Course overview

This course is an introduction to ecological and evolutionary theory. Although ecology and evolution are presented as separate disciplines, their interaction is emphasized and proficient knowledge of how ecology and evolution interact is a major learning goal and requirement for passing this course.

While the course presents an integrated view of ecology and evolution, in the first half of the class, the focus is on evolution. Macroevolutionary concepts are discussed in detail, but my presentation of the course is admittedly biased towards population genetics and microevolutionary theory. The emphasis on microevolutionary mechanisms partly reflects the fact that this is my area of expertise and I feel most comfortable teaching this material. But more importantly, I believe that a solid background in microevolutionary mechanisms helps to reinforce the connection between heredity (i.e. genetics) and microevolution, as well as the connection between microevolution and macroevolution.

While basic comprehension of biological evolution requires a solid foundation in microevolution, the theory underlying this subject is largely based on probability theory applied to population genetic data. The quantitative nature of the subject makes it challenging for some students and teachers, so it is often underemphasized in most evolution textbooks (usually given a chapter or two, at most). In the present course, by choosing to emphasize microevolutionary theory, I have taken the opposite approach. My hope is that this emphasis will provide

"Required" texts:

1) Population Genetics and Microevolutionary Theory by Alan R. Templeton; the publisher is Wiley.

Recommended texts:

2) Ecology: Global Insights and Investigations by Peter Stiling; the publisher is McGraw Hill.
3) A Primer of Ecology by Nicholas J. Gotelli; the publisher is Sinauer Associates, Inc.
4) Any general textbook on evolution or ecology.

Unfortunately, there is only one text book in print that covers both ecology and evolution in tandem; for various reasons, I have chosen not to use this particular book. On the other hand, there are many text books that cover ecology and evolution as separate subjects, and many general ecology textbooks include some evolution.

I am only requiring one book (Templeton). The pop gen book may be considered "overkill" by some, as its level is relatively advanced and it contains some information that is beyond the scope of the present course. However, as much time is spent covering microevolutionary theory, I think students will benefit from the additional examples and practice problems contained in this book. Moreover, many of my lectures on this subject are based directly on this text, so reading the book should help to reinforce some of the more challenging lecture material. In my opinion, this is the hardest part of the course for students, and many students have told me that reading the book in tandem was very helpful.

For various reasons, including cost, I have decided not to require an ecology book this semester. However, some students might consider buying or "checking out" a general textbook on ecology or evolution or buying an E-book. Most of these textbooks cover the same topics and most of the topics are covered in this course. Reading another source to reinforce the course material could be very helpful (just remember to skip the stuff we do not cover).

We will be taking multiple field trips into inhospitable areas and during most of these field trips we will be “off trail”. You need to wear long pants and closed toed shoes; long sleeve shirts are also recommended. To avoid mosquitoes and overheating, wear light (or earth) colored clothing. During some of the

Students requiring classroom or testing accommodations because of documented disabilities should discuss their needs with the instructor at the beginning of the semester. Students not registered must contact the Access Office, Farber Hall, Phone; 245-2498. Website: http://www.valdosta.edu/access/
For some students, the presence of a medical condition places them at high risk for COVID-19. These students can use the online form to submit documentation of the condition to the Access Office to ensure confidentiality.

https://www.valdosta.edu/student/disability/forms/request-for-covid19-course-modification.php

The Access Office will then contact the advisor and department to indicate the receipt of documentation that supports the request for course substitutions or appropriate alternative assignments and virtual access to lectures.

VSU cares about student success both on and offline, and a variety of resources are available to help studentsboth academically and personally during the Fall 2020 semester. One of the best resources is VSU's Coronavirus FAQ page located at https://www.valdosta.edu/health-advisory/faq.php. Information is available there about a variety of topics in VSU's return-to-campus plan.

A website devoted to the health and wellness of VSU students can be seen

This is a difficult course, missing lectures or labs (for reasons other than illness) is just a bad idea that will likely affect your grade.

Unless we are forced online, this is a face-to-face course. Attendance is for all laboratories and is strongly encouraged for lecture. Do not be excessively and consistently late for lab or lecture, especially field labs. Also note that there are no make-up labs. For in-class labs, I simply do not have the extra time to go over an intricate three-hour lab with students who happen to miss class. If there are extenuating circumstances, talk to me, and we will work something out.