HERPETOLOGY (EEB 473) **Spring Semester 2014**

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GTA: Evin Carter Office: Hesler 526 974-8782 ecarte19@utk.edu

Lecture: 1:25 - 2:15 PM MWF Hesler 602 **Laboratory:** 2:30 - 4:25 PM W Hesler 602

Texts: Vitt, L. J. And J. P. Caldwell. 2013. Herpetology: An Introductory Biology of Amphibians and Reptiles, 4th Ed. Academic Press, New York.

Niemiller, M. and R. G. Reynolds, Eds. 2011. The Amphibians of Tennessee. University of Tennessee Press, Knoxville.

Niemiller, M., R. G. Reynolds and B. T. Miller, Eds. 2013. The Reptiles of Tennessee. University of Tennessee Press, Knoxville.

Schedule

Day	Date	Lecture Topic	Text Chapter	Laboratory Exercise
W	8 Jan	Introduction	-	Introduction
		Amphibians		
F	10	The Fish-Amphibian Transition and the Origin of Tetrapods	1	
M	13	Evolution and Characteristics of Modern Amphibians	3	
W	15	Evolution and Characteristics of Modern Amphibians	3	Frog Identification
F	17	Evolution and Characteristics of Modern Amphibians	3	
M	20	**No Class:** Martin Luther King Day	-	
W	22	Reproduction and Life Histories	4	Frog Identification
F	24	Reproduction and Life Histories	4	
M	27	Reproductive Modes	5	
W	29	Reproductive Modes	5	Frog Adaptive Radiation
F	30	Reproductive Modes	5	

Day	Date	Lecture Topic	Text Chapter	Laboratory Exercise
M	3 Feb	Physiological Ecology	6	
W	5	Physiological Ecology	7	Salamander Identification
F	7	Spacing, Movements, and Orientation	8	
M	10	Communication and Social Behavior	9	
W	12	Foraging Ecology and Diets	10	Salamander Identification
F	14	Defense and Escape	11	
M	17	Ecology	12	
W	19	Ecology	12	Salamander Adaptive Radiation
F	21	Biogeography	13	
M	24	Biogeography	13	
W	26	Conservation Biology	14	**Lab Exam 1**
F	28	Conservation Biology	14	
M	3 Mar	**Lecture Exam 1**		
		Reptiles		
W	5	Conquest of Land	1	Turtle Identification and Adaptive Radiation
F	7	Anatomy of Reptiles	2	
M	10	Conquest of Land	1	
W	12	Anatomy of Reptiles	2	Lizard Identification
F	14	Anatomy of Reptiles	2	

Day	Date	Lecture Topic	Text Chapter	Laboratory Exercise
M-F	17-21	**No Class:** Spring Break		
M	24	Evolution of Ancient and Modern Reptiles	3	
W	26	Reproduction and Life Histories	4	Lizard Identification
F	28	Reproductive Modes	5	
M	31	Physiological Ecology	6	
W	2 Apr	Physiological Ecology	7	Lizard Identification
F	4	Spacing, Movements, and Orientation	8	
M	7	Communication and Social Organization	9	
W	9	Foraging Ecology, Feeding, and Diets	10	Lizard Adaptive Radiation
F	11	Defense and Escape	11	
M	14	Ecology	12	
W	16	Ecology	12	Snake Identification
F	18	**No Class:** Spring Recess		
M	21	Biogeography	13	
W	23	Conservation Biology	14	Snake Identification
F	25	Conservation Biology	14	
W	30	**Lecture Exam 2:** 12:30 - 2:30 PM		
Th	1 May	-		**Lab Exam 2:** 12:30 – 2:30 PM

Lecture: The central theme of the course is adaptive radiation. Lectures cover the biology of contemporary amphibians and reptiles with a brief review of the evolution of each of the major groups. It does not cover extinct taxa except those ancestral to the modern taxa.

Lecture Examinations: There are two lecture examinations, each a "final." The first covers amphibians, and the second pertains to reptiles. Questions will drawn be primarily from material presented in the lecture and from Vitt and Caldwell (2013), although some material from the laboratory may be included. The format will be short answer essay (including definitions), matching, and fill-in-the-blank questions. Each of the two examinations will be worth 100 points. All questions concerning the grading of an examination must be brought to the attention of the instructor within two weeks of the return of the graded exam. After two weeks, no grade adjustments will be made.

