

BIOL 1442: Evolution and Ecology
Spring 2016

Instructor(s): Dr. Walter E. Schargel

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Note about emails: on a typical semester I have more than 400 students in different classes and sometimes it is difficult for me to reply to every single email I get. Part of the problem is students who email me without providing me a full name or the course/section they are taking from me. In other cases questions asked are in the syllabus (e.g. "when is our final?"). The bottom-line is: email me if it's important and always include your full information. It is always better to talk to me after class; I don't mind staying a few more minutes to answer your questions.

Faculty Profile: <http://www.uta.edu/profiles/Walter-Schargel>

Office Hours: Monday & Wednesday 10:00 a.m. – 12:00 noon.

Section Information: BIOL 1442 sec 003

Time and Place of Class Meetings: LS 122, Tuesday and Thursday 12:30–1:50 pm.

Description of Course Content: Reviews significant aspects of organismal biology and presents current hypotheses concerning the origin and diversification of life on earth. The ecological and behavioral interactions between organisms and their biotic/abiotic environments are considered from an evolutionary perspective. The laboratory will examine evolution, ecology and the diversity of life using hands-on observational and experimental approaches. Prerequisite: BIOL 1441.

Student Learning Outcomes: Student will develop a basic understanding of 1) the diversity of extant organisms; 2) the evolutionary mechanisms by which this diversity has arisen and is maintained; 3) ecological interactions within and among species, and between organisms and their environment; and 4) significance of the identity and role of Homo sapiens in the context of evolution, ecology, and biodiversity.

Required Textbooks and Other Course Materials: We will follow the Campbell Biology book (10th edition) fairly closely. Because the content of BIOL 1442 has been completely changed this semester I strongly recommend you get the book (any of the last three editions will do).

Attendance: At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I allow students to attend class at their own discretion; however, students that attend on a regular basis tend to do better than those students that don't. My exams included bonus questions that related to examples that I talk about in class but that won't necessarily be in the book or my PowerPoint presentations.

Grading: Your lecture grade is 67% (2/3) of your total grade. Your lab grade is 33% (1/3) of your total grade.

- A. 3 Lecture Examinations, each 100 pts (multiple choice, lowest grade dropped)
 - B. Final Examination- comprehensive, 100 pts (multiple choice)
- *Total possible pts for lecture: 300 pts

- C. To calculate your grade: Lecture- Add your exam points together and divide by 3, then multiply times 0.67. Lab- multiply lab grade times 0.33. *Add those numbers together for your final grade.
- D. Grades: A = 89.5-100; B = 79.5-89.4; C = 69.5-79.4; D = 59.5-69.4; F = 59.4

Make-up Exams: There will be no make-up exams unless an unanticipated and severe problem prevents attendance on the scheduled date, or unless the student is representing the University in an officially recognized activity for which University policy allows an excusable absence (e.g. intercollegiate athletics). Written documentation of circumstances is required for make-up exams. Valid documentation includes: Doctor's notes, court orders, and police reports. Make-up exams will be given only at times scheduled by the Biology Department for this purpose. All make-up exams will be short essay format and the grading will be at my discretion.

Expectations for Out-of-Class Study: Biology is not really a difficult subject; however, the amount of information we will cover, including concepts, terminology, dates, and names, can be overwhelming. The key to succeed is to study every week at least six hours, preferably two hours of study after each lecture while the information is still fresh in your mind. Regrettably, many student wait until the night before the exam to study, which is certainly not enough to digest all the material.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/aao/fao/>).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the **Office for Students with Disabilities (OSD)**. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364.
Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671.

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos. For information regarding Title IX, visit www.uta.edu/titleIX.*

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. In addition to this, students involved in academic dishonesty will received a 0 as grade on the exam. If academic dishonesty reoccurs that student will automatically fail the course.

Lab Safety Training: Students registered for this course must complete all required lab safety training prior to entering the lab and undertaking any activities. Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e., through the following August) and must be completed anew in subsequent years. There are no exceptions to this University policy. Failure to complete the required training will preclude participation in any lab activities, including those for which a grade is assigned. To complete lab safety training follow the steps below:

1. Login to **Blackboard** at <https://elearn.uta.edu> with your NetID and password.
2. Under **My Blackboard** tab, click **Lab Safety Training**.
3. Click **Welcome** from the left pane to start and follow the instructions.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. Exits are located nearby after exiting LS 122. The nearest exit is located on the west side of the building (turn left after you exit the lecture room), but other exits are also available on the north and east side of the building. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at <http://www.uta.edu/universitycollege/resources/index.php>

Course Schedule

Week	Topic
1 st : Jan 19–22	Syllabus / Ch 22
2 nd : Jan 25–29	Ch 22 and 23
3 rd : Feb 1–5	Ch 24 and 25
4 th : Feb 8–12	Ch 25 and 26
5 th : Feb 15–19	Exam 1, Ch 26
6 th : Feb 22–26	Ch 27 and 28
7 th : Feb 29–Mar 4	Ch 29 and 30
8 th : Mar 7–11	Ch 31, Catch up
9 th : Mar 14–18	Spring break!!!
10 th : Mar 21–25	Exam 2, Ch 32
11 th : Mar 28–Apr 1	Ch 33 and 34
12 th : Apr 4–8	Ch 51, Catch up
13 th : Apr 11–15	Exam 3, Ch 52
14 th : Apr 18–22	Ch 53 and 54
15 th : Apr 25–29	Ch 55 and 56
16 th : May 2–6	Catch up/ Final Review
May 12 (Thursday)	FINAL EXAM 11:00 – 1:30 pm.

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. –Dr. Walter E. Schargel

Book Chapters:

Chapter 22: Descent with Modification: A Darwinian View of Life

Chapter 23: The Evolution of Populations

Chapter 24: The Origin of Species

Chapter 25: The History of Life on Earth

Chapter 26: Phylogeny and the Tree of Life

Chapter 27: Bacteria and Archaea

Chapter 28: Protists

Chapter 29: Plant Diversity 1: How Plants Colonized Land
Chapter 30: Plant Diversity 2: The Evolution of Seed Plants
Chapter 31: Fungi
Chapter 32: An Overview of Animal Diversity
Chapter 33: An Introduction to Vertebrates
Chapter 34: The Origin and Evolution of Vertebrates
Chapter 51: Animal Behavior
Chapter 52: An Introduction to Ecology and the Biosphere
Chapter 53: Population Ecology
Chapter 54: Community Ecology
Chapter 55: Ecosystems and Restoration Ecology
Chapter 56: Conservation Biology and Global Change