

Evolution & Ecology BIOL 1442 for Science Majors

T/Th 11⁰⁰ - 12²⁰pm LS 122 (section 001)

T/Th 5³⁰ - 6⁵⁰pm LS 122 (section 003)

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Office Hours: T/Th 3⁰⁰-3⁴⁵ T/Th 4³⁰-5¹⁵ & by appointment LS 460

** Fall 2017 ** Please note **census date Sep 11** and **drop deadline Nov 1** **

Description of Course Content: Reviews aspects of organismal biology. Presents current hypotheses concerning the origin and diversification of life on earth. The ecological and behavioral interactions between organisms and their biotic/abiotic environment are considered from an evolutionary perspective. 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.

This course satisfies the University of Texas at Arlington core curriculum requirement in life and physical sciences. The italicized student learning outcomes required of core courses below will be assessed for each student in the laboratory portion of the course. The final lab report will be assessed to determine how a student has mastered critical thinking, communication, and empirical and quantitative skills. A teamwork assessment (peer evaluation) will be completed by each student in lab to determine how students work together in lab groups to achieve the student learning outcomes described below.

Student Learning Outcomes

1. Understand crucial biological processes and structures that maintain life
2. Gain a familiarity with biological concepts related to issues of health, social and environmental concerns by investigating case studies in lecture
3. Learn the scientific process by designing and conducting experiments, collecting and analyzing data, and presenting results, in both written and oral formats
4. *Critical Thinking Skills:* to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information;
5. *Communication Skills:* to include effective development, interpretation and expression of ideas through written, oral and visual communication
6. *Empirical and Quantitative Skills:* to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
7. *Teamwork:* to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

This course counts as part of the **Environmental and Sustainability Studies Minor**, a minor that is open to students in all majors, in all colleges. For more information about ESS classes, requirements & advising:

<http://www.uta.edu/cappa/academics/planning-landscape-architecture/environmental-sustainability/>

Requirement: BIOL 1441 (prerequisite) or permission of the instructor

Required Textbook: Campbell et al., *Biology* (10th ed.) ISBN-10: 0321775658

Grading Policy: BIOL 1442 lab component counts for 1/3 of your total grade (see GTA for lab syllabus).

Calculate Your Semester Grade: total = [lecture avg x 0.67] + [lab avg x 0.33]

Lecture Grade:

Midterm Exam 1	= 25% of semester grade (lecture portion)
Midterm Exam 2	= 25% of semester grade (lecture portion)
Midterm Exam 3	= 25% of semester grade (lecture portion)
Cumulative Final	= 25% of semester grade (lecture portion)

Lecture exams will contain a combination of question styles (e.g., multiple choice, matching, true/false). A typical exam will contain between 50 questions. Each student must bring a Scantron form 4521 (full page; blue) and a No. 2 pencil.

semester grade: A = 89.5-100%, B = 79.5-89.4% C = 69.5-79.4%, D = 59.5-69.4%, F < 59.5%

Agenda:

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

Exam #1 Chapters 22-27 Wednesday, September 20, 7:00pm, location TBA

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

Exam #2 Chapters 28-33 Wednesday, October 25, 7:00pm, location TBA

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

Exam #3 Chapters 34, 51-56 Wednesday, November 29, 7:00pm, location TBA

Final Review Week; Guest Lecture / Special Topic (details TBA)

Cumulative Final Exam Saturday, December XX, time and location TBA

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. – Jill DeVito, PhD

Honors Credit: Students enrolled for honors credit will have a chance to hone their public speaking skills. (Trust me – this will serve you very well in your future science career endeavors!) To fulfill your commitment, you will 1) sign up for a timeslot for your 15 minute presentation during the first two weeks of class, 2) submit a topic for approval at least three weeks prior to your chosen date, and 3) present a thorough but concise review of your subject material with visual aides (e.g., PowerPoint). You are also encouraged to submit an outline or draft of your talk for review at least one week in advance. Please see me individually for additional questions or for guidance choosing an ideal topic.

