

Herpetology

Instructors: Dr. David C. Blackburn and Dr. Harvey B. Lillywhite

Department of Biology
Prof. Marta Wayne, Chair

General Class Information:

Course Summary

This course will feature lectures and laboratory sections that provide a broad introduction to the diversity, evolution, and biology of amphibians and reptiles. Topics will include evolutionary history, systematics, diversity, ecology, behavior, physiology, anatomy, and natural history. Laboratory sections will provide hands-on experience with amphibians and reptiles and make use of the scientific collections of the Florida Museum of Natural History. In addition to the lectures and laboratory activities, the course will involve several local field trips to see living species. 4 Credit hours.

Course Lectures and Laboratory Sections

The course will meet for lecture twice each week and once for laboratory each week.

Lecture: Tuesday and Thursday, Period 6 (12:50 – 1:40 pm), Dickinson 371

Laboratory Sections: Friday, Dickinson 371

Section (1), Periods 3 and 4 (9:30 am – 11:30 am)

Section (2), Periods 6 and 7 (12:50 pm – 2:45 pm)

Instructors

Dr. David C. Blackburn

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Required Course Materials

Textbook: Pough, F.H., R.M. Andrews, M.L. Crump, A.H. Savitzky, K.D. Wells, and M.C. Brandley. 2015. *Herpetology*. 4th Edition. Sinauer Associates.

Grading and Exams:

Grades will be based on attendance, exams, laboratory assignments, and participation in one of the field trips. Exams will include content from both lecture and laboratory assignments.

3 exams, in class:	300 points
Attendance (including field trip):	150 points
Laboratory assignments:	200 points
Laboratory practical:	100 points
Term Paper (essay or proposal):	250 points
Total Points:	1000 points

Undergraduate students will write a 3-page essay on a herpetological topic, including, for example, a summary of the biology and natural history of a specific species or genus based on a review of the scientific literature.

Graduate students will write a 5-page *grant proposal* on a herpetological topic (chosen in consultation with the instructors). These proposals are intended as a means for students to lay out a strategy for investigating a controversial topic, including reviewing previous arguments and presenting a testable hypothesis. Examples of potential topics include 'What is the nearest relative of snakes?', 'What is the principal cause of current amphibian declines?', 'How does changing climate affect temperate, tropical, marine, or montane (pick one) reptiles?', or 'What drives adaptive radiation in lizards?' Graduate students will then do a short presentation on this proposal in lab.

Further details concerning the essay or grant proposal will be made available to you once the semester is underway.

Graduate students are required to attend one off-site field trip for professional development. Graduate students will also work together to prepare a study guide for the class for the lab practical.

There are *no* make-up exams, unless previously arranged or an exam is missed owing to a legitimate emergency. *Exam scores are considered final two weeks after an exam is returned.*

Final course grades will likely be assigned as follows: A (≥ 930), A- (929-900), B+ (899-870 pts), B (869-830 pts), B- (829-800 pts), C+ (799-770), C (769-730), C- (729-700), D+ (699-670 pts), D (669-670 pts), D- (629-600 pts), E (<600 pts). Please note this scale could possibly be changed if justified by the overall class performance.

Attendance Policy:

Students are expected to attend all classes and laboratories. No make-up examinations will be given without providing evidence to the instructor that

substantiates the reason for any absence. Absences will be excused with a doctor's note provided within 1 week or if previously arranged with the instructor. If a student is absent for more than 3 classes (labs and lectures) as a result of illness, a physician's note is required. In addition, there will be no switching of lab sections without permission.

If you miss class, you must obtain notes for the missed days from a classmate. These will not be provided by the instructor, except for lecture notes and other information that are posted at the website. It is *your* responsibility to be actively engaged in learning from the lectures. ***Class lectures will not be repeated for individuals.***

Illness:

If you are ill with an infectious or contagious illness such as cold or flu, you should ***not*** attend class. If you have a fever associated with any illness, you should ***not*** attend class until you have been free of the fever for at least 24 hours. The instructor reserves the right to ask any student to leave the classroom at any time if there is a reasonable likelihood that the student's presence in the classroom places other students at substantial risk of infection.

Reading Assignments:

Extra readings may be assigned in addition to the text assignments listed below. *Please keep up with the assigned reading!* You will do better if your reading is current (or ahead) and if you read difficult material more than once. Poor performance on examinations is usually associated with failure to keep a study schedule current. Lecture and textbook are intended to be complementary; do not expect material covered in lecture always to duplicate what is in the textbook, and *vice versa*. Also, do not expect the *structure* and *order* of information given in lectures to follow that in the text. Differences in the two approaches (lecture and text) will actually enrich your exposure to, and learning of, the information. Examinations will cover material from *both* lectures and the assigned readings in the textbook. Attendance at class meetings is required and will be necessary to keep up with class information. Failure to attend class meetings has been found to correlate with poor performance on examinations. ***It is your responsibility to know what is happening in class.***

Topics for Lectures:

Introduction

Paleontology of Reptiles and Amphibians

Diversity and Evolution of Reptiles & Amphibians

 Crocodilians

 Turtles

 Lizards (in two parts)

 Snakes

 Frogs

 Salamanders & Caecilians

Structure & Function

 Locomotion: running, jumping, crawling, climbing, and digging

 Feeding

 Temperature & Ectothermy

 Water Balance

Life History, Behavior, and Ecology

 Reproduction

 Metamorphosis and Amphibian Reproductive Diversity

 Behavior

 Communication

 Community Ecology

Conservation

 Threats to Amphibians and Reptiles

 Global Declines of Amphibians and Reptiles

Laboratories:

Each week, students will participate in one of the two-hour laboratory sections. Labs will be organized taxonomically with a different focus each week (i.e., crocodilians, turtles, lizards). The labs will make use of the scientific specimens (both skeletons and preserved in alcohol) preserved in the Florida Museum of Natural History. Labs will focus on providing students with hands-on familiarity with major lineages of amphibians and reptiles around the world as well as the diversity found in Florida. Lab assignments will guide students through examination of specimens for each week's focal group and build skills in identification. The lab practical will evaluate identification skills but also important biological themes (e.g., locomotion, feeding, life history) as they relate to anatomy of preserved specimens.

University of Florida Policy Statements

Grades and Grade Points

For information on current UF policies for assigning grade points, see:
<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Absences and Make-Up Work

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:
<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see:
<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/
 - Counseling Services
 - Groups and Workshops
 - Outreach and Consultation
 - Self-Help Library
 - Training Programs
- U Matter We Care, www.umatter.ufl.edu/
- Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

0001 Reid Hall, 392-8565, www.dso.ufl.edu/drc/

Student Complaints

Each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level. See <http://www.distance.ufl.edu/student-complaint-process> for more details.

Sexual Harassment

It is the policy of The University of Florida to provide an educational and working environment for its students, faculty, and staff that is free from sex discrimination and sexual harassment. In accordance with federal and state law, the University prohibits discrimination on the basis of sex, including sexual harassment. Sex discrimination and sexual harassment will not be tolerated, and individuals who

engage in such conduct will be subject to disciplinary action. The University encourages students, faculty, staff, and visitors to promptly report sex discrimination and sexual harassment. If you believe you have been subjected to sex discrimination or sexual harassment please report the incident to me or any University official, administrator, or supervisor. The Office of Human Resource Services investigates all complaints. Incidents should be reported as soon as possible after the time of their occurrence (larry-ellis@ufl.edu).