

**ABIO 516**  
**HERPETOLOGY**  
**SPRING, 2005**  
**4 credit hours**

**Instructor:** Dr. Hugh Hanlin  
**Office:** 101A SBDG

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**Classroom/time:** Science Building 102; Lecture – T & Th 10:50-12:05 AM  
Lab – Th 1:40-4:30 PM

**Textbooks:** Herpetology, Zug, Vitt & Caldwell  
Field Guide to Eastern Amphibians and Reptiles (Peterson Series), Conant & Collins

### **Laboratory Supplies**

A lab coat or apron to protect your clothes is recommended when handling preserved specimens. Gloves, hand lotion, soap, etc. are also recommended. (**Caution:** Exposure to formaldehyde has been linked to cancer in rats. The use of surgical gloves in ABIO 516 is recommended. Any students with special health considerations or conditions should inform their instructor and seek special instructions regarding exposure in labs.)

Dipnets and dichotomous keys to the amphibians and reptiles will be assigned to each student during the first week of class. Each student will be responsible for these supplies for the entire semester. **FAILURE TO RETURN THESE SUPPLIES AT THE END OF THE SEMESTER WILL RESULT IN THE ASSIGNMENT OF THE GRADE OF “I”.** (The student will be required to sign a contract for the “incomplete”, and the grade will be changed when all supplies have been returned or replaced.)

### **Course Description**

Systematics, distribution, morphology, life history, behavior, ecology and current literature of amphibians and reptiles with special emphasis on South Carolina species. Field trips and collection required.

### **Course Content**

The biology of the amphibians and reptiles will be studied. Topics will include:

Phylogeny	Life History
Taxonomy	Population Ecology
Morphology	Care and Handling
Special adaptations	Preservation
Distribution	

### **Competency Goals**

By the end of the course students will have demonstrated the ability to:

- use taxonomic keys
- identify selected South Carolina amphibians and reptiles
- describe the morphology, distribution, behavior and life history of selected South Carolina amphibians and reptiles
- describe principles of population ecology, citing amphibian and/or reptiles species in examples
- critically review selected current herpetological literature
- conduct a literature search for one taxon and prepare a written review
- prepare a field notebook
- properly handle selected amphibians and reptiles
- properly preserve selected amphibians and reptiles
- describe the proper care for selected amphibians and reptiles

### **Method of Evaluation**

- 20% - Lecture Exams
- 20% - Lab Exams (Keying Exercises)
- 20% - Collection/ Field Notebook
- 20% - Literature Review/ Report
- 20% - Final Exam

### Tentative Lecture Schedule

WEEK	DATES	TOPIC	REFERENCES
1	Jan 11,13	Introduction to Herpetology , Amphibians: Phylogeny	Text 1,3
2	Jan 18,20	Amphibians: Phylogeny, Morphology, Distribution	Text 1,2,3, 15
3	Jan 25,27	Amphibians: Phylogeny, Morphology, Distribution	Text 1,3, 16
4	Feb 01,03	Amphibians: Phylogeny, Morphology, Distribution	Text 1,3, 17
5	<b>Feb 8</b>	<b>Exam #1</b>	
	Feb 10	Reptiles: Phylogeny,	Text 1,3,
6	Feb 15,17	Reptiles: Phylogeny, Morphology, Distribution	Text 1,2, 3, 18-19
7	Feb 22,24	Reptiles: Phylogeny, Morphology, Distribution	Text 1,3, 20
8	Mar 01	Reptiles: Phylogeny, Morphology, Distribution	Text 1,3, 21
	<b>Mar 03</b>	<b>Exam #2</b>	
	<b>Mar 04</b>	<b>Last day to withdraw without receiving "WF"</b>	
9	<b>Mar 08, 10</b>	<b>SPRING BREAK</b>	
10	Mar 15,17	Modes of Reproduction and Life Histories	Text 4-5
11	Mar 22,24	Physiological Ecology	Text 6-7
12	Mar 29,31	Movements and Social Behavior	Text 8-9
13	Apr 05,07	Foraging Ecology; Predator-Prey Interactions	Text 10-11
14	Apr 12,14	Community Ecology; Conservation Biology	Text 12-14
15	Apr 19,21	Care and Handling; Preservation Techniques	
16	<b>Apr 26</b>	<b>Reading Day</b>	
	<b>Apr 28</b>	<b>FINAL EXAM (11:00 AM)</b>	

