SYLLABUS
EOEB 3410: ECOLOGY LECTURE
SPRING 2015

INSTRUCTORS:
Dr. Jim Bauer
476 Aronoff Laboratory
E-mail: bauer.362@osu.edu
Office hours: 476 Aronoff Laboratory
Thurs 1-2 PM or by appt.

Dr. Erik Rothacker
260 Jennings Hall
E-mail: rothacker.1@osu.edu
Office hours: 240B Jennings Hall
Wed. 2:30-3:30PM or by appt.

GRADUATE TEACHING ASSISTANTS
Amber Bellamy (bellamy.41@osu.edu), office hrs: Tues 11AM-noon & by appt., 110 Jennings Hall
Zac Beres (beres.36@osu.edu), office hrs: Tues 11AM-noon & by apt., 378 Aronoff Lab
Kellen Calinger (calinger.2@osu.edu), office hrs: Mon 10:30-11:30AM & by apt., 366 Aronoff Lab
Tahir Ibrahim (ibrahim.93@osu.edu); office hrs: Mon 2-3PM & by appt., 356 Aronoff Lab
Steve Gougherty (gougherty.2@osu.edu); office hrs: Mon 10-11AM & by appt., 110 Jennings Hall
Scott Kelsey (Kelsey.38@osu.edu), office hrs: Tues 11AM-noon & by appt., 110 Jennings Hall

LECTURES:
Monday & Wednesday 3:55 – 5:15 PM, Room 1184 Postle Hall

LABORATORIES:
Each student must enroll in one lab section. Labs meet in Room 130 Jennings Hall.
Tuesday 8:00-10:55AM (GTA: Amber Bellamy)
12:45-3:40PM (GTA: Tahir Ibrahim)
Wednesday 9:10-11:55AM (GTA: Scott Kelsey)
Thursday 8:00-10:50AM (GTA: Zac Beres)
12:45-3:40PM (GTA: Kellen Calinger)
Friday 9:10AM-11:55AM (GTA: Steve Gougherty)

REQUIRED TEXT:
SimUText EEOB 3410. Ecology SP15. Cost: $89. This text can be accessed and run from any
computer, public or private, or even a USB thumb drive.
Please follow the instructions below to subscribe to SimUText for your Ecology SP15 course at Ohio
State University.

2. Click the Continue button.
3. Once you complete your registration, you must download and install the SimUText application to
view your course materials. You will need the account information you created when you
registered to log in to the SimUText System.
Should you encounter a problem registering, the access key for this course is `scu5-CtpA-YkjH-NjEp-vER6`.

Problems or questions? Visit SimUText Support to search our Knowledge Base and view Video Tutorials.

If you are not able to find the answer to your question, you can submit a support request from the support page (both email and phone nos. are available here for student questions, problems registering and downloading, and other related issues).

**LEARNING OBJECTIVES:**

We have identified numerous learning objectives for the course. Achieving these learning objectives will require that you attend and participate in lectures and labs, as well as complete all assigned readings and take-home activities. The student who successfully completes this course should be able to:

I. Understand how ecologists think:
   A. Understand how evolutionary principles apply to ecological problems.
   B. Appreciate the importance of systems thinking in ecology.
   C. Appreciate the need to consider scale when trying to interpret spatial and temporal patterns in nature.
   D. Appreciate the importance of change in ecology.

II. Understand how ecology is done:
   A. Understand how ecologists use the scientific method.
   B. Understand the difference between using observational and experimental approaches to understanding nature.
   C. Appreciate how models are used to understand nature.
   D. Learn the need for, meaning of, and use of statistics as a tool to understand nature.

III. Have knowledge of ecological concepts and connections:
   A. Understand the ecology of the individual organism.
   B. Understand what factors and processes affect population size, structure, and growth rate.
   C. Understand how interactions among species and among species and the environment affect community structure and function.
   D. Understand the flow of energy and nutrients through ecosystems.
   E. Appreciate the role of global processes in ecology.

IV. Appreciate linkages between human actions and the environment:
   A. Understand what types of careers are available in ecology.
   B. Appreciate the existence of a basic-to-applied continuum in ecology.
   C. Understand and value the difference between appraisals based upon the scientific method and values-based appraisals.
   D. Be able to “think outside the box” and realize that understanding ecology involves transdisciplinary thinking, including disciplines such as economics, sociology, environmental chemistry, toxicology, and ethics.
COURSE ASSESSMENT, POLICIES, & PROCEDURES

Total points for the entire course = 1,040. The following scale will be used to determine your grade:

- \(\geq 93\% = A\)
- 90-92\% = A-
- 87-89\% = B+
- 83-86\% = B
- 80-82\% = B-
- 77-79\% = C+
- 73-76\% = C
- 70-72\% = C-
- 60-69\% = D
- \(\leq 59\% = E\)

Your final grade will be determined on the basis of numerous in-class and out-of-class activities. Such activities include:

**SimUText readings and questions.** Prior to each lecture, students must read the assigned chapter section(s) and submit answers to the questions that appear throughout each section. Your answers must be submitted before 3:00 PM the day of that lecture to receive any points. At the conclusion of the course, we will determine the percentage of correct questions (across all readings) multiple this percentage by 217 points to determine your grade. Total maximum points = 217.

