

Special Topics in Evolution and Ecology: Dimensions of Biodiversity
Spring 2024 BIOL 7010 (CRN #26759)
Valdosta State University, Biology Department, College of Science & Math

Instructor: Dr. John G. Phillips (he/him)
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Class Times: Tuesdays 3:30–5:20pm, Bailey Science Center Room 2022

Office hours: Wednesdays 1:00 PM – 2:00 PM, Thursdays 10:00 AM – 2:00 PM
Or by appointment (please send an email to my valdosta.edu account with “appointment” in the subject line and I will accommodate as time permits).

Course Description: In this course, students will learn about biodiversity across different dimensions. Course instruction will be combined with discussion of scientific literature to enhance our understanding of the causes and consequences of biological diversity.

Required Texts: None

This is a Core IMPACTS course that is part of the Technology, Mathematics & Sciences area. Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and support students’ broad academic and career goals. This course should direct students toward a broad Orienting Question:

- *How do I ask scientific questions or use data, mathematics, or technology to understand the universe?*

Completion of this course should enable students to meet the following Learning Outcome:

- *Students will use the scientific method and laboratory procedures or mathematical and computational methods to analyze data, solve problems, and explain natural phenomena.*

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- *Inquiry and Analysis*
- *Problem-Solving*
- *Teamwork*

Course Objectives: The objectives of this course are (1) to learn about how biological diversity is generated and maintained and its distribution across time and spatial scales, and (2) to apply the scientific process by developing and conduct a research project. More specifically, students will learn:

- to generate a good scientific question (with testable predictions)
- to read, interpret, and critically think about scientific papers
- to design a research study to answer a scientific question
- to collect, analyze, and interpret data as related to biological diversity
- to disseminate and present results to peers and to general public

Assignments and Grading: Students will be graded on their performance and participation in classroom discussions and a final project as specified by your instructor. **UNLESS OTHERWISE SPECIFIED.** All late assignments will be subject to a 10% penalty every day an assignment is late.

1. **Class Discussions (50%):** Throughout the semester, students will learn how to read and synthesize peer-reviewed literature pertinent to the lessons learned in class. Students are expected to attend and participate in vigorous discussion.
2. **End of Semester Project (50%):** Each student will develop a project in this class dealing with the themes of biodiversity. This project can be empirical, experimental, or literature-based and should be selected after discussion with the professor. Students will present their project by both writing a paper and delivering a 15-minute presentation to be given during class.

Attendance Policy: Absences resulting in >20% of missed class time (**i.e., three classes**) may result in an automatic grade of F as per university policy. Full absence regulations are available online at <http://catalog.valdosta.edu/undergraduate/academic-affairs/>. I will not regularly take attendance, but lack of class participation will negatively impact your grade and it is hard to participate when absent.

Class SCHEDULE (subject to change per professor's discretion)
**Notification of any changes will be provided to the students in advance*

Week	Date	Topic
1	Jan. 9	Introduction to the course and each other
2	Jan. 16	What are the dimensions of diversity?
3	Jan. 23	Diversity across space: Species-Area Relationships
4	Jan. 30	Diversity across space: Gradients
5	Feb. 6	Phylogenies. How to read and how to make
6	Feb. 13	Formation of Diversity: Traits and Adaptations
7	Feb. 20	Formation of Diversity: Species
8	Feb. 27	Formation of Diversity: Ecological Communities
9	March 5	WHY SHOULD WE CARE? Neutral Models
10	March 11	Spring Break – NO CLASS
11	March 19	WHY SHOULD WE CARE? Conservation
12	March 26	Reserved for Final Presentations
13	Apr 2	Reserved for Final Presentations
14	Apr 9	*If we complete everything as intended, we will not meet these final
15	Apr 16	weeks. However, keep these dates open in case we discover that we have
16	Apr 23	more to accomplish together.

Academic Integrity: By taking this course, you agree that all required course work may be subject to submission for textual similarity review to Turnitin, a tool within Blazeview. Penalties for plagiarism will be at the discretion of the professor with a minimum of an automatic 0 for the assignment with possible failure of the course.