### Tentative Lab Schedule

WEEK	DATE	TOPIC	REFERENCES
1	Jan 13	Amphibians: Keying Exercise (Taxonomy and Morphology)	Supplemental Keys
2	Jan 20	Amphibians: Keying Exercise (Taxonomy and Morphology)	Supplemental Keys
3	<b>Jan 27</b>	<b>Lab Exam #1 : Amphibian Keying</b>	
4	Feb 03	Reptiles: Keying Exercise (Taxonomy and Morphology)	Supplemental Keys
5	Feb 10	Reptiles: Keying Exercise (Taxonomy and Morphology)	Supplemental Keys
6	<b>Feb 17</b>	<b>Lab Exam #2 : Reptile Keying</b>	
7	Feb 24	*Field Exercise – Natural Heritage Preserve	
8	Mar 03	*Field Exercise – TBA	
	<b>Mar 04</b>	<b>Last day to withdraw without receiving "WF"</b>	
9	<b>Mar 5-11</b>	<b>SPRING BREAK (**Okefenokee Field Trip)</b>	
10	Mar 17	*Field Exercise - Flatrock	
11	Mar 24	*Field Exercise - Hitchcock Woods	
12	Mar 31	*Field Exercise - Gopher Tortoise Preserve	
	<b>Apr 1-3</b>	<b>***Highlands Field Trip</b>	
13	Apr 07	*Field Exercise – Aiken State Park	
14	Apr 14	*Field Exercise – TBA	
	<b>Apr 15-17</b>	<b>***Edisto Island Field Trip</b>	
15	Apr 21	*Riverbanks Zoo Trip	

**\*In-class field exercises** will require appropriate attire for field work/reptile and amphibian sampling. In the event of inclement weather, specimen preservation techniques will be conducted in the laboratory.

- \*\* Optional Field Trip:** Okefenokee National Wildlife Refuge & Little Talbot Island – A 5-day trip scheduled during the week of Spring Break (March 5-11, 2005)
- \*\*\* Required Field Trips:** Appalachian Mtns./Highlands Biological Station – April 1-3, 2005  
Coastal Plain/Edisto Island -- April 15-17, 2005

If you have schedule conflicts or are otherwise unable to attend the required field trips, the requirement may be satisfied with a written critique of selected journal articles.

### **Field Trip Costs**

There are no costs associated with local class field trips with the exception of the visit to the Riverbanks Zoo which will cost \$7.00 per student. Although the total cost for the Okefenokee & Little Talbot Island trip is not finalized, you can expect a minimum cost of \$150 -\$200 per student. The cost for each weekend field trip (Highlands and Edisto Island) is approximately \$50 per student.

### **Collection Requirement**

A collection of amphibians and reptiles will be required. A point system for the collection will be outlined by your instructor.

### **Term Paper Requirement**

You will be expected to conduct a search of the scientific literature for one amphibian or reptile taxon of your choice and prepare a written review of your findings complete with literature cited. You must select a taxon by **February 8**. A preliminary list of references is due by **March 3**. Your final report is due on the last day of classes, **April 21**.

### **Additional Comments**

- 1) You will be expected to have read the assigned chapters prior to lecture.
- 2) You will be expected to endorse the following HONOR PLEDGE on every quiz:

On my honor as a University of South Carolina at Aiken student, I have neither given nor received any unauthorized aid on this assignment/examination. To the best of my knowledge, I am not in violation of academic honesty.

- 3) No make-up exams will be given except under extreme situations (see Student Handbook).
- 4) You must attend at least 75% of the classes to receive a passing grade in the class.
- 5) You are encouraged to make appointments with your instructor if you are having problems in the course. In general, the following hours are available for appointments:

**T 1:30-3:00PM; W 9:30-11:30AM, 1:30-3:00PM**

- 6) If you have a physical, psychological, and/or learning disability which might affect your performance in this class, please contact the Office of Disability Services, 126A B&E, (803) 641-3609, as soon as possible. The Disabilities Services Office will determine appropriate accommodations based on medical documentation.