Lecture and Laboratory Examinations: Make-up examinations will cover the same material as the scheduled examination, but the questions and the format will differ (e.g., lecture make-up exams will consist largely of essay questions). All students who request a make-up exam will be required to take it as soon as possible, and at the same time and place, as scheduled with the instructor. No exams will be given before the regularly scheduled examination has been given (i.e., no early exams).

Laboratory: Emphasis will be on the identification of amphibians and reptiles of the southeastern United States, and on adaptive radiation. For the latter, the approach will be global rather than regional. Bring your Niemiller and Reynolds (2011) and Niemiller, Reynolds and Miller (2013) with you to each laboratory session. If you must miss part of a lab session, try not to miss the first half hour or so during which the GTA will be giving instructions concerning the week's exercise. The lab will be open and preserved material available outside of scheduled class times if prior arrangement has been made with either the instructor or the GTA. Please do not enter the lab at times when another course is scheduled in the room. The room will also be unavailable for the two hours prior to each laboratory examination.

You will be handling live specimens on occasion, and you must wash your hands thoroughly with soap before and after doing so. Be sure to rinse all of the soap off your hands before handling a specimen. You will be handling preserved specimens that are stored in 70% ethyl alcohol (ethanol or ETOH) which may both dry and irritate your skin. The use of surgical gloves, which will be provided, is recommended though not required. Do not remove specimens from the lab.

Laboratory Examinations: Examinations - You will be required to sight identify to family, genus, and species, amphibians or reptiles from the southeastern United States to family, to be able to identify through the use of a key specimens from elsewhere in the world, and to provide brief answers to questions about certain species. As for lecture examinations, each of the two examinations, will worth a maximum of 50 points.

Weekly Laboratory Quizzes: There will be 10 short weekly assignments**,** each worth a maximum of 10 points toward your final grade. Assignments turned in late will receive a maximum of 5 points and will be accepted only up to one week late.

Field Trips: Three field trips are planned: 1) a late day and evening trip on a Saturday, 2) a night trip on a Friday or Saturday, and 3) a Saturday trip, either to a field site or to the Knoxville Zoo. Dates will be announced later in the semester. *You are required to participate in at least two of these trips*.

On field trips, you should wear long pants and expect to find yourself wading in water that is at least knee-deep. Wear athletic shoes or other footwear that you won't mind getting wet and muddy, but do not wear flip-flops, sandals, or other types of shoes that won't adequately protect your feet if they are battered against rocks or you have walk through thorny vegetation, or have soles that become slippery when wet. For night trips, bring a good flashlight (two or more D-cells; bring an extra set) and do not bring a head lamp. No class collecting will be allowed on the field trips, so bring a camera if you want a record of what you see.

Grading and Course Grades: Your grade will be determined entirely on the total points you earn out of a possible 400 points:

2 lecture examinations @ 100 points each	200
10 weekly assignments @ 10 points each	100
2 laboratory examinations @ 50 points each	100
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Total possible points	400

The grading scale will be determined by the distribution of total point scores of all of the students in the class and, as a result, letter grades will not be assigned, nor should they be assumed, for individual examination, quizzes, or assignments. There are only three guarantees: 1) if your point total is 93% (372 points) or more of the maximum possible total of 400, you will receive an A; 2) if your point total is 50% (200 points) or less of the maximum possible total, you will receive an F; 3) you must pass the lab (i.e., earn at least 50 points on lab quizzes and exams (out of a maximum possible total of 100) to pass the course no matter how well you have done on the lecture exams.

Office Hours: Dr. Echternacht has no regular schedule of office hours but will be happy to meet with you any time that is mutually agreeable. Contact him in class or at echterna@utk.edu to set up a meeting.

Disability Statement:

If you need course adaptations or accommodations because of a documented disability, or if you have emergency information to share, please contact the Office of Disability Services. This will ensure that you are properly registered for services. Campus location: 2227 Dunford Hall. Phone: 865-974-6087 E-mail: ods@utk.edu Website: http://ods.utk.edu