Herpetology (BZ329): Spring, 2024

Welcome to Herpetology! We are glad to have you in the course, whether you're a lifelong log-flipper or a newcomer to the biology of amphibians and reptiles.

Instructor:
Dr. Rachel L. Mueller (call me Rachel)
Office Hours: Tuesday and Thursday, 12:20 – 1:20 in Bio 434
Zoom link for virtual office hours:
https://zoom.us/j/91418031041?pwd=Tm5IQUhQMEgyZ3BrZWJkTkhDenZlZz09

GTAs:
Beth Wittman, Amanda MacDonald, Kaci Agre
Office Hours: Friday 12-2 in the lab (Bio 104)
Zoom link for virtual office hours: https://zoom.us/j/91547840223

E-mail:
Please join us for office hours if you have questions -- we would much rather talk to you! If you must contact us electronically, please **use the message function in Canvas.**

Textbooks:
Herpetology, 4th edition, by Pough et al. (Available as Day One Access in Canvas; physical copy on reserve in Morgan library)
Western Reptiles and Amphibians, 4th edition, by R. C. Stebbins and S. M. McGinnis (Peterson Field Guides)

What Is This Course About? Herp Learning Goals:
This course introduces you to the biology of amphibians and reptiles.
Through this introduction, you will learn:

1) the evolutionary processes that have generated herp diversity
2) form and function relationships in herps
3) behavior, ecology, and conservation of herps
4) phylogeny and taxonomy of herps, what it reflects, and why it is constantly changing
5) how to look closely (really closely) at herps and identify them
6) Colorado herp diversity
7) Some of the research tools used by herpetologists

Midterm and Final Exam Point Distribution:
Two in-class midterm exams on lecture material: (150 points each, 300 total)
Cumulative final exam on lecture material: (200 points)
Six homework assignments: (30 points each, 180 points total)
Seven lab worksheets: (5 points each, drop the lowest, 30 points total)
Four lab quizzes: (33.3 points each, drop the lowest, 100 points total)
Three lab assignments: (30 points each, 90 total)
Two lab practicals: (50 points each, 100 total)

Total course points = 1,000.

Clickers and Participation Points:
Some lectures will include iClicker questions to help us engage with the material together. You will need to bring your own device that is iClicker-enabled to class. At the end of the semester, if you have answered half or more of the clicker questions, you will have an additional 5 points

added to your overall grade. This is essentially a chance for you to bump your grade up half a percentage point if you come to class, which will help you if you end up right on the split between grades.

You will receive a single grade for 329A and 329B. Although they are listed as separate courses, they are operationally a single course.

Final Exam Date and Time: Wednesday, May 8, 2024 6:20 – 8:20 pm in the classroom

Final grade:
Your final grade will be based on your total score. 90% - 100% = A, 80% - 89% = B, 70% - 79% = C, 60% – 69% = D, 0 – 59% = F. “+” for -7 to -9%, “-“ for -0 to -2%. No C-, D+, or D- given.

Absence Policy:
Life is complex. If you must miss an exam due to illness, family emergency, or other personal tragedy, please let us know before the test begins if at all possible; e-mail is a great way to do this. If you must miss a test for a University-sponsored event, a letter from a coach is required in advance. All lectures will be recorded in Echo360 and available to you. Lab specimens will be available during lab office hours.

Special Needs:
If you have special needs and are working with the Student Disability Center, please let us know as soon as you can so that we may accommodate you.

Academic Integrity:
In this course, we expect you to act with academic and personal integrity. Your responsibilities with respect to maintaining academic integrity are outlined here:
https://resolutioncenter.colostate.edu/academic-integrity/.
Your responsibilities with respect to acting with personal integrity are outlined in the Student Conduct Code Philosophy here:
https://resolutioncenter.colostate.edu/wp-content/uploads/sites/32/2018/08/Student-Conduct-Code-v2018.pdf.
In addition to the grading penalty, violations will be reported to, and handled in partnership with, the Office of Conflict Resolution and Student Conduct Services.

This course will include the CSU Honor Pledge on assignments, which you may sign:
"I have not given, received, or used any unauthorized assistance."

Grievance policy:
We occasionally make grading mistakes, and we want to be sure they are rectified. If you think your work was graded incorrectly, please e-mail your instructor and explain your reasoning in writing. You must do this **within two weeks** of receiving your graded assignment back from us.