Make-up Exam Policy: Exams can occasionally be made up **with adequate advance notice** by appointment with a graduate student proctor, at your instructor's discretion. If you miss an exam without adequate advance notice, please review the section above regarding the final exam score replacing your missed exam (instead of your lowest exam score). That will be your last resort “make up” plan.

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. Students who attend class tend to earn higher grades, and **I do not recommend enrolling in my class this semester if you anticipate a recurring schedule conflict with work or other responsibilities.** Exam dates are listed clearly in this syllabus, so please plan around them.

Other Requirements: There will be three major exams administered on specific **Wednesday evenings** indicated in the agenda above, **each beginning at 7:00 PM.** The UTA Biology program uses a common exam for Biol 1442 & 1342 (= all instructors participate in making an exam that all students take). You will be assigned a room in which to take the exam, which may be different from the current lecture room. It is your responsibility to attend the correct exam room.

Expectations for Out-of-Class Study: Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional nine hours per week of their own time in course-related activities (reading required materials, completing assignments, preparing for exams, etc.).

Academic Integrity: All students enrolled in this course are expected to adhere to the UTA 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.

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 the event of a suspected breach of academic integrity (collusion, copying, plagiarism, stealing blank copies of a quiz or exam, referring to notes during a quiz or exam, etc.), you will receive a hearing by the Office of Community Standards. The hearing will be fair to the student, and judgments are based on evidence. If the outcome of the hearing finds you to be responsible for breaking the honor code, the penalty for the incident is left up to the individual instructor. It may be as severe as a failing grade for the semester.

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://www.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). Only those students who have officially documented a need for an accommodation will have their request honored. 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. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability.

Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

Non-Discrimination Policy: *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.*

Title IX Policy: The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. *For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or jmhood@uta.edu.*

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., Fall through Summer II) 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. **See your individual laboratory instructor (GTA) for additional information.**

Conflict of Resolution: If you are experiencing an issue in lab or class, you should first arrange a meeting with your instructor. After you have met with your instructor and if the issue remains unresolved, you may then consult the Laboratory Coordinators. If the issue still requires attention, you may then consult the Associate Chair of the Department of Biology, Dr. Laura Mydlarz. To do this you can file a grievance at <https://www.uta.edu/php-lib/machform/view.php?id=3403>. You must file the form in order to have your issue heard. None of the listed personnel will discuss the issue with you until you have first consulted all of those preceding him/her.

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>.

Campus Carry: Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a 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.

Drop for non-payment of tuition: Payment must be received by the term due date or your registration will be cancelled. If your registration is cancelled for non-payment, you may reregister for classes if seats are available.

After Hours Safety Escort: The Sam Mav Escort service provides a service to assist students, faculty, staff and campus visitors to reach their destinations after regular business hours. The hours of service are 7:00 pm to 1:00 am daily. 817-272-3381

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>.

The English Writing Center (411LIBR): The Writing Center Offers free tutoring in 20-, 40-, or 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Our hours are 9 am to 8 pm Mon.-Thurs., 9 am-3 pm Fri. and Noon-6 pm Sat. and Sun. Register and make appointments online at <http://uta.mywconline.com>. Classroom Visits, workshops, and specialized services for graduate students are also available. Please see www.uta.edu/owl for detailed information on all our programs and services.

<p>Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911. Non-emergency number 817-272-3381</p>

Emergency Exit Procedures from LS 122: Should we experience an emergency event that requires us to vacate the building, students should exit from the front of the classroom and move toward the nearest exit, which is located straight across the first floor lobby, on the North wall. 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 handicapped individuals.

Those who do not read are no better off than those who cannot
Chinese proverb

The palest ink is better than the strongest memory
Chinese proverb

You'll never plow a field by turning it over in your mind
Irish proverb

The day of the storm is not the day for thatching
Irish proverb