**In-class lecture activities.** **Attendance and participation in lecture is mandatory.** Lecture sessions will be used in a number of ways, but a simple recounting of material from the assigned reading is not one of them. Most lectures will elaborate on and present a broader perspective on the Simutext readings, require student involvement, including synthesizing new information, interpreting data, and/or presenting ecological news items, among other activities. Points will be lost from your grade if you do not attend lecture so be prepared to attend lecture and participate in it. Total maximum points for in-class activities = 208.

**Note that laptops and smartphones* are NOT allowed to be used in class.** You must bring writing materials (notebook, pens, etc.) in order to take notes during class. Many studies have shown that this leads to a “brain on” situation where you listen to and assimilate the information being presented much better. Lecture handouts may at times be made available on Carmen prior to a given lecture – in these cases, you should plan to bring a printed copy of the handout with you in order to make notes on it; at other times, handouts of the lecture material will not be posted to Carmen until after the lecture.

(*Smartphones may be used in place of clickers to respond to in-class questions. Aside from this, however, TAs and instructors will be checking continuously to make sure that the no-laptop, no-smartphone use policy is enforced).

**Ecology-in-the-News.** As part of the course, you are required to keep abreast of current events involving ecology. On two (2) specific dates during the semester, you will be required to bring an ecology-related current event story to lecture. Details of the assignment, including your assigned days, can be found on Carmen. **These summaries must be handed in at the beginning of class to receive full credit. TA’s will then select two people to present their articles to the class, based on interest and relevance to the course material.** Each current event = 5 points. Total maximum points = 10.

**In-class exams.** We will have two mid-term exams and a final exam. Each exam will be worth 100 points. Total maximum points = 300.

**In-class laboratory activities.** Most labs will include a written assignment, which will be due at the end of a given lab period. Your attendance in lab and completion of the written assignment will earn you 10 or 15 points. The laboratory grade will be calculated primarily on the basis of the following criteria: 1) weekly lab write-ups (totaling 145 points); 2) a scientific paper based on a long-term competition experiment (first drafts = 20 points for Introduction and Methods, and 20 points for Results and Discussion; final version = 50 points); 3) a peer review of another student’s competition paper (20 points); and 4) a team (2 students) a) summary of your presentation (10 points) and actual presentation on a scientific paper of your choice (40 points). Total maximum points = 305. See the lab syllabus for more details. **Anyone missing three laboratory periods for reasons other than those deemed appropriate by University rules will be assigned a failing grade for the entire course, regardless of points accumulated.**
FREQUENTLY ASKED QUESTIONS (FAQs):

What should I do if I feel I need some accommodation to allow me to succeed in this course? If you feel you may need an accommodation based on a special need, you should contact Dr. Bauer and Dr. Rothacker to arrange an appointment as soon as possible after the beginning of the semester. At that time we can discuss the course format, anticipate your needs, and explore potential adaptations to meet your needs. We rely on the Office for Disability Services (ODS; http://ods.osu.edu/) for assistance in verifying the need for accommodations and developing accommodation strategies. If you have not previously contacted the Office for Disability Services, please do so at 614-292-3307 in room 150 Pomerene Hall to coordinate reasonable accommodations. Note: The syllabus and lab materials can be made available in alternative media, given advanced notice and documentation from ODS.

What is the course policy on Academic Misconduct? You are responsible for completing your assignments on your own, unless otherwise noted. Examples of plagiarism and other forms of academic misconduct are given in the OSU Code of Student Conduct (http://studentaffairs.osu.edu/csc/), and it is the responsibility of all OSU students to understand what actions might be construed as academic misconduct. See http://oaa.osu.edu/coamfaqs.html for frequently asked question on academic misconduct. Any and all suspected incidents of academic misconduct will be forwarded to the OSU Committee on Academic Misconduct for adjudication.

Will lecture attendance be used in the grading scheme? Yes, for each class you miss, you will lose 8 points guaranteed. Attendance will be monitored through the use of clickers (clicker questions will be scattered throughout lecture sessions, including beginning, middle and end), as well as through you turning in responses from our in-class activities. We are requiring that you to attend class primarily because we want you to succeed. We expect our exams to be difficult. Thus, attending class would 1) help you do better on exams because material will be covered in lecture that will not be available either in the textbook or the lab manual and 2) allow you to earn relatively “easy” points to offset potential deficits incurred elsewhere in the course. Make it a habit to attend class on a regular basis!!

