

Biology of Snakes

WIS 4944, 6934; ZOO 4926, 6927
Fall 2014

Instructors: Drs. Max Nickerson, Harvey Lillywhite, and Coleman Sheehy III

Department of Wildlife Ecology & Conservation
Dr. Eric Hellgren, Chair
115 Newins-Ziegler Hall, 846-0552

Department of Biology
Dr. Marta Wayne, Chair
220 Bartram Hall, 392-1175

GENERAL CLASS INFORMATION:

Course Summary

This course will feature lectures and discussions related to fundamental aspects of the biology of snakes. Topics will include evolutionary history, systematics, diversity, structure, function, and behavior, including treatment of field and laboratory techniques in research, and consideration of the health, welfare, and conservation of snake biota. Discussion will cover the processes and mechanisms of maintenance, activity, and integration in contexts of behavior, ecology, and evolutionary history. The course will feature attributes of snakes, but is also comparative in the sense that comparisons with other vertebrates will be important for certain topics of discussion. 2 Credit hours.

Course Lectures Tu, Th, period 6 (12:50–1:40 PM), McCarty A, room 1142

Instructors

Prof. Max Nickerson, Florida Museum of Natural History & Department of Wildlife Ecology and Conservation
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Office hours: Th 2–4 PM, or by arrangement with instructor. Office 258 Dickinson Hall

Prof. Harvey B. Lillywhite, Department of Biology
Email: hblill@ufl.edu
Office hours: Th 2–4 PM, or by arrangement with instructor. Office 122 Bartram Hall

Dr. Coleman Sheehy III, Department of Wildlife Ecology and Conservation
Email: coleman3@ufl.edu
Office hours: Tu 2–4 PM, or by arrangement with instructor. Office 105 Newins-Ziegler Hall

Required Course Materials

Textbook: H.B. Lillywhite, *How Snakes Work: Structure, Function and Behavior of the World's Snakes*, Oxford University Press, 2014 (available at university book stores).

Tell us about you

Please give us during the first week of classes a single page document that contains the following information: Name, class level, major or specialization, Email address, career goals, and a brief statement of why you are interested in snakes and/or this course. As an optional request, please include on the page a picture of yourself, e.g.

photocopy of the small photo that is on your driver's license. This will help the instructors get to know students early.

Grading There are *600 points* possible in the class, distributed as follows:

3 exams @ 200 points each = 600 points

Total points = 600 points

Anticipated grade distributions:

Below are grade levels you *might expect* from various percentages of **total course points**, but the grade cutoffs (or scale) may be adjusted if warranted by the overall class performance. **Please note the following scale is an approximate expectation only:**

- A 90-100%
- B 78-89%
- C 60-77%
- D 50-59%
- E <50%

Examinations

Three exams are **tentatively** scheduled for the following dates, which are *subject to change* and will be announced:

1st Exam: Friday, September 19, 5-7 PM

2nd Exam: Friday, November 7, 5-7 PM

3rd Exam: Thursday, December 11, 1-2 PM in class

All written exams will be held in the usual lecture room unless announced otherwise. The three exams are sequential and not cumulative; that is, each will cover a block of material different from the others. All exams will be based on *lectures, assigned readings* in the textbook, and *any other assigned readings or information* that might be announced in lecture during the term. Exams will consist of short-answer, quantitative, or essay questions. Further information concerning the format of examinations and suggestions for preparation will be given to you in class sometime prior to the first scheduled exam.

There are three **absolute policies** relating to examinations. **1)** There are *no* make-up exams, unless previously arranged. *Exam scores are considered final two weeks after an exam is returned.* **2)** If you wish to have errors in grading corrected, you must do so *within one week* following the return of any exam. You *must* read the posted key to any exam *before* questioning the instructor about credit that was missed. Exams will not be re-graded merely for random attempt to "gain more points." It is expected that questions about the grading of exams will be legitimate and specific. **3)** Cheating will not be tolerated, and anyone caught at it will fail the course.

If you must miss an exam because of an allowable scheduled absence (e.g., to participate in a sanctioned university function), you must notify the instructor as soon as the even is scheduled or during the first week of classes. If you miss class because of an allowable but unscheduled absence (e.g., illness), you must contact the instructor as soon as possible. In the case of illness, you must provide a signed note from your primary care provider indicating you were not able to attend class on the day(s) in question. It is not sufficient for the note to simply indicate you were seen at a clinic on a given day.

Important tips for doing well in this class

Please note this information *will not be repeated* in response to questions along the lines "How can I better my scores or performance in class" that might arise during the semester. Please consider the following advice carefully and **take it seriously**.

