

BIEB 102 General Information, Winter 2020

INTRODUCTORY ECOLOGY: ORGANISMS & HABITATS. 4 units. BIEB 102 is an introduction to ecology with an emphasis on the principles that shape organisms, populations, and ecosystems. Topics to be discussed include population dynamics, adaptation to the physical environment, competition, predation, mutualism, and historical trends in human exploitation. We will delineate the climatic, biotic and human factors contributing to structure and function of ecological systems and discuss the types of natural and human-mediated disturbances that influence species persistence. BILD 3 is a prerequisite for this course.

Professor: Jonathan Shurin (4258 Muir Biology Building)

Contact information: *email* jshurin@ucsd.edu; *office hours* Wednesday 2-3pm or by appointment

• **Exams and grading.** You get to choose how you will be graded in this course, however, there are only two options:

Option 1- Exams only. There will be 3 exams weighted equally (30%). Weekly quizzes given in discussion section will be worth 10%. To choose Option 1, attend class, discussion section and exams and do nothing else.

Option 2- Exams plus clickers. There are three exams, each worth 28% of your grade, plus section quizzes worth 10%, for a total of 94%. The remaining 6% of your grade comes from participation in class with clicker questions. You will receive the full 6% if you answer at least 75% of the questions in 75% of the lectures. The clicker questions will be similar to the exam questions. The 25% buffer for missed questions is to allow for the possibility of forgotten clickers, battery failure, illness, etc., so do not notify me or ask for exemption in case of any of these events. To choose Option 2, register a clicker by the end of Week 3 and clicker points will automatically be included in your grade. If you do not register a clicker by Week 3, you will automatically be graded based on Option 1.

Each exam will be based on material for that section of the course up to the lecture preceding the exam. Questions concerning exams are dealt with in office hours or discussion sections – not by email. Students wishing to have questions from exams re-graded must submit a written request specifying the questions in dispute and the reason for the re-grade to the Instructional Assistant (IA) who graded the question within one week of the date the exam was returned to you. There are no make-up exams. If you miss a midterm or final exam, then you will be required to provide official documentation of an unavoidable emergency (e.g., serious illness, etc.). Without such documentation, you will receive no credit for that exam. For a missed midterm with valid documentation, your final grade will be the average of the other midterm and the final. For a missed final exam **with** valid documentation, you will be expected to take the final orally or you will receive an incomplete for the course.

• **Lectures.** It is your job to attend lectures (Tu-Th 9:30-10:50 in Tata Hall 3201). Attending lectures is key to mastering the material, receiving the participation credit and important announcements. Do not expect to miss lectures consistently and be able to do well in the course. Lecture notes will be posted on TED at least 24 hours before each lecture, **but essential material will be presented in class that does not appear on web-posted notes.** Please turn off cell phones before each lecture. Lectures will be podcasted at podcast.ucsd.edu.

• **Readings.** There are recommended reading from the text each week. The text is not required but is on reserve at BML as an additional resource to help you understand the material.

• **Quizzes.** Quizzes cover material from several of the lectures and will be covered in Discussion Sections. Problem sets are not graded, but similar material will appear on exams.

• **Discussion sections.** Sections are not required, but you will lose credit for quizzes (worth 10% of your grade) if you do not attend. Sections will meet during the first week. See Canvas for information regarding times and locations of discussion sections. Papers from the primary ecological literature will be discussed in section and tested on the exams. These papers will not be covered in lecture, so be sure to attend section for discussion of the material. Papers will be posted on Canvas.

• **Cheating.** Don't. Any student caught cheating will receive an F in the course. For information on academic integrity at UCSD: <http://www-senate.ucsd.edu/manual/appendices/app2.htm>

Lecture & date	Subject	Chapters in text*
Tues 7 Jan	1. Course overview: what is ecology?	1
Thurs 9 Jan	2. Physical environment & productivity	2,20
Tues 14 Jan	3. Niches & biomes	3,4
Thurs 16 Jan	4. Nutrient cycling I: nutrients, water	4,22
Tues 21 Jan	5. Nutrient cycling II: carbon cycle & climate	5
Thurs 23 Jan	6. Climate change in California	
Tues 28 Jan	7. Midterm 1	
Thurs 30 Jan	8. Physiological ecology	5,6
Tues 4 Feb	9. Life history evolution	7
Thurs 6 Feb	10. Exponential & logistic population growth	10
Tues 11 Feb	11. Life histories & age/stage structure	7,9
Thurs 13 Feb	12. Dynamics in space and time	11
Tues 18 Feb	13. Mutualism & parasitism	15
Thurs 20 Feb	14. Predation	13
Tues 25 Feb	15. Midterm 2	
Thurs 27 Feb	16. Inter-specific competition	12
Tues 3 Mar	17. Disease ecology and epidemiology	
Thurs 5 Mar	18. Theories of diversity & community structure	14
Tues 10 Mar	19. Food webs	16,19
Thurs 12 Mar	20. Island Biogeography & effects of diversity	21
Tues 17 Mar	21. Final Exam, 8-11am	18

IA contact info and office hours will be posted on TED during week 2.

* **Text:** Cain, Bowman and Hacker (2014) *Ecology*. Sinauer Associates.