

Course Syllabus
BISC 331 Comparative Anatomy of the Vertebrates

Instructor: Dr. Christopher Leary
Semester: Fall 2020
Lecture location: Remote/online
Lecture times: Tues, Thurs 1:00-2:15

Office Location: Shoemaker Room 416
Office Hours: 8:00-11:00, Mon & Wed
E-mail: ctleary@olemiss.edu
Phone: 915-1087

Laboratory Instructor: Tyler Casada
Lab Location: Remote/online

Lab times: Section 3: Wed 11-1:50
Section 4: Wed 2:00-4:50

Overview: Why are some morphological features of vertebrate organisms so markedly different while others are incredibly similar? For instance, the unique anatomical features of birds and turtles allow us to readily identify them but we would be hard-pressed to distinguish between these groups based upon their digestive tracts. How and why do such differences in anatomy arise? How and why are other traits remarkably similar? To address these types of questions, we will examine vertebrate form and function in an evolutionary context. In doing so, we will consider a wide range of topics including systematics, histology, embryology, physiology, ecology and behavior. Upon completion of this course, students should be able to integrate various principles, concepts, and themes to explain the diversity in morphology across vertebrate taxa.

Because of the risks associated with COVID-19, this course is being offered remotely/online this semester. The course will cover the same material normally covered during traditional face-to-face class meetings but will consist primarily of lectures recorded in Screencast-O-Matic format (MP3 files). These files will be uploaded in a BOX account that you will have access to. You will be notified when new files are posted and you will be able to view/listen to these files at any time and as many times as you like. Powerpoint slides that will be covered in Screencast-O-Matic lectures will also be provided separately on Blackboard if you wish to download those files to follow along and take notes. Similarly, the lab for this class will all be online. Your laboratory instructor, Tyler Casada, will provide you with details of the laboratory material during your first lab meeting.

I received very valuable feedback about online teaching from students near the end of the spring semester when UM transitioned to online courses because of COVID-19. One important point that was conveyed to me was that students had an easier time learning the material from online lectures that were short in duration. Hence, I will post approximately five 15 minute lectures per class meeting time which amounts to the same amount of time we would normally meet in face-to-face lectures. This will allow you to get through the lecture material in short blocks of time and at any time you like. Of course, the drawback of this format is that you are unable to ask questions and I am unable to gauge whether I am explaining something clearly or not! We will resolve this issue with occasional Zoom meetings where you can ask questions so that I can clarify any issues. Everyone is expected to attend these scheduled online Zoom lectures and attendance will be taken during that time. When logging into your Zoom account I ask that you please use your full name so that it is clearly visible on the computer screen during our meetings.

On another note, I want to emphasize that Tyler and I are aware of the difficulties of learning material from online formats! I encourage all of you to contact us at ANY TIME if you need help! We are more than happy to talk to you via telephone or arrange for one-to-one or small group Zoom meetings to discuss any of the material that you may be having difficulty with. Please, do not hesitate to ask! This is our job and we will do all that we can to help you learn the material and get through this semester!

Text: “Vertebrates: Comparative Anatomy, Function, Evolution” 5th edition (or more recent editions). McGraw Hill Publisher. Author: K.V. Kardong.

Laboratory manual and materials: “Comparative Vertebrate Anatomy: A Laboratory Dissection Guide”, 6th edition (or more recent editions). McGraw Hill Publisher. Authors: K.V. Kardong and E.J. Zalisko.

Attendance: You are responsible for all information and material provided online. Attendance is expected and will be recorded during Zoom meetings. *To comply with attendance verification requirements, a report of your attendance will be made during the first two weeks of class.*

Exam and quiz make-up policy: Students can make-up missed exams or quizzes only under the following circumstances: 1) illness with physician documentation, 2) family emergency with contact person provided, 3) university-sponsored function with written documentation from sponsoring department. I must be contacted either before the exam/quiz or within 24 hours after the exam/quiz is given to arrange a time to make-up the exam.

Cell Phones: Please turn your cell phone OFF before logging in to Zoom meetings.

Academic integrity: In cases involving dishonesty or misconduct, procedures outlined by the University Academic Discipline Committee will be followed.

LECTURE & LAB SCHEDULE

| <u>Date</u> | <u>Text Chapter</u> | <u>Lecture Topic</u> | <u>Lab</u> |
|---|----------------------------|--|-----------------------------|
| Week 1 (Aug 24-28) | 1 | Introduction: a brief history, general morphological concepts, phylogeny and geological time | Vertebrae, ribs |
| Week 2 (Aug 31- Sept 4) | 2, 3 | Chordate and vertebrate phylogeny and characteristics | Skull |
| Week 3 (Sept 7-11) | 4, 5 | Design: size, shape, biomechanics, biophysics and life history | Girdles, limbs |
| Week 4 (Sept 14-18) | 6 | Integument | LAB EXAM I |
| Week 5 (Sept 21-25) | 7 | The skull LECTURE EXAM I | Muscle |
| Week 6 (Sept 28- Oct 2) | 7 | The skull | Muscle |
| Week 7 (Oct 5-9) | 8 | The axial skeleton | Muscle |
| Week 8 (Oct 12-16) | 9 | The appendicular skeleton | LAB EXAM II |
| Week 9 (Oct 19-23) | 10 | The muscular system LECTURE EXAM II | Circulation/ Respiration |
| Week 10 (Oct 26-30) | 11 | The respiratory system | Circulation/ Respiration |
| Week 11 (Nov 2-6) | 12 | The circulatory system | Digestive system |
| Week 12 (Nov 9-13) | 12 | The circulatory system | Urogenital system |
| Classes end on Tuesday Nov 17th | | Review sessions and LAB EXAM III on Mon or Tues | |
| Nov 18-24 | | Final Exams (scheduled on weekdays only) | |

GRADE DISTRIBUTION

LECTURE

| | |
|---------------------------------|------------|
| 3 Exams (100 points each)..... | 300 points |
| 5 Quizzes (10 points each)..... | 50 points |

Total points from lecture: **350**

LABORATORY

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|--|------------|
| 3 Lab exams (40 points each)..... | 120 points |
| 3 Dissection quizzes (10 points each)..... | 30 points |
| 5 General quizzes (10 points)..... | 50 points |

Total points from lab: **200**

Total course points = 550

Grading Scale: The “plus/minus” grade system is not used in this course. Final grades are calculated based on the percentage of the total points earned.

Final grades: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 59% or less

Special considerations regarding COVID-19

Students are encouraged to visit the University’s Keep Learning site (<https://olemiss.edu/keeplearning/>) to access information and resources related to COVID-19 support. The site provides links to University student services to facilitate and support learning.

Students with diagnosed health concerns that may affect their compliance with COVID-19 health requirements should contact UM’s Student Disability Services (SDS) Office (<https://sds.olemiss.edu>) to see if they are eligible for an SDS accommodation as soon as possible.

The University must have accurate contact information, including cell phone numbers, to facilitate student communications and contact tracing. Students should check and update their University contact information (<https://olemiss.edu/mystudentprofile>).

Students attending the virtual component of hybrid, remote, or online courses are subject to the same attendance policy and procedures as traditional students. However, participation is defined in a different manner. The University’s “Attendance Policy for Online Education” states: “Student attendance in online courses is defined as active participation in the course as described in the individual course syllabus.” If students fail to meet online attendance requirements as stated in the syllabus, they will be given an absence.