1. Factual detail is necessary for understanding the subject matter. However, bear in mind that examinations will stress learning and application of *principles* and *concepts* as well. Thus, when you study, do so for understanding; *do not simply memorize factual information*.
2. It is helpful to take notes during lecture and to organize these notes carefully. It is further helpful to formulate your own questions based on concepts covered in class or textbook, then write or verbalize answers to these questions. Studying with someone else, using a tape recorder, talking to a mirror, or writing answers to questions will help you to understand the information. In other words, some form of *active involvement* with the information (including taking notes during lecture!) facilitates learning, in contrast to simply “glancing over” your notes or having a casual approach to studying. Most important, you must keep up with a study schedule and not put off reading and studying information until a few days prior to an exam. This latter approach almost guarantees failure. Unfortunately, it is a common practice among a small subset of students who almost always experience poor performance as a result.
3. 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.***
4. 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.
5. 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.*** Email questions about exam schedules or other information provided here in this syllabus will not be answered.

Communications

1. Before lectures, please avoid asking questions while the instructor is in front of the computer loading the day's lectures and trouble-shooting any computer problems. Once he completes this set-up, if there is extra time he will give you a “nod” and you may then ask questions.
2. Please do not send email communications to instructors unless it is an emergency. We receive sometimes more than 100 emails per day, and we cannot keep up with an excessive amount of student communications. This is simply a pragmatic constraint, but a very real one. We will not reply to questions that duplicate what is in this syllabus or given during lectures.
3. Please be courteous during lectures, to the instructor, and to your fellow classmates. This means do not text or otherwise engage electronic devices for purposes other than taking notes. Do not read the newspaper in class or surf websites.

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.

UF Counseling Services

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include: 1) UF Counseling & Wellness Center, 3190 Radio Rd, 392–1575, psychological and psychiatric services. 2) Career Resource Center, Reitz Union, 392–1601, career and job search services. Many students experience test anxiety and other stress related problems. “A Self Help Guide for Students” is available through the Counseling Center (301 Peabody Hall, 392–1575) and at their web site: <http://www.counsel.ufl.edu/>. Students with disabilities are required to register with the Disability Resource Center (DRC) if they are requesting accommodations. The DRC may be contacted at (352) 392-2565 or refer to the website at <http://www.dso.ufl.edu/drc>.

TOPICAL LECTURE SCHEDULE

Date	Topic	Lecturer	Required Reading *
August 26	Introduction to Course	Lillywhite, Sheehy & Nickerson	
August 28; Sept 2, 4, 9, 11	Evolution and Diversity of Snakes Evolutionary History Phylogeny and Phylogenetic Methods Taxonomy Diversification and Speciation	Sheehy & Nickerson	Chapter 1
September 16	Feeding and Digestion	Nickerson & Sheehy	Chapter 2
“ 18, 23	Locomotion	Lillywhite & Nickerson	Chapter 3
“ 25	Temperature & Ectothermy	Lillywhite	Chapter 4
“ 30	Venom & Venom Evolution	Bryan Fry (guest lecturer)	Chapter 2
October 2	Skin Structure & Function	Lillywhite	Chapter 5
“ 7, 9	Mating & Reproduction	Guest lecturer (TBA)	Chapter 9
“ 14, 16	Water Balance	Lillywhite & Sheehy	Chapter 2
“ 21, 23	Respiration and Circulation	Lillywhite	Chapter 6
“ 28	Sound Production	Lillywhite, Nickerson & Sheehy	Chapter 8
“ 30, November 4	Sensory Organs and Systems	Lillywhite, Nickerson & Sheehy	Chapter 7
November 6, 13	Conservation: Impacts of Climate Change	Lillywhite	
“ 18	Conservation: Health & Disease	Jacobson (guest lecturer)	
“ 20	Conservation: Community Assemblages	Laurie Vitt (guest lecturer)	
“ 25; December 2	Conservation: Ecology and Field Methods	Nickerson	
December 4, 9	Conservation and Public Education	Nickerson, Sheehy & Lillywhite	

* **Text:** H.B. Lillywhite, *How Snakes Work*, Oxford University Press, 2014.

Academic Honesty

In 1995 the UF student body enacted a new honor code and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

Preamble: In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of the honor code.

The Honor Code: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the university, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

If you witness any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at: <http://www.dso.ufl.edu/judicial/procedures/academicguide.html>.

Please photocopy this single page, read the statement in bold italics below, print and sign your name in the spaces below, and return the signed sheet to Dr. Nickerson on or before Tuesday, 2 September.

I have read the University of Florida Honor Code and herewith pledge to follow it during all work related to this course (Biology of Snakes)

Printed name

Signed name

date