Laboratory Rules:

1. Please handle the preserved specimens with care. Many were difficult to obtain and would be hard to replace. If you damage key characteristics, other students will have trouble finding them.

2. Always return specimens to the containers from which they came. Mixing specimens can really confuse other students. If you are in doubt about the identity of a herp, don't hesitate to ask. Also, be sure specimens are completely submerged in EtOH when in their jars. Feel free to get more EtOH from your TA if necessary.

3. Do not let specimens dry out while you are working with them. Put a little EtOH in your pan, and keep specimens covered with wet paper towels as much as possible while you are studying them.

4. Work with only a few herps at a time. You may want to compare several species, but do not spread too many out on your tray. This makes it easier to keep them moist, protected, and sorted correctly.

5. As in lecture, please do not do anything in lab that is distracting to your fellow classmates. Please stay off your phones, laptops, and tablets unless you are using them to take notes. Please contribute to an environment where all students feel welcomed and encouraged to learn as much as possible.

6. No eating or drinking, with the exception of water.

Herpetology (BZ329): Spring, 2024

January 15		No lab, MLK Day	
January 16	Lec1	Welcome!	
January 18	Lec2	Museum science and herpetology	
January 22 Lab	Lab1	Herp Traits, Dichotomous Keys	Field Guide
January 23	Lec3	Intro to reptiles and amphibians	Chapter 1
January 25	Lec4	Species, speciation, & taxonomy 1	No reading
January 29 Lab	Lab2	Salamanders	Chapter 3 p. 45-55 as reference
January 30	Lec5	Species, speciation, & taxonomy 2	No reading
February 1	Lec6	Species, speciation, & taxonomy 3	No reading
February 5 Lab	Lab3	Frogs, **Quiz 1**	Chapter 3 p. 45-55 as reference
February 6	Lec7	Phylogeny, taxonomy, and the problem of herpetology	No reading
February 8	Lec8	Trait evolution 1	No reading
February 12 Lab	Lab4	Amphibian Evolution	Chapter 3 p. 59-95 as reference
February 13	Lec9	Trait evolution 2	No reading
February 15	Lec10	Phylogeny estimation and trait reversal	No reading
February 19 Lab	Lab5	Lizards 1, **Quiz 2**	Ch. 4 p. 122-151 as reference
February 20		**Midterm 1**	
February 22	Lec11	Water and temperature 1	Chapter 6
February 26 Lab	Lab6	**Lab Practical 1**	Ch. 4 p. 122-151 as reference
February 27	Lec12	Water and temperature 2	Chapter 6
February 29	Lec13	Energetics and performance 1	Chapter 7
March 4 Lab	Lab7	Snakes	
March 5	Lec14	Energetics and performance 2	Chapter 7
March 7	Lec15	Reproduction and life history – amphibians	Chapter 8
March 18 Lab	Lab8	Squamate Evolution	
March 19	Lec16	Reproduction and life history -- reptiles	Chapter 9
March 21	Lec17	Locomotion 1	Chapter 10
March 25 Lab	Lab9	Crocs and Turtles, **Quiz 3**	Ch. 4 p. 151-181 as reference
March 26	Lec18	Locomotion 2	Chapter 10
March 28	Lec19	Reptiles and amphibians in the news	No reading

April 1 Lab	Lab10	Live Animal Day	Ch. 4 p. 151-181 as reference
April 2		**Midterm 2**	
April 4	Lec20	Feeding 1	Chapter 11
April 8	Lab11	FoCo Species	Chapter 4 p. 181-184, 187-199
April 9	Lec21	Feeding 2	Chapter 11
April 11	Lec22	Territoriality and migration	Chapter 12
April 15	Lab12	Synthesis Day, **Quiz 4**	Colorado Herp Key
April 16	Lec23	Communication	Chapter 13
April 18	Lec24	Mating systems	Chapter 14
April 22	Lab13	**Practical 2**	Colorado Herp Key
April 23	Lec25	Diet, foraging, being eaten	Chapter 15
April 25	Lec26	Species assemblages	Chapter 16
	Lec26.5	Bonus Snake/Primate Lecture (online)	No reading
April 29	Lab14	Field Techniques Day	
April 30	Lec27	Phylogenies, speciation, and extinction	No reading
May 2	Lec28	Conservation	Chapter 17