ECOLOGY AND EVOLUTION (BIOL 3250 E) -- Spring Semester 2023

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Office Hours: MW 2-3,T 11-12, other times by appointment.

Texts: Smith, R.L., and T.M. Smith. 2001. Ecology and field biology. 6th ed. Benjamin Cummings, San Francisco, CA. 771 pp.
Hall, B.K., and B. Hallgrimsson. 2008. Strickberger's Evolution. 4th ed. Jones and Bartlett, Boston, MA. 762 pp. (Or 5th ed., 2013)
**STUDENTS ARE RESPONSIBLE ON EXAMS FOR ALL INFORMATION FROM LECTURE NOTES, HANDOUTS AND ASSIGNED READINGS.

Lecture: four 100-pt. lecture exams.
*Tentative Exam Dates: Feb 8, March 8, April 19, May 4 (Th, 2:45 pm)

Lab is about 1/3 of course grade, from writeups of field/laboratory exercises; including original investigations and computer simulations.

LECTURE SCHEDULE

Week #	Topic	Chapters in: Evolution (V), otherwise Ecology
1	Introduction to Ecology	1
1	History and Fundamentals of Evolutionary Theory	V1-3
2	The Nature of Variation	Skim V9- 10
2-3	Species and Phylogenies	V11, Skim V12
3	"Evo-Devo"	V13
4-5	Population Genetics and the Mechanisms of Microevolution Patterns of Macroevolution	V21- 23 V24
6-7	Physical and Physiological Ecology Conditions and Resources Nutrient/Mineral Cycles Niche Concepts	5,6,8 Skim 4,7,9 2,27 Skim 25,26 pp. 253-62;383-84
8-9	Population Ecology: Demography, Dynamics, & Density-dependence	10,11, skim 12
10-11	Reproductive Ecology & Life Histories	13
11-12	Interspecific Competition	14
13	Foraging Ecology, Predator-Prey	15,16
14	Community Structure & Dynamics, Stability, Diversity, & Complexity	20
15	Ecosystem Development, Island/Landscape Ecology, Conservation Biology and Preservation of Biodiversity	21,22,23

Ecology and Evolution (BIOL 3250) – Spring 2023 Expectations of Students

1. The text chapters will serve as your introduction and background to the lecture topics. Therefore, read them carefully, preferably before the lecture; otherwise, you may find that you are lost! Success in this course demands that you attend every day and come to class prepared.

2. On weeks that I inform you we will be in the field, be prepared to leave for the field promptly at lab time--this includes APPROPRIATE ATTIRE. It may be hot or cold. We will be encountering briars, chiggers, fire ants, ticks, mosquitoes, and possibly snakes; you are responsible for your own protection against these as well as the climatic elements (I can't control either). You may not make up missed labs; I will deduct points from your grade for any lab absences beyond one.

3. An important part of this course is the writing of laboratory reports and scientific papers. We will be collecting data in the field and lab, and analyzing these data, as a group. You will be receiving written and verbal instructions for preparing a scientific paper early in the semester. I expect you to share the basic data and results of certain analyses. I expect each and every person to do his or her own writing, however. Copying of phrases or sentences from references or even slightly modified phrases and sentences "borrowed" from these sources constitutes **plagiarism** and

Ecological fieldwork can be fun and rewarding, but at times it can be hard work under rigorous conditions. If you are not used to either of the latter two, be prepared for a learning experience that may enrich your life in ways you'll only begin to appreciate now. And since we'll all be doing this together, adopting a positive attitude from the start will improve the already likely prospects of this being a positive experience for everyone.

7. If you should have any kind of question, problem, comment, complaint, crisis, etc., involving this course, I'm the appropriate person for you to talk to. Please come by and see me about it immediately; that's what I'm here for. Feel free to stop by anytime (but try office hours first).

8. STUDENTS WITH DISABILITIES: Students requiring classroom or testing accommodations because of documented disabilities should discuss their needs with the instructor at the beginning of the quarter. To register with the Access Office, go to Farber Hall or call 245-2498 (voice) or 219-1348 (tty).

COURSE GOALS AND LEARNING OUTCOMES:

This course is designed to give the Biology Major a basic understanding of the modern theories and principles of biological evolution, the unifying principle of biology explaining the history of life on Earth and the mechanisms by which descendants become modified from their ancestors; and of the several subfields of ecology, which is the study of the individual organism in the context of its

Quarantine Changes

The USG is also following the CDC's updated guidance regarding quarantine. Those exposed who are unvaccinated or are vaccinated but not fully boosted should quarantine for 5 days followed by strict mask use for an additional 5 days. Those who have received their booster shot or completed the primary series of the Pfizer or Moderna vaccine within the last 6 months or completed the primary series of the J&J vaccine within the last two months DO NOT need to quarantine following an exposure, but they should wear a mask for 10 days after the exposure. For anyone exposed, the CDC says best practice would also include getting tested at day 5 after exposure. If symptoms occur, individuals should immediately remain at home until a negative test confirms symptoms are not attributable to COVID-19. You can read more about the updated CDC guidance here: https://www.cdc.gov/media/releases/2021/s1227-isolation-quarantine-guidance.html

Reporting Cases

VSU continues to maintain a self-reporting portal for COVID+ diagnosis through MyVSU, although its use is no longer required. Please see the image below on where the self-reporting tab is located within MyVSU.

VSU's COVID-19 Task Force will continue to meet as needed. If you have a concern you would like