Privacy Act (FERPA): The Family Educational Rights and Privacy Act (FERPA) prohibit the public posting of grades by social security number or in any manner personally identifiable to the individual student. No grades can be given by email or over the telephone, as positive identification cannot be made by this manner. Grades will be posted through Blazeview course website.

Non-Discrimination and Title IX Statement: Valdosta State University (VSU) upholds all applicable laws and policies regarding discrimination on the basis of race, color, sex (including sexual harassment and pregnancy), sexual orientation, gender identity or expression, national origin, religion, age, veteran status, political affiliation, or disability. The University prohibits specific forms of behavior that violate Title IX of the Education Amendments of 1972. Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in education programs and activities that receive federal funding. VSU considers sex discrimination in any form to be a serious offense. Title IX refers to all forms of sex discrimination committed against others, including but not limited to: sexual harassment, sexual assault, sexual misconduct, and sexual violence by other employees, students or third parties and gender inequity or unfair treatment based on an individual's sex/gender. The designated Title IX Coordinator for VSU is Ms. Selenseia Holmes. To view the full policy or to report an incident visit: <https://www.valdosta.edu/administration/student-affairs/title-ix/>

Access Office: Students with disabilities who are experiencing barriers in this course may contact the Access Office (<https://www.valdosta.edu/student/disability/>) for assistance in determining and implementing reasonable accommodations. The Access Office is located in University Center Room 4136 Entrance 5. The phone numbers are 229-245-2498 (V), 229-375-5871. For more information, please visit VSU's Access Office or email: access@valdosta.edu. To request reasonable accommodations for pregnancy and childbirth, contact Ms. Myia Miller, Title IX Compliance Officer, at maburden@valdosta.edu. Please note, you will be required to provide documentation from an appropriately licensed medical professional indicating the requested accommodations are medically necessary.

COVID-19 related policy: As the Blazer Creed articulates, members of the VSU community are expected to live by the high standards of civility, integrity, and citizenship and embrace their responsibility as a member of the Blazer community. In recognition of this responsibility, and in response to the best available science and current guidance from the Centers for Disease Control and Prevention and the Georgia Department of Public Health, while face coverings are no longer required, individuals are strongly encouraged to continue wearing a face covering indoors. **Unvaccinated individuals are strongly encouraged to get vaccinated. Vaccines remain available at no cost for all members of the university community by appointment at Student Health Services. For COVID Vaccines, please call ahead for an appointment at 229-333-5886.**

Biology Tutoring: The Academic Support Center (ASC) provides unlimited, in-person, free peer tutoring in core courses such as math, English/writing, sciences, social sciences, and languages. We also offer 8 hours of free online tutoring via Tutor.com (8 hours per student, available 24/7). Click the Free Tutoring link in any BlazeVIEW course to make appointments. Please drop by our space in Odum Library, 2nd floor, or call 229-333-7570, email asc@valdosta.edu, or visit the website www.valdosta.edu/asc for more information.

Campus Gun Carry Statement (HB 280): If you choose to carry and concealed weapon on campus, you are responsible for knowing and following the law. Refer here for FAQ: valdosta.edu/administration/finance-admin/police/campuscarry/

SOI Statement: At the end of the term, all students will be expected to complete an online Student Opinion of Instruction survey (SOI) that will be available through SmartEvals. Students will receive an email notification through their VSU email address when the SOI is available (generally at least one week before the end of the term). SOI responses are anonymous to instructors/administrators, and they will be able to access results only after they have submitted final grades. Before final grade submission, instructors will not be able to see any responses, but they can see the percentage of students who have or have not completed their SOIs. While instructors will not be able to see student names, an automated system will send a reminder email to those who have yet to complete their SOIs. Students who withdraw or drop a course will also be sent invitations to complete the Dropped Course Survey. Complete information about the SOIs, including how to access the survey, is available on the SOI Procedures webpage.