

Evolution and Ecology- Spring 2002

ABIO 370 (4 credit hours)

Instructor: Dr. Andrew Dyer
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Lecture: TTh 10:50- 12:05 SBDG 107
Lab: T 1:40-4:30 SBDG 107
Office hours: MTW 9:00-10:30, and by appointment

Course readings

The required text is M. C. Molles. 1994. *Ecology: Concepts and Applications*. 2th Ed.
There will be several other required readings that I will make available.
You will need a lab notebook; bound, not looseleaf.

Course description

This course is intended as an introduction to the theoretical and practical concepts of evolution and ecology for biology majors with no previous experience in these two fields. Because of the conceptual nature of this course, an emphasis will be placed on understanding and synthesis and less on memorization. To accomplish the goals of the course, students will be required to read scientific writings and to write good quality essays and summaries of reading assignments. Class projects will also require background reading, data analysis, and report writing. Examples from both plant and animal kingdoms will be presented and discussed. Information will be presented in the form of lectures, discussions, reading assignments, group reports, and laboratory exercises. ABIO 102 and AMTH 111(or their equivalents) are prerequisite for this class unless you have approval from the instructor.

Laboratory description

This session will be used for exploratory labs, formal and informal discussion of lecture, text, and supplementary material, individual and group investigations and presentations. Assignments in lab will have due dates depending on the assignment, but the last lab of the semester is the last day any regular work can be accepted. Any supplementary reading materials assigned for lab discussions given in class or will be available for photocopying outside Room 101E in the Sciences building.

Objectives

- To acquaint the student with the basic evolutionary principles governing the processes of natural selection and adaptation, and ecological principles describing the regulation of plant and animal abundance and distribution.
- To acquaint the student with the current understanding of the mechanisms governing ecological interactions among organisms and the close association between evolutionary and ecological principles and theory.
- To improve the ability of students to recognize, identify and analyze evolutionary and ecological processes in the natural world.

Competencies

By the end of this course, the student will have demonstrated the ability to

- Discuss basic evolutionary and ecological principles, and understand contemporary examples that illustrate the basic principles.
- Describe potential mechanisms by which organisms interact and compete for resources in nature.
- Describe basic methods for quantifying interactions between organisms and their environment whether in the laboratory or in the field and through statistical analysis.

Optional field trips

There may be short field excursions during the lab periods on Tuesday. Activities in the field may include informal lecture and discussion, plant and animal identification, and data collection for analysis in the laboratory.

Quiz and exam dates

A quiz will be given at the beginning of several labs covering material in the text (see schedule).

Lecture exams will be given February 14, March 21, April 18.

The final exam will be given at 11:00 am on Thursday, May 2.

Exams will be short answer with some objective sections

Exams

If you are going to miss a lecture exam, you must inform Dr. Dyer **before** the day of the test unless absolutely unavoidable (i.e., medical with a note) in which case there must be a phone call to Dr. Dyer or to the Biology Department office.

All make-ups will be in the form of a 60 minute **oral** exam.

A quiz cannot be made up. The final cannot be taken early.

Grading

10% lecture quizzes

30% three lecture exams

20% final exam

10% from reading assignments

10% oral lab presentations

10% written lab reports

There are no bonus points, but when grades are computed, students who took a more active role in the class and lab will get the benefit of the doubt. Attendance counts.

Lecture and lab grades are computed separately; final grade is a combination of the two.

Late assignments lose 10% per day.

Final grades will tend to be in the range of A>88%, B>78%, C>65%.

Exams typically will be short answer and objective questions.

When I grade subjective assignments (e.g., essays and reports), I judge them according to how much effort went into them. Spelling, grammar, organization, and thoughtfulness count as does the ability to tie together different concepts from class. I will make every effort to return graded assignments in one week and often with comments.

Additional comments

1. Preparation for class includes reading the assigned material beforehand.
2. If you are having difficulty with any aspect of this course, please come see me as soon as possible. If my regular office hours conflict with your schedule, you can make an appointment to see me at a more convenient time.
3. If you have a physical, psychological, and/or learning disability that might affect your performance in this class, please contact the Office of Disability Services, 126A B & E, (803) 641-3609 as soon as possible. The Disabilities Services Office will determine appropriate accommodations based on medical documentation.
4. You will be expected to endorse the following Honor Pledge on every quiz or exam:
On my honor as a University of South Carolina Aiken student, I have neither given nor received any unauthorized aid in this assignment/examination. To the best of my knowledge, I am not in violation of academic honesty.
5. Students are expected to adhere to the University attendance policy as stated in the Student Handbook.

