

BIOL 3452 - 001: COMPARATIVE VERTEBRATE ANATOMY (CVA)

Syllabus – Fall 2015

Instructor(s): Dr. Eric N. Smith

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Office Hours: Monday 11:00 AM-12:30 PM, Thursday 2:00 to 3:30 PM

(If these are not convenient please contact me to make an appointment at a time convenience)

Section Information: BIOL 3452 - 001

Time and Place of Class Meetings: Monday, Wednesday and Friday 10:00-10:50 am; Room SH 125 (Science Hall).

Description of Course Content: CVA compares the anatomical similarities and differences among protochordates and vertebrates. It explores the evolutionary development of current anatomical diversity while giving some consideration to biomechanics and design. In the laboratory, a series of representative vertebrates are dissected to familiarize students with the specific components of the various systems, with emphasis placed on the dissection of cats and sharks. This course is considered to be one of the most challenging by many students. It is recommended that students do not overload themselves with coursework, especially lab courses, when they take CVA.

Student Learning Outcomes: To understand and compare structures of vertebrates by establishing homologies and thereby deduce the course of evolution of organisms and their organs.

Required Textbooks and Other Course Materials:

Book Title: *Vertebrates: Comparative Anatomy, Function, Evolution*

Author: Kardong, Kenneth V.

Publisher: McGraw-Hill

Edition: 7th

Descriptions of major assignments and examinations:

Course Schedule:

LECTURE TOPIC	Kardong 7th ed.
A. Introduction	General Biology Review
B. Evolution and Phylogenetic Analysis	Ch. 1, pp. 1–47
C. Protochordates and Origin of Vertebrates	Ch. 2, pp. 48–81
D. Diversity of Chordates	Ch. 3, pp. 82–127
E. Early Development of Vertebrates	Ch. 5, pp. 161–177, 189–211
Test 1	September 25

F. Integument and its Derivatives	Ch. 6, pp. 212–240
G. Mineralized Tissues	Ch. 5, pp. 177–189
H. Teeth	Ch. 13, pp. 503–516
I. Skull and Visceral Skeleton	Ch. 7, pp. 241–293
J. Axial Skeleton	Ch. 8, pp. 294–324
K. Appendicular Skeleton	Ch. 9, pp. 325–371
Test 2	October 23
L. Muscular System	Ch. 10, pp. 372–412
M. Digestive System	Ch. 13, pp. 516–544
N. Respiratory System	Ch. 11, pp. 413–450
O. Circulatory System	Ch. 12, pp. 451–502
P. Urogenital System	Ch. 14, pp. 545–591
Test 3	November 20
Q. Endocrine System	Ch. 15, pp. 592–624
R. Nervous System: Spinal Cord	Ch. 16, pp. 625–651
S. Nervous System: Brain	Ch. 16, pp. 651–670
T. Sensory Organs	Ch. 17, pp. 671–713
Final	December 14, 8 - 10:30 a.m

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. –Eric N. Smith.

Exams:

Tentative Lecture Exam Dates: Sept 25, Oct 23, Nov 20.

Final, comprehensive, 100 questions, 50% on last 4 topics [Q-T].

Laboratory:

BIOL 3452 - 002. Required. Monday and Wednesday 1:00 to 5:00 PM. LS348. Start date: 7 Sep 2014.

Text: Comparative Anatomy - Manual of Vertebrate Dissection, 2015, by Dale W. Fishbeck and Aurora M. Sebastiani, 3rd ed. Morton Publishing Company.

Important dates:

- August 27 First Day of Classes
- August 27–September 02 Late Registration
- September 07 Labor Day Holiday
- September 14 Census Date
- November 04 Last day to drop class
- November 26–27 Thanksgiving Holidays
- December 09 Last Day of Classes
- December 12–18 Final Exams
- December 17–19 Commencement Ceremonies

Important Dates Specific for Comparative Vertebrate Anatomy:

- September 25 1st Lecture Exam
- October 23 2nd Lecture Exam
- November 20 3rd Lecture Exam
- Dec 14 Final Exam, 8 - 10:30 a.m. (Monday)

Final Grades will be available online

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 recommend that you attend every class; there is a direct correlation between attendance and grade scores. 5% of your grade will be based on attendance.

Grading: Grading will evaluate comprehension of the material covered through the course (textbook reading assignments, lecture, laboratory).

- Three Lecture Exams @ 10% ea. (30%)
- Five Quizzes @ 1% ea. (5%)
- Attendance taken five times (5%)
- One Final (20%)
- Laboratory (40%)

Grades: A = 90-100%; B = 80-89%; C = 70-79%; D = 60-69%; F = below 60%.

Final comprehensive. Quizzes will be very short, 4 or less questions, they will be given on Fridays. These will cover material given during the week and/or reading assignments. Attendance will be taken at random, five times during the semester. Missed exams, missed quizzes, missed laboratory work, or missed days of attendance, will have a grade of zero in grade computation.

Make-up Exam Policy: I encourage you to make every effort not to miss an exam. You should approach the instructor regarding this matter. Reasons for missing tests will be evaluated on a case by case basis. If possible, let know ahead of time if you are going to miss a test. Some excuses may not be considered valid. **No make-up exams will be given.** If a student misses an exam and has a documented illness or approved university absence, the final exam grade will replace the missed exam.

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 9 hours per week of their own time in course-related activities, including reading required materials, preparing for exams, etc.

Grade Grievances: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog.
<http://catalog.uta.edu/academicregulations/grades/#undergraduatetext>.

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/>).

Americans with Disabilities Act: The University of Texas at 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)*. 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 that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. 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 is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, 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. Academic dishonesty will result in a grade of zero for a particular test or work and dismissal from the class.

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.

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, on the north 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>.

Writing Center: The Writing Center, 411 Central Library, offers individual 40 minute sessions to review assignments, *Quick Hits* (5-10 minute quick answers to questions), and workshops on grammar and specific writing projects. Visit <https://uta.mywconline.com/> to register and make appointments. For hours, information about the writing workshops we offer, scheduling a classroom visit, and descriptions of the services we offer undergraduates, graduate students, and faculty members, please visit our website at www.uta.edu/owl/.

Librarian to Contact: For Biology assistance please contact Ms. Peace Ossom Williamson (peace@uta.edu) or Mr. Clarke Iakovakis (clarke@uta.edu).

- Library Home Page <http://www.uta.edu/library>
- Subject Guides <http://libguides.uta.edu>
- Subject Librarians <http://www.uta.edu/library/help/subject-librarians.php>
- Database List <http://www.uta.edu/library/databases/index.php>
- Course Reserves <http://pulse.uta.edu/vwebv/enterCourseReserve.do>
- Library Tutorials <http://www.uta.edu/library/help/tutorials.php>
- Connecting from Off- Campus <http://libguides.uta.edu/offcampus>
- Ask A Librarian <http://ask.uta.edu>

<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.</p>

For non-emergencies, contact the UTA PD at 817-272-3381.
