

**BIOE 107: Ecology**  
**Draft syllabus**  
**Summer 2015**

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**Course website is on eCommons:** <https://ecommons.ucsc.edu/xsl-portal>

**Course prerequisites:** BIOL 20A, BIOE 20B, & BIOE 20C

**Course objectives for students:**

- To build models describing and predicting population dynamics.
- To interpret and explain data.
- To construct scientific arguments using evidence from primary literature.
- To enhance writing skills via editing.
- To think about the process of learning (metacognition).

**Course objectives for Instructor:**

- To promote active and inquiry-based learning in the classroom.
- To provide an environment for students to interact with each other and the instructor.
- To provide fair, constructive feedback in a timely manner.

**Required course material:**

- ***A Primer of Ecology (2008) 4th Edition by N.J. Gotelli.*** This book is exceptional in explaining how to building mathematical ecological models from scratch. Each week you will be assigned readings to be done **before** attending lecture. The readings will give you a baseline understanding of the topics we will discuss that day and we will use lecture to expand upon important topics and clarify any muddy concepts.
- **Lab research notebook with carbon sheets**—Roaring Spring item #77641 available at Bay Tree Bookstore. Carbonless paper notebook. Notebooks will be used **in class** for problem solving and group discussion.
- **SimBio Virtual Lab software** (purchase online for \$10 with code obtained via eCommons). Two lab modules have been assigned for homework to facilitate exploration of different scientific methods while simultaneously reinforcing lecture material in an interactive setting.

**Optional textbook:**

- ***Ecology 2<sup>nd</sup> edition (2011) by M.L. Cain, W.D. Bowman, & S.D. Hacker.*** This text describes a broad array of topics surrounding the field of ecology. It could be used to supplement your understanding of the topics covered in class.

### Lecture schedule and readings for Gotelli:

Date	Topic	Read <i>before</i> lecture
<b>July</b>		
Tue 28	Introduction Exponential and logistic population growth	Ch. 1: pgs 2-14 Ch. 2: pgs 26-37
Thur 30	Life tables	Ch. 3: pgs 50-65 & 74-79
<b>August</b>		
Tue 4	Competition <b>SimBio Isle Royale graded questions due online by 9pm</b> <b>1<sup>st</sup> writing assignment due on eCommons by 9pm</b>	Ch. 5
Thur 6	Island Biogeography + Species Diversity <b>Field trip to Redwood forest on campus—wear appropriate clothing + shoes</b>	Ch. 7 Ch. 9: pgs 204-208 & 219-223
Tue 11	MIDTERM ( <i>includes material covered through Aug 6th</i> ) <b>2<sup>nd</sup> writing assignment due on eCommons by 9pm</b>	
Thur 13	Writing workshop <b>Bring hardcopy of writing assignment or computer to class for peer revision and discussion</b>	The Science of Scientific Writing PDF
Tue 18	Predation	Ch. 6
Thur 20	Metapopulation dynamics <b>Final writing assignment due on eCommons by 9pm</b>	Ch. 4
Tue 25	Succession <b>SimBio Patchy Prairies Exercises 3 &amp; 4 due in class</b>	Ch. 8
Thur 27	FINAL EXAM ( <i>weighted more heavily on material covered after the midterm</i> )	

### Grading:

- 25% Lecture participation and preparedness—assessed by in-class assignments. *Note: I will drop your lowest score*
- 10% SimBio Homework
- 30% Midterm exam
- 35% Final exam
- P/NP writing assignment

### Midterm and Final exams:

- Midterm exam will be Tuesday August 11<sup>th</sup>. *It will cover material up to and including Thursday August 6<sup>th</sup>.*
- Final exam will be Thursday August 27<sup>th</sup> and will be **cumulative**, *but will more be more heavily weighted (about 2/3 of the exam) towards material covered after the midterm.*
- Make-up exams are not offered except under extraordinary (and documented) circumstances, and may be in a different format (oral or essay) than standard exams.
- Both exams will consist of only short answer questions (i.e. there will be **no** fill in the blank, pairing or multiple choice questions).
- **There will not be review sessions prior to exams.** One of the goals of this course is to encourage critical and active learning, and discourage the rote memorization of disconnected facts immediately before an exam. Lecture, in-class discussions, i-clicker questions, and pre-class quizzes will provide an ample foundation for what to expect on the exams.
- **I will not re-grade exams or assignments unless there is an error in the points tally.** I take great measures to ensure that all assignments and exams are consistently and fairly graded. In other words: I will not re-grade your exam or assignment because you do not like your grade. If you do find there has been an error in the calculation of your grade please write a formal explanation for where you think the error has occurred, attach it to your exam, and talk to me after lecture or during office hours.

### Disciplinary Communication Assignments:

- Disciplinary Communication (DC) assignments will be assessed on a pass/no-pass basis, and **you cannot pass the class without receiving an overall passing grade on the DC assignments.**
- The reason for grading the DC assignments on a pass/no pass basis is to help students improve their writing without the anxiety of having the writing assignments contribute quantitatively to the course grade.
- You will be required to write at least 12 (single spaced) pages. The 12 page writing requirement will be fulfilled by writing an essay that explores the progression of two schools of thought regarding the field of conservation biology– one side of the argument is led by Michael Soule and the other is led by Peter Kareiva and Michelle Marvier.
- A detailed grading rubric for the **first** assignment will be distributed the first day of class. Additionally, there will be **specific rubrics for the remaining 2 assignments**, these will be available in each eCommons assignment folder. ***Be sure to review each grading rubric and clearly address each item on the rubric.***

### Academic Integrity (please read, I take this very seriously):

- Academic misconduct includes, but is not limited to, cheating, fabrication, plagiarism, or facilitating academic dishonesty. Everything you submit to be graded in this course must be written in your own words and to the best of your understanding of the course material. Academic misconduct in any part of the course may result in at least one of the following actions: 1) failing the particular assignment, 2) failing the entire course, and 3) disciplinary sanctions from UCSC.

- This course is designed to encourage student discussion of course material, but copying or paraphrasing someone else's work is not acceptable. Borrowing from the work of previous students is also not okay. Additionally, copying directly from, or cutting and pasting from, published work, including the internet, even if you cite the author, is considered plagiarism. The consequences of cheating and academic dishonesty can potentially ruin your academic and future careers, so please don't do it. If you have any concerns about your work bordering on plagiarism talk to me before you submit the assignment. Lastly, using another person's i-clicker, or having someone use yours, is considered cheating and I will also report this offense to your college.
- **I will report students caught plagiarizing to their college for disciplinary sanctions, even if it was an accident, a small amount of plagiarism, or a first time offense.**
- For more information regarding UCSC's Academic Integrity policy please see:  
[http://www.ue.ucsc.edu/academic\\_integrity](http://www.ue.ucsc.edu/academic_integrity)

**DRC accommodation:**

If you qualify for classroom accommodations because of a disability, please submit your Accommodation Authorization from the Disability Resource Center (DRC) to me after class or during my office hours as soon as possible, preferably within the first two weeks of the quarter. For other questions or concerns regarding the DRC please contact them directly at 831-459-2089 or by email at [drc@ucsc.edu](mailto:drc@ucsc.edu).

**Drop/withdrawal deadlines:**

Drop Deadline - Aug 3

Withdraw Deadline - Aug 14