

BIOL 314: Ecology and Population Biology

Teaching Assistants

Jeremy Yoder (Monday)
jbyoder@gmail.com
Office: LSS 352 (back)
2:30-3:30 Mon or by appt.

Matthew Singer (Friday)
sing5957@vandals.uidaho.edu
Office: Gibb 229
1:00-2:00 Weds or by appt.

Welcome to the Ecology and Population Biology lab, where we'll take a hands-on look at the ecological and evolutionary processes discussed in lecture. If you're like me, you probably got into biology because you weren't a big fan of math. It turns out, though, that biologists use lots of math to test hypotheses about the living world. Through the activities we do in lab, I hope you'll learn that mathematical models are not just descriptions of natural processes, but can actually help scientists generate and test hypotheses about how those processes work.

All **lab activities** for this course are carried out in the program Populus, which is available as a free download at <http://www.cbs.umn.edu/populus>. Instructions are on the course website, http://www.webpages.uidaho.edu/~snuismer/Nuismer_Lab/laboratories.htm. I'll start each lab with a brief discussion of the process examined in the week's activity, and explain the Populus module we'll use. You'll have the rest of the period to complete the activity; lab reports are due one week after the relevant lab period. You'll also complete a **primary literature report**, due at the end of the semester, and you may do additional primary literature reading, or attend scientific seminars, for **extra credit**. (See the Grading section below for details.)

Lab periods immediately preceding an exam will be **review sessions**. There will (usually) be no activity or formal lecture during these periods. Instead, I'll be available to answer questions about the material on the upcoming exam.

General remarks:

- (1) Turn in all written assignments as electronic documents emailed to **jbyoder@gmail.com**; corrected assignments will be returned by email.
 - a. Acceptable document formats are **MS Word .docx or .doc** and **Adobe PDF**.
 - b. Please put the number or title of the lab exercise in the subject line of your email.
 - c. For each day an assignment is late, as determined by the timestamp on the email, 10 percent will be deducted from the final grade, to a maximum of 50 percent.
 - d. Exceptions to due dates *must be negotiated in advance* whenever possible.
- (2) There is no minimum length for any written answer, but you must answer all questions **completely**, and in **complete sentences**. (This does not apply to questions that are in the form of a multiple choice or fill-in-blanks.)
- (3) Extra credit is available as described under "Grading," and may be arranged by special request, given extenuating circumstances.

Grading:

Lab activities are worth a total of 200 points (see the syllabus on the course website). This total is made up of nine laboratory activity reports (15 points each) and a primary literature reading report (65 points). Up to 20 points of extra credit are also available.

- (1) **Lab reports** are worth up to 15 points each, and due at **midnight** one week after the activity is completed in lab. A lab report is to consist of brief answers to all questions in the assignment, in complete sentences.
- (2) The **primary literature report** is worth up to 65 points, and will be due at **midnight on 25 April 2011**. For this report, you should select three peer-reviewed scientific papers on a single topic discussed in lab or lecture. I will discuss where and how to search the primary literature for interesting papers during a lab session. Then, in a two-to-three page report, discuss
 - a. what hypotheses the papers test,
 - b. what data or theoretical work are used to test those hypotheses, and
 - c. whether the papers reach similar conclusions about their common topic.
- (3) You can earn up to 20 points of **extra credit** in two ways: reports on scientific seminars (5 points each) or reports on independent reading (10 points each).
 - a. A **seminar report** is about a scientific seminar in the Biology Department series or the IBEST series. Attend a seminar and submit a half-page report describing the research presented and your reaction to it.
 - b. For an **independent reading report**, select a peer-reviewed research paper on a topic discussed in lab or lecture, and submit a one-page report discussing what hypothesis the paper tests and what data or theoretical work is used to test it. Independent reading reports must discuss papers other than those used for your primary literature report.
- (4) Observe standard American English spelling and usages. I reserve the right to deduct points for poor spelling or grammar.
- (5) **Do your own work. Write in your own words.**
 - a. Working together on the *primary literature report* is not permitted.
 - b. Working together on *lab reports* is permitted; turning in identical reports is not.
 - c. Research of sources outside the lab and lecture texts is encouraged, but such sources should be cited in a references list by (at a minimum) author, year of publication, and title. Information from these sources **must be written in your own words**. Otherwise, it's plagiarism.
 - d. **Plagiarism gets a zero**. No warnings for first offenses.
- (6) Grades may be appealed, but only in the case of factual error on my part.