

Comparative Anatomy of the Vertebrates
3 credits
Prerequisite(s): Biology 133

Class Information		Instructor Information		First day of classes:	Tuesday January 12
Days:	Tues. / Thurs.	Instructor:	Dr. Ted Pike	Last day to add/ drop/change to audit:	Sunday, January 24
Time:	8:15-9:30	Email:	Ted.pike@ambrose.edu	Last day to request revised exam:	Monday, March 8
Room:	A 1085-1	Phone:	403-410-2000, ext 6930	Last day to withdraw from course:	Friday, March 19
Lab:	Thursday 3:00 PM	Office:	A 2156	Last day to apply for time extension for coursework:	Monday, March 29
Final Exam: Tuesday, April 9, in A2131, 9:00 AM		Office Hrs:	TBA	Last day of classes:	Friday, April 16

Textbook:

Vertebrates: Comparative Anatomy, Function and Evolution; K. V. Kardong
McGraw- Hill, 6th Ed. 2009

A lab manual will be supplied

Course Description:

This course examines the classification, comparative anatomy, function, and development of the vertebrate groups.

Expected Learning Outcomes:

1. Students will gain a greater understanding of comparative vertebrate anatomy and physiology
2. Students will be able to discuss the evolutionary history, biological diversity and modern relationships between vertebrates
3. Students will learn dissection techniques in the laboratory essential to research in zoology-related fields.
4. Students will collaborate with peers in a laboratory setting

Course Schedule:

<u>Dates</u>	<u>Topic</u>	<u>Text Chapters</u>
<u>Week of</u>		
Jan. 12	Introduction to Zoology 277 Origin of Chordates / Vertebrate story/ Vertebrate Phylogeny/ transitions	1 2, 3
Jan. 14	The axial Skeleton / the skull	7, 8
Jan. 19	The appendicular skeleton	9
Jan. 21	Life History / Integument	5, 6
Jan. 26	The Muscular system	10
Jan 28.	The Muscular system	10
Feb. 2	The Nervous system	16
Feb. 4	The Nervous system	16
Feb. 9	The Nervous system / Senses	16, 17
Feb. 11	The digestive system	13
Feb. 16 and 18	Reading week	
Feb. 23	The Respiratory system	11
Feb. 25	The Circulatory system	12
Mar. 2	The Circulatory system	12
Mar. 4	Immunity	
Mar. 9	the Uro-genital system	14
Mar. 11	The Uro-genital system	14
Mar. 16	Hormones	
Mar. 18	Hormones	
Mar. 23	Evolution of vertebrates	
Mar. 25	Evolution of Vertebrates	

Mar. 30	Human Evolution
Apr. 1	Human Evolution
Apr. 6	Outstanding issues in Vertebrate Studies
Apr. 8	Weirdies
Apr. 13	Review
Apr. 15	Review

Laboratory Schedule

Attendance at the laboratory sessions is **COMPULSORY**. Any lab missed without a valid excuse cannot be made up. A valid excuse (such as illness, death in the family etc.) must be validated by written proof from a doctor or counselor. Lab coats are not required but are strongly recommended. Labs will begin the week of January 18th. Laboratory topics covered will enhance course material.

Lab coats are required. Labs will begin the week of January 18th. Dissection tools may be purchased before this lab.

The dissection work on the preserved rat and dogfish shark will be a term-long project running throughout the term.

Lab 1- Introduction, Conodonts

Labs 2-3 – Integument and Muscles of Shark

Labs 4– Circulatory, Digestive, Urinary systems of Shark

Lab 5 – Reproductive, respiratory system, skeletal and nervous systems of Shark

Lab 6 – Integument and Muscles of Rat

Lab 7-- – Reproductive, respiratory system, Circulatory, Digestive, Urinary systems of Rat

Lab 8-10 - Skeletal System of Rat

Lab 11 – Nervous system / Review

Requirements:

The lecture portion of the course will be evaluated with 1 midterm exam (20%) plus a final exam (worth 40%). The lab portion of this course will consist of a lab journal documenting what structures you have seen, and what they do (30%). There will be a review paper written as well (10%). Case studies and inquiry-based learning will be used in the class - Student participation is expected in the form of discussion and presentation.

The midterm and final exam will likely be a combination of multiple choice questions, as well as short and long answer questions. While most questions will be based on lecture material, the textbook reading will absolutely help in the understanding of this material.

Attendance:

While attendance at lectures is not mandatory, it will help ensure success on course exams and assignments. Attendance at laboratory sessions is mandatory. Lab reports will not be accepted unless the lab has been attended or exceptions have been made with the instructor.

Grade Summary:

Mark Distribution	:	1 Midterm Exams (in class)	20%
		Lab Journal	30%
		Review Paper	10%
		Final Exam	40%

(Scheduled by registrar)

The available letters for course grades are as follows:

Grad	Percent	Grade Point Value	Description
A+	96-100	4.00	Outstanding
A	92-95	4.00	Excellent - superior performance, showing comprehensive understanding of subject matter.
A-	88-91	3.70	
B+	83-87	3.30	
B	78-82	3.00	Good-clearly above average performance with knowledge of subject matter generally complete.
B-	73-77	2.70	
C+	68-72	2.30	
C	64-67	2.00	Satisfactory – basic understanding of the subject matter. Grade point average below 2.00 is not sufficient for promotion.
C-	60-63	1.70	Minimum grade required if needed as a prerequisite course
D+	55-59	1.30	
D	51-54	1.00	Minimal pass – marginal performance; generally insufficient preparation for subsequent courses in the same subject.
F	<50	0	Fail – unsatisfactory performance or failure to meet course requirements.

Other

Classroom Etiquette:

It is expected that students will take an active role in the learning process. This includes: (a) regular class attendance, (b) reading course material in advance of class, and (c) engaging in discussions during class.

In respect to the professor and to your fellow students, we ask that you:

- a) Turn your phone off during class and that you don't use it for texting during lecture or lab
- b) Not have conversations with the people beside your during lecture – it is very distracting to the people around you
- c) Use your laptops for lecture material and assignments only – that you are not using the internet or facebook during class time.

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- d) Arrive to lecture and lab on time
 - e) Don't come to class or lab with your ipod or equivalent.

These will help to maximize the learning experience for you and your fellow students (and will keep your professor in a good mood).

Policies:

Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

Registration

During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline**; please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Exam Scheduling

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final

examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devices in class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the

scheduled final examination period unless they have received permission for a course Extension from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university college. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

Note: Students are strongly advised to retain this syllabus for their records.