Why are we using an interactive textbook instead of a “real” textbook? We chose to use an electronic textbook for three reasons. First, a growing body of research has shown that interactive learning approaches can help students retain information for a longer period of time than simply reading (for example). Our SimUText offers numerous ways (e.g., hierarchical modeling building, mathematical exercises, answering questions) to help you learn and remember difficult concepts. Second, we will use a lot of active learning methods in class instead of simply lecturing with examples from a text. By having you answer questions online as you do the SimUText readings, we can better identify which concepts are being misunderstood, and in turn, focus our lectures on those concepts. In addition to helping ensure that you learn difficult information, we can avoid wasting time on easily understood information and then have more time to learn other things that are not in the SimUText. And third, by assigning points to SimUText questions, you will be more inclined to read the material, which will improve your grade and help ensure that you are achieving our leaning objectives.

Why are we not only lecturing during lecture? A growing body of research has shown that active (interactive) learning approaches in classroom can help students retain information for a longer time than through lecturing alone. Likewise, this same body of research has shown that active (interactive) learning can significantly improve critical thinking skills, which will be critical to your ability to get a job and succeed at it. In essence, our decision to include active learning components in the classroom adheres to the philosophy that students learn science best by doing science.

What do I have to do for the final exam? The third of the three lecture exams will be given during Final Exam week. It is currently scheduled for Monday, May 4 from 4:00–5:45 PM in our regular lecture room, 1184 Postle Hall. This exam will not be “comprehensive”, as it will focus on the third
portion of the course. However, you will also need remember the basic principles and concepts from
the previous two-thirds of the class in order to be successful in the last exam.

If for any reason you cannot take the final exam as scheduled, you must submit a written
request to Dr. Bauer and Dr. Rothacker to take this exam at a different time, and must justify
this request with a reasonable academic argument. Conflicts with airline reservations or vacation
trips do not constitute reasonable academic arguments. All such requests must be submitted no later
than March 5.

What if I miss an exam? Make-up exams will be given only if the student must miss the regularly
scheduled exam due to 1) a university-organized or university-sanctioned event or 2) a medical or
family emergency. In the case of a university-organized or-sanctioned event, the student must submit
appropriate documentation no later than 10 days before the examination, and must schedule the
time and place for the make-up exam with Dr. Bauer or Dr. Rothacker prior to the event. In the case
of medical emergency, the student must submit documentation from a licensed medical care facility
or provider as soon as possible after the exam is given. Only Dr. Bauer and Dr. Rothacker can
approve make-up exams; do not take requests for make-up exams to your lab instructor.

What happens if my classroom clicker is not working or working incorrectly? You will receive
information via email about registering your clicker in advance of class. Please make sure to register
your clicker. We also will take time during the first lecture period to test clickers and resolve any
problems immediately. However, it is your responsibility to make sure that your clicker is working
correctly and that your score is being recorded. Towards this end, clicker points will be posted within
48 hours of class so that you have time to check your grade and make sure your clicker is working
properly. If your clicker is not working, it will be your responsibility to notify Steve Gougherty
(gougherty.2@osu.edu), the GTA in charge of clickers, within 24 hours of the clicker points being
posted on Carmen. Thus, check your grades on Carmen regularly so that you can catch any issues
early. You will not receive any points or credit if Steve is not notified of clickers failing to work
properly within 24 hours of scores being posted to Carmen.

What if I am having issues accessing or effectively using the SimUText? SimBio, the creator and
administrator of our SimUText site, has provided a couple of different ways to get help. First, if you
are having any technical difficulties with the SimUText site (e.g., cannot install the program, cannot
download it, cannot register answers), then please check out SimBio’s support page
at http://simbio.com/support/simutext which contains information on how to properly subscribe and
install SimUText, as well as on known issues with the software. If you still are having technical
difficulties, then you should email SimBio at simutextsupport@simbio.com. Their policy is to
respond within 24 hours of any request, and most likely it will be much sooner. Second, SimBio has
created numerous video tutorials that can help you use SimUText effectively. The full list of tutorials
can be found at http://simbio.com/support/simutext. We strongly encourage you to watch all of
these tutorials. The 15 or so minutes that you spend watching these tutorials could save you
countless hours later, and help ensure that you are using the SimUText chapters and website to your
maximum benefit.
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Class #</th>
<th>Topic</th>
<th>SimUText Readings (Answer Questions Before Class)</th>
<th>Lecturer</th>
<th>In-Class Points</th>
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