loose leaf paper, something to write on and with, sun-block, a water bottle, rain gear, footwear suitable for wet, muddy, thorny, field conditions (i.e., close-toed shoes or boots). If it is raining you may want to bring a change of clothes. Please check the weather forecast. If you are allergic to bee-stings, bring a bee-sting kit and also any medication you may be taking (i.e., asthma inhaler), etc. Lunch will be provided around noon.

Extra Credit Assignment

To obtain 10 points extra credit you will need to attend one of the Ecology and Evolution Seminars (see the posted schedule). During the seminar you should take notes and address the following questions. This is NOT a group or partner assignment.

1. What was the title of the seminar?
2. What were the major questions or hypotheses being addressed by the speaker?
3. What key species were being studied?
4. What were the two or three most important methods used to address the focal questions or hypotheses?
5. What were the two or three key take-home messages or novel scientific findings.

Please turn in to your instructor a one-page, double-spaced paper addressing the five questions above by no later than Friday, November 30 by 11:59 pm.

The seminars are held each Wednesday at noon in 169 Crawford Hall. Other ecology and evolution seminars may also be used to complete this extra-credit assignment. You must get pre-approval from your instructor if you are attending another seminar.
<table>
<thead>
<tr>
<th>Week</th>
<th>Week of</th>
<th>Laboratory</th>
</tr>
</thead>
</table>
| 1    | Aug. 27 | 1. Scientific Method and Hypothesis Testing  
                  2. Impoverished Eastern Deciduous Forests  
                  **Scientific Method and Hypothesis Testing assignment due (in-class assignment). Complete online CLASS survey.** |
| 2    | Sept. 3 | No Class – Labor Day Holiday  
                  Groups should meet to work on their hypotheses and presentations. |
| 3    | Sept. 10 | Impoverished Eastern Deciduous Forests  
                  Each group will meet with instructor for 40 minutes to discuss their progress and hypotheses. |
| 4    | Sept. 17 | Impoverished Eastern Deciduous Forests  
                  **Each group will present their findings on the causes of impoverished eastern deciduous forests.** |
| 5    | Sept. 24 | Plant Spatial Distributions Lab  
                  **In-class Excel assignment due.** |
| 5    | Oct. 1 | Exotic Species and the Enemy Release Hypothesis Lab  
                  **Plant Spatial Distributions assignment due.** |
| 6    | Oct. 6 or 7 | Field trip to Eden Hall Campus of Chatham University  
                  Fun in the Sun (and in the rain). The field trip is mandatory! For details, please page 3 of syllabus. Make sure to bring field trip handouts. |
| 7    | Oct. 8 | Coarse Woody Debris Lab  
                  **Exotic Species and the Enemy Release Hypothesis assignment due.** |
| 8    | Oct. 15 | No Class – Fall Break |
| 9    | Oct. 22 | Forest Tree Community Dynamics Lab and Impoverished Eastern Deciduous Forests  
                  **Coarse Woody Debris assignment due.** |
| 10   | Oct. 29 | Insect Herbivory and Plant Performance  
                  **Forest Tree Community Dynamics assignment due.** |
| 11   | Nov. 5 | Impoverished Eastern Deciduous Forests  
                  Each group will meet with instructor for 40 minutes to discuss their progress. |
| 12   | Nov. 12 | Impoverished Eastern Deciduous Forests  
                  **Each group will present their proposal on testing the causes of impoverished eastern deciduous forests.** |
| 13   | Nov. 19 | No Class – Thanksgiving Break |
| 14   | Nov. 26 | No-Class  
                  Instructors will be available during office hours to discuss final papers and proposals.  
                  **Extra Credit assignment due Nov. 30 by 11:59 pm.** |
| 15   | Dec. 3 | **Scientific Paper and Proposal due Dec. 7 by 11:59